



LIFE, AND ACCIDENT AND HEALTH COMPANIES/FRATERNAL BENEFIT SOCIETIES - ASSOCIATION EDITION

ANNUAL STATEMENT

FOR THE YEAR ENDED DECEMBER 31, 2022

OF THE CONDITION AND AFFAIRS OF THE

MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

NAIC Group Code

0435

0435

NAIC Company Code

63312

Employer's ID Number

13-1935920

(Current)

(Prior)

Organized under the Laws of

Ohio

, State of Domicile or Port of Entry

OH

Country of Domicile

United States of America

Licensed as business type:

Life, Accident and Health [X]

Fraternal Benefit Societies []

Incorporated/Organized

12/29/1961

Commenced Business

08/13/1963

Statutory Home Office

191 Rosa Parks Street

,

Cincinnati, OH, US 45202

(Street and Number)

(City or Town, State, Country and Zip Code)

Main Administrative Office

191 Rosa Parks Street

(Street and Number)

Cincinnati, OH, US 45202

(City or Town, State, Country and Zip Code)

513-361-9000

(Area Code) (Telephone Number)

Mail Address

Post Office Box 5420

,

Cincinnati, OH, US 45201

(Street and Number or P.O. Box)

(City or Town, State, Country and Zip Code)

Primary Location of Books and Records

191 Rosa Parks Street

(Street and Number)

Cincinnati, OH, US 45202

(City or Town, State, Country and Zip Code)

513-361-9000

(Area Code) (Telephone Number)

Internet Website Address

www.massmutualascend.com

Statutory Statement Contact

Robert Mayhew Earle II

,

513-361-9077

(Name)

(Area Code) (Telephone Number)

rearle@mmascend.com

,

513-345-9484

(E-mail Address)

(FAX Number)

OFFICERS

President

Mark Francis Muething

Secretary

John Paul Gruber

Treasurer

Brian Patrick Sponaugle #

Appointed Actuary

Isaac Cezar Hall #

OTHER

Donna Marie Carrelli #

Michael Robert Fanning

Michael Harrison Haney

DIRECTORS OR TRUSTEES

Dominic Lusean Blue	Elizabeth Ward Chicares	Susan Marie Cicco
Geoffrey James Craddock	Roger William Crandall	Michael Robert Fanning
Paul Anthony Lapiana	Sears Andrew Merritt #	Mark Francis Muething
Michael James O'Connor	Eric William Partlan	Arthur William Wallace III

State of

Ohio

SS

County of

Hamilton

The officers of this reporting entity being duly sworn, each depose and say that they are the described officers of said reporting entity, and that on the reporting period stated above, all of the herein described assets were the absolute property of the said reporting entity, free and clear from any liens or claims thereon, except as herein stated, and that this statement, together with related exhibits, schedules and explanations therein contained, annexed or referred to, is a full and true statement of all the assets and liabilities and of the condition and affairs of the said reporting entity as of the reporting period stated above, and of its income and deductions therefrom for the period ended, and have been completed in accordance with the NAIC Annual Statement Instructions and Accounting Practices and Procedures manual except to the extent that: (1) state law may differ; or, (2) that state rules or regulations require differences in reporting not related to accounting practices and procedures, according to the best of their information, knowledge and belief, respectively. Furthermore, the scope of this attestation by the described officers also includes the related corresponding electronic filing with the NAIC, when required, that is an exact copy (except for formatting differences due to electronic filing) of the enclosed statement. The electronic filing may be requested by various regulators in lieu of or in addition to the enclosed statement.

Mark Francis Muething

John Paul Gruber

Brian Patrick Sponaugle

President

Secretary

Treasurer

Subscribed and sworn to before me this

February 2023

day of

a. Is this an original filing?
b. If no,
1. State the amendment number.....
2. Date filed
3. Number of pages attached.....

Yes [X] No []

OFFICERS AND DIRECTORS WHO DID NOT OCCUPY THE INDICATED POSITION IN THE PREVIOUS ANNUAL STATEMENT

SUMMARY INVESTMENT SCHEDULE

Investment Categories	Gross Investment Holdings		Admitted Assets as Reported in the Annual Statement			
	1	2	3	4	5	6
	Amount	Percentage of Column 1 Line 13	Amount	Securities Lending Reinvested Collateral Amount	Total (Col. 3 + 4) Amount	Percentage of Column 5 Line 13
1. Long-Term Bonds (Schedule D, Part 1):						
1.01 U.S. governments	98,902,747	0.237	98,902,747		98,902,747	0.237
1.02 All other governments	19,164,997	0.046			0	0.000
1.03 U.S. states, territories and possessions, etc. guaranteed	190,684,775	0.457	190,684,775		190,684,775	0.457
1.04 U.S. political subdivisions of states, territories, and possessions, guaranteed	272,686,233	0.654	272,686,233		272,686,233	0.654
1.05 U.S. special revenue and special assessment obligations, etc. non-guaranteed	1,691,650,066	4.058	1,691,650,066		1,691,650,066	4.058
1.06 Industrial and miscellaneous	27,641,259,241	66.301	22,076,250,674		22,076,250,674	52.953
1.07 Hybrid securities	634,223,003	1.521	535,342,223		535,342,223	1.284
1.08 Parent, subsidiaries and affiliates	505,922,314	1.214	120,467,571		120,467,571	0.289
1.09 SVO identified funds		0.000			0	0.000
1.10 Unaffiliated bank loans	2,277,410,910	5.463	8,345,919,997		8,345,919,997	20.019
1.11 Unaffiliated certificates of deposit		0.000			0	0.000
1.12 Total long-term bonds	33,331,904,286	79.951	33,331,904,286	0	33,331,904,286	79.951
2. Preferred stocks (Schedule D, Part 2, Section 1):						
2.01 Industrial and miscellaneous (Unaffiliated)	184,968,184	0.444	184,968,184		184,968,184	0.444
2.02 Parent, subsidiaries and affiliates		0.000			0	0.000
2.03 Total preferred stocks	184,968,184	0.444	184,968,184	0	184,968,184	0.444
3. Common stocks (Schedule D, Part 2, Section 2):						
3.01 Industrial and miscellaneous Publicly traded (Unaffiliated)	113,553,887	0.272	113,553,887		113,553,887	0.272
3.02 Industrial and miscellaneous Other (Unaffiliated)	167,829,721	0.403	167,829,721		167,829,721	0.403
3.03 Parent, subsidiaries and affiliates Publicly traded		0.000			0	0.000
3.04 Parent, subsidiaries and affiliates Other	401,901,977	0.964	401,901,977		401,901,977	0.964
3.05 Mutual funds		0.000			0	0.000
3.06 Unit investment trusts		0.000			0	0.000
3.07 Closed-end funds		0.000			0	0.000
3.08 Exchange traded funds		0.000			0	0.000
3.09 Total common stocks	683,285,585	1.639	683,285,585	0	683,285,585	1.639
4. Mortgage loans (Schedule B):						
4.01 Farm mortgages	0	0.000			0	0.000
4.02 Residential mortgages	1,802,764,160	4.324	1,802,764,160		1,802,764,160	4.324
4.03 Commercial mortgages	1,263,455,753	3.031	1,263,455,753		1,263,455,753	3.031
4.04 Mezzanine real estate loans	22,593,648	0.054	22,593,648		22,593,648	0.054
4.05 Total valuation allowance		0.000			0	0.000
4.06 Total mortgage loans	3,088,813,561	7.409	3,088,813,561	0	3,088,813,561	7.409
5. Real estate (Schedule A):						
5.01 Properties occupied by company		0.000	0		0	0.000
5.02 Properties held for production of income		0.000	0		0	0.000
5.03 Properties held for sale		0.000	0		0	0.000
5.04 Total real estate	0	0.000	0	0	0	0.000
6. Cash, cash equivalents and short-term investments:						
6.01 Cash (Schedule E, Part 1)	65,861,003	0.158	65,861,003		65,861,003	0.158
6.02 Cash equivalents (Schedule E, Part 2)	1,535,691,774	3.684	1,535,691,774		1,535,691,774	3.684
6.03 Short-term investments (Schedule DA)	389,684,178	0.935	389,684,178		389,684,178	0.935
6.04 Total cash, cash equivalents and short-term investments	1,991,236,955	4.776	1,991,236,955	0	1,991,236,955	4.776
7. Contract loans	31,459,162	0.075	31,459,162		31,459,162	0.075
8. Derivatives (Schedule DB)	872,965,902	2.094	872,965,902		872,965,902	2.094
9. Other invested assets (Schedule BA)	1,363,435,253	3.270	1,363,435,253		1,363,435,253	3.270
10. Receivables for securities	142,312,266	0.341	142,312,266		142,312,266	0.341
11. Securities Lending (Schedule DL, Part 1).....	0	0.000	0	XXX	XXX	XXX
12. Other invested assets (Page 2, Line 11)	0	0.000	0		0	0.000
13. Total invested assets	41,690,381,154	100.000	41,690,381,154	0	41,690,381,154	100.000

SCHEDULE A - VERIFICATION BETWEEN YEARS

Real Estate

1.	Book/adjusted carrying value, December 31 of prior year	0
2.	Cost of acquired:	
	2.1 Actual cost at time of acquisition (Part 2, Column 6)	
	2.2 Additional investment made after acquisition (Part 2, Column 9)	0
3.	Current year change in encumbrances:	
	3.1 Totals, Part 1, Column 13	
	3.2 Totals, Part 3, Column 11	0
4.	Total gain (loss) on disposals, Part 3, Column 18	
5.	Deduct amounts received on disposals, Part 3, Column 15	
6.	Total foreign exchange change in book/adjusted carrying value:	
	6.1 Totals, Part 1, Column 15	
	6.2 Totals, Part 3, Column 13	0
7.	Deduct current year's other than temporary impairment recognized:	
	7.1 Totals, Part 1, Column 12	
	7.2 Totals, Part 3, Column 10	0
8.	Deduct current year's depreciation:	
	8.1 Totals, Part 1, Column 11	
	8.2 Totals, Part 3, Column 9	0
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	0
10.	Deduct total nonadmitted amounts	0
11.	Statement value at end of current period (Line 9 minus Line 10)	0

SCHEDULE B - VERIFICATION BETWEEN YEARS

Mortgage Loans

1.	Book value/recorded investment excluding accrued interest, December 31 of prior year	2,148,469,101
2.	Cost of acquired:	
	2.1 Actual cost at time of acquisition (Part 2, Column 7)	1,426,971,997
	2.2 Additional investment made after acquisition (Part 2, Column 8)	43,507,818
		1,470,479,815
3.	Capitalized deferred interest and other:	
	3.1 Totals, Part 1, Column 12	153,558
	3.2 Totals, Part 3, Column 11	928,049
		1,081,607
4.	Accrual of discount	13,017,034
5.	Unrealized valuation increase (decrease):	
	5.1 Totals, Part 1, Column 9	0
	5.2 Totals, Part 3, Column 8	0
		0
6.	Total gain (loss) on disposals, Part 3, Column 18	0
7.	Deduct amounts received on disposals, Part 3, Column 15	537,024,492
8.	Deduct amortization of premium and mortgage interest points and commitment fees	7,209,504
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest:	
	9.1 Totals, Part 1, Column 13	0
	9.2 Totals, Part 3, Column 13	0
		0
10.	Deduct current year's other than temporary impairment recognized:	
	10.1 Totals, Part 1, Column 11	0
	10.2 Totals, Part 3, Column 10	0
		0
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	3,088,813,561
12.	Total valuation allowance	
13.	Subtotal (Line 11 plus 12)	3,088,813,561
14.	Deduct total nonadmitted amounts	0
15.	Statement value of mortgages owned at end of current period (Line 13 minus Line 14)	3,088,813,561

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - VERIFICATION BETWEEN YEARS

Other Long-Term Invested Assets

1.	Book/adjusted carrying value, December 31 of prior year	1,092,315,061	
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition (Part 2, Column 8)	34,554,124	
	2.2 Additional investment made after acquisition (Part 2, Column 9)	386,006,631	420,560,753
3.	Capitalized deferred interest and other:		
	3.1 Totals, Part 1, Column 16	0	
	3.2 Totals, Part 3, Column 12	0	0
4.	Accrual of discount	0	
5.	Unrealized valuation increase (decrease):		
	5.1 Totals, Part 1, Column 13	131,001,321	
	5.2 Totals, Part 3, Column 9	(710,253)	130,291,068
6.	Total gain (loss) on disposals, Part 3, Column 19	(362,017)	
7.	Deduct amounts received on disposals, Part 3, Column 16	291,108,114	
8.	Deduct amortization of premium and depreciation	1,983,147	
9.	Total foreign exchange change in book/adjusted carrying value:		
	9.1 Totals, Part 1, Column 17	7,800	
	9.2 Totals, Part 3, Column 14	0	7,800
10.	Deduct current year's other than temporary impairment recognized:		
	10.1 Totals, Part 1, Column 15	(13,713,847)	
	10.2 Totals, Part 3, Column 11	0	(13,713,847)
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	1,363,435,250	
12.	Deduct total nonadmitted amounts		
13.	Statement value at end of current period (Line 11 minus Line 12)	1,363,435,250	

SCHEDULE D - VERIFICATION BETWEEN YEARS

Bonds and Stocks

1.	Book/adjusted carrying value, December 31 of prior year	32,199,605,856
2.	Cost of bonds and stocks acquired, Part 3, Column 7	16,491,151,584
3.	Accrual of discount	161,977,324
4.	Unrealized valuation increase (decrease):	
4.1.	Part 1, Column 12	(14,197,165)
4.2.	Part 2, Section 1, Column 15	(42,762,430)
4.3.	Part 2, Section 2, Column 13	2,856,468
4.4.	Part 4, Column 11	0
		(54,103,127)
5.	Total gain (loss) on disposals, Part 4, Column 19	51,389,809
6.	Deduction consideration for bonds and stocks disposed of, Part 4, Column 7	14,559,739,657
7.	Deduct amortization of premium	59,049,938
8.	Total foreign exchange change in book/adjusted carrying value:	
8.1.	Part 1, Column 15	8,850,307
8.2.	Part 2, Section 1, Column 19	0
8.3.	Part 2, Section 2, Column 16	0
8.4.	Part 4, Column 15	0
		8,850,307
9.	Deduct current year's other than temporary impairment recognized:	
9.1.	Part 1, Column 14	17,457,754
9.2.	Part 2, Section 1, Column 17	4,387,814
9.3.	Part 2, Section 2, Column 14	14,315,906
9.4.	Part 4, Column 13	4,366,380
		40,527,854
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Note 5Q, Line 2	603,750
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	34,200,158,053
12.	Deduct total nonadmitted amounts	0
13.	Statement value at end of current period (Line 11 minus Line 12)	34,200,158,053

SCHEDULE D - SUMMARY BY COUNTRY

Long-Term Bonds and Stocks OWNED December 31 of Current Year

Description		1 Book/Adjusted Carrying Value	2 Fair Value	3 Actual Cost	4 Par Value of Bonds
BONDS					
Governments (Including all obligations guaranteed by governments)	1. United States 2. Canada 3. Other Countries	98,902,747 19,164,997	63,969,575 17,782,764	98,902,747 19,164,997	541,297,800 18,715,000
	4. Totals	118,067,744	81,752,339	118,067,744	560,012,800
U.S. States, Territories and Possessions (Direct and guaranteed)	5. Totals	190,684,775	183,055,580	190,684,775	182,325,728
U.S. Political Subdivisions of States, Territories and Possessions (Direct and guaranteed)	6. Totals	272,686,233	268,730,922	272,686,233	266,685,067
U.S. Special Revenue and Special Assessment Obligations and all Non-Guaranteed Obligations of Agencies and Authorities of Governments and their Political Subdivisions	7. Totals	1,691,650,066	1,536,952,443	1,691,642,721	1,659,493,518
Industrial and Miscellaneous, SVO Identified Funds, Unaffiliated Bank Loans, Unaffiliated Certificates of Deposit and Hybrid Securities (unaffiliated)	8. United States 9. Canada 10. Other Countries	29,498,409,295 412,322,597	26,514,630,454 365,021,577	29,545,314,656 412,322,597	29,693,662,146 403,327,986
	11. Totals	30,552,893,154	27,500,541,223	30,617,955,062	30,796,324,404
Parent, Subsidiaries and Affiliates	12. Totals	505,922,314	449,912,380	503,849,582	505,114,616
	13. Total Bonds	33,331,904,286	30,020,944,887	33,394,886,117	33,969,956,133
PREFERRED STOCKS					
Industrial and Miscellaneous (unaffiliated)	14. United States 15. Canada 16. Other Countries	180,476,094 0	192,094,644 0	161,086,017 0	
	17. Totals	184,968,184	198,325,422	172,650,366	
Parent, Subsidiaries and Affiliates	18. Totals				
	19. Total Preferred Stocks	184,968,184	198,325,422	172,650,366	
COMMON STOCKS					
Industrial and Miscellaneous (unaffiliated), Mutual Funds, Unit Investment Trusts, Closed-End Funds and Exchange Traded Funds	20. United States 21. Canada 22. Other Countries	257,711,078 0	257,711,079 0	208,933,611 0	
	23. Totals	281,383,608	281,383,610	220,532,278	
Parent, Subsidiaries and Affiliates	24. Totals	401,901,977	401,901,977	236,348,177	
	25. Total Common Stocks	683,285,585	683,285,587	456,880,455	
	26. Total Stocks	868,253,769	881,611,009	629,530,821	
	27. Total Bonds and Stocks	34,200,158,055	30,902,555,896	34,024,416,938	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY
SCHEDULE D - PART 1A - SECTION 1

Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

NAIC Designation	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 12.7	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed (a)
1. U.S. Governments												
1.1 NAIC 1	10,774,533	33,777,722	26,070,426	21,972,663	6,307,403	XXX	98,902,747	0.3	103,557,216	0.3	98,902,748	(1)
1.2 NAIC 2	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.3 NAIC 3	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.7 Totals	10,774,533	33,777,722	26,070,426	21,972,663	6,307,403	XXX	98,902,747	0.3	103,557,216	0.3	98,902,748	(1)
2. All Other Governments												
2.1 NAIC 1	1,047,652	5,388,697	2,120,139	2,592,782	0	XXX	11,149,270	0.0	17,697,338	0.1	0	11,149,270
2.2 NAIC 2	0	0	4,015,727	0	0	XXX	4,015,727	0.0	0	0.0	0	4,015,727
2.3 NAIC 3	361,821	1,283,596	1,314,295	1,040,287	0	XXX	3,999,999	0.0	0	0.0	0	3,999,999
2.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.7 Totals	1,409,473	6,672,293	7,450,161	3,633,069	0	XXX	19,164,996	0.1	17,697,338	0.1	0	19,164,996
3. U.S. States, Territories and Possessions etc., Guaranteed												
3.1 NAIC 1	6,697,295	97,732,881	80,152,426	6,102,171	0	XXX	190,684,773	0.5	302,358,798	1.0	190,684,774	(1)
3.2 NAIC 2	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.3 NAIC 3	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.7 Totals	6,697,295	97,732,881	80,152,426	6,102,171	0	XXX	190,684,773	0.5	302,358,798	1.0	190,684,774	(1)
4. U.S. Political Subdivisions of States, Territories and Possessions , Guaranteed												
4.1 NAIC 1	60,456,501	99,917,594	61,483,132	40,068,310	1,759,227	XXX	263,684,764	0.8	354,592,511	1.1	263,684,763	1
4.2 NAIC 2	0	0	0	0	0	XXX	0	0.0	1,170,625	0.0	0	0
4.3 NAIC 3	0	9,001,470	0	0	0	XXX	9,001,470	0.0	8,698,935	0.0	9,001,470	0
4.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.7 Totals	60,456,501	108,919,064	61,483,132	40,068,310	1,759,227	XXX	272,686,234	0.8	364,462,071	1.1	272,686,233	1
5. U.S. Special Revenue & Special Assessment Obligations, etc., Non-Guaranteed												
5.1 NAIC 1	139,028,085	554,583,408	460,123,130	401,163,534	136,749,552	XXX	1,691,647,709	4.8	2,199,489,716	6.9	1,690,553,514	1,094,195
5.2 NAIC 2	0	0	0	0	0	XXX	0	0.0	30,812,446	0.1	0	0
5.3 NAIC 3	0	0	0	0	0	XXX	0	0.0	3,876,363	0.0	0	0
5.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
5.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
5.6 NAIC 6	2,271	87	0	0	0	XXX	2,358	0.0	0	0.0	0	2,358
5.7 Totals	139,030,356	554,583,495	460,123,130	401,163,534	136,749,552	XXX	1,691,650,067	4.8	2,234,178,525	7.0	1,690,553,514	1,096,553

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY
SCHEDULE D - PART 1A - SECTION 1 (Continued)

Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

	1	2	3	4	5	6	7	8	9	10	11	12
NAIC Designation	1 Year or Less	Over 1 Year Through 5 Years	Over 5 Years Through 10 Years	Over 10 Years Through 20 Years	Over 20 Years	No Maturity Date	Total Current Year	Col. 7 as a % of Line 12.7	Total from Col. 7 Prior Year	% From Col. 8 Prior Year	Total Publicly Traded	Total Privately Placed (a)
6. Industrial & Miscellaneous (Unaffiliated)												
6.1 NAIC 1	1,982,511,537	3,257,446,658	3,826,999,942	1,794,610,964	1,434,402,848	XXX	12,295,971,949	35.2	14,535,761,121	45.7	2,814,439,157	9,481,532,792
6.2 NAIC 2	2,035,928,268	5,374,546,952	4,487,345,565	2,226,351,809	1,167,900,356	XXX	15,292,072,950	43.8	11,850,286,448	37.3	7,269,035,914	8,023,037,036
6.3 NAIC 3	81,488,784	454,472,991	617,719,179	47,683,711	27,989,795	XXX	1,229,354,460	3.5	630,125,430	2.0	309,479,219	919,875,241
6.4 NAIC 4	37,890,586	135,770,207	95,101,346	32,689,052	0	XXX	301,451,191	0.9	335,105,438	1.1	58,991,241	242,459,950
6.5 NAIC 5	26,132,614	25,767,667	47,052,825	9,504,671	1,054,746	XXX	109,512,523	0.3	33,697,032	0.1	13,821,125	95,691,398
6.6 NAIC 6	7,374,987	9,001,962	3,716,869	3,768,284	6,715,947	XXX	30,578,049	0.1	33,948,739	0.1	2,305,792	28,272,257
6.7 Totals	4,171,326,776	9,257,006,437	9,077,935,726	4,114,608,491	2,638,063,692	XXX	29,258,941,122	83.7	27,418,924,209	86.3	10,468,072,448	18,790,868,674
7. Hybrid Securities												
7.1 NAIC 1	0	43,000,371	47,502,605	20,835,000	9,086,979	XXX	120,424,955	0.3	35,764,962	0.1	4,243,080	116,181,875
7.2 NAIC 2	26,530,613	77,704,417	127,422,079	28,044,871	197,269,732	XXX	456,971,712	1.3	6,709,091	0.0	363,280,769	93,690,943
7.3 NAIC 3	0	13,000,000	0	0	43,826,336	XXX	56,826,336	0.2	0	0.0	46,826,336	10,000,000
7.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.7 Totals	26,530,613	133,704,788	174,924,684	48,879,871	250,183,047	XXX	634,223,003	1.8	42,474,053	0.1	414,350,185	219,872,818
8. Parent, Subsidiaries and Affiliates												
8.1 NAIC 1	15,531,126	95,688,004	123,843,346	83,549,327	43,784,521	XXX	362,396,324	1.0	0	0.0	0	362,396,324
8.2 NAIC 2	421,856	41,976,140	47,522,369	9,037,060	0	XXX	98,957,425	0.3	0	0.0	0	98,957,425
8.3 NAIC 3	3,922,124	3,836,294	15,382,536	2,327,610	0	XXX	25,468,564	0.1	0	0.0	0	25,468,564
8.4 NAIC 4	55,795	201,143	18,813,667	29,394	0	XXX	19,099,999	0.1	0	0.0	0	19,099,999
8.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.7 Totals	19,930,901	141,701,581	205,561,918	94,943,391	43,784,521	XXX	505,922,312	1.4	0	0.0	0	505,922,312
9. SVO Identified Funds												
9.1 NAIC 1	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.2 NAIC 2	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.3 NAIC 3	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.4 NAIC 4	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.5 NAIC 5	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.6 NAIC 6	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
9.7 Totals	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
10. Unaffiliated Bank Loans												
10.1 NAIC 1	573,522	343,629,480	71,571,570	74,581,810	1,290,891	XXX	491,647,273	1.4	518,920,565	1.6	0	491,647,273
10.2 NAIC 2	2,169,990	1,321,576,862	64,511,310	31,346,027	0	XXX	1,419,604,189	4.1	405,857,710	1.3	0	1,419,604,189
10.3 NAIC 3	12,901,589	74,025,488	32,109,489	12,594,567	0	XXX	131,631,133	0.4	120,256,109	0.4	0	131,631,133
10.4 NAIC 4	0	80,579,114	53,073,825	0	408,485	XXX	134,061,424	0.4	210,170,815	0.7	0	134,061,424
10.5 NAIC 5	153,463	73,426,459	26,297,001	0	0	XXX	99,876,923	0.3	36,261,338	0.1	0	99,876,923
10.6 NAIC 6	74,268	0	0	0	515,698	XXX	589,966	0.0	29,089	0.0	0	589,966
10.7 Totals	15,872,832	1,893,237,403	247,563,195	118,522,404	2,215,074	XXX	2,277,410,908	6.5	1,291,495,626	4.1	0	2,277,410,908
11. Unaffiliated Certificates of Deposit												
11.1 NAIC 1	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.2 NAIC 2	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.3 NAIC 3	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.4 NAIC 4	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.5 NAIC 5	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.6 NAIC 6	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
11.7 Totals	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1A - SECTION 1 (Continued)

Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

	1	2	3	4	5	6	7	8	9	10	11	12
NAIC Designation	1 Year or Less	Over 1 Year Through 5 Years	Over 5 Years Through 10 Years	Over 10 Years Through 20 Years	Over 20 Years	No Maturity Date	Total Current Year	Col. 7 as a % of Line 12.7	Total from Col. 7 Prior Year	% From Col. 8 Prior Year	Total Publicly Traded	Total Privately Placed (a)
12. Total Bonds Current Year												
12.1 NAIC 1	(d) 2,216,620,251	4,531,164,815	4,699,866,716	2,445,476,561	1,633,381,421	0	15,526,509,764	44.4	XXX	XXX	5,062,508,036	10,464,001,728
12.2 NAIC 2	(d) 2,065,050,727	6,815,804,371	4,730,817,050	2,294,779,767	1,365,170,088	0	17,271,622,003	49.4	XXX	XXX	7,632,316,683	9,639,305,320
12.3 NAIC 3	(d) 98,674,318	555,619,839	666,525,499	63,646,175	71,816,131	0	1,456,281,962	4.2	XXX	XXX	365,307,025	1,090,974,937
12.4 NAIC 4	(d) 37,946,381	216,550,464	166,988,838	32,718,446	408,485	0	454,612,614	1.3	XXX	XXX	58,991,241	395,621,373
12.5 NAIC 5	(d) 26,286,077	99,194,126	73,349,826	9,504,671	1,054,746	(c)	209,389,446	0.6	XXX	XXX	13,821,125	195,568,321
12.6 NAIC 6	(d) 7,451,526	9,002,049	3,716,869	3,768,284	7,231,645	0	31,170,373	0.1	XXX	XXX	2,305,792	28,864,581
12.7 Totals	4,452,029,280	12,227,335,664	10,341,264,798	4,849,893,904	3,079,062,516	0	(b) 34,949,586,162	100.0	XXX	XXX	13,135,249,902	21,814,336,260
12.8 Line 12.7 as a % of Col. 7	12.7	35.0	29.6	13.9	8.8	0.0	100.0	XXX	XXX	XXX	37.6	62.4
13. Total Bonds Prior Year												
13.1 NAIC 1	2,430,623,305	7,825,654,334	5,078,542,937	2,154,180,944	579,140,708	0	XXX	XXX	18,068,142,228	56.9	7,358,901,363	10,709,240,865
13.2 NAIC 2	749,099,998	4,790,735,587	3,970,704,208	1,510,411,305	1,273,885,222	0	XXX	XXX	12,294,836,321	38.7	9,071,622,498	3,223,213,823
13.3 NAIC 3	51,925,204	468,132,944	189,964,191	33,134,593	19,799,906	0	XXX	XXX	762,956,837	2.4	478,331,098	284,625,739
13.4 NAIC 4	28,539,372	177,335,947	294,830,032	33,934,096	10,636,807	0	XXX	XXX	545,276,253	1.7	253,572,677	291,703,577
13.5 NAIC 5	5,755,766	50,148,497	10,597,977	2,585,919	870,211	0	XXX	XXX	(c) 69,958,371	0.2	16,161,631	53,796,740
13.6 NAIC 6	10,141,840	4,385,326	1,147,490	9,088,997	9,214,173	0	XXX	XXX	(c) 33,977,827	0.1	16,536,667	17,441,161
13.7 Totals	3,276,085,485	13,316,392,636	9,545,786,835	3,743,335,854	1,893,547,027	0	XXX	XXX	(b) 31,775,147,837	100.0	17,195,125,933	14,580,021,904
13.8 Line 13.7 as a % of Col. 9	10.3	41.9	30.0	11.8	6.0	0.0	XXX	XXX	100.0	XXX	54.1	45.9
14. Total Publicly Traded Bonds												
14.1 NAIC 1	468,377,461	1,762,783,024	1,218,162,492	881,869,667	731,315,392	0	5,062,508,036	14.5	7,358,901,363	23.2	5,062,508,036	XXX
14.2 NAIC 2	362,661,308	3,511,442,475	1,960,490,392	1,024,412,519	773,309,990	0	7,632,316,684	21.8	9,071,622,498	28.5	7,632,316,684	XXX
14.3 NAIC 3	40,582,810	186,845,292	77,750,065	10,653,826	49,475,033	0	365,307,026	1.0	478,331,098	1.5	365,307,026	XXX
14.4 NAIC 4	14,565,538	30,650,984	12,064,410	1,710,309	0	0	58,991,241	0.2	253,572,677	0.8	58,991,241	XXX
14.5 NAIC 5	1,468,941	3,025,993	8,477,613	724,028	124,550	0	13,821,125	0.0	16,161,631	0.1	13,821,125	XXX
14.6 NAIC 6	603,592	1,030,926	439,693	202,923	28,658	0	2,305,792	0.0	16,536,667	0.1	2,305,792	XXX
14.7 Totals	888,259,650	5,495,778,694	3,277,384,665	1,919,573,272	1,554,253,623	0	13,135,249,904	37.6	17,195,125,933	54.1	13,135,249,904	XXX
14.8 Line 14.7 as a % of Col. 7	6.8	41.8	25.0	14.6	11.8	0.0	100.0	XXX	XXX	XXX	100.0	XXX
14.9 Line 14.7 as a % of Line 12.7, Col. 7, Section 12	2.5	15.7	9.4	5.5	4.4	0.0	37.6	XXX	XXX	XXX	37.6	XXX
15. Total Privately Placed Bonds												
15.1 NAIC 1	1,748,242,790	2,768,381,791	3,481,704,224	1,563,606,894	902,066,029	0	10,464,001,728	29.9	10,709,240,865	33.7	XXX	10,464,001,728
15.2 NAIC 2	1,702,389,419	3,304,361,896	2,770,326,658	1,270,367,248	591,860,098	0	9,639,305,319	27.6	9,639,305,319	10.1	XXX	9,639,305,319
15.3 NAIC 3	58,091,508	368,774,547	588,775,434	52,992,349	22,341,098	0	1,090,974,936	3.1	284,625,739	0.9	XXX	1,090,974,936
15.4 NAIC 4	23,380,843	185,899,480	154,924,428	31,008,137	408,485	0	395,621,373	1.1	291,703,577	0.9	XXX	395,621,373
15.5 NAIC 5	24,817,136	96,168,133	64,872,213	8,780,643	930,196	0	195,568,321	0.6	53,796,740	0.2	XXX	195,568,321
15.6 NAIC 6	6,847,934	7,971,123	3,277,176	3,565,361	7,202,987	0	28,864,581	0.1	17,441,161	0.1	XXX	28,864,581
15.7 Totals	3,563,769,630	6,731,556,970	7,063,880,133	2,930,320,632	1,524,808,893	0	21,814,336,258	62.4	14,580,021,904	45.9	XXX	21,814,336,258
15.8 Line 15.7 as a % of Col. 7	16.3	30.9	32.4	13.4	7.0	0.0	100.0	XXX	XXX	XXX	XXX	100.0
15.9 Line 15.7 as a % of Line 12.7, Col. 7, Section 12	10.2	19.3	20.2	8.4	4.4	0.0	62.4	XXX	XXX	XXX	XXX	62.4

(a) Includes \$ 14,964,868,479 freely tradable under SEC Rule 144 or qualified for resale under SEC Rule 144A.
(b) Includes \$ 1,201,622,419 current year of bonds with Z designations and \$ 1,085,347,541 prior year of bonds with Z designations. The letter "Z" means the NAIC designation was not assigned by the Securities Valuation Office (SVO) at the date of the statement.
(c) Includes \$ 102,166,634 current year, \$ 30,722,496 prior year of bonds with 5GI designations and \$ 27,474,029 current year, \$ 2,618,758 prior year of bonds with 6* designations. "5GI" means the NAIC designation was assigned by the (SVO) in reliance on the insurer's certification that the issuer is current in all principal and interest payments. "6*" means the NAIC designation was assigned by the SVO due to inadequate certification of principal and interest payments.
(d) Includes the following amount of short-term and cash equivalent bonds by NAIC designation: NAIC 1 \$ 319,921,575 ; NAIC 2 \$ 1,297,760,304 ; NAIC 3 \$; NAIC 4 \$ 0 ; NAIC 5 \$ 0 ; NAIC 6 \$ 0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1A - SECTION 2

Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Type and Subtype of Issues

Distribution by Type	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 12.09	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed
1. U.S. Governments												
1.01 Issuer Obligations	0	0	0	0	0	XXX	0	0.0	16,276,469	0.1	0	0
1.02 Residential Mortgage-Backed Securities	10,774,533	33,777,722	26,070,426	21,972,663	6,307,403	XXX	98,902,747	0.3	86,744,288	0.3	98,902,748	(1)
1.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	536,459	0.0	0	0
1.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
1.05 Totals	10,774,533	33,777,722	26,070,426	21,972,663	6,307,403	XXX	98,902,747	0.3	103,557,216	0.3	98,902,748	(1)
2. All Other Governments												
2.01 Issuer Obligations	1,409,473	6,672,294	7,450,161	3,633,069	0	XXX	19,164,997	0.1	17,697,338	0.1	0	19,164,997
2.02 Residential Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
2.05 Totals	1,409,473	6,672,294	7,450,161	3,633,069	0	XXX	19,164,997	0.1	17,697,338	0.1	0	19,164,997
3. U.S. States, Territories and Possessions, Guaranteed												
3.01 Issuer Obligations	6,697,295	97,732,881	80,152,426	6,102,171	0	XXX	190,684,773	0.5	302,358,798	1.0	190,684,774	(1)
3.02 Residential Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
3.05 Totals	6,697,295	97,732,881	80,152,426	6,102,171	0	XXX	190,684,773	0.5	302,358,798	1.0	190,684,774	(1)
4. U.S. Political Subdivisions of States, Territories and Possessions, Guaranteed												
4.01 Issuer Obligations	60,456,501	108,919,064	61,483,132	40,068,310	1,759,227	XXX	272,686,234	0.8	364,462,071	1.1	272,686,233	1
4.02 Residential Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
4.05 Totals	60,456,501	108,919,064	61,483,132	40,068,310	1,759,227	XXX	272,686,234	0.8	364,462,071	1.1	272,686,233	1
5. U.S. Special Revenue & Special Assessment Obligations etc., Non-Guaranteed												
5.01 Issuer Obligations	124,361,703	489,026,249	391,632,848	296,511,043	73,196,448	XXX	1,374,728,291	3.9	1,178,297,276	3.7	1,373,634,096	1,094,195
5.02 Residential Mortgage-Backed Securities	14,668,653	65,557,246	68,490,282	104,652,491	63,553,103	XXX	316,921,775	0.9	625,342,398	2.0	316,919,418	2,357
5.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	3,207,274	0.0	0	0
5.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	427,331,577	1.3	0	0
5.05 Totals	139,030,356	554,583,495	460,123,130	401,163,534	136,749,551	XXX	1,691,650,066	4.8	2,234,178,525	7.0	1,690,553,514	1,096,552
6. Industrial and Miscellaneous												
6.01 Issuer Obligations	2,555,597,430	4,307,155,006	5,647,711,806	2,900,711,164	2,118,348,107	XXX	17,529,523,513	50.2	17,434,220,836	54.9	9,505,582,123	8,023,941,390
6.02 Residential Mortgage-Backed Securities	328,375,097	1,178,054,898	533,872,625	190,424,405	91,640,565	XXX	2,322,367,590	6.6	1,401,039,922	4.4	473,104,558	1,849,263,032
6.03 Commercial Mortgage-Backed Securities	322,395,792	563,114,806	606,636,704	22,757,842	445,308	XXX	1,515,350,452	4.3	818,805,742	2.6	380,573,431	1,134,777,021
6.04 Other Loan-Backed and Structured Securities ...	964,958,457	3,208,681,727	2,289,714,590	1,000,715,076	427,629,713	XXX	7,891,699,563	22.6	7,764,857,710	24.4	108,812,335	7,782,887,228
6.05 Totals	4,171,326,776	9,257,006,437	9,077,935,725	4,114,608,487	2,638,063,693	XXX	29,258,941,118	83.7	27,418,924,209	86.3	10,468,072,447	18,790,868,671
7. Hybrid Securities												
7.01 Issuer Obligations	26,530,613	133,704,788	174,924,684	48,879,871	250,183,048	XXX	634,223,004	1.8	42,474,053	0.1	414,350,185	219,872,819
7.02 Residential Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.04 Other Loan-Backed and Structured Securities ...	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
7.05 Totals	26,530,613	133,704,788	174,924,684	48,879,871	250,183,048	XXX	634,223,004	1.8	42,474,053	0.1	414,350,185	219,872,819
8. Parent, Subsidiaries and Affiliates												
8.01 Issuer Obligations	17,989,283	65,358,826	17,645,506	19,473,956	0	XXX	120,467,571	0.3	0	0.0	0	120,467,571
8.02 Residential Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.03 Commercial Mortgage-Backed Securities	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.04 Other Loan-Backed and Structured Securities ...	1,941,618	76,342,755	187,916,413	75,469,436	43,784,521	XXX	385,454,743	1.1	0	0.0	0	385,454,743
8.05 Affiliated Bank Loans - Issued	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.06 Affiliated Bank Loans - Acquired	0	0	0	0	0	XXX	0	0.0	0	0.0	0	0
8.07 Totals	19,930,901	141,701,581	205,561,919	94,943,392	43,784,521	XXX	505,922,314	1.4	0	0.0	0	505,922,314

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY
SCHEDULE D - PART 1A - SECTION 2 (Continued)

Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Type and Subtype of Issues

	1	2	3	4	5	6	7	8	9	10	11	12
Distribution by Type	1 Year or Less	Over 1 Year Through 5 Years	Over 5 Years Through 10 Years	Over 10 Years Through 20 Years	Over 20 Years	No Maturity Date	Total Current Year	Col. 7 as a % of Line 12.09	Total from Col. 7 Prior Year	% From Col. 8 Prior Year	Total Publicly Traded	Total Privately Placed
9. SVO Identified Funds												
9.01 Exchange Traded Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	0
10. Unaffiliated Bank Loans												
10.01 Unaffiliated Bank Loans - Issued	0	119,024,017	112,667,070	28,151,687	0	XXX	259,842,774	0.7	145,123,494	0.5	0	259,842,774
10.02 Unaffiliated Bank Loans - Acquired	15,872,833	1,774,213,387	134,896,124	90,370,718	2,215,074	XXX	2,017,568,136	5.8	1,146,372,132	3.6	0	2,017,568,136
10.03 Totals	15,872,833	1,893,237,404	247,563,194	118,522,405	2,215,074	XXX	2,277,410,910	6.5	1,291,495,626	4.1	0	2,277,410,910
11. Unaffiliated Certificates of Deposit												
11.01 Totals	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
12. Total Bonds Current Year												
12.01 Issuer Obligations	2,793,042,298	5,208,569,108	6,381,000,563	3,315,379,584	2,443,486,830	XXX	20,141,478,383	57.6	XXX	XXX	11,756,937,411	8,384,540,972
12.02 Residential Mortgage-Backed Securities	353,818,283	1,277,389,866	628,433,333	317,049,559	161,501,071	XXX	2,738,192,112	7.8	XXX	XXX	888,926,724	1,849,265,388
12.03 Commercial Mortgage-Backed Securities	322,395,792	563,114,806	606,636,704	22,757,842	445,308	XXX	1,515,350,452	4.3	XXX	XXX	380,573,431	1,134,777,021
12.04 Other Loan-Backed and Structured Securities	966,900,075	3,285,024,482	2,477,631,003	1,076,184,512	471,414,234	XXX	8,277,154,306	23.7	XXX	XXX	108,812,335	8,168,341,971
12.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	0	0	0.0	XXX	XXX	0	0
12.06 Affiliated Bank Loans	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
12.07 Unaffiliated Bank Loans	15,872,833	1,893,237,404	247,563,194	118,522,405	2,215,074	XXX	2,277,410,910	6.5	XXX	XXX	0	2,277,410,910
12.08 Unaffiliated Certificates of Deposit	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	0
12.09 Totals	4,452,029,281	12,227,335,666	10,341,264,797	4,849,893,902	3,079,062,517	0	34,949,586,163	100.0	XXX	XXX	13,135,249,901	21,814,336,262
12.10 Line 12.09 as a % of Col. 7	12.7	35.0	29.6	13.9	8.8	0.0	100.0	XXX	XXX	XXX	37.6	62.4
13. Total Bonds Prior Year												
13.01 Issuer Obligations	1,737,778,110	7,070,637,200	6,493,292,234	2,559,444,539	1,494,634,758	XXX	XXX	XXX	19,355,786,842	60.9	14,058,970,115	5,296,816,727
13.02 Residential Mortgage-Backed Securities	370,133,103	875,229,806	502,201,043	262,032,948	103,529,709	XXX	XXX	XXX	2,113,126,608	6.7	1,264,217,525	848,909,083
13.03 Commercial Mortgage-Backed Securities	118,322,159	593,503,532	86,583,467	20,619,440	3,520,877	XXX	XXX	XXX	822,549,474	2.6	354,005,884	468,543,591
13.04 Other Loan-Backed and Structured Securities	987,193,264	4,119,429,627	1,955,076,041	860,334,312	270,156,042	XXX	XXX	XXX	8,192,189,286	25.8	660,522,141	7,531,667,145
13.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	0	0.0	0	0
13.06 Affiliated Bank Loans	0	0	0	0	0	XXX	XXX	XXX	0	0.0	0	0
13.07 Unaffiliated Bank Loans	62,658,850	657,592,472	508,634,049	40,904,615	21,705,641	XXX	XXX	XXX	1,291,495,626	4.1	857,410,268	434,085,358
13.08 Unaffiliated Certificates of Deposit	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13.09 Totals	3,276,085,485	13,316,392,636	9,545,786,835	3,743,335,854	1,893,547,027	0	XXX	XXX	31,775,147,837	100.0	17,195,125,933	14,580,021,904
13.10 Line 13.09 as a % of Col. 9	10.3	41.9	30.0	11.8	6.0	0.0	XXX	XXX	100.0	XXX	54.1	45.9
14. Total Publicly Traded Bonds												
14.01 Issuer Obligations	702,874,716	4,985,762,391	2,857,797,947	1,732,601,214	1,477,901,145	XXX	11,756,937,413	33.6	14,058,970,115	44.2	11,756,937,413	XXX
14.02 Residential Mortgage-Backed Securities	114,406,509	317,227,740	198,260,368	182,708,286	76,323,820	XXX	888,926,723	2.5	1,264,217,525	4.0	888,926,723	XXX
14.03 Commercial Mortgage-Backed Securities	59,632,167	116,337,326	204,603,938	0	0	XXX	380,573,431	1.1	354,005,884	1.1	380,573,431	XXX
14.04 Other Loan-Backed and Structured Securities	11,346,257	76,451,237	16,722,412	4,263,772	28,658	XXX	108,812,336	0.3	660,522,141	2.1	108,812,336	XXX
14.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	0	XXX
14.06 Affiliated Bank Loans	0	0	0	0	0	XXX	0	0.0	0	0.0	0	XXX
14.07 Unaffiliated Bank Loans	0	0	0	0	0	XXX	0	0.0	857,410,268	2.7	0	XXX
14.08 Unaffiliated Certificates of Deposit	0	0	0	0	0	XXX	0	0.0	XXX	XXX	0	XXX
14.09 Totals	888,259,649	5,495,778,694	3,277,384,665	1,919,573,272	1,554,253,623	0	13,135,249,903	37.6	17,195,125,933	54.1	13,135,249,903	XXX
14.10 Line 14.09 as a % of Col. 7	6.8	41.8	25.0	14.6	11.8	0.0	100.0	XXX	XXX	XXX	100.0	XXX
14.11 Line 14.09 as a % of Line 12.09, Col. 7, Section 12	2.5	15.7	9.4	5.5	4.4	0.0	37.6	XXX	XXX	XXX	37.6	XXX
15. Total Privately Placed Bonds												
15.01 Issuer Obligations	2,090,167,582	222,806,717	3,523,202,616	1,582,778,370	965,585,685	XXX	8,384,540,970	24.0	5,296,816,727	16.7	XXX	8,384,540,970
15.02 Residential Mortgage-Backed Securities	239,411,774	960,162,126	430,172,965	134,341,273	85,177,251	XXX	1,849,265,389	5.3	848,909,083	2.7	XXX	1,849,265,389
15.03 Commercial Mortgage-Backed Securities	262,763,625	446,777,480	402,032,766	22,757,842	445,308	XXX	1,134,777,021	3.2	468,543,591	1.5	XXX	1,134,777,021
15.04 Other Loan-Backed and Structured Securities	955,553,818	3,208,573,245	2,460,908,591	1,071,920,740	471,385,576	XXX	8,168,341,970	23.4	7,531,667,145	23.7	XXX	8,168,341,970
15.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	0	0	0.0	0	0.0	XXX	0
15.06 Affiliated Bank Loans	0	0	0	0	0	XXX	0	0.0	0	0.0	XXX	0
15.07 Unaffiliated Bank Loans	15,872,833	1,893,237,404	247,563,194	118,522,405	2,215,074	XXX	2,277,410,910	6.5	434,085,358	1.4	XXX	2,277,410,910
15.08 Unaffiliated Certificates of Deposit	0	0	0	0	0	XXX	0	0.0	XXX	XXX	XXX	0
15.09 Totals	3,563,769,632	6,731,556,972	7,063,880,132	2,930,320,630	1,524,808,894	0	21,814,336,260	62.4	14,580,021,904	45.9	XXX	21,814,336,260
15.10 Line 15.09 as a % of Col. 7	16.3	30.9	32.4	13.4	7.0	0.0	100.0	XXX	XXX	XXX	XXX	100.0
15.11 Line 15.09 as a % of Line 12.09, Col. 7, Section 12	10.2	19.3	20.2	8.4	4.4	0.0	62.4	XXX	XXX	XXX	XXX	62.4

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DA - VERIFICATION BETWEEN YEARS

Short-Term Investments

	1	2	3	4	5
	Total	Bonds	Mortgage Loans	Other Short-term Investment Assets (a)	Investments in Parent, Subsidiaries and Affiliates
1. Book/adjusted carrying value, December 31 of prior year	476,420,524	476,420,524	0	0	0
2. Cost of short-term investments acquired	433,155,035	433,155,035			
3. Accrual of discount	742,798	742,798			
4. Unrealized valuation increase (decrease)	0				
5. Total gain (loss) on disposals	(87,555)	(87,555)			
6. Deduct consideration received on disposals	520,546,624	520,546,624			
7. Deduct amortization of premium	0				
8. Total foreign exchange change in book/adjusted carrying value	0				
9. Deduct current year's other than temporary impairment recognized	0				
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	389,684,178	389,684,178	0	0	0
11. Deduct total nonadmitted amounts	0				
12. Statement value at end of current period (Line 10 minus Line 11)	389,684,178	389,684,178	0	0	0

(a) Indicate the category of such assets, for example, joint ventures, transportation equipment:

SCHEDULE DB - PART A - VERIFICATION BETWEEN YEARS

Options, Caps, Floors, Collars, Swaps and Forwards

1.	Book/adjusted carrying value, December 31, prior year (Line 10, prior year)	706,855,811
2.	Cost paid/(consideration received) on additions:	
2.1	Current year paid/(consideration received) at time of acquisition, still open, Section 1, Column 12	494,662,542
2.2	Current year paid/(consideration received) at time of acquisition, terminated, Section 2, Column 14	0494,662,542
3.	Unrealized valuation increase/(decrease):	
3.1	Section 1, Column 17	(572,364,216)
3.2	Section 2, Column 19	0(572,364,216)
4.	SSAP No. 108 Adjustments	
5.	Total gain (loss) on termination recognized, Section 2, Column 22	277,376,843
6.	Considerations received/(paid) on terminations, Section 2, Column 15	277,376,843
7.	Amortization:	
7.1	Section 1, Column 19	(249,134,738)
7.2	Section 2, Column 21	(207,970,174)(457,104,912)
8.	Adjustment to the book/adjusted carrying value of hedged item:	
8.1	Section 1, Column 20	0
8.2	Section 2, Column 23	00
9.	Total foreign exchange change in book/adjusted carrying value:	
9.1	Section 1, Column 18	40,966
9.2	Section 2, Column 20	040,966
10.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6+7+8+9)	172,090,191
11.	Deduct nonadmitted assets	
12.	Statement value at end of current period (Line 10 minus Line 11)	172,090,191

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1.	Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)	
2.	Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cumulative Cash Change Column)	
3.1	Add:	
	Change in variation margin on open contracts - Highly effective hedges	
3.11	Section 1, Column 15, current year minus	
3.12	Section 1, Column 15, prior year	0
	Change in variation margin on open contracts - All other	
3.13	Section 1, Column 18, current year minus	
3.14	Section 1, Column 18, prior year	00
3.2	Add:	
	Change in adjustment to basis of hedged item	
3.21	Section 1, Column 17, current year to date minus	
3.22	Section 1, Column 17, prior year	0
	Change in amount recognized	
3.23	Section 1, Column 19, current year to date minus	
3.24	Section 1, Column 19, prior year plus	
3.25	SSAP No. 108 Adjustments	00
3.3	Subtotal (Line 3.1 minus Line 3.2)	0
4.1	Cumulative variation margin on terminated contracts during the year (Section 2, Column 15)	3,074,366
4.2	Less:	
4.21	Amount used to adjust basis of hedged item (Section 2, Column 17)	0
4.22	Amount recognized (Section 2, Column 16)	3,074,366
4.23	SSAP No. 108 Adjustments	3,074,366
4.3	Subtotal (Line 4.1 minus Line 4.2)	0
5.	Dispositions gains (losses) on contracts terminated in prior year:	
5.1	Total gain (loss) recognized for terminations in prior year	
5.2	Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	
6.	Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	0
7.	Deduct total nonadmitted amounts	
8.	Statement value at end of current period (Line 6 minus Line 7)	0

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open

N O N E

Schedule DB-Part C-Section 2-Reconciliation of Replication (Synthetic Asset) Transactions Open

N O N E

SCHEDULE DB - VERIFICATION

Verification of Book/Adjusted Carrying Value, Fair Value and Potential Exposure of all Open Derivative Contracts

		Book/Adjusted Carrying Value Check
1.	Part A, Section 1, Column 14.....	172,090,190
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance	0
3.	Total (Line 1 plus Line 2)	172,090,190
4.	Part D, Section 1, Column 6	872,965,553
5.	Part D, Section 1, Column 7	(700,875,364)
6.	Total (Line 3 minus Line 4 minus Line 5)	0
		Fair Value Check
7.	Part A, Section 1, Column 16	211,309,661
8.	Part B, Section 1, Column 13	
9.	Total (Line 7 plus Line 8)	211,309,661
10.	Part D, Section 1, Column 9	281,107,417
11.	Part D, Section 1, Column 10	(69,797,756)
12.	Total (Line 9 minus Line 10 minus Line 11)	0
		Potential Exposure Check
13.	Part A, Section 1, Column 21	57,659,761
14.	Part B, Section 1, Column 20	
15.	Part D, Section 1, Column 12	57,659,761
16.	Total (Line 13 plus Line 14 minus Line 15)	0

SCHEDULE E - PART 2 - VERIFICATION BETWEEN YEARS

(Cash Equivalents)

	1	2	3	4
	Total	Bonds	Money Market Mutual funds	Other (a)
1. Book/adjusted carrying value, December 31 of prior year	279,044,687	157,169,559	121,875,127	0
2. Cost of cash equivalents acquired	99,903,606,155	26,568,942,734	73,334,663,422	0
3. Accrual of discount	14,187,427	14,187,427		0
4. Unrealized valuation increase (decrease)	0			0
5. Total gain (loss) on disposals	(1,203)	(1,203)		0
6. Deduct consideration received on disposals	98,661,145,292	25,512,300,817	73,148,844,475	0
7. Deduct amortization of premium	0	0	0	0
8. Total foreign exchange change in book/adjusted carrying value	0	0	0	0
9. Deduct current year's other than temporary impairment recognized	0	0	0	0
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	1,535,691,774	1,227,997,700	307,694,074	0
11. Deduct total nonadmitted amounts	0	0	0	0
12. Statement value at end of current period (Line 10 minus Line 11)	1,535,691,774	1,227,997,700	307,694,074	0

(a) Indicate the category of such investments, for example, joint ventures, transportation equipment:

Schedule A - Part 1 - Real Estate Owned

N O N E

Schedule A - Part 2 - Real Estate Acquired and Additions Made

N O N E

Schedule A - Part 3 - Real Estate Disposed

N O N E

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

1	2	Location		5	6	7	8	Change in Book Value/Recorded Investment					14	15
		3	4					9	10	11	12	13		
Loan Number	Code	City	State	Loan Type	Date Acquired	Rate of Interest	Book Value/Recorded Investment Excluding Accrued Interest	Unrealized Valuation Increase (Decrease)	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Foreign Exchange Change in Book Value	Value of Land and Buildings	Date of Last Appraisal or Valuation
121836GH7		Various	FL		12/22/2022	7.947	5,049,088	0	(175)		0	0	5,004,270	12/22/2022
151315BC1		Various	AZ		03/01/2022	6.270	456,697	0	0		0	0	456,697	03/01/2022
1550201J1		Various	TX		07/01/2021	3.687	2,546,919	0	(7,357)		0	0	2,426,305	07/01/2021
155020JK9		Various	NC		09/01/2021	2.870	5,736,064	0	850,302		0	0	5,430,156	09/01/2021
155020KL3		Various	TX		10/01/2021	2.990	4,732,824	0	2,190,206		0	0	4,512,769	10/01/2021
155020LM0		Various	FL		11/01/2021	2.180	13,702,712	0	(386,622)		0	0	12,834,968	11/01/2021
155020MN7		Various	CA		12/01/2021	2.240	10,435,372	0	84,289		0	0	9,853,835	12/01/2021
155020NO4		Various	TX		01/03/2022	2.560	15,539,382	0	386,840		0	0	14,626,027	01/03/2022
155020PQ7		Various	VA		02/01/2022	3.290	2,470,244	0	62,860		0	0	2,331,866	02/01/2022
155020QR4		Various	VA		03/01/2022	4.130	3,707,390	0	94,471		0	0	3,519,717	03/01/2022
337945AA7		Various	CA		12/22/2021	4.080	17,531,618	0	2,572,509		0	0	15,682,962	12/22/2021
709301KJ3		Various	FL		07/01/2021	4.168	29,170,516	0	3,040,922		0	0	25,772,504	07/01/2021
709301LK9		Various	TX		08/02/2021	3.772	62,653,941	0	74,833		0	0	57,530,264	08/02/2021
709301ML6		Various	MD		09/01/2021	3.830	57,932,569	0	2,377,866		0	0	51,039,812	09/01/2021
709301MM3		Various	TX		10/01/2021	3.470	70,351,842	0	157,746		0	0	63,973,382	10/01/2021
709301NO0		Various	TX		11/01/2021	3.590	67,184,800	0	(1,822,293)		0	0	59,314,472	11/01/2021
709301P07		Various	TX		12/01/2021	2.750	59,446,066	0	(1,256,110)		0	0	52,761,695	12/01/2021
709301P03		Various	TX		01/03/2022	3.360	26,046,189	0	(55,506)		0	0	23,627,251	01/03/2022
709301R00		Various	TX		02/01/2022	3.560	20,498,001	0	4,248		0	0	18,560,792	02/01/2022
709301SR7		Various	FL		03/01/2022	4.220	7,157,380	0	11,407		0	0	6,635,708	03/01/2022
709301TS4		Various	IL		04/01/2022	4.570	4,296,220	0	10,775		0	0	4,018,126	04/01/2022
0299999. Mortgages in good standing - Residential mortgages-insured or guaranteed							486,645,834	0	8,391,210	0	0	0	439,913,578	XXX
121836AB6		Various	NJ		08/02/2022	7.260	497,805		(313)		0	0	489,594	08/02/2022
121836BC3		Various	MI		08/18/2022	7.490	838,634		(760)		0	0	828,100	08/18/2022
121836CD0		Various	NJ		09/15/2022	7.426	3,911,570		(3,675)		0	0	3,831,985	09/15/2022
121836DE7		Various	NY		10/20/2022	7.476	2,246,903		(1,452)		0	0	2,212,062	10/20/2022
121836EF3		Various	NJ		11/03/2022	7.230	5,566,122		(964)		0	0	5,454,452	11/03/2022
121836FG0		Various	MD		11/17/2022	7.870	16,601,260		(2,241)		0	0	16,603,459	11/17/2022
146738AB5		Various	FL		11/29/2022	10.520	12,324,106		219		0	0	12,325,113	11/29/2022
146738BC2		Various	FL		12/09/2022	11.320	4,778,022		0		0	0	4,778,022	12/09/2022
146738CD9		Various	TX		12/22/2022	11.670	8,862,135		(59)		0	0	8,863,555	12/22/2022
15912ZAB3		Various	CA		12/13/2021	4.829	17,884,867		(399,154)		0	0	14,622,140	12/13/2021
15912ZBC0		Various	CA		11/30/2021	5.079	18,744,212		(98,680)		0	0	15,501,524	11/30/2021
15912ZCD7		Various	CA		01/28/2022	5.095	22,555,569		(134,114)		0	0	18,747,908	01/28/2022
15912ZDE4		Various	CA		06/15/2022	6.880	16,939,153		(125,648)		0	0	15,743,758	06/15/2022
161225AA5		Various	AZ		05/06/2022	5.441	541,306		724		0	0	502,448	05/06/2022
161225AB3		Various	NC		06/09/2022	5.174	1,011,537		110		0	0	921,280	06/09/2022
161225BC0		Various	TN		07/21/2022	7.300	688,660		(1,588)		0	0	668,493	07/21/2022
161225CD7		Various	WA		08/18/2022	7.600	681,261		(616)		0	0	674,767	08/18/2022
161225DE4		Various	WA		09/15/2022	7.480	1,389,364		(1,307)		0	0	1,368,997	09/15/2022
161225EF0		Various	AZ		09/29/2022	7.676	1,322,118		(373)		0	0	1,316,278	09/29/2022
161225FG7		Various	NY		11/03/2022	7.570	12,994,084		(2,064)		0	0	12,925,820	11/03/2022
161225GH7		Various	NY		11/17/2022	7.574	11,465,109		(1,040)		0	0	11,466,155	11/17/2022
161225HJ9		Various	NC		12/22/2022	8.810	8,682,331		(264)		0	0	8,682,590	12/22/2022
20258ZZ9		Various	OH		09/30/2022	3.760	91,680,000				0	0	78,375,380	09/30/2022
209999ZAZ		Various	SC		09/30/2019	3.580	80,000,000				0	0	74,013,456	09/30/2022
209999ZB0		Various	SC		11/15/2019	3.250	44,500,000				0	0	40,796,723	09/30/2022
209999ZC8		Various	SC		06/18/2020	3.260	39,959,924				0	0	36,749,057	09/30/2022
243820AB3		Various	CA		09/29/2022	7.706	5,484,857		65,144		0	0	5,279,980	09/29/2022
243820IIX1		Various	CA		06/28/2022	5.780	14,031,232		(26,677)		0	0	12,648,979	06/28/2022
243820XY8		Various	FL		07/21/2022	6.444	28,476,340		(120,571)		0	0	26,408,562	07/21/2022
243820YZ4		Various	FL		08/19/2022	7.370	30,695,938		(43,708)		0	0	29,636,608	08/19/2022

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

1	2	Location		5	6	7	8	Change in Book Value/Recorded Investment					14	15
		3	4					9	10	11	12	13		
Loan Number	Code	City	State	Loan Type	Date Acquired	Rate of Interest	Book Value/Recorded Investment Excluding Accrued Interest	Unrealized Valuation Increase (Decrease)	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Foreign Exchange Change in Book Value	Value of Land and Buildings	Date of Last Appraisal or Valuation
243820ZA8		Various	CA.		09/16/2022	7.919	10,248,297		(897)			0	10,046,203	09/16/2022
243820ZB6		Various	CA.		10/20/2022	7.945	13,714,560		(24,095)			0	13,471,366	10/20/2022
243820ZC4		Various	CA.		11/03/2022	8.050	24,306,121		(6,507)			0	23,763,861	11/03/2022
243820ZD2		Various	CA.		11/17/2022	8.256	20,379,289		(3,351)			0	20,071,723	11/17/2022
243820ZE0		Various	CA.		12/22/2022	8.256	12,082,308		(417)			0	12,082,756	12/22/2022
365#AA7*7		Various	IN.		09/30/2022	6.690	9,991,800					0	9,884,658	09/30/2022
62938XAA2		Various	FL.		03/09/2022	4.926	13,419,816		(31,049)			0	11,600,961	03/09/2022
62938XBB9		Various	FL.		04/21/2022	5.374	13,651,296		(34,715)			0	12,097,049	04/21/2022
62938XCC6		Various	FL.		05/12/2022	6.270	13,391,663		(24,089)			0	12,364,615	05/12/2022
62938XDD3		Various	FL.		06/09/2022	6.587	14,411,745		(21,014)			0	13,595,834	06/09/2022
62938XEE0		Various	FL.		07/15/2022	7.322	18,911,445		(94,753)			0	18,239,381	07/15/2022
62938XFF6		Various	FL.		08/19/2022	7.634	30,317,810		(44,216)			0	29,568,906	08/19/2022
62938XGG3		Various	FL.		09/16/2022	7.833	10,176,647		(13,934)			0	10,003,927	09/16/2022
62938XHH0		Various	AZ.		09/16/2022	8.115	3,907,002		(5,404)			0	3,861,182	09/16/2022
62938XJJ4		Various	FL.		09/30/2022	7.868	8,926,921		(7,728)			0	8,764,316	09/30/2022
62938XKK9		Various	FL.		09/30/2022	7.699	6,081,387		(4,597)			0	5,940,743	09/30/2022
62938XMM3		Various	FL.		10/20/2022	8.143	14,538,037		(18,030)			0	14,369,764	10/20/2022
62938XNN0		Various	FL.		11/17/2022	8.510	565,710		(136)			0	560,969	11/17/2022
62938XPP3		Various	FL.		11/17/2022	8.360	50,905,112		(6,827)			0	50,000,000	11/17/2022
62938XQQ0		Various	CA.		12/22/2022	8.909	29,285,803		(1,031)			0	29,286,699	12/22/2022
671483AA3		Various	CA.		06/09/2022	5.568	2,562,359		2,736			0	2,409,618	06/09/2022
671483BB0		Various	SC.		07/21/2022	6.500	1,667,114		(1,888)			0	1,590,342	07/21/2022
671483CC8		Various	TX.		09/01/2022	6.789	1,025,549		(634)			0	987,149	09/01/2022
671483DD5		Various	AZ.		09/29/2022	7.260	2,224,879		(882)			0	2,184,220	09/29/2022
671483DE2		Various	TX.		10/20/2022	8.375	460,393		(181)			0	473,502	10/20/2022
671483EF8		Various	MD.		12/22/2022	8.375	43,128		0			0	43,098	12/22/2022
685422Z23		Various	GA.		09/30/2022	5.130	37,220,482		3,329			0	36,817,939	09/30/2022
69511#YY3		Various	TX.		09/30/2022	4.070	15,000,000					0	13,285,364	09/30/2022
69511#ZZ9		Various	TX.		09/30/2022	5.340	900,861					0	887,752	09/30/2022
749002AA9		Various	CA.		01/15/2022	5.582	20,176,286		(462,199)			0	17,349,370	01/15/2022
749002AB7		Various	NY.		01/25/2022	5.570	27,324,532		(337,878)			0	23,414,749	01/25/2022
749002AC5		Various	NY.		02/24/2022	5.659	30,704,514		(356,809)			0	26,679,469	02/24/2022
749002AD3		Various	NY.		03/29/2022	5.415	23,051,622		(90,360)			0	20,110,733	03/29/2022
749002AE1		Various	NY.		05/20/2022	5.854	10,987,823		72,619			0	10,117,893	05/20/2022
749002AF8		Various	NY.		05/20/2022	5.822	22,952,126		99,913			0	21,192,828	05/20/2022
749002AG6		Various	NY.		05/27/2022	5.895	6,279,642		17,867			0	5,817,214	05/27/2022
78415#AA9		Various	MI.		09/30/2022	4.240	57,675,549					0	49,658,706	09/30/2022
78416#ZZ6		Various	MO.		09/30/2022	4.330	28,506,900					0	25,700,364	09/30/2022
78417#AA7		Various	IN.		09/30/2022	6.690	50,164,032					0	47,860,414	09/30/2022
84*284WB3		Various	IN.		09/30/2022	6.690	19,140,933					0	18,655,726	09/30/2022
86106#YY8		Various	SC.		09/30/2022	4.310	13,337,891		17,584			0	13,019,918	09/30/2022
89#625Z21		Various	TN.		09/30/2022	5.590	23,684,133					0	23,351,162	09/30/2022
909055Z21		Various	AZ.		09/30/2022	5.550	50,959,140		24,133			0	51,433,015	09/30/2022
92838ZMM6		Various	CA.		09/27/2021	6.370	22,501,436		(1,122,553)			0	20,742,290	09/27/2021
92838ZMN4		Various	CA.		10/22/2021	4.913	22,999,811		657,248			0	18,193,221	10/22/2021
0399999. Mortgages in good standing - Residential mortgages-all other							1,316,118,325	0	(2,719,816)	0	0	0	1,223,988,214	XXX
N184123		Edgerton	KS.		07/15/2022	4.670	4,958,507	0	236	0	0	0	6,754,761	07/15/2022
N214051		Channahon	IL.		09/10/2021	5.375	6,556,572	0	5,801	0	0	0	12,135,000	09/10/2021
N214071		Denver	CO.		07/29/2021	2.970	12,988,621	0	1,146	0	0	0	21,365,575	07/29/2021
N214081		Dallas	TX.		08/27/2021	2.670	9,991,778	0	1,328	0	0	0	15,950,619	08/27/2021
N214111		The Woodlands	TX.		01/31/2022	2.640	7,193,660		860	0	0	0	11,535,000	01/31/2022
N214121		Austin	TX.		12/15/2021	2.860	9,491,780	0	1,233	0	0	0	17,800,001	12/15/2021

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

1	2	Location		5	6	7	8	Change in Book Value/Recorded Investment					14	15
		3	4					9	10	11	12	13		
Loan Number	Code	City	State	Loan Type	Date Acquired	Rate of Interest	Book Value/Recorded Investment Excluding Accrued Interest	Unrealized Valuation Increase (Decrease)	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Foreign Exchange Change in Book Value	Value of Land and Buildings	Date of Last Appraisal or Valuation
N214131		Centennial	CO.....	.....	11/19/2021 ...	3.020	11,210,398	0	1,459	0	0	0	21,845,000	11/19/2021 ...
N214141		Itasca	IL.....	.....	12/22/2021 ...	2.990	14,986,714	0	1,685	0	0	0	24,165,002	12/22/2021 ...
N216191		Hazlewood	MO.....	.....	09/24/2021 ...	6.675	45,046,487	0	98,861	0	0	0	62,643,281	09/24/2021 ...
N216311		Salt Lake City	UT.....	.....	07/19/2022 ...	11.724	771	0	0	0	27	0	87,743,707	07/19/2022 ...
N219011		Mansfield	MA.....	.....	12/13/2021 ...	2.620	9,361,916	0	1,231	0	0	0	15,218,389	12/13/2021 ...
N219012		Mansfield	MA.....	.....	12/13/2021 ...	3.490	127,483	0	0	0	0	0	207,053	12/13/2021 ...
N219031		Charleston	SC.....	.....	11/04/2021 ...	2.680	19,857,142	0	1,749	0	0	0	39,750,000	11/04/2021 ...
N219041		Hingham	MA.....	.....	12/02/2021 ...	2.990	9,991,396	0	1,294	0	0	0	18,075,424	12/02/2021 ...
N224021		Sedona	AZ.....	.....	11/04/2022 ...	4.500	29,970,378	0	378	0	0	0	95,000,000	11/04/2022 ...
N224031		Newville	PA.....	.....	08/31/2022 ...	6.074	39,715,655	0	15,654	0	0	0	71,887,061	08/31/2022 ...
N224041		Dallas	TX.....	.....	12/21/2022 ...	6.321	39,742,090	0	2,085	0	0	0	64,418,740	12/21/2022 ...
N226021		Arlington	VA.....	.....	05/05/2022 ...	4.490	10,773,489	0	0	0	153,527	0	108,131,878	05/05/2022 ...
N226161		Flower Mound	TX.....	.....	12/02/2022 ...	9.783	85	0	0	0	0	0	28,352	12/02/2022 ...
N229011		Rochester	NY.....	.....	05/03/2022 ...	3.730	13,714,909	0	1,136	0	0	0	27,455,000	05/03/2022 ...
NAG0021		New York	NY.....	.....	07/07/2022 ...	7.782	13,848,764	0	0	0	0	0	66,450,500	07/07/2022 ...
NAG0031		New York	NY.....	.....	12/21/2022 ...	8.884	11,000,000	0	0	0	0	0	198,478,261	12/21/2022 ...
NAG0041		New York	NY.....	.....	09/29/2022 ...	9.480	33,925,000	0	0	0	0	0	313,703,528	09/29/2022 ...
NAG0011		Miramar Beach	FL.....	.....	06/01/2021 ...	5.250	19,660,913	0	0	0	0	0	31,704,276	06/01/2021 ...
NAG0211		Philadelphia	PA.....	.....	06/01/2021 ...	6.050	14,188,315	0	0	0	0	0	32,100,000	06/01/2021 ...
NAG0431		Sacramento	CA.....	.....	06/01/2021 ...	4.650	37,801,631	0	0	0	0	0	35,000,000	06/01/2021 ...
NAG0471		Salt Lake City	UT.....	.....	06/01/2021 ...	5.000	10,824,970	0	0	0	0	0	11,459,116	06/01/2021 ...
NAG0491		Lehi	UT.....	.....	06/01/2021 ...	4.700	18,425,671	0	0	0	0	0	81,300,000	06/01/2021 ...
NAG0511		West Bloomfield	MI.....	.....	06/01/2021 ...	5.250	23,994,141	0	0	0	0	0	73,800,000	06/01/2021 ...
NAG0531		Tucson	AZ.....	.....	06/01/2021 ...	4.750	16,914,693	0	0	0	0	0	17,559,938	06/01/2021 ...
NAG0571		Prescott	AZ.....	.....	06/01/2021 ...	4.500	21,518,014	0	0	0	0	0	22,312,812	06/01/2021 ...
NAG0581		The Woodlands	TX.....	.....	06/01/2021 ...	4.500	19,712,444	0	0	0	0	0	20,449,247	06/01/2021 ...
NAG0641		Chatham	MA.....	.....	06/01/2021 ...	5.100	31,882,609	0	0	0	0	0	107,843,620	06/01/2021 ...
NAG0671		Indianapolis	IN.....	.....	06/01/2021 ...	5.000	20,313,672	0	0	0	0	0	53,100,000	06/01/2021 ...
NAG0681		Austin	TX.....	.....	06/01/2021 ...	4.600	19,101,184	0	0	0	0	0	39,700,000	06/01/2021 ...
NAG0711		Brooklyn	NY.....	.....	06/01/2021 ...	4.750	25,100,000	0	0	0	0	0	75,100,000	06/01/2021 ...
NAG0741		Houston	TX.....	.....	06/01/2021 ...	5.200	36,431,022	0	0	0	0	0	37,336,415	06/01/2021 ...
NAG0751		Jacksonville	FL.....	.....	06/01/2021 ...	5.200	24,321,928	0	0	0	0	0	24,879,462	06/01/2021 ...
NAG0761		Franklin	TN.....	.....	06/01/2021 ...	5.200	26,999,133	0	0	0	0	0	55,458,610	06/01/2021 ...
NAG0771		Miramar Beach	FL.....	.....	06/01/2021 ...	6.000	48,791,927	0	0	0	0	0	67,176,459	06/01/2021 ...
NAG0781		Miramar Beach	FL.....	.....	06/01/2021 ...	6.000	16,863,552	0	0	0	0	0	24,679,931	06/01/2021 ...
NAG0801		Beaverton	OR.....	.....	06/01/2021 ...	4.650	21,891,420	0	0	0	0	0	21,338,674	06/01/2021 ...
NAG0811		Kendall	FL.....	.....	06/01/2021 ...	3.800	82,875,000	0	0	0	0	0	82,875,000	06/01/2021 ...
NAG0821		Indianapolis	IN.....	.....	06/01/2021 ...	4.950	21,111,504	0	0	0	0	0	21,653,007	06/01/2021 ...
NAG0831		Portland	OR.....	.....	06/01/2021 ...	4.450	22,000,000	0	0	0	0	0	22,900,000	06/01/2021 ...
NAG0841		Middleburg	VA.....	.....	06/01/2021 ...	3.750	76,500,000	0	0	0	0	0	76,500,000	06/01/2021 ...
NAG0851		Denver	CO.....	.....	06/01/2021 ...	4.250	71,600,000	0	0	0	0	0	113,600,000	06/01/2021 ...
NAG0861		Avon	IN.....	.....	06/01/2021 ...	3.850	29,000,000	0	0	0	0	0	29,000,000	06/01/2021 ...
NAG0881		Colorado Springs	CO.....	.....	06/01/2021 ...	4.000	22,150,846	0	0	0	0	0	44,000,000	06/01/2021 ...
NAG0891		Louisville	KY.....	.....	06/01/2021 ...	3.000	8,500,000	0	0	0	0	0	17,000,000	06/01/2021 ...
NAG0892		Louisville	KY.....	.....	06/01/2021 ...	3.000	3,500,000	0	0	0	0	0	7,000,000	06/01/2021 ...
NAG0901		Northglen	CO.....	.....	06/01/2021 ...	3.000	27,773,603	0	0	0	0	0	55,547,205	06/01/2021 ...
NAG0911		Greensboro	NC.....	.....	06/01/2021 ...	3.000	17,795,967	0	0	0	0	0	35,591,933	06/01/2021 ...
NAG0931		Colorado Springs	CO.....	.....	06/01/2021 ...	3.250	30,045,120	0	0	0	0	0	37,556,400	06/01/2021 ...
NAG0961		Columbus	OH.....	.....	06/01/2021 ...	3.250	35,700,000	0	0	0	0	0	51,000,000	06/01/2021 ...
NAG0971		Beloit	WI.....	.....	02/24/2022 ...	4.000	5,712,879	0	0	0	0	0	5,854,278	02/24/2022 ...
0599999. Mortgages in good standing - Commercial mortgages-all other								0	136,136	0	153,554	0	2,733,118,515	XXX
N226091		Brooklyn	NY.....	.....	11/16/2022 ...	13.283	604	0	0	0	4	0	293,999,026	11/16/2022 ...

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

1 Loan Number	2 Code	Location		5 Loan Type	6 Date Acquired	7 Rate of Interest	8 Book Value/Recorded Investment Excluding Accrued Interest	Change in Book Value/Recorded Investment					14 Value of Land and Buildings	15 Date of Last Appraisal or Valuation
		3 City	4 State					9 Unrealized Valuation Increase (Decrease)	10 Current Year's (Amortization)/ Accretion	11 Current Year's Other-Than-Temporary Impairment Recognized	12 Capitalized Deferred Interest and Other	13 Total Foreign Exchange Change in Book Value		
NAC0011		Stafford	TX.....	.....	..02/24/2022	9.984	20,000,000	0	0	0	0	0	20,000,000	..02/24/2022 ...
NAC0022		New York	NY.....	.....	..07/07/2022	12.234	2,593,044	0	0	0	0	0	66,450,500	..07/07/2022 ...
0699999. Mortgages in good standing - Mezzanine Loans							22,593,648	0	0	0	4	0	380,449,526	XXX
0899999. Total Mortgages in good standing							3,088,813,561	0	5,807,530	0	153,558	0	4,777,469,833	XXX
1699999. Total - Restructured Mortgages							0	0	0	0	0	0	0	XXX
2499999. Total - Mortgages with overdue interest over 90 days							0	0	0	0	0	0	0	XXX
3299999. Total - Mortgages in the process of foreclosure							0	0	0	0	0	0	0	XXX
3399999 - Totals							3,088,813,561	0	5,807,530	0	153,558	0	4,777,469,833	XXX

General Interrogatory:

1. Mortgages in good standing \$	unpaid taxes \$	interest due and unpaid.
2. Restructured mortgages \$	unpaid taxes \$	interest due and unpaid.
3. Mortgages with overdue interest over 90 days not in process of foreclosure \$	unpaid taxes \$	interest due and unpaid.
4. Mortgages in process of foreclosure \$	unpaid taxes \$	interest due and unpaid.

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 2

Showing All Mortgage Loans ACQUIRED AND ADDITIONS MADE During the Current Year

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Rate of Interest	7 Actual Cost at Time of Acquisition	8 Additional Investment Made After Acquisition	9 Value of Land and Buildings
	2 City	3 State						
121836GH7	Various	FL		12/22/2022	7.947	5,049,263	.0	5,004,270
151315BC1	Various	AZ		03/01/2022	6.270	467,111	.0	456,697
155020JK7	Various	NC		09/01/2021	2.870	.0	(5,953,194)	5,430,156
155020KL3	Various	TX		10/01/2021	2.990	.0	8,332,449	4,512,769
155020NO4	Various	TX		01/03/2022	2.560	36,256,905	.0	14,626,027
155020PO7	Various	VA		02/01/2022	3.290	4,905,352	.0	2,331,866
155020QR4	Various	NC		03/01/2022	4.130	7,375,727	.0	3,519,717
709301QP3	Various	TX		01/03/2022	3.360	33,562,767	.0	23,627,251
709301RQ0	Various	TX		02/01/2022	3.560	25,985,114	.0	18,560,792
709301SR7	Various	FL		03/01/2022	4.220	8,971,491	.0	6,635,708
709301TS4	Various	IL		04/01/2022	4.570	4,879,319	.0	4,018,126
0299999. Mortgages in good standing - Residential mortgages-insured or guaranteed						127,453,049	2,379,255	88,723,379
121836AB6	Various	NJ		08/02/2022	7.260	500,405	.0	489,594
121836BC3	Various	MI		08/18/2022	7.490	842,221	.0	828,100
121836CD0	Various	NJ		09/15/2022	7.426	3,921,614	.0	3,831,985
121836DE7	Various	NY		10/20/2022	7.476	2,248,355	.0	2,212,062
121836EF3	Various	NJ		11/03/2022	7.230	5,567,086	.0	5,454,452
121836FG0	Various	MD		11/17/2022	7.870	16,603,501	.0	16,603,459
146738AB5	Various	FL		11/29/2022	10.520	12,323,888	.0	12,325,113
146738BC2	Various	FL		12/09/2022	11.320	4,778,022	.0	4,778,022
146738CD9	Various	TX		12/22/2022	11.670	8,862,195	.0	8,863,555
15912ZCD7	Various	CA		01/28/2022	5.054	25,656,238	.0	18,747,908
15912ZDE4	Various	CA		06/15/2022	6.880	19,332,008	.0	15,743,758
161225AA5	Various	AZ		05/06/2022	5.202	543,588	.0	502,448
161225AB3	Various	NC		06/09/2022	5.402	1,016,146	.0	921,280
161225BC0	Various	TN		07/21/2022	7.154	692,356	.0	668,493
161225CD7	Various	WA		08/18/2022	7.600	683,016	.0	674,767
161225DE4	Various	WA		09/15/2022	7.480	1,391,865	.0	1,368,997
161225EF0	Various	AZ		09/29/2022	7.676	1,323,203	.0	1,316,278
161225FG7	Various	NY		11/03/2022	7.570	12,996,148	.0	12,925,820
161225GH7	Various	NY		11/17/2022	7.574	11,466,149	.0	11,466,155
161225HJ9	Various	NC		12/22/2022	8.810	8,682,595	.0	8,682,590
20258#ZZ9	Various	OH		09/30/2022	3.760	88,380,000	3,300,000	78,375,380
243820AB3	Various	CA		09/29/2022	7.706	5,427,660	.0	5,279,980
243820WX1	Various	CA		06/28/2022	6.035	14,102,457	.0	12,648,979
243820XY8	Various	FL		07/21/2022	6.478	30,746,793	.0	26,408,562
243820YZ4	Various	FL		08/19/2022	6.860	31,197,272	.0	29,636,608
243820ZA8	Various	CA		09/16/2022	7.919	10,249,194	.0	10,046,203
243820ZB6	Various	CA		10/20/2022	7.945	13,750,431	.0	13,471,366
243820ZC4	Various	CA		11/03/2022	8.050	24,312,628	.0	23,763,861
243820ZD2	Various	CA		11/17/2022	8.256	20,382,640	.0	20,071,723
243820ZE0	Various	CA		12/22/2022	8.256	12,082,724	.0	12,082,756
365#AA7*7	Various	IN		09/30/2022	6.690	6,740,175	3,251,625	9,884,658
62938XAA2	Various	FL		03/09/2022	4.910	13,707,553	.0	11,600,961
62938XBB9	Various	FL		04/21/2022	5.353	13,754,694	.0	12,097,049
62938XCC6	Various	FL		05/12/2022	6.270	13,968,015	.0	12,364,615
62938XDD3	Various	FL		06/09/2022	6.576	14,585,517	.0	13,595,834
62938XEEO	Various	FL		07/15/2022	7.322	19,665,293	.0	18,239,381
62938XFF6	Various	FL		08/19/2022	7.634	30,700,281	.0	29,568,906
62938XGG3	Various	FL		09/16/2022	7.833	10,204,235	.0	10,003,927
62938XH+0	Various	AZ		09/16/2022	8.115	3,925,491	.0	3,861,182
62938XJJ4	Various	FL		09/30/2022	7.868	8,945,176	.0	8,764,316
62938XKK9	Various	FL		09/30/2022	7.699	6,093,833	.0	5,940,743
62938XMM3	Various	FL		10/20/2022	8.143	14,556,067	.0	14,369,764
62938XNN0	Various	FL		11/17/2022	8.510	565,847	.0	560,969

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 2

Showing All Mortgage Loans ACQUIRED AND ADDITIONS MADE During the Current Year

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Rate of Interest	7 Actual Cost at Time of Acquisition	8 Additional Investment Made After Acquisition	9 Value of Land and Buildings
	2 City	3 State						
62938XPP3	Various	FL .....	.....	11/17/2022	8.360	50,911,938	0	50,000,000
62938XQ00	Various	CA .....	.....	12/22/2022	8.909	29,286,834	0	29,286,699
671483AA3	Various	CA .....	.....	06/09/2022	4.948	2,560,348	0	2,409,618
671483B80	Various	SC .....	.....	07/21/2022	6.456	1,670,308	0	1,590,342
671483B88	Various	TX .....	.....	09/01/2022	6.789	1,028,459	0	987,149
671483C05	Various	AZ .....	.....	09/29/2022	7.260	2,226,695	0	2,184,220
671483D82	Various	TX .....	.....	10/20/2022	8.375	460,574	0	473,502
671483EF8	Various	MD .....	.....	12/22/2022	8.375	43,128 .....	.....	43,098
685422Z23	Various	GA .....	.....	09/30/2022	5.130	37,831,947	66,551	36,817,939
69511#YY3	Various	TX .....	.....	09/30/2022	4.070	15,000,000	0	13,285,364
69511#ZZ9	Various	TX .....	.....	09/30/2022	5.340	6,892,242	104,385	887,752
749002AB7	Various	NY .....	.....	01/25/2022	5.570	31,350,000	0	23,414,749
749002AC5	Various	NY .....	.....	02/24/2022	5.624	36,277,500	0	26,679,469
749002AD3	Various	NY .....	.....	03/29/2022	5.378	24,427,988	0	20,110,733
749002AE1	Various	NY .....	.....	05/20/2022	5.860	12,783,635	0	10,117,893
749002AF8	Various	NY .....	.....	05/20/2022	5.802	24,520,735	0	21,192,828
749002AG6	Various	NY .....	.....	05/27/2022	5.934	6,352,982	0	5,817,214
78415#AA9	Various	MI .....	.....	09/30/2022	4.240	52,666,797	5,008,753	49,658,706
78416#ZZ6	Various	MO .....	.....	09/30/2022	4.330	25,486,864	3,020,036	25,700,364
78417#AA7	Various	IN .....	.....	09/30/2022	6.690	29,512,629	20,651,403	47,860,414
84*284#B3	Various	IN .....	.....	09/30/2022	6.690	19,140,933	0	18,655,726
86106#YY8	Various	SC .....	.....	09/30/2022	4.310	12,097,219	1,223,089	13,019,918
89#625Z21	Various	TN .....	.....	09/30/2022	5.590	43,013,880	(13,182,026)	23,351,162
909055Z1	Various	AZ .....	.....	09/30/2022	5.550	50,935,007	0	51,433,015
0399999. Mortgages in good standing - Residential mortgages-all other						1,063,953,217	23,443,816	986,020,433
N184123	Edgerton	KS .....	.....	07/15/2022	4.670	4,993,750 .....	.....	6,754,761
N214111	The Woodlands	TX .....	.....	01/31/2022	2.640	7,192,800 .....	.....	11,535,000
N216191	Hazlewood	MO .....	.....	09/24/2021	6.680 .....	.....	6,035,273	62,643,281
N216311	Salt Lake City	UT .....	.....	07/19/2022	11.720	744 .....	.....	87,743,707
N224021	Sedona	AZ .....	.....	11/04/2022	4.500	29,970,000 .....	.....	95,000,000
N224031	Newville	PA .....	.....	08/31/2022	6.070	39,700,001 .....	.....	71,887,061
N224041	Dallas	TX .....	.....	12/21/2022	6.320	39,740,005 .....	.....	64,418,740
N226021	Arlington	VA .....	.....	05/05/2022	4.490	3,587,165	7,032,796	108,131,878
N226161	Flower Mound	TX .....	.....	12/02/2022	9.780	85 .....	.....	28,352
N229011	Rochester	NY .....	.....	05/03/2022	3.730	13,713,773 .....	.....	27,455,000
NAC0021	New York	NY .....	.....	07/07/2022	7.780	13,848,764 .....	.....	66,450,500
NAC0031	New York	NY .....	.....	12/21/2022	8.880	11,000,000 .....	.....	198,478,261
NAC0041	New York	NY .....	.....	09/29/2022	9.480	33,925,000 .....	.....	313,703,528
NAG0211	Philadelphia	PA .....	.....	06/01/2021	6.050 .....	.....	335,074	32,100,000
NAG0641	Chatham	MA .....	.....	06/01/2021	5.100 .....	.....	465,314	107,843,620
NAG0711	Brooklyn	NY .....	.....	06/01/2021	4.750 .....	.....	317,000	75,100,000
NAG0771	Miramar Beach	FL .....	.....	06/01/2021	6.000 .....	.....	3,183,390	67,176,459
NAG0781	Miramar Beach	FL .....	.....	06/01/2021	6.000 .....	.....	315,900	24,679,931
NAG0971	Beloit	WI .....	.....	02/24/2022	4.000	15,300,000 .....	.....	5,854,278
0599999. Mortgages in good standing - Commercial mortgages-all other						212,972,087	17,684,747	1,426,984,357
N226091	Brooklyn	NY .....	.....	11/16/2022	13.280	600 .....	.....	293,999,026
NAC0011	Stafford	TX .....	.....	02/24/2022	9.980	20,000,000 .....	.....	20,000,000
NAC0022	New York	NY .....	.....	07/07/2022	12.230	2,593,044 .....	.....	66,450,500
0699999. Mortgages in good standing - Mezzanine Loans						22,593,644	0	380,449,526
0899999. Total Mortgages in good standing						1,426,971,997	43,507,818	2,882,177,695
1699999. Total - Restructured Mortgages						0	0	0
2499999. Total - Mortgages with overdue interest over 90 days						0	0	0
3299999. Total - Mortgages in the process of foreclosure						0	0	0
3399999 - Totals						1,426,971,997	43,507,818	2,882,177,695

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE B - PART 3

Showing All Mortgage Loans DISPOSED, Transferred or Repaid During the Current Year

[illegible]

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identifi- cation	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encum- brances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreci- ation) or (Amorti- zation)/ Accretion	Current Year's Other- Than- Tempo- rary Im- pair- ment Recog- nized	Capital- ized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Invest- ment Income	Commit- ment for Additional Invest- ment	Percent- age of Owner- ship
1199999.	Non-Registered Private Funds - Mortgage Loans - Unaffiliated								0	0	0	0	0	0	0	0	0	0	XXX
000000-00-0.	2725 Sprott Private Resource Lending Fund III LP		Toronto		Sprott Resource Lending Corp		11/29/2022	3.	222,395	222,395	222,395	0					(6,632)	4,777,605	0.500
1399999.	Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated								222,395	222,395	222,395	0	0	0	0	0	(6,632)	4,777,605	XXX
000000-00-0.	6116 Sierra Senior Loan Strategy JV I LLC		New York	NY	Medley Capital LLC		07/16/2015		10,209,829	10,209,829	10,209,829	0					0	0	11.250
000000-00-0.	6117 Monarch Capital Partners III LP		New York	NY	Monarch Alternative Capital GP III LLC		01/12/2015		4,424,941	4,424,941	4,424,941	(621,906)					942,682	1,474,472	2.930
000000-00-0.	6118 Yukon Capital Partners II LP		Minneapolis	MN	Yukon Partners II LLC		07/17/2014	2.	3,846,745	3,846,745	3,846,745	453,868					0	699,424	0.953
000000-00-0.	6119 Northcreek Mezzanine Fund II LP		Cincinnati	OH	Yukon Partners II LLC		01/31/2014	2.	1,164,533	1,164,533	1,164,533	116,993					229,383	348,083	3.250
000000-00-0.	6120 Northcreek Mezzanine Fund III LP		Cincinnati	OH	NMF GP III LLC		09/10/2019	2.	1,779,822	1,779,822	1,779,822	303,564					204,852	393,727	3.025
000000-00-0.	6121 ExWorks Capital Fund I LP		Chicago	IL	ExWorks Capital Fund I GP LP		04/17/2017		0	0	0						0	0	11.007
000000-00-0.	6122 ExWorks Capital Fund II Parallel Vehicle LP		Chicago	IL	ExWorks Capital Fund I GP LP		06/22/2017		0	0	0						0	0	51.065
000000-00-0.	6123 NB Private Equity Credit Opportunities Fund LP		New York	NY	NB Private Equity Credit Opp Assocs LP		06/07/2017		5,315,559	5,315,559	5,315,559	(38,311)					900,902	1,439,119	0.856
000000-00-0.	6124 Yukon Capital Partners III LP		Minneapolis	MN	Yukon Partners III LLC		07/18/2017	2.	2,430,017	2,430,017	2,430,017	438,480					346,752	1,057,289	5.980
000000-00-0.	6125 Monarch Capital Partners IV LP		New York	NY	Yukon Partners II LLC		10/30/2017		6,595,920	6,595,920	6,595,920	(83,867)					3,535,937	1,955,966	2.746
000000-00-0.	6126 Gryphon Mezzanine Partners LP		San Francisco	CA	Gryphon Mezzanine Partners GP LP		11/30/2017		3,892,692	3,892,692	3,892,692	353,661					257,910	448,741	6.340
000000-00-0.	6127 TTGA C-1 MMF LP		San Francisco	CA	TTGA C-1 MMF GP LLC		12/18/2017		0	0	0	0					0	0	65.740
000000-00-0.	6128 World Trade Finance LLC		Oak Brook	IL	ExlWorks Capital LLC		04/20/2020		20	20	20	33,091					47,060	1,357,650	
000000-00-0.	6129 SAAS Capital Fund III		Cincinnati	OH	Gryphon Mezzanine Partners GP LP		08/09/2018		304,854	304,854	304,854	21,986					43,090	225,000	6.716
000000-00-0.	6130 SAAS Capital Fund III (B) LP		Cincinnati	OH	SC GP III LLC		08/26/2020		1,379,758	1,379,758	1,379,758	179,603					187,601	187,500	7.583
000000-00-0.	6131 Great American Capital Partners Fund II LP		Los Angeles	CA	Great American Capital Partners LLC		01/12/2018		3,485,260	3,485,260	3,485,260	40,507					0	0	2.120
000000-00-0.	6132 Sagard Credit Partners LP		Toronto	ON	Sagard Credit Partners Cayman GP Inc		10/09/2018		280,862	280,862	280,862	(1,298,355)					0	4,243,100	7.515
000000-00-0.	6133 PineBridge Private Credit Feeder LP		New York	NY	PineBridge Private Credit Gen Part LP		11/28/2018		5,955,798	5,955,798	5,955,798	1,958,812					2,705,512	1,021,206	10.211
000000-00-0.	6134 Gryphon Mezzanine Partners II Feeder Fund LP		San Francisco	CA	Gryphon Mezzanine Partners II LP		12/20/2019		974,330	974,330	974,330	305,525					133,065	2,435,249	18.420
000000-00-0.	6135 NB Direct Access Insurance SPV LLC		Wilmington	DE	NB Direct Access Associates LP		08/21/2020		5,320,961	5,320,961	5,320,961	4,113,348					316,876	255,793	21.429
000000-00-0.	6136 Caltius Partners III LP		Los Angeles	CA	GP III LP		06/25/2004		67,637	67,637	67,637	(46,768)					0	317,894	1.200
000000-00-0.	6137 Cyprium Parallel Investors V LP		Cleveland	OH	Cyprium V Management LLC		08/15/2019		4,789,379	4,789,379	4,789,379	408,112					548,824	1,875,206	3.382
000000-00-0.	6148 TTGA SBIC Pioneer Feeder Fund LP		Purchase	NY	TTGA SBIC Feeder GP LLC		05/25/2021		329,190	329,190	329,190	24,896					(389,315)	7,735,819	3.618
1799999.	Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated								62,548,109	55,952,189	62,548,109	6,663,241	0	0	0	0	10,011,131	27,471,237	XXX
000000-00-0.	2182 River Cities Capital Fund VI LP		Cincinnati	OH	River Cities Management VI LLC		02/15/2018	3.	6,651,447	6,651,447	6,651,447	1,045,503					184,943	1,260,000	
000000-00-0.	2244 Hidden Harbor Capital Parnters I LP		Boca Raton	FL	Hidden Harbor Capital Partners GP I LP		02/08/2018	3.	3,000,000	3,000,000	3,000,000	0					0	0	1.872
000000-00-0.	2250 Goldner Hawn Fund VII LP		Minneapolis	MN	Goldner Hawn GP LLC		04/29/2019	3.	365,343	365,343	365,343	0					0	3,334,502	
000000-00-0.	2416 Gryphon Partners VI LP		San Francisco	CA	Gryphon GenPar VI LP		11/26/2021	3.	3,345,435	3,345,435	3,345,435	213,395					158,258	1,867,960	0.482
000000-00-0.	2518 MidOcean Partners VI LP		New York	NY	MidOcean Associates V LP		11/09/2021	3.	359,380	359,380	359,380	(105,451)					(879)	4,535,169	
000000-00-0.	2556 FSS Software Topco LP		McHenry	IL	Francisco Partners		08/27/2021	2.	38,282	38,282	38,282	0					0	0	
000000-00-0.	2557 FSS Content Topco LP		McHenry	IL	Francisco Partners		08/27/2021	2.	8,707	8,707	8,707	0					0	0	
000000-00-0.	2558 JFL-NG Continuation Fund		New York	NY	J F Lehman & Company		10/27/2021	3.	11,370,535	11,370,535	11,370,535	3,470,852					0	2,132,654	2.018
000000-00-0.	2569 IVP XII DK Co-Invest LP		New York	NY	Insight Venture Associates IX LP		09/30/2021	2.	309,574	309,574	309,574	0					0	0	
000000-00-0.	2581 Energy Impact Fund II LP		New York	NY	Energy Impact Fund II GP LLC		11/12/2021	1.	1,101,399	1,101,399	1,101,399	153,590					76,674	2,210,346	
000000-00-0.	2584 One Equity Partners VIII LP		New York	NY	One Equity Partners		01/26/2022	3.	3,214,313	3,214,313	3,214,313	316,648					312,700	2,673,550	0.250
000000-00-0.	2589 Hidden Harbor Capital Partners II L P		Boca Raton	FL	Hidden Harbor Capital Partners GP I LP		09/07/2022	3.	1,804,483	1,804,483	1,804,483	(11,819)					0	2,883,698	1.253
000000-00-0.	2591 VSC Polara LLC		Los Angeles	CA	VSC III Polara Holdings GP		12/02/2021	2.	122,928	122,928	122,928	0					0	0	
000000-00-0.	2614 NSH Verisma Holcoo LP		Radnor	PA	NewSpring Health Capital		12/16/2021	3.	15,155,488	15,155,488	15,155,488	(100,626)					0	4,750,000	
000000-00-0.	2619 OSP Hamilton Equity Aggregator LP		Wilmington	DE	OceanSound Partners LP		07/22/2022	2.	122,074	122,074	122,074	0					0	0	0.160
000000-00-0.	2620 JFL-NARDA Partners LLC		New York	NY	J F Lehman and Company LLC		12/28/2021	2.	36,064	36,064	36,064	0					0	0	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identifi- cation	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encum- brances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreci- ation) or (Amorti- zation)/ Accretion	Current Year's Other- Than- Tempo- rary Impair- ment Recog- nized	Capital- ized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Invest- ment Income	Commit- ment for Additional Invest- ment	Percent- age of Owner- ship
000000-00-0	2622 OceanSound Partners Fund LP .....	.....	New York	NY.....	OceanSound Partners .....	.....	12/27/2021	3.....	4,792,085	4,792,085	4,792,085	829,056 .....	.....	.....	.....	.....	882,261	1,168,345	0.234
000000-00-0	2624 KLCP Domestic Fund III LP .....	.....	New York	NY.....	Kennedy Lewis GP III LLC .....	.....	12/27/2021	3.....	957,743	957,743	957,743	145,851 .....	.....	.....	.....	.....	14,979	3,340,721	0.920
000000-00-0	2633 Weatherby Parent Holdings LLC .....	.....	Boston	MA.....	TA Associates .....	.....	02/07/2022	2.....	6,459	6,459	6,459	0 .....	.....	.....	.....	.....	0	0	0
000000-00-0	2635 Karakoram Fund I LP .....	.....	Manhattan Beach	CA.....	K5 Capital Advisors LP .....	.....	01/28/2022	3.....	1,826,445	1,826,445	1,826,445	100,587 .....	.....	.....	.....	.....	(8,276)	1,430,067	0.087
000000-00-0	2644 SDC Digital Infrastructure Opportunity Fund III LP .....	.....	New York	NY.....	SDC DIOF III GP LP .....	.....	04/25/2022	1.....	62,199	62,199	62,199	(52,591) .....	.....	.....	.....	.....	0	4,885,210	0.330
000000-00-0	2656 Trident IX LP .....	.....	Greenwich	CT.....	Trident Capital IX LP .....	.....	06/24/2022	1.....	912,656	912,656	912,656	(93,076) .....	.....	.....	.....	.....	0	3,994,268	0.070
000000-00-0	2657 A&M Capital Partners III LP .....	.....	Greenwich	CT.....	A&M Capital GP III LP .....	.....	12/16/2022	3.....	1,383,602	1,383,602	1,383,602	0 .....	.....	.....	.....	.....	0	3,616,398	0.290
000000-00-0	2665 AEA Growth Equity Fund LP .....	.....	San Francisco	CA.....	AEA Growth .....	.....	04/29/2022	3.....	2,254,954	2,254,954	2,254,954	260,604 .....	.....	.....	.....	.....	0	3,011,211	1.250
000000-00-0	2672 River Cities Capital Fund VII LP .....	.....	Cincinnati	OH.....	River Cities Management VI LLC .....	.....	07/15/2022	3.....	197,167	197,167	197,167	(52,833) .....	.....	.....	.....	.....	0	4,750,000	1.667
000000-00-0	2686 SER Capital Partners I LP .....	.....	Houston	TX.....	Apollo Global Management .....	.....	07/31/2021	3.....	916,588	916,588	916,588	0 .....	.....	.....	.....	.....	(1,916)	4,077,493 .....	.....
000000-00-0	2705 Energy Acquisition Vehicle LP .....	.....	New York	NY.....	Stone Ridge Asset Management LLC .....	.....	09/22/2022	3.....	14,275,355	14,275,355	14,275,355	0 .....	.....	.....	.....	.....	0	0	7.850
000000-00-0	2710 Asper DHUK LP .....	.....	London SE1 9SG .....	.....	Asper Investment Management .....	.....	10/21/2022	3.....	140,399	140,399	140,399	0 .....	.....	.....	.....	7,831	0	3,266,460	1.604
000000-00-0	2713 Rockland Power Partners IV LP .....	.....	The Woodlands	TX.....	Rockland Power Partners III GP LLC .....	.....	10/20/2022	3.....	2,352,873	2,352,873	2,352,873	0 .....	.....	.....	.....	.....	(5,995)	2,886,316 .....	.....
000000-00-0	2733 Capital Z Partners (MGA) L.P. ....	.....	New York	NY.....	Capital Z Partners .....	.....	12/14/2022	3.....	3,000,000	3,000,000	3,000,000	0 .....	.....	.....	.....	.....	(3,479)	0	0.311
000000-00-0	6001 A&M Capital Partners LP .....	.....	GREENWICH	CT.....	A&M Capital-GP LP .....	.....	12/06/2013	3.....	3,423,681	3,423,681	3,423,681	325,204 .....	.....	.....	.....	.....	0	0	2.107
000000-00-0	6002 A&M Capital Partners II LP .....	.....	GREENWICH	CT.....	A&M Capital-GP II LP .....	.....	05/25/2018	3.....	7,675,180	7,675,180	7,675,180	968,669 .....	.....	.....	.....	.....	0	0	0.882
000000-00-0	6003 Allos III-Q LP .....	.....	Rowayton	CT.....	Allos Ventures III LLC .....	.....	12/19/2018 .....	.....	2,315,528	2,315,528	2,315,528	69,981 .....	.....	.....	.....	.....	0	240,000	4.448
000000-00-0	6004 AltEnergy Storage LLC .....	.....	Rowayton	CT.....	AltEnergy Storage LLC .....	.....	09/28/2015 .....	.....	0	0	0	0 .....	.....	.....	.....	.....	0	0	13.710
000000-00-0	6005 Arclight Energy Partners Fund VI LP .....	.....	Boston	MA.....	ArcLight PEF GP VI LLC .....	.....	08/04/2015	3.....	9,704,479	9,704,479	9,704,479	2,374,840 .....	.....	.....	.....	.....	820,982	1,961,335	9.845
000000-00-0	6006 Cincy Tech Fund IV LLC .....	.....	Cincinnati	OH.....	CincyTech LLC .....	.....	03/18/2016	1.....	3,861,966	3,861,966	3,861,966	820,721 .....	.....	.....	.....	.....	115,367	0	5.860
000000-00-0	6007 Electric Gaurd Dog LLC .....	.....	New York	NY.....	Snow Phipps III AIV LP .....	.....	06/08/2016 .....	.....	0	0	0	0 .....	.....	.....	.....	.....	0	0	2.350
000000-00-0	6008 Harvest Intrexon Enterprise Fund I LP ..	.....	San Francisco	CA.....	Harvest Enterprise GP I LLC .....	.....	09/04/2015 .....	.....	15,813,891	15,813,891	15,813,891	15,291,393 .....	.....	.....	.....	.....	25,833	570,000	1.290
000000-00-0	6009 LLR Equity Partners IV LP .....	.....	Philadelphia	PA.....	LLR Capital IV LP .....	.....	03/14/2014	3.....	2,727,436	2,727,436	2,727,436	908,259 .....	.....	.....	.....	.....	747,600	560,000	0.828
000000-00-0	6010 NB Secondary Opportunities Fund III LP .	.....	New York	NY.....	NB Secondary Opportunities Assoc III LP .....	.....	05/23/2013	3.....	4,526,376	4,526,376	4,526,376	(138,702) .....	.....	.....	.....	.....	0	3,881,072	0.794
000000-00-0	6011 NB Strategic Co-Investment Partners II LP .....	.....	New York	NY.....	NB Strat Co-Investment Assoc II GP LLC .....	.....	10/01/2012	3.....	2,593,148	2,593,148	2,593,148	(992,531) .....	.....	.....	.....	.....	0	631,133	0.871
000000-00-0	6012 NB Strategic Co-Investment Partners III LP .....	.....	New York	NY.....	NB Strat Co-Investment Assoc III GP LLC .....	.....	01/28/2016	3.....	10,767,169	10,767,169	10,767,169	(493,382) .....	.....	.....	.....	.....	1,144,491	879,985	0.875
000000-00-0	6013 NB Secondary Opportunities Fund IV LP ...	.....	New York	NY.....	NB Secondary Opportunities Assoc IV LP .....	.....	04/19/2017	3.....	7,034,470	7,034,470	7,034,470	(127,271) .....	.....	.....	.....	.....	1,172,836	2,881,398	0.442
000000-00-0	6014 OLG Investment Partners LP .....	.....	Cincinnati	OH.....	OLG Investment Partners LP Lucas Group .....	.....	09/27/2013 .....	.....	185,961	185,961	185,961	267,393 .....	.....	.....	.....	.....	81,433	0	66.396
000000-00-0	6015 Bridge Growth Partners LP .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	07/15/2014	3.....	22,420,491	22,420,491	22,420,491	4,589,479 .....	.....	.....	.....	.....	136,039	136,408	5.957
000000-00-0	6016 Channel 51 LLC .....	.....	Miami	FL.....	Channel 51 LLC .....	.....	04/29/2016 .....	.....	3,119,975	3,119,975	3,119,975	16,025 .....	.....	.....	.....	.....	16,764	374,309	0.362
000000-00-0	6017 Financial Edge Fund LP .....	.....	Naples	FL.....	PL Capital LLC .....	.....	11/29/2007 .....	.....	11,721,937	11,721,937	11,721,937	(290,605) .....	.....	.....	.....	.....	0	0	7.019
000000-00-0	6018 Greenspring Opportunities IV LP .....	.....	Owing Mills	MD.....	Greenspring Opportunities Gen Part IV LP .....	.....	04/25/2016 .....	.....	4,760,087	4,760,087	4,760,087	(2,180,132) .....	.....	.....	.....	.....	0	0	1.081
000000-00-0	6019 Narya Capital Fund I LP .....	.....	Cincinnati	OH.....	Narya Capital Fund I LP .....	.....	03/20/2020 .....	.....	3,028,999	3,028,999	3,028,999	681,417 .....	.....	.....	.....	.....	0	557,606	2.086
000000-00-0	6020 OBC Investment Partners LP .....	.....	Chicago	IL.....	Orchard Investment Management LLC .....	.....	07/31/2014 .....	.....	0	0	0	0 .....	.....	.....	.....	.....	0	0	63.400
000000-00-0	6021 Orchard Tosca Investment Partners LP .....	.....	CINCINNATI	OH.....	Orchard Investment Management LLC .....	.....	08/19/2011 .....	.....	7,401,741	7,401,741	7,401,741	739,165 .....	.....	.....	.....	.....	0	0	47.702
000000-00-0	6022 Patriot Financial Partners II LP .....	.....	Radnor	PA.....	Patriot Financial Partners GP II LP .....	.....	04/30/2014	3.....	3,413,659	3,413,659	3,413,659	(99,219) .....	.....	.....	.....	.....	1,738,525	362,070	3.844
000000-00-0	6023 Patriot Financial Partners III, L.P. ....	.....	Radnor	PA.....	Patriot Financial Partners GP III LP .....	.....	07/21/2017	3.....	11,237,317	11,237,317	11,237,317	58,707 .....	.....	.....	.....	.....	0	929,455	2.584
000000-00-0	6024 Project Senator Holdings LP .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	05/11/2016 .....	.....	9,004,386	9,004,386	9,004,386	1,705,324 .....	.....	.....	.....	.....	0	0	3.000
000000-00-0	6025 RCCF IFBYPHONE LLC .....	.....	Ciniciinmati	OH.....	RCCF Ifbyphone LLC .....	.....	09/09/2014 .....	.....	1,477,326	1,477,326	1,477,326	268,661 .....	.....	.....	.....	.....	0	0	23.123
000000-00-0	6026 River Cities Capital Fund IV LP .....	.....	Davenport	IA.....	River Cities Management IV LLC .....	.....	09/30/2012	3.....	1,093,601	1,093,601	1,093,601	342,921 .....	.....	.....	.....	.....	0	314,160	3.501
000000-00-0	6027 River Cities Capital Fund V, LP .....	.....	Davenport	IA.....	River Cities Management V LLC .....	.....	12/31/2012	3.....	2,223,773	2,223,773	2,223,773	192,753 .....	.....	.....	.....	.....	316,750	0	1.708
000000-00-0	6028 River Cities Capital Fund VI LP .....	.....	Davenport	IA.....	River Cities Management VI LLC .....	.....	02/15/2018	3.....	0	0	0	0 .....	.....	.....	.....	.....	0	0	3.500
000000-00-0	6029 River Cities Capital Fund III LP .....	.....	Davenport	IA.....	River Cities Management III LP .....	.....	05/15/2018	3.....	0	0	0	0 .....	.....	.....	.....	.....	0	0 .....	.....
000000-00-0	6030 Snow Phipps II LP .....	.....	New York	NY.....	Snow Phipps GP II LP .....	.....	01/08/2010	3.....	5,473,192	5,473,192	5,473,192	229,942 .....	.....	.....	.....	.....	0	172,303	1.063

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identifi- cation	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encum- brances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreci- ation) or (Amorti- zation)/ Accretion	Current Year's Other- Than- Tempo- rary Impair- ment Recogn- ized	Capital- ized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Invest- ment Income	Commit- ment for Additional Invest- ment	Percent- age of Owner- ship
000000-00-0	6031 Snow Phipps III LP .....	.....	New York	NY.....	Snow Phipps GP III LLC .....	.....	06/08/2016	3.....	7,671,417	7,671,417	7,671,417	1,142,992					529,173	1,342,501	1.142
000000-00-0	6032 Snow Phipps LP .....	.....	New York	NY.....	SPG GP LLC .....	.....	02/06/2007	3.....	4,463,764	4,463,764	4,463,764	(199,187)					41,201	113,864	1.594
000000-00-0	6033 Solamere Capital Fund II LP .....	.....	Boston	MA.....	Solamere Capital Fund II GP LP .....	.....	08/19/2013	3.....	9,381,107	9,381,107	9,381,107	575,466					695,576	1,597,389	1.886
000000-00-0	6034 Solamere Capital Fund II-A LP .....	.....	Boston	MA.....	Snow Phipps GP III LLC .....	.....	08/19/2013	3.....	3,915,024	3,915,024	3,915,024	534,776					106,891	669,839	1.760
000000-00-0	6035 Solamere Portfolio Company Investments II LLC Vivint .....	.....	Boston	MA.....	Solamere Capital LLC .....	.....	01/18/2019		556,509	556,509	556,509	(254,707)					0	0	8.293
000000-00-0	6036 Solamere Portfolio Company Investments II LLC .....	.....	Boston	MA.....	Solamere Capital LLC .....	.....	04/18/2016	3.....	2,496,940	2,496,940	2,496,940	11,957					0	0	2.840
000000-00-0	6037 Thorley Industries LLC .....	.....	Pittsburgh	PA.....	BTM Ventures LLC .....	.....	09/23/2015		910,997	910,997	910,997	70,997					0	0	8.210
000000-00-0	6038 Three Ocean Partners LLC .....	.....	New York	NY.....	Three Ocean Partners LLC .....	.....	06/01/2011		1	1	1	0					0	0	1.000
000000-00-0	6039 Tritium Partners LLC .....	.....	Austin	TX.....	Tritium I GP LLC .....	.....	06/26/2015		8,410,424	8,410,424	8,410,424	1,464,138					1,473,195	486,430	2.094
000000-00-0	6041 L-A Saturn Acquisition LP .....	.....	Philadelphia	PA.....	L-A Group Saturn LLC .....	.....	01/16/2015		19,334,821	19,334,821	19,334,821	(4,563,972)					420,437	83,599	2.624
000000-00-0	6042 Cincinnati Cornerstone Investors EI III LLC .....	.....	Cincinnati	OH.....	CincyTech LLC .....	.....	09/13/2016	3.....	5,827,983	5,827,983	5,827,983	2,792,678					0	0	16.851
000000-00-0	6043 BGP FS Holdco LLC .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	11/08/2016		0	0	0	0					0	0	4.261
000000-00-0	6044 MCOF GP LLC .....	.....	New York	NY.....	Medley GP Holdings LLC .....	.....	07/15/2016	3.....	0	0	0	0					0	0	1.380
000000-00-0	6045 MCOF Management LLC .....	.....	New York	NY.....	MCOF GP LLC .....	.....	07/15/2016		0	0	0	0					0	0	1.400
000000-00-0	6046 Medley Credit Opportunity Delaware Fund LP .....	.....	New York	NY.....	MCOF GP LLC .....	.....	10/01/2021	7.....	0	0	0	0					0	0	45.898
000000-00-0	6047 Gryphon Partners IV LP .....	.....	San Francisco	CA.....	Gryphon GenPar IV LP .....	.....	12/06/2016		4,730,562	4,730,562	4,730,562	116,428					49,498	0	0.460
000000-00-0	6048 Gryphon Partners V LP .....	.....	San Francisco	CA.....	Gryphon GenPar V LP .....	.....	08/29/2018		8,299,654	8,299,654	8,299,654	754,206					1,225,351	0	0.570
000000-00-0	6049 A&M Capital Opportunities Fund LP .....	.....	Greenwich	CT.....	A&M Capital Opportunities-GP LP .....	.....	10/01/2021		5,147,710	5,147,710	5,147,710	125,912					2,168,948	0	1.496
000000-00-0	6050 ManchesterStory Venture Fund LP .....	.....	West Des Moines	IA.....	ManchesterStory GP1 LLC .....	.....	03/23/2017		3,560,268	3,560,268	3,560,268	1,657,162					0	699,354	2.132
000000-00-0	6051 Medley Real D Annuity LLC .....	.....	New York	NY.....	Medley Capital LLC .....	.....	03/21/2016	3.....	0	0	0	0					0	0	69.340
000000-00-0	6052 Bridge Growth Partners LP Accedian Holdings .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	05/19/2017		14,404,072	14,404,072	14,404,072	3,678,273					0	0	6.670
000000-00-0	6053 Energy Impact Fund LP .....	.....	New York	NY.....	Energy Impact Partners LLC .....	.....	05/11/2017		11,312,336	11,312,336	11,312,336	651,080					2,108,668	1,266,782	1.621
000000-00-0	6054 Greenspring Global Partners VIII LP .....	.....	Owing Mills	MD.....	Greenspring Opportunities VIII LP .....	.....	07/14/2017	1.....	6,087,488	6,087,488	6,087,488	583,629					319,609	0	10.872
000000-00-0	6055 Greenspring Opportunities V LP .....	.....	Owing Mills	MD.....	Greenspring Opportunities Gen Part V LP .....	.....	01/22/2018	1.....	4,786,899	4,786,899	4,786,899	(445,777)					805,000	0	0.802
000000-00-0	6056 OVIP LP .....	.....	CINCINNATI	OH.....	Orchard Investment Management III LLC .....	.....	07/27/2017		13,812,183	13,812,183	13,812,183	6,216,739					0	0	54.225
000000-00-0	6057 LLR Equity Partners V LP .....	.....	Philadelphia	PA.....	LLR Capital V LP .....	.....	03/31/2017	3.....	9,450,077	9,450,077	9,450,077	2,227,403					420,795	1,121,473	0.733
000000-00-0	6058 Cintrifuse Syndicate Fund II, LLC .....	.....	Cincinnati	OH.....	Cintrifuse Fund Management II LLC .....	.....	09/18/2017	1.....	2,929,746	2,929,746	2,929,746	515,935					142,141	518,523	4.483
000000-00-0	6059 Cintrifuse Syndicate Fund I LLC .....	.....	Cincinnati	OH.....	Cintrifuse Fund Management LLC .....	.....	04/29/2013	1.....	2,196,711	2,196,711	2,196,711	(159,517)					142,587	239,153	2.441
000000-00-0	6060 Bridge Growth Partners Aggregator LLC .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	09/29/2017		21,253,021	21,253,021	21,253,021	1,929,672					0	0	5.887
000000-00-0	6061 Refinery Venture Fund I LP .....	.....	Fort Worth	TX.....	Refinery Management LLC .....	.....	11/20/2017		6,054,744	6,054,744	6,054,744	2,090,798					0	0	4.561
000000-00-0	6062 Foresite Capital Fund IV LP .....	.....	San Francisco	CA.....	Foresite Capital Management IV .....	.....	04/16/2018		8,887,435	8,887,435	8,887,435	(573,579)					219,221	150,000	0.628
000000-00-0	6063 Rivercrest Capital Partners LP .....	.....	Fort Worth	TX.....	Rivercrest Capital GP LLC .....	.....	04/02/2018		10,029,906	10,029,906	10,029,906	2,762,248					1,477,767	3,378	4.561
000000-00-0	6064 Corsair Assist Investors LP .....	.....	New York	NY.....	Rivercrest Capital GP LLC .....	.....	05/25/2018		9,686,769	9,686,769	9,686,769	382,485					0	0	13.505
000000-00-0	6065 Corsair Boomer Investors LP .....	.....	New York	NY.....	Corsair Boomer Management LP .....	.....	06/25/2018		12,456,280	12,456,280	12,456,280	(6,071,474)					0	0	9.845
000000-00-0	6066 Corsair V Financial Services Capital Partners LP .....	.....	New York	NY.....	Rivercrest Capital GP LLC .....	.....	06/25/2018		14,990,889	14,990,889	14,990,889	573,470					2,993,691	2,887,885	1.517
000000-00-0	6067 NB Dyal IV US Investors LP .....	.....	New York	NY.....	NB Dyal Associates IV LP .....	.....	06/11/2018	3.....	5,750,840	5,750,840	5,750,840	80,175					714,854	4,603,906	0.273
000000-00-0	6068 Triatlantic Capital Partners VI LP .....	.....	New York	NY.....	Triatlantic Capital Partners Assoc VI LP .....	.....	07/25/2018		8,639,127	8,639,127	8,639,127	2,164,067					660,735	1,619,293	0.490
000000-00-0	6069 Cincinnati Cornerstone Investors EI IV LLC .....	.....	Cincinnati	OH.....	CincyTech LLC .....	.....	09/28/2018		2,947,053	2,947,053	2,947,053	1,327,782					0	0	15.499
000000-00-0	6070 Medley Aspect Management LLC .....	.....	Wilmington	DE.....	MCOF GP LLC .....	.....	07/15/2016		0	0	0	0					0	0	1.400
000000-00-0	6071 Cowboy Parent LLC .....	.....	New York	NY.....	Snow Phipps III LP .....	.....	10/29/2018		6,842,324	6,842,324	6,842,324	1,039,835					0	0	2.680
000000-00-0	6072 Solamere Capital Fund III LP .....	.....	Boston	MA.....	Solamere Capital Fund III GP LP .....	.....	11/20/2018		11,052,753	11,052,753	11,052,753	965,099					434,000	2,989,745	1.571
000000-00-0	6073 Roark Capital Partners Fund V LP .....	.....	New York	NY.....	Roark Capital GenPar V LP .....	.....	11/01/2018		3,965,161	3,965,161	3,965,161	148,177					9,824	982,583	0.143

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identi- fication	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encum- brances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreci- ation) or (Amorti- zation)/ Accretion	Current Year's Other- Than- Tempo- rary Impair- ment Recogn- ized	Capital- ized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Invest- ment Income	Commit- ment for Additional Invest- ment	Percent- age of Owner- ship
000000-00-0	6074 OTAIP LP .....	.....	Chicago	IL.....	Orchard Investment Management III LLC .....	.....	02/01/2019	.....	6,830,730	6,830,730	6,830,730	(309,602)	.....	.....	.....	.....	0	0	45.920
000000-00-0	6075 Greenspring Global Partners IX-B LP .....	.....	Owing Mills	MD.....	Greenspring General Partner IX LP .....	.....	02/08/2019	.....	3,545,603	3,545,603	3,545,603	121,025	.....	.....	.....	.....	80,280	0	0.278
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP .....	.....	New York	NY.....	Blackstone Tac Opportunities Assoc 3 LLC .....	.....	02/08/2019	.....	6,537,022	6,537,022	6,537,022	81,961	.....	.....	.....	.....	847,414	0	0.243
000000-00-0	6077 Bridge Growth Partners LP Accedian Holdings II .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	03/08/2019	3.....	14,401,280	14,401,280	14,401,280	3,712,287	.....	.....	.....	.....	0	0	29.850
000000-00-0	6078 TriArtisan PFC Partners LLC .....	.....	Wilmington	DE.....	Get Me Mears Group Holdings LLC .....	.....	02/27/2019	.....	9,297,592	9,297,592	9,297,592	895,001	.....	.....	.....	.....	0	0	11.500
000000-00-0	6079 Goldner Hawn Fund VII LP .....	.....	Minneapolis	MN.....	Goldner Hawn GP LLC .....	.....	04/29/2019	.....	3,442,206	3,442,206	3,442,206	2,278,625	.....	.....	.....	.....	2,142,051	0	1.732
000000-00-0	6080 Cincinnati Cornerstone Investors BWV I LLC .....	.....	Cincinnati	OH.....	CincyTech LLC .....	.....	06/28/2019	.....	491,379	491,379	491,379	(3,449)	.....	.....	.....	.....	0	0	10.780
000000-00-0	6081 OBIP LP .....	.....	Cincinnati	OH.....	Orchard Investment Management III LLC .....	.....	06/27/2019	.....	9,103,133	9,103,133	9,103,133	6,855,760	.....	.....	.....	.....	0	0	49.968
000000-00-0	6082 Nutraceutical Investco LP .....	.....	River Side	CT.....	M&S GP LLC .....	.....	10/18/2019	.....	2,512,460	2,512,460	2,512,460	(1,780,619)	.....	.....	.....	.....	0	0	2.273
000000-00-0	6083 Tritium Partners II LLC .....	.....	Austin	TX.....	Tritium II GP LLC .....	.....	11/13/2019	3.....	9,044,512	9,044,512	9,044,512	897,120	.....	.....	.....	.....	265,572	1,128,476	2.050
000000-00-0	6084 Cincy Tech Fund V LLC .....	.....	Cincinnati	OH.....	CincyTech LLC .....	.....	11/20/2019	1.....	1,320,921	1,320,921	1,320,921	(78,844)	.....	.....	.....	.....	0	225,000	8.450
000000-00-0	6085 Corsair Blade Investors LP .....	.....	New York	NY.....	Corsair Blade Management LP .....	.....	12/16/2019	.....	11,387,173	11,387,173	11,387,173	1,830,499	.....	.....	.....	.....	0	0	15.576
000000-00-0	6086 Gallant Capital Partners I LP .....	.....	Los Angeles	CA.....	CincyTech LLC .....	.....	05/29/2020	.....	6,001,559	6,001,559	6,001,559	649,662	.....	.....	.....	.....	202,074	0	3.145
000000-00-0	6087 Refinery Venture Fund II LP .....	.....	Cincinnati	OH.....	Refinery Management LLC .....	.....	11/19/2019	.....	326,504	326,504	326,504	(11,048)	.....	.....	.....	.....	0	150,000	1.360
000000-00-0	6088 Cross Creek Capital III LP .....	.....	Salt Lake City	UT.....	Cross Creek Capital III GP LP .....	.....	03/09/2021	.....	689,794	689,794	689,794	(42,128)	.....	.....	.....	.....	419	1,812,500	1.696
000000-00-0	6089 Bridge Growth Partners II LP .....	.....	New York	NY.....	Bridge Growth Partners LP .....	.....	10/01/2021	.....	5,952,237	5,952,237	5,952,237	1,358,835	.....	.....	.....	.....	44,061	3,194,120	7.335
000000-00-0	6090 Blue Chip VI Extension Fund II LLC .....	.....	Cincinnati	OH.....	Blue Chip VI Partners LLC .....	.....	09/15/2015	1.....	0	0	0	0	.....	.....	.....	.....	0	0	46.280
000000-00-0	6091 CCA Life Settlements Fund II LP .....	.....	Dublin	NY.....	CCA Life Settlements Fund II ICAV .....	.....	12/16/2019	.....	4,735,621	4,735,621	4,735,621	209,698	.....	.....	.....	.....	1,066,891	0	15.580
000000-00-0	6092 Corsair Indigo Investors LP .....	.....	New York	NY.....	Corsair Indigo Management LP .....	.....	12/07/2020	.....	7,444,610	7,444,610	7,444,610	(130,404)	.....	.....	.....	.....	202,137	628,768	5.993
000000-00-0	6093 Foresite Capital Fund V LP .....	.....	San Fransico	CA.....	Foresite Capital Management V LLC .....	.....	06/08/2020	.....	4,346,569	4,346,569	4,346,569	(289,834)	.....	.....	.....	.....	69,768	140,000	0.484
000000-00-0	6094 Foresite Capital Opportunity Fund V LP .....	.....	San Fransico	CA.....	Foresite Capital Opportunity Mgmt V LLC .....	.....	06/29/2020	.....	1,016,677	1,016,677	1,016,677	(86,523)	.....	.....	.....	.....	20,231	130,000	0.484
000000-00-0	6095 Greenspring Opportunities VI LP .....	.....	Owing Mills	MD.....	Greenspring Opportunities VI LP .....	.....	01/21/2020	.....	2,666,232	2,666,232	2,666,232	(396,328)	.....	.....	.....	.....	0	0	0.410
000000-00-0	6096 LLR Equity Partners VI LP .....	.....	Philadelphia	PA.....	LLR Capital VI LP .....	.....	05/13/2021	.....	1,628,183	1,628,183	1,628,183	37,298	.....	.....	.....	.....	0	0	0.212
000000-00-0	6097 Medley Aspect GP LLC .....	.....	Wilmington	DE.....	Medley Capital LLC .....	.....	07/15/2016	.....	0	0	0	0	.....	.....	.....	.....	0	0	1.400
000000-00-0	6098 Dyal V US Investors LP .....	.....	New York	NY.....	NB Dyal Associates V LP .....	.....	10/01/2021	.....	1,647,222	1,647,222	1,647,222	(2,887,368)	.....	.....	.....	.....	814	6,435,842	0.415
000000-00-0	6099 NB Strategic Capital LP .....	.....	New York	NY.....	NB Strategic Capital Associates LP .....	.....	03/05/2020	.....	8,894,565	8,894,565	8,894,565	1,022,794	.....	.....	.....	.....	1,061,926	3,261,301	1.013
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP .....	.....	New York	NY.....	NB Alternatives Advisors LLC .....	.....	01/29/2020	.....	5,134,886	5,134,886	5,134,886	202,029	.....	.....	.....	.....	306,740	3,325,758	0.494
000000-00-0	6101 Revelstoke EPIC Fund I LP .....	.....	Denver	CA.....	RCP Single Asset Fund I GP LLC .....	.....	10/01/2021	.....	5,077,737	5,077,737	5,077,737	485,568	.....	.....	.....	.....	0	295,847	0.412
000000-00-0	6102 Riverwood Capital Partners III LP .....	.....	Menlo Park	CA.....	Riverwood Capital III LP .....	.....	03/27/2020	.....	5,691,410	5,691,410	5,691,410	(301,311)	.....	.....	.....	.....	440,130	802,754	0.693
000000-00-0	6103 Cranemere Group Limited .....	.....	Palo Alto	CA.....	The Cranemere Group Limited .....	.....	05/21/2014	.....	61,916,826	61,916,826	61,916,826	46,424,925	.....	.....	.....	.....	0	3,514,004	7.360
000000-00-0	6104 Vivo Capital Fund IX LP .....	.....	Palo Alto	CA.....	Vivo Capital IX LLC .....	.....	09/09/2019	.....	9,140,363	9,140,363	9,140,363	1,083,154	.....	.....	.....	.....	326,336	697,169	0.350
000000-00-0	6138 A&M Capital Europe SCSp .....	.....	Greenwich	CT.....	A&M Capital Europe-GP LP .....	.....	06/30/2019	.....	5,144,911	5,144,911	5,144,911	(283,773)	.....	.....	.....	(31)	(216,567)	4,327,766	1.437
000000-00-0	6139 GreyLion Capital LP .....	.....	New York	NY.....	GreyLion Capital GP LP .....	.....	08/20/2014	.....	9,733,954	9,733,954	9,733,954	327,730	.....	.....	.....	.....	160,137	1,607,195	2.057
000000-00-0	6140 GreyLion Capital II LP .....	.....	New York	NY.....	GreyLion Capital II GP LP .....	.....	02/28/2018	.....	6,997,600	6,997,600	6,997,600	600,315	.....	.....	.....	.....	1,400,001	1,280,566	1.201
000000-00-0	6141 Vida Insurance Credit Opportunity Fund II LP .....	.....	Austin	TX.....	Vida Management I LLC .....	.....	10/01/2021	.....	12,880,425	12,880,425	12,880,425	100,184	.....	.....	.....	.....	1,904,563	0	3.618
000000-00-0	6142 TriArtisan Orlando Partners LLC .....	.....	New York	NY.....	TriArtisan Orlando MM LLC .....	.....	03/12/2018	.....	1,872,522	1,872,522	1,872,522	(281,015)	.....	.....	.....	.....	0	0	15.002
000000-00-0	6143 Private Equity Solutions SCSP .....	.....	Luxembourg	LUX.....	DWS Investment SA .....	.....	12/16/2019	.....	4,286,263	4,286,263	4,286,263	(842,253)	.....	.....	.....	.....	0	1,840,541	1.585
000000-00-0	6144 Blackstone Diversified Alternatives Issuer LLC .....	.....	New York	NY.....	Blackstone Diversified Alt Issuer LLC .....	.....	05/21/2019	.....	8,973,754	8,973,754	8,973,754	1,747,926	.....	.....	.....	.....	171,742	0	1.921
000000-00-0	6145 AltEnergy Storage Bridge LLC .....	.....	Rowayton	CT.....	AltEnergy Storage Bridge LLC .....	.....	03/20/2019	.....	0	0	0	0	.....	.....	.....	.....	0	0	6.640
000000-00-0	6146 Desri VI LLC .....	.....	New York	NY.....	DE Shaw Renewable Investments LLC .....	.....	12/17/2014	.....	3,739,074	3,739,074	3,739,074	1,335,668	.....	.....	.....	.....	34,642	0	4.110
000000-00-0	6149 Greylion Capital Fund III LP .....	.....	New York	NY.....	Greylion Capital Fund III GP .....	.....	12/14/2021	3.....	1,063,410	1,063,410	1,063,410	235,200	.....	.....	.....	.....	117,338	1,554,452	0.819
000000-00-0	6150 DataLink Holdings LLC .....	.....	West Palm Beach	FL.....	Massachusetts Mutual Life Ins Co .....	.....	11/23/2020	.....	0	0	0	0	.....	.....	.....	.....	0	625,000	.....
000000-00-0	6155 Blue Chip VI Extension Fund LLC .....	.....	Cincinnati	OH.....	Blue Chip VI Partners LLC .....	.....	09/15/2015	1.....	0	0	0	0	.....	.....	.....	.....	0	0	43.719

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identification	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encumbrances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Impairment Recognized	Capitalized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Investment Income	Commitment for Additional Investment	Percentage of Ownership
000000-00-0	6156 Blue Chip VI LLC .....	.....	Cincinnati	OH.....	Blue Chip VI Partners LLC .....	.....	...09/15/2015 ...	...1.....	0	0	0	0	.....	.....	.....	.....	.....0	0	11.649
000000-00-0	2717 Ampersand 2022 LP .....	.....	Wellesley	MA.....	Massachusetts Mutual Life Ins Co .....	.....	...11/02/2022 ...	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....(5,832)	5,000,000	.....
000000-00-0	1901 High Road Capital Partners Fund II P .....	.....	Greenwich	CT.....	Massachusetts Mutual Life Ins Co .....	.....	...05/03/2013 ...	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....(3,886)	0	.....
000000-00-0	2691 PEP Secure Assets Fund II LP .....	.....	Sydney NSW 2000 .....	.....	Massachusetts Mutual Life Ins Co .....	.....	...12/19/2022 ...	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....(4,338)	4,841,490	.....
000000-00-0	2692 NexPhase Capital Fund V LP .....	.....	New York	NY.....	Massachusetts Mutual Life Ins Co .....	.....	...12/16/2022 ...	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....(3,802)	5,000,000	.....
000000-00-0	2345 Gallant Capital Partne .....	.....	Los Angeles	CA.....	Massachusetts Mutual Life Ins Co .....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....	....88,104	.....
000000-00-0	1976 River Cities Capital Fund V LP .....	.....	Cincinnati	OH.....	Massachusetts Mutual Life Ins Co .....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....	....280,000	.....
000000-00-0	2060 Gryphon Partners IV LP .....	.....	San Francisco	CA.....	Massachusetts Mutual Life Ins Co .....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....	....494,981	.....
000000-00-0	2242 Gryphon Partners V LP .....	.....	San Francisco	CA.....	Massachusetts Mutual Life Ins Co .....	.....	...08/29/2021 ...	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....	....1,933,329	.....
000000-00-0	2419 LLR Equity Partners VI LP .....	.....	Philadelphia	PA.....	Massachusetts Mutual Life Ins Co .....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....	.....	.....	....850,000	.....
1999999. Joint Venture Interests - Common Stock - Unaffiliated									774,249,665	774,249,664	774,249,665	120,732,832	0	0	0	7,800	35,715,894	153,366,262	XXX
000000-00-0	6040 Vida Longevity Fund LP .....	.....	Austin	TX.....	Vida Management I LLC .....	.....	...04/01/2015 ...	...10.....	9,354,140	9,354,140	9,354,140	316,539	.....	.....	.....	.....	206,630	0	0.776
2099999. Joint Venture Interests - Common Stock - Affiliated									9,354,140	9,354,140	9,354,140	316,539	0	0	0	0	206,630	0	XXX
000000-00-0	6105 L-A Laramar Urban Neighborhood Fund LP ..	.....	Philadelphia	PA.....	L-A Battery Group LLC .....	.....	...10/15/2015 ...	.....	13,488,794	13,488,794	13,488,794	(1,663,635)	.....	.....	.....	.....	0	313,988	3.470
000000-00-0	6106 Lubert-Adler Real Estate Fund VII LP .....	.....	Philadelphia	PA.....	Lubert-Adler Group VII LP .....	.....	...10/15/2013 ...	.....	30,005,421	30,005,421	30,005,421	2,938,137	.....	.....	.....	.....	0	1,250,000	10.051
000000-00-0	6107 Lubert-Adler Real Estate Fund VII-B LP .....	.....	Philadelphia	PA.....	Lubert-Adler Group VII-B LLC .....	.....	...04/07/2017 ...	.....	4,628,300	4,628,300	4,628,300	982,537	.....	.....	.....	.....	3,886,260	1,666,667	3.717
000000-00-0	6108 NB Real Estate Secondary Opportunities Fund LP .....	.....	Philadelphia	PA.....	NB Real Estate Secondary Opp Assoc LP ..	.....	...12/05/2018 ...	.....	8,948,019	8,948,019	8,948,019	2,334,332	.....	.....	.....	.....	2,201,890	4,049,815	1.688
000000-00-0	6109 LCN NA Fund III-D LP .....	.....	Philadelphia	PA.....	LCN North American GP III LP .....	.....	...08/23/2019 ...	.....	524,323	524,323	524,323	267,875	.....	.....	.....	.....	272,904	0	4.324
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP ..	.....	Philadelphia	PA.....	Lubert-Adler Group WH LP .....	.....	...10/01/2021 ...	.....	4,059,902	4,059,902	4,059,902	(53,987)	.....	.....	.....	.....	1,983,011	6,000,000	5.411
000000-00-0	6111 Hillpointe Workforce Housing Partnership I LP .....	.....	Winter Park	FL.....	Hillpointe Fund I GP LLC .....	.....	...03/17/2020 ...	.....	1,072,980	1,072,980	1,072,980	1,580,541	.....	.....	.....	.....	1,553,484	0	3.297
000000-00-0	6112 Hillpointe Workforce Housing Partnership II LP .....	.....	Winter Park	FL.....	Hillpointe Fund II GP LLC .....	.....	...11/03/2020 ...	.....	2,902,283	2,902,283	2,902,283	(49,409)	.....	.....	.....	.....	0	0	2.727
2199999. Joint Venture Interests - Real Estate - Unaffiliated									65,630,023	65,630,023	65,630,023	6,336,391	0	0	0	0	9,897,549	13,280,470	XXX
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund .....	.....	Springfield	MA.....	Massachusetts Mutual Life Ins Co .....	.....	...10/06/2021 ...	...3.....	22,429,848	11,168,336	11,168,337	(489,600)	.....	.....	.....	.....	683,401	17,134,938	13.000
000000-00-0	2525 MM BIG Peninsula Co-Invest Member LLC ..	.....	Hartford	CT.....	Massachusetts Mutual Life Ins Co .....	.....	...06/30/2021 ...	...3.....	3,584,367	2,023,837	2,023,837	5,097,598	.....	.....	.....	.....	139,167	0	5.710
000000-00-0	2530 MM Horizon Savannah Member LLC .....	.....	Springfield	MA.....	Massachusetts Mutual Life Ins Co .....	.....	...10/25/2021 ...	...3.....	7,456,962	5,385,175	4,950,677	(19,472)	.....	.....	.....	.....	(34)	0	7.600
000000-00-0	2676 Trailside MM Member II LLC .....	.....	Hartford	CT.....	Massachusetts Mutual Life Ins Co .....	.....	...07/26/2022 ...	...3.....	596,359	596,367	596,359	0	.....	.....	.....	.....	(160)	161,165	19.880
2299999. Joint Venture Interests - Real Estate - Affiliated									34,067,536	19,173,715	18,739,210	4,588,526	0	0	0	0	822,374	17,296,103	XXX
000000-00-0	6113 Ellington GA RPL 1 LLC .....	.....	Old Greenwich	CT.....	EPO II GP LLC .....	.....	...05/04/2020 ...	.....	.....0	0	0	0	.....	.....	.....	.....	0	0	.....
000000-00-0	6114 Pretium Mortgage Credit Partners I LP ...	.....	New York	NY.....	Pretium Mtge Credit Partners I GP LLC ..	.....	...12/04/2014 ...	.....	2,190,926	2,190,926	2,190,926	664,840	.....	.....	.....	.....	0	10,000,000	1.283
000000-00-0	6115 SHARB Investors LP .....	.....	New York	NY.....	Waterfall Sentinel GP LLC .....	.....	...11/24/2020 ...	.....	2,819,519	2,819,519	2,819,519	(2,344,084)	.....	.....	.....	.....	0	23,330	.....
2399999. Joint Venture Interests - Mortgage Loans - Unaffiliated									5,010,445	5,010,445	5,010,445	(1,679,244)	0	0	0	0	0	10,000,000	XXX
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	.....	Hartford	CT.....	BREDIF GP LLC .....	.....	...03/24/2021 ...	...3.....	112,666,848	112,666,848	112,666,848	6,716,626	.....	.....	.....	.....	3,061,533	13,874,338	0.100
2499999. Joint Venture Interests - Mortgage Loans - Affiliated									112,666,848	112,666,848	112,666,848	6,716,626	0	0	0	0	3,061,533	13,874,338	XXX
000000-00-0	2554 PDQ Topco LP .....	.....	Menlo Park	CA.....	TA Associates .....	.....	...08/27/2021 ...	...3.....	43,192	43,192	43,192	0	.....	.....	.....	.....	0	0	.....
000000-00-0	2579 Renovation Parent LLC .....	.....	West Palm Beach	FL.....	Comvest Partners .....	.....	...11/15/2021 ...	...2.....	197,368	197,368	197,368	0	.....	.....	.....	.....	0	0	.....
000000-00-0	2599 ITI Ultimate Holdco LLC .....	.....	San Francisco	CA.....	Calera Capital .....	.....	...01/14/2022 ...	...2.....	257,758	257,758	257,758	0	.....	.....	.....	.....	0	0	.....
000000-00-0	2601A BSP TS Co-Invest I LLC .....	.....	New York	NY.....	Broad Sky Partners LLC .....	.....	...12/10/2021 ...	...3.....	11,553,687	11,553,687	11,553,687	(60,954)	.....	.....	.....	.....	(13,112)	0	.....
000000-00-0	2616A Stork SPV LP .....	.....	Greenwich	CT.....	Amulet Capital Fund II GP LP .....	.....	...12/20/2021 ...	...3.....	10,002,386	10,002,387	10,002,386	2,549,869	.....	.....	.....	.....	(23,367)	0	10.610
000000-00-0	2636 ZB Parent LLC .....	.....	Austin	TX.....	Peak Rock Capital .....	.....	...02/09/2022 ...	...2.....	27,069	27,069	27,069	0	.....	.....	.....	.....	0	0	.....
000000-00-0	2652 Accurus Aerospace Holdings LLC .....	.....	New York	NY.....	Liberty Hall Capital Partners .....	.....	...04/04/2022 ...	...2.....	81,121	81,121	81,121	0	.....	.....	.....	.....	0	0	0.033
000000-00-0	2673 KSL Capital Partners CV I LP .....	.....	Denver	CO.....	KSL Capital Partners .....	.....	...05/25/2022 ...	...1.....	2,156,846	2,156,846	2,156,846	487,259	.....	.....	.....	.....	(6,518)	1,373,776	0.307
000000-00-0	2687 ASC Communications Holdings LLC .....	.....	Charlotte	NC.....	Pamlico Capital .....	.....	...07/15/2022 ...	...2.....	22,387	22,387	22,387	0	.....	.....	.....	.....	0	0	1.119
000000-00-0	2688 Burgess Point Holdings LP .....	.....	Santa Monica	CA.....	Burgess Point Holdings LP .....	.....	...07/25/2022 ...	...2.....	204,273	204,273	204,273	0	.....	.....	.....	.....	0	0	0.019
000000-00-0	2698 Exos Collateralized SPAC Holdings Fund LP	.....	New York	NY.....	Exos Collateralized SPAC Holdings Fund .....	.....	...11/14/2022 ...	...1.....	2,000,000	2,000,000	2,000,000	0	.....	.....	.....	.....	0	0	14.290

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20
			4	5								13	14	15	16	17			
CUSIP Identifi- cation	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/ Adjusted Carrying Value Less Encum- brances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreci- ation) or (Amorti- zation)/ Accretion	Current Year's Other- Than- Tempo- rary Impair- ment Recog- nized	Capital- ized Deferred Interest and Other	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Invest- ment Income	Commit- ment for Additional Invest- ment	Percent- age of Owner- ship
000000-00-0	2707 TSS Co-Invest Holdings LP .....	.....	Beverly Hills	CA.....	Levine Leichtman Capital Partners .....	.....	09/09/2022	3.....	3,000,000	3,000,000	3,000,000	0	.....	.....	.....	.....	0	0	0.587
000000-00-0	2712 GB King Holdings LP .....	.....	Rye	NY.....	Greenbriar Equity Group LP .....	.....	10/31/2022	2.....	66,700	66,700	66,700	0	.....	.....	.....	.....	0	0	0.020
000000-00-0	2720 AASC Holdings LP .....	.....	Rye	NY.....	Greenbriar Equity Group LP .....	.....	12/01/2022	2.....	86,000	86,000	86,000	0	.....	.....	.....	.....	0	0	0.059
000000-00-0	2724 Solo Topco L.P. ....	.....	San Francisco	CA.....	OA Topco GP LLC .....	.....	12/01/2022	2.....	51,640	51,640	51,640	0	.....	.....	.....	.....	0	0	0.027
000000-00-0	2729 TSYL TA Aggregator LP .....	.....	Boston	MA.....	Pacific Equity Partners Fund V GP Ltd .	.....	12/19/2022	2.....	4,673	0	4,673	0	.....	.....	.....	.....	0	0	0.003
25999999. Joint Venture Interests - Other - Unaffiliated									29,755,101	29,750,428	29,755,101	2,976,174	0	0	0	0	(42,997)	1,373,776	XXX
649526-AF-5	8003 New York Life Insurance Co .....	.....	Ireland	.....	New York Life Insurance Co	1.C FE	03/25/2010	.....	14,943,736	12,118,182	14,943,736	0	(122,837)	.....	.....	.....	673,325	0	.....
878091-BC-0	8005 Teachers Insurance & Annuity .....	.....	Ireland	.....	Teachers Insurance & Annuity	1.D FE	03/31/2010	.....	6,082,785	6,046,192	6,082,785	0	(3,259)	.....	.....	.....	21,581	0	.....
677412-AF-5	8007 Ohio National Life Ins .....	.....	Ireland	.....	Ohio National Life Ins	2.C FE	04/27/2015	.....	5,500,000	5,252,286	5,500,000	0	.....	.....	.....	.....	378,125	0	.....
878091-BD-8	8008 Teachers Insurance & Annuity .....	.....	Ireland	.....	Teachers Insurance & Annuity	1.D FE	04/27/2015	.....	(45,765)	3,019,965	(45,765)	0	(45,765)	.....	.....	.....	180,811	0	.....
638671-AK-3	8012 Nationwide Mutual Ins Co .....	.....	Ireland	.....	Nationwide Mutual Ins Co	1.G FE	08/31/2017	.....	40,225,565	34,449,914	40,225,565	0	(447,147)	.....	.....	.....	2,177,853	0	.....
743917-AH-9	8015 Prudential Ins Co America .....	.....	Ireland	.....	Prudential Ins Co America	1.F FE	08/03/2016	.....	7,026,525	6,751,244	7,026,525	0	(235,424)	.....	.....	.....	295,361	0	.....
401378-AC-8	8017 Guardian Life Insurance Co of America ..	.....	Ireland	.....	Guardian Life Ins Co Amer	1.D FE	05/31/2017	.....	17,083,768	10,460,456	17,083,768	0	(4,871)	.....	.....	.....	772,051	0	.....
023138-AA-8	8020 Ambac Assurance Corp .....	.....	Ireland	.....	Ambac Assurance Corp	5.B FE	12/31/2018	.....	16,590	29,474	16,590	0	.....	.....	.....	.....	844	0	.....
309588-AC-5	8026 Farmers Exchange Capital-Subordinated ...	.....	Ireland	.....	Farmers exchange CAP III	2.A FE	07/31/2020	.....	9,777,494	0	9,777,494	0	(118,203)	.....	.....	.....	516,297	0	.....
638671-AK-3	8501 Nationwide Mutual Insurance Company Surplus Note .....	.....	Wilmington	DE.....	Stifel	1.G FE	07/26/2016	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
628312-AA-8	8502 MUTUAL OF OMAHA SURPLUS NOTE .....	.....	Wilmington	DE.....	Stifel	1.G FE	12/06/2016	.....	11,308,625	8,703,624	11,308,625	0	(98,372)	.....	.....	.....	542,188	0	.....
878091-BC-0	8503 Teachers Ins & ANN 6.85 12/16/2039 .....	.....	New York	NY.....	Stifel	1.D FE	08/31/2017	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
401378-AC-8	8504 Gaurdian Life Ins 4.85 01/24/2077 .....	.....	New York	NY.....	Stifel	1.D FE	08/31/2017	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
592173-AE-8	8505 MET LIFE 7.80 11/01/2025 .....	.....	New York	NY.....	Stifel	1.F FE	08/31/2017	.....	(429)	0	(429)	0	(40,851)	.....	.....	.....	0	0	.....
743917-AH-9	8506 Prudential Ins 8.30 07/01/2025 .....	.....	Newark	NJ.....	Stifel	1.F FE	08/31/2017	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
694475-AA-2	8507 PACIFIC LIFE INSURANCE 9.25 06/15/2039 .	.....	Newport Beach	CA.....	Stifel	1.F FE	10/01/2021	.....	11,869,673	10,296,688	11,869,673	0	(136,790)	.....	.....	.....	624,948	0	.....
649526-AF-5	8508 New York Life 6.75 11/15/2039 .....	.....	New York	NY.....	Stifel	1.C FE	10/01/2021	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
707567-AC-7	8509 PENN MUTUAL LIFE 7.625 06/15/2040 .....	.....	Horsham	PA.....	Stifel	1.F FE	08/31/2017	.....	16,602,795	12,677,259	16,602,795	0	(123,785)	.....	.....	.....	868,990	0	.....
638671-AE-7	8510 NATIONWIDE MUTL 144A 7.875 04/01/2033 ..	.....	Columbus	OH.....	Stifel	1.G FE	10/01/2021	.....	20,528,487	16,732,100	20,528,487	0	(320,149)	.....	.....	.....	959,538	0	.....
628312-AB-6	8511 MUTUAL OF OMAHA 6.95 10/15/2040 .....	.....	Omaha	NE.....	Stifel	1.G FE	12/01/2018	.....	2,582,556	1,538,622	2,582,556	0	(20,921)	.....	.....	.....	118,079	0	.....
878091-BD-8	8512 TIAA 4.900 09/15/44 .....	.....	New York	NY.....	Stifel	1.D FE	07/05/2021	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
309588-AC-5	8513 Farmers Surplus Note 7.05 .....	.....	Cincinnati	OH.....	Guggenheim	2.A FE	09/27/2016	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
309588-AE-1	8514 Farmers Surplus Note 7.20 .....	.....	Cincinnati	OH.....	Jeffries & Company	2.A FE	04/11/2017	.....	7,515,261	5,810,991	7,515,261	0	(26,499)	.....	.....	.....	408,381	0	.....
30958P-AA-1	8515 Farmers Surplus Note 6.151 .....	.....	Cincinnati	OH.....	Stifel	2.A FE	04/11/2017	.....	16,234,470	13,089,146	16,234,470	0	(83,422)	.....	.....	.....	839,228	0	.....
309601-AE-2	8516 Farmers Ins Exch 4.747 11/01/2057 .....	.....	Ireland	.....	Stifel	2.A FE	12/01/2018	.....	7,000,617	4,533,839	7,000,617	0	(47)	.....	.....	.....	332,243	0	.....
80529E-AA-1	8517 Savings Bank Life Insurance Company Surplus Note 6.50 .....	.....	Cincinnati	OH.....	Stifel	2.B FE	08/31/2017	.....	5,500,928	925,497	5,500,928	0	(22)	.....	.....	.....	357,478	0	.....
530790-AC-1	8518 Liberty Mutual Insurance Company Surplus Note 7.875 .....	.....	Cincinnati	OH.....	Stifel	2.A FE	08/31/2017	.....	(592)	(17,512,200)	(592)	0	(154,782)	.....	.....	.....	299,997	0	.....
677412-AF-5	8519 Ohio National Life Insurance Company Surplus Note .....	.....	Cincinnati	OH.....	Stifel	2.C FE	07/31/2016	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
023138-AA-8	8520 AMBAC Assurance .....	.....	New York	NY.....	Stifel	5.B	02/28/2018	.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
27999999. Surplus Debentures, etc - Unaffiliated									199,753,088	134,923,279	199,753,088	0	(1,983,146)	0	0	0	10,367,317	0	XXX
000000-00-0	2326 Ivy Hill Revolver Funding LP .....	.....	Los Angeles	CA.....	Ivy Hill Revolver Management GP LLC ....	.....	03/01/2020	3.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
000000-00-0	2550A Trace Midtown .....	.....	Springfield	MA.....	Massachusetts Mutual Life Ins Co .....	.....	07/09/2021	3.....	0	0	0	0	.....	.....	.....	.....	0	0	13.605
000000-00-0	2550D The Oasis Anaheim .....	.....	Springfield	MA.....	Massachusetts Mutual Life Ins Co .....	.....	09/09/2021	2.....	0	0	0	0	.....	.....	.....	.....	0	0	.....
29999999. Collateral Loans - Unaffiliated									0	0	0	0	0	0	0	0	0	0	XXX
US0561-6M-A	7111 BABSON CLO LTD 2015-II SUB NT .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	05/09/2014	3.....	1,112,883	2,351,915	1,112,883	(1,239,033)	(3,793,154)	.....	.....	.....	247,457	0	.....
7135	AMMC CLO XI Ltd-AMMC 2012-11A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	05/09/2014	3.....	3,612,624	3,612,624	3,612,624	0	.....	.....	.....	.....	0	0	.....
US0017-7C-A	7136 Ammc Clo 20 Ltd-AMMC 2017-20A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	05/09/2014	3.....	5,329,114	6,425,584	5,329,114	(1,096,470)	.....	.....	.....	.....	1,333,348	0	.....
US0017-4B-A	7137 AMMC CLO XIV Ltd-AMMC 2014-14A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	05/09/2014	3.....	1,030,981	1,769,520	1,030,981	(738,539)	(136,415)	.....	.....	.....	475,383	0	.....
US0017-5N-A	7138 AMMC CLO 15 Ltd-AMMC 2014-15A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	05/09/2014	3.....	6,895,519	7,495,905	6,895,519	(600,386)	.....	.....	.....	.....	2,349,915	0	.....

SCHEDULE BA - PART 1

1 CUSIP Identi- fication	2 Name or Description	3 Code	4 Location		6 Name of Vendor or General Partner	7 NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	8 Date Originally Acquired	9 Type and Strategy	10 Actual Cost	11 Fair Value	12 Book/ Adjusted Carrying Value Less Encum- brances	Change in Book/Adjusted Carrying Value					18 Invest- ment Income	19 Commit- ment for Additional Invest- ment	20 Percent- age of Own- ship
			4 City	5 State								13 Unrealized Valuation Increase (Decrease)	14 Current Year's (Depre- ciation) or (Amorti- zation)/ Accretion	15 Current Year's Other- Than- Tempo- rary Impair- ment Recogn- ized	16 Capital- ized Deferred Interest and Other	17 Total Foreign Exchange Change in Book/ Adjusted Carrying Value			
US0017-6B-A ..	7139 AMMC CLO XIII Ltd-AMMC 2013-13A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	1,218	197,391	1,218	(196,173)	.....	.....(1,611,723)	.....	.....784,068	0 .....	.....	
US0017-6N-A ..	7140 AMMC CLO 22 Ltd-AMMC 2018-22A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	9,648,038	11,394,162	9,648,038	(1,746,124)	.....	.....	.....	.....2,297,166	0 .....	.....	
US0017-6R-A ..	7141 AMMC CLO 23 Ltd-AMMC 2020-23A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	10,367,939	11,279,017	10,367,939	(911,078)	.....	.....	.....	.....2,341,727	0 .....	.....	
US0017-9T-A ..	7142 AMMC CLO 21 Ltd-AMMC 2017-21A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	1,337,400	1,602,007	1,337,400	(264,606)	.....	.....	.....	.....472,294	0 .....	.....	
US0017-43-A ..	7143 AMMC CLO 18 Ltd-AMMC 2016-18A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	5,164,598	5,304,291	5,164,598	(139,693)	.....	.....	.....	.....1,896,387	0 .....	.....	
US0017-6E-A ..	7144 AMMC CLO XII Ltd-AMMC 2013-12A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	851,399	2,025,218	851,399	(1,173,820)	.....	.....(854,944)	.....	.....197,044	0 .....	.....	
US0017-6Q-A ..	7145 Ammc Clo 19 Ltd-AMMC 2016-19A .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	4,544,719	4,544,719	4,544,719	0	.....	.....(2,062,619)	.....	.....550,682	0 .....	.....	
US2882-9D-A ..	7146 Man GLG US CLO-GLGU 2018-1A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	2,254,907	8,812,071	2,254,907	(6,557,164)	.....	.....	.....	.....2,105,275	0 .....	.....	
US5595-3P-A ..	7147 Magnetite XVI Ltd-MAGNE 2015-16A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	814,673	814,673	814,673	0	.....	.....	.....	.....202,479	0 .....	.....	
US6738-9Y-A ..	7159 Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A SUB .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	266,701	332,190	266,701	(65,488)	.....	.....(3,704,684)	.....	.....410,045	0 .....	.....	
US3631-9W-A ..	7161 Galaxy XXIII CLO Ltd-GALXY 2017-23A SUBA .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...05/09/2014	3.....	294,556	747,901	294,556	(453,345)	.....	.....(1,550,310)	.....	.....64,810	0 .....	.....	
46655H-AK-9 ..	7164 JCP Direct Lending CLO 2022 LLC .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...03/13/2014	3.....	5,090,746	5,101,878	5,090,746	(11,132)	.....	.....	.....	.....0	0 .....	.....	
XS2506-08-5 ..	7165 Loan Asset Issuer LLC SER 2021 M-2 .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...03/13/2014	3.....	7,067,304	7,067,304	7,067,304	0	.....	.....	.....	.....(977)	0 .....	.....	
46655H-AK-9 ..	7166 Loan Asset Issuer LLC Series 2022 NG-1 .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...03/13/2014	3.....	6,051,242	6,051,242	6,051,242	0	.....	.....	.....	.....4,454,462	0 .....	.....	
000000-00-0 ..	7167 AMMC CLO 16 Ltd .....	.....	Cayman Islands	KY.....	Massachusetts Mutual Life Ins Co .....	.....	...03/13/2014	3.....	1,840,682	2,297,396	1,840,682	(456,714)	.....	.....	.....	.....977,509	0 .....	.....	
46999999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated									73,577,244	89,227,009	73,577,244	(15,649,764)	0	(13,713,847)	0	21,159,074	0	XXX	
0																			

E07.6

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE December 31 of Current Year

1 CUSIP Identification	2 Name or Description	Location		5 Name of Vendor or General Partner	6 Date Originally Acquired	7 Type and Strategy	8 Actual Cost at Time of Acquisition	9 Additional Investment Made After Acquisition	10 Amount of Encumbrances	11 Percentage of Ownership
		3 City	4 State							
000000-00-0	2725 Sprott Private Resource Lending Fund III LP	Toronto		Sprott Resource Lending Corp	11/29/2022	3	222,395			0.500
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated										
000000-00-0	6118 Yukon Capital Partners II LP	Minneapolis	MN	Yukon Partners II LLC	07/17/2014	2	222,395	0	0	XXX
000000-00-0	6120 Northcreek Mezzanine Fund III LP	Cincinnati	OH	NMF GP III LLC	09/10/2019	2		11,004		0.953
000000-00-0	6123 NB Private Equity Credit Opportunities Fund LP	New York	NY	NB Private Equity Credit Opp Assocs LP	06/07/2017	3		601,026		3.025
000000-00-0	6124 Yukon Capital Partners III LP	Minneapolis	MN	Yukon Partners III LLC	07/18/2017	2		43,806		0.856
000000-00-0	6126 Gryphon Mezzanine Partners LP	San Francisco	CA	Gryphon Mezzanine Partners GP LP	11/30/2017	3		90,511		5.980
000000-00-0	6130 SAAS Capital Fund III (B) LP	Cincinnati	OH	SC GP III LLC	08/26/2020	3		716,458		6.340
000000-00-0	6132 Sagard Credit Partners LP	Toronto		Sagard Credit Partners Cayman GP Inc	10/09/2018	3		131,250		7.583
000000-00-0	6133 PineBridge Private Credit Feeder LP	New York	NY	PineBridge Private Credit Gen Part LP	11/28/2018	3		67,019		7.515
000000-00-0	6134 Gryphon Mezzanine Partners II Feeder Fund LP	San Francisco	CA	Gryphon Mezzanine Partners II LP	12/20/2019	3		1,984,983		10.211
000000-00-0	6135 NB Direct Access Insurance SPV LLC	Wilmington	DE	NB Direct Access Associates LP	08/21/2020	3		90,826		18.420
000000-00-0	6137 Cyprum Parallel Investors V LP	Cleveland	OH	Cyprum V Management LLC	08/15/2019	3		382,317		21.429
000000-00-0	6148 TTGA SBIC Pioneer Feeder Fund LP	Purchase	NY	TTGA SBIC Feeder GP LLC	05/25/2021	3		4,930,091		3.382
1799999. Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated										
000000-00-0	2182 River Cities Capital Fund VI LP	Cincinnati	OH	River Cities Management VI LLC	02/15/2018	3	0	9,798,938	0	XXX
000000-00-0	2244 Hidden Harbor Capital Parnters I LP	Boca Raton	FL	Hidden Harbor Capital Partners GP I LP	02/08/2018	3		1,120,000		
000000-00-0	2250 Goldner Hawn Fund VII LP	Minneapolis	MN	Goldner Hawn GP LLC	04/29/2019	3		3,000,000		1.872
000000-00-0	2416 Gryphon Partners VI LP	San Francisco	CA	Gryphon GenPar VI LP	11/26/2021	3		365,343		
000000-00-0	2518 MidOcean Partners VI LP	New York	NY	MidOcean Associates V LP	11/09/2021	3		1,112,688		0.482
000000-00-0	2556 FSS Software Topco LP	McHenry	IL	Francisco Partners	08/27/2021	2		464,831		
000000-00-0	2557 FSS Content Topco LP	McHenry	IL	Francisco Partners	08/27/2021	2		74		
000000-00-0	2558 JFL-NG Continuation Fund	New York	NY	J F Lehman & Company	10/27/2021	3		(74)		
000000-00-0	2581 Energy Impact Fund II LP	New York	NY	Energy Impact Fund II GP LLC	11/12/2021	1		49,624		2.018
000000-00-0	2584 One Equity Partners VIII LP	New York	NY	One Equity Partners	01/26/2022	3	1,253,370	(1,082,854)		
000000-00-0	2589 Hidden Harbor Capital Partners II L P	Boca Raton	FL	Hidden Harbor Capital Partners GP I LP	09/07/2022	3	1,253,370	2,183,124		0.250
000000-00-0	2591 VSC Polara LLC	Los Angeles	CA	VSC III Polara Holdings GP	12/02/2021	2	1,816,302			1.253
000000-00-0	2614 NSH Verisma Holdco LP	Radnor	PA	NewSpring Health Capital	12/16/2021	3		122,928		
000000-00-0	2619 OSP Hamilton Equity Aggregator LP	Wilmington	DE	OceanSound Partners LP	07/22/2022	2	122,074	101,106		
000000-00-0	2620 JFL-NARDA Partners LLC	New York	NY	J F Lehman and Company LLC	12/28/2021	2				0.160
000000-00-0	2622 OceanSound Partners Fund LP	New York	NY	OceanSound Partners	12/27/2021	3		36,064		
000000-00-0	2624 KLCP Domestic Fund III LP	New York	NY	Kennedy Lewis GP III LLC	12/27/2021	3		1,201,570		0.234
000000-00-0	2633 Weatherby Parent Holdings LLC	Boston	MA	TA Associates	02/07/2022	2		29,296		0.920
000000-00-0	2635 Karakoram Fund I LP	Manhattan Beach	CA	K5 Capital Advisors LP	01/28/2022	3	1,406,250	6,509		
000000-00-0	2644 SDC Digital Infrastructure Opportunity Fund III LP	New York	NY	SDC DIOF III GP LP	04/25/2022	1		327,884		0.087
000000-00-0	2656 Trident IX LP	Greenwich	CT	Trident Capital IX LP	06/24/2022	1	25,000	89,790		0.330
000000-00-0	2657 A&M Capital Partners III LP	Greenwich	CT	A&M Capital GP III LP	12/16/2022	3	1,383,602	537,645		0.070
000000-00-0	2665 AEA Growth Equity Fund LP	San Francisco	CA	AEA Growth	04/29/2022	3		5,561	1,988,789	1.250
000000-00-0	2672 River Cities Capital Fund VII LP	Cincinnati	OH	River Cities Management VI LLC	07/15/2022	3	250,000			1.667
000000-00-0	2686 SER Capital Partners I LP	Houston	TX	Apollo Global Management	07/31/2021	3		997,978		
000000-00-0	2705 Energy Acquisition Vehicle LP	New York	NY	Stone Ridge Asset Management LLC	09/22/2022	3	14,275,355			7.850
000000-00-0	2710 Asper DHUK LP	London SE1 9SG		Asper Investment Management	10/21/2022	3	121,218	27,349		1.604
000000-00-0	2713 Rockland Power Partners IV LP	The Woodlands	TX	Rockland Power Partners III GP LLC	10/20/2022	3	2,164,400	188,473		
000000-00-0	2733 Capital Z Partners (MGA) L.P.	New York	NY	Capital Z Partners	12/14/2022	3	3,000,000			0.311
000000-00-0	6002 A&M Capital Partners II LP	GREENWICH	CT	A&M Capital-GP II LP	05/25/2018	3		605,058		0.882
000000-00-0	6003 Allos III-Q LP	Rowayton	CT	Allos Ventures III LLC	12/19/2018	3		380,000		4.448
000000-00-0	6009 LLR Equity Partners IV LP	Philadelphia	PA	LLR Capital IV LP	03/14/2014	3		1,978		0.828
000000-00-0	6010 NB Secondary Opportunities Fund III LP	New York	NY	NB Secondary Opportunities Assoc III LP	05/23/2013	3		218,167		0.794
000000-00-0	6012 NB Strategic Co-Investment Partners III LP	New York	NY	NB Strat Co-Investment Assoc III GP LLC	01/28/2016	3		66,123		0.875
000000-00-0	6013 NB Secondary Opportunities Fund IV LP	New York	NY	NB Secondary Opportunities Assoc IV LP	04/19/2017	3		524,464		0.442
000000-00-0	6015 Bridge Growth Partners LP	New York	NY	Bridge Growth Partners LP	07/15/2014	3		530,240		5.957
000000-00-0	6018 Greenspring Opportunities IV LP	Owing Mills	MD	Greenspring Opportunities Gen Part IV LP	04/25/2016	3		105,000		1.081
000000-00-0	6019 Narya Capital Fund I LP	Cincinnati	OH	Narya Capital Fund I LP	03/20/2020	3		830,000		2.086
000000-00-0	6021 Orchard Tosca Investment Partners LP	CINCINNATI	OH	Orchard Investment Management LLC	08/19/2011	3		97,789		47.702
000000-00-0	6030 Snow Phipps II LP	New York	NY	Snow Phipps GP II LP	01/08/2010	3		74,870		1.063
000000-00-0	6031 Snow Phipps III LP	New York	NY	Snow Phipps GP III LLC	06/08/2016	3		373,114		1.142
000000-00-0	6033 Solamere Capital Fund II LP	Boston	MA	Solamere Capital Fund II GP LP	08/19/2013	3		216,451		1.886
000000-00-0	6034 Solamere Capital Fund II-A LP	Boston	MA	Snow Phipps GP III LLC	08/19/2013	3		35,815		1.760
000000-00-0	6039 Tritium Partners LLC	Austin	TX	Tritium I GP LLC	06/26/2015	3		267,193		2.094
000000-00-0	6046 Medley Credit Opportunity Delaware Fund LP	New York	NY	MCOF GP LLC	10/01/2021	7		54,810		45.898
000000-00-0	6047 Gryphon Partners IV LP	San Francisco	CA	Gryphon GenPar IV LP	12/06/2016	3		94,191		0.460
000000-00-0	6048 Gryphon Partners V LP	San Francisco	CA	Gryphon GenPar V LP	08/29/2018	3		65,912		0.570

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE December 31 of Current Year

1	2	Location		5	6	7	8	9	10	11
		3	4							
CUSIP Identification	Name or Description	City	State	Name of Vendor or General Partner	Date Originally Acquired	Type and Strategy	Actual Cost at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Percentage of Ownership
000000-00-0	6049 A&M Capital Opportunities Fund LP	Greenwich	CT	A&M Capital Opportunities-GP LP	10/01/2021	3		810,987		1.496
000000-00-0	6050 ManchesterStory Venture Fund LP	West Des Moines	IA	ManchesterStory GP1 LLC	03/23/2017	3		280,839		2.132
000000-00-0	6053 Energy Impact Fund LP	New York	NY	Energy Impact Partners LLC	05/11/2017	3		1,547,549		1.621
000000-00-0	6057 LLR Equity Partners V LP	Philadelphia	PA	LLR Capital V LP	03/31/2017	3		352,156		0.733
000000-00-0	6058 Cintrifuse Syndicate Fund II, LLC	Cincinnati	OH	Cintrifuse Fund Management II LLC	09/18/2017	1		512,600		4.483
000000-00-0	6061 Refinery Venture Fund I LP	Fort Worth	TX	Refinery Management LLC	11/20/2017	3		100,496		4.561
000000-00-0	6063 Rivercrest Capital Partners LP	Fort Worth	TX	Rivercrest Capital GP LLC	04/02/2018	3		649,739		4.561
000000-00-0	6064 Corsair Assist Investors LP	New York	NY	Rivercrest Capital GP LLC	05/25/2018	3		33,582		13.505
000000-00-0	6065 Corsair Boomer Investors LP	New York	NY	Corsair Boomer Management LP	06/25/2018	3		9,767		9.845
000000-00-0	6066 Corsair V Financial Services Capital Partners LP	New York	NY	Rivercrest Capital GP LLC	06/25/2018	3		289,380		1.517
000000-00-0	6067 NB Dyal IV US Investors LP	New York	NY	NB Dyal Associates IV LP	06/11/2018	3		1,015,955		0.273
000000-00-0	6068 Trilantic Capital Partners VI LP	New York	NY	Trilantic Capital Partners Assoc VI LP	07/25/2018	3		1,160,167		0.490
000000-00-0	6072 Solamere Capital Fund III LP	Boston	MA	Solamere Capital Fund III GP LP	11/20/2018	3		2,055,127		1.571
000000-00-0	6073 Roark Capital Partners Fund V LP	New York	NY	Roark Capital GenPar V LP	11/01/2018	3		207,074		0.143
000000-00-0	6075 Greenspring Global Partners IX-B LP	Owing Mills	MD	Greenspring General Partner IX LP	02/08/2019	3		247,580		0.278
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP	New York	NY	Blackstone Tac Opportunities Assoc 3 LLC	02/08/2019	3		1,082,871		0.243
000000-00-0	6079 Goldner Hawn Fund VII LP	Minneapolis	MN	Goldner Hawn GP LLC	04/29/2019	3		744,643		1.732
000000-00-0	6082 Nutraceutical Investco LP	River Side	CT	M&S GP LLC	10/18/2019	3		26,795		2.273
000000-00-0	6083 Tritium Partners II LLC	Austin	TX	Tritium II GP LLC	11/13/2019	3		1,489,130		2.050
000000-00-0	6084 Cincy Tech Fund V LLC	Cincinnati	OH	CincyTech LLC	11/20/2019	1		525,000		8.450
000000-00-0	6085 Corsair Blade Investors LP	New York	NY	Corsair Blade Management LP	12/16/2019	3		15,576		15.576
000000-00-0	6086 Gallant Capital Partners I LP	Los Angeles	CA	CincyTech LLC	05/29/2020	3		2,640,972		3.145
000000-00-0	6087 Refinery Venture Fund II LP	Cincinnati	OH	Refinery Management LLC	11/19/2019	3		200,016		1.360
000000-00-0	6088 Cross Creek Capital III LP	Salt Lake City	UT	Cross Creek Capital III GP LP	03/09/2021	3		300,000		1.696
000000-00-0	6089 Bridge Growth Partners II LP	New York	NY	Bridge Growth Partners LP	10/01/2021	3		3,344,892		7.335
000000-00-0	6092 Corsair Indigo Investors LP	New York	NY	Corsair Indigo Management LP	12/07/2020	3		16,295		5.993
000000-00-0	6093 Foresite Capital Fund V LP	San Francisco	CA	Foresite Capital Management V LLC	06/08/2020	3		380,000		0.484
000000-00-0	6095 Greenspring Opportunities VI LP	Owing Mills	MD	Greenspring Opportunities VI LP	01/21/2020	3		400,000		0.410
000000-00-0	6096 LLR Equity Partners VI LP	Philadelphia	PA	LLR Capital VI LP	05/13/2021	3		600,000		0.212
000000-00-0	6098 Dyal V US Investors LP	New York	NY	NB Dyal Associates V LP	10/01/2021	3		2,200,270		0.415
000000-00-0	6099 NB Strategic Capital LP	New York	NY	NB Strategic Capital Associates LP	03/05/2020	3		1,437,191		1.013
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP	New York	NY	NB Alternatives Advisors LLC	01/29/2020	3		1,724,586		0.494
000000-00-0	6101 Revelstoke EPIC Fund I LP	Denver	CA	RCP Single Asset Fund I GP LLC	10/01/2021	3		135,189		0.412
000000-00-0	6102 Riverwood Capital Partners III LP	Menlo Park	CA	Riverwood Capital III LP	03/27/2020	3		1,397,805		0.693
000000-00-0	6103 Cranemere Group Limited	Palo Alto	CA	The Cranemere Group Limited	05/21/2014	3		28,851,593		7.360
000000-00-0	6104 Vivo Capital Fund IX LP	Palo Alto	CA	Vivo Capital IX LLC	09/09/2019	3		642,377		0.350
000000-00-0	6138 A&M Capital Europe SCSp	Greenwich	CT	A&M Capital Europe-GP LP	06/30/2019	3		2,214,930		1.437
000000-00-0	6139 GreyLion Capital LP	New York	NY	GreyLion Capital GP LP	08/20/2014	3		82,896		2.057
000000-00-0	6140 GreyLion Capital II LP	New York	NY	GreyLion Capital II GP LP	02/28/2018	3		681,087		1.201
000000-00-0	6141 Vida Insurance Credit Opportunity Fund II LP	Austin	TX	Vida Management I LLC	10/01/2021	3		5,677,203		3.618
000000-00-0	6143 Private Equity Solutions SCSP	Luxembourg	LUX	DWS Investment SA	12/16/2019	3		1,476,247		1.585
000000-00-0	6146 Desri VI LLC	New York	NY	DE Shaw Renewable Investments LLC	12/17/2014	3		3,464		4.110
000000-00-0	6149 Greyllon Capital Fund III LP	New York	NY	Greyllon Capital Fund III GP	12/14/2021	3		529,578		0.819
000000-00-0	2554 PDQ Topco LP	Menlo Park	CA	PDQ Topco LP	08/27/2021	3		43,192		
1999999. Joint Venture Interests - Common Stock - Unaffiliated							26,297,728	85,539,598	0	XXX
000000-00-0	6108 NB Real Estate Secondary Opportunities Fund LP	Philadelphia	PA	NB Real Estate Secondary Opp Assoc LP	12/05/2018	3		1,642,707		1.688
000000-00-0	6109 LCN NA Fund III-D LP	Philadelphia	PA	LCN North American GP III LP	08/23/2019	3		413,046		4.324
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP	Philadelphia	PA	Lubert-Adler Group WH LP	10/01/2021	3		5,250,000		5.411
000000-00-0	6112 Hillpointe Workforce Housing Partnership II LP	Winter Park	FL	Hillpointe Fund II GP LLC	11/03/2020	3		75,000		2.727
2199999. Joint Venture Interests - Real Estate - Unaffiliated							0	7,380,753	0	XXX
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund	Springfield	MA	Massachusetts Mutual Life Ins Co	10/06/2021	3		3,928,171	11,261,511	13.000
000000-00-0	2525 MM BIG Peninsula Co-Invest Member LLC	Hartford	CT	Massachusetts Mutual Life Ins Co	06/30/2021	3		287,970	1,560,530	5.710
000000-00-0	2530 MM Horizon Savannah Member LLC	Springfield	MA	Massachusetts Mutual Life Ins Co	10/25/2021	3		1,398,984	2,506,285	7.600
000000-00-0	2676 Trailside MM Member II LLC	Hartford	CT	Massachusetts Mutual Life Ins Co	07/26/2022	3	562,793	33,566		19.880
2299999. Joint Venture Interests - Real Estate - Affiliated							562,793	5,648,691	15,328,326	XXX
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	Charlotte	CT	BREDIF GP LLC	03/24/2021	3		84,581,940		0.100
2499999. Joint Venture Interests - Mortgage Loans - Affiliated							0	84,581,940	0	XXX
000000-00-0	2579 Renovation Parent LLC	West Palm Beach	FL	Comvest Partners	11/15/2021	2		197,368		
000000-00-0	2599 ITI Ultimate Holdco LLC	San Francisco	CA	Calera Capital	01/14/2022	2	257,758			
000000-00-0	2601 BSP TS Co-Invest I LLC	New York	NY	Broad Sky Partners LLC	12/10/2021	3		114,641		
000000-00-0	2616 Stork SPV LP	Greenwich	CT	Amulet Capital Fund II GP LP	12/20/2021	3		2,185,517		10.610
000000-00-0	2636 ZB Parent LLC	Austin	TX	Peak Rock Capital	02/09/2022	2	27,069			

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE December 31 of Current Year

1 CUSIP Identification	2 Name or Description	Location		5 Name of Vendor or General Partner	6 Date Originally Acquired	7 Type and Strategy	8 Actual Cost at Time of Acquisition	9 Additional Investment Made After Acquisition	10 Amount of Encumbrances	11 Percentage of Ownership
		3 City	4 State							
000000-00-0	2652 Accurus Aerospace Holdings LLC	New York	NY.....	Liberty Hall Capital Partners	..04/04/2022	2.....	81,121 .....	.....	.....	.....0.033
000000-00-0	2673 KSL Capital Partners CV I LP	Denver	CO.....	KSL Capital Partners	..05/25/2022	1.....	1,669,587 .....	.....	.....	.....0.307
000000-00-0	2687 ASC Communications Holdings LLC	Charlotte	NC.....	Pamlico Capital	..07/15/2022	2.....	22,387 .....	.....	.....	.....1.119
000000-00-0	2688 Burgess Point Holdings LP	Santa Monica	CA.....	Burgess Point Holdings LP	..07/25/2022	2.....	204,273 .....	.....	.....	.....0.019
000000-00-0	2688 Exos Collateralized SPAC Holdings Fund LP	New York	NY.....	Exos Collateralized SPAC Holdings Fund	..11/14/2022	1.....	2,000,000 .....	.....	.....	.....14.290
000000-00-0	2707 TSS Co-Invest Holdings LP	Beverly Hills	CA.....	Levine Leichtman Capital Partners	..09/09/2022	3.....	3,000,000 .....	.....	.....	.....0.587
000000-00-0	2712 GB King Holdings LP	Rye	NY.....	Greenbriar Equity Group LP	..10/31/2022	2.....	66,700 .....	.....	.....	.....0.020
000000-00-0	2720 AASC Holdings LP	Rye	NY.....	Greenbriar Equity Group LP	..12/01/2022	2.....	86,000 .....	.....	.....	.....0.059
000000-00-0	2724 Solo Topco L.P.	San Francisco	CA.....	OA Topco GP LLC	..12/01/2022	2.....	51,640 .....	.....	.....	.....0.027
000000-00-0	2729 TSYL TA Aggregator LP	Boston	MA.....	Pacific Equity Partners Fund V GP Ltd	..12/19/2022	2.....	4,673 .....	.....	.....	.....0.003
2599999. Joint Venture Interests - Other - Unaffiliated							7,471,208	2,497,526	0	XXX
649526-AF-5	8003 New York Life Insurance Co	Ireland .....	.....	New York Life Insurance Co	..03/25/2010 .....	.....	.....	.....15,066,573 .....	.....	.....
878091-BC-0	8005 Teachers Insurance & Annuity	Ireland .....	.....	Teachers Insurance & Annuity	..03/31/2010 .....	.....	.....	.....6,086,044 .....	.....	.....
677412-AF-5	8007 Ohio National Life Ins	Ireland .....	.....	Ohio National Life Ins	..04/27/2015 .....	.....	.....	.....5,500,000 .....	.....	.....
878091-BD-8	8008 Teachers Insurance & Annuity	Ireland .....	.....	Teachers Insurance & Annuity	..04/27/2015 .....	.....	.....	.....	.....	.....
638671-AK-3	8012 Nationwide Mutual Ins Co	Ireland .....	.....	Nationwide Mutual Ins Co	..08/31/2017 .....	.....	.....	.....40,672,711 .....	.....	.....
743917-AH-9	8015 Prudential Ins Co America	Ireland .....	.....	Prudential Ins Co America	..08/03/2016 .....	.....	.....	.....7,261,949 .....	.....	.....
401378-AC-8	8017 Guardian Life Insurance Co of America	Ireland .....	.....	Guardian Life Ins Co Amer	..05/31/2017 .....	.....	.....	.....17,088,638 .....	.....	.....
023138-AA-8	8020 Ambac Assurance Corp	Ireland .....	.....	Ambac Assurance Corp	..12/31/2018 .....	.....	.....	.....16,590 .....	.....	.....
309588-AC-5	8026 Farmers Exchange Capital-Subordinated	Ireland .....	.....	Farmers exchange CAP III	..07/31/2020 .....	.....	.....	.....9,895,698 .....	.....	.....
530790-AC-1	8518 Liberty Mutual Insurance Company Surplus Note 7.875	Cincinnati	OH.....	Stifel	..08/31/2017 .....	.....	.....	.....(18,372,284) .....	.....	.....
2799999. Surplus Debentures, etc - Unaffiliated							0	83,215,919	0	XXX
000000-00-0	8501 Nationwide Mutual Insurance Company Surplus Note	Wilmington	DE.....	Nationwide Mutual Insurance Company Surplus Note	..07/26/2016	3.....	.....	.....(40,672,711) .....	.....	.....
000000-00-0	8503 Teachers Ins & ANN 6.85 12/16/2039	New York	NY.....	Teachers Ins & ANN 6.85 12/16/2039	..08/31/2017	3.....	.....	.....(631,068) .....	.....	.....
000000-00-0	8504 Gaurdian Life Ins 4.85 01/24/2077	New York	NY.....	Gaurdian Life Ins 4.85 01/24/2077	..08/31/2017	3.....	.....	.....(17,088,638) .....	.....	.....
000000-00-0	8506 Prudential Ins 8.30 07/01/2025	Newark	NJ.....	Prudential Ins 8.30 07/01/2025	..08/31/2017	3.....	.....	.....(7,261,949) .....	.....	.....
000000-00-0	8508 New York Life 6.75 11/15/2039	New York	NY.....	New York Life 6.75 11/15/2039	..10/01/2021	3.....	.....	.....(15,066,573) .....	.....	.....
000000-00-0	8512 TIAA 4.900 09/15/44	New York	NY.....	TIAA 4.900 09/15/44	..07/05/2021	3.....	.....	.....(6,082,795) .....	.....	.....
000000-00-0	8513 Farmers Surplus Note 7.05	Cincinnati	OH.....	Farmers Surplus Note 7.05	..09/27/2016	3.....	.....	.....(9,895,698) .....	.....	.....
000000-00-0	8519 Ohio National Life Insurance Company Surplus Note	Cincinnati	OH.....	Ohio National Life Insurance Company Surplus Note	..07/31/2016	3.....	.....	.....(5,500,000) .....	.....	.....
000000-00-0	8520 AMBAC Assurance	New York	NY.....	AMBAC Assurance	..02/28/2018	3.....	.....	.....(16,590) .....	.....	.....
2899999. Surplus Debentures, etc - Affiliated							0	(102,216,022)	0	XXX
000000-00-0	7111 BABSON CLO LTD 2015-II SUB NT	Cayman Islands .....	.....	BABSON CLO LTD 2015-II SUB NT	..05/09/2014	3.....	.....	.....8,543,834 .....	.....	.....
000000-00-0	7135 AMMC CLO XI Ltd-AMMC 2012-11A	Cayman Islands .....	.....	AMMC CLO XI Ltd-AMMC 2012-11A	..05/09/2014	3.....	.....	.....7,313,067 .....	.....	.....
000000-00-0	7136 Ammc Clo 20 Ltd-AMMC 2017-20A	Cayman Islands .....	.....	Ammc Clo 20 Ltd-AMMC 2017-20A	..05/09/2014	3.....	.....	.....12,119,493 .....	.....	.....
000000-00-0	7137 AMMC CLO XIV Ltd-AMMC 2014-14A	Cayman Islands .....	.....	AMMC CLO XIV Ltd-AMMC 2014-14A	..05/09/2014	3.....	.....	.....3,276,015 .....	.....	.....
000000-00-0	7138 AMMC CLO 15 Ltd-AMMC 2014-15A	Cayman Islands .....	.....	AMMC CLO 15 Ltd-AMMC 2014-15A	..05/09/2014	3.....	.....	.....13,865,706 .....	.....	.....
000000-00-0	7139 AMMC CLO XIII Ltd-AMMC 2013-13A	Cayman Islands .....	.....	AMMC CLO XIII Ltd-AMMC 2013-13A	..05/09/2014	3.....	.....	.....2,028,925 .....	.....	.....
000000-00-0	7140 AMMC CLO 22 Ltd-AMMC 2018-22A SUB	Cayman Islands .....	.....	AMMC CLO 22 Ltd-AMMC 2018-22A SUB	..05/09/2014	3.....	.....	.....22,257,439 .....	.....	.....
000000-00-0	7141 AMMC CLO 23 Ltd-AMMC 2020-23A SUB	Cayman Islands .....	.....	AMMC CLO 23 Ltd-AMMC 2020-23A SUB	..05/09/2014	3.....	.....	.....22,558,040 .....	.....	.....
000000-00-0	7142 AMMC CLO 21 LTD	Cayman Islands .....	.....	AMMC CLO 21 LTD	..05/09/2014	3.....	.....	.....3,240,462 .....	.....	.....
000000-00-0	7143 AMMC CLO 18 Ltd-AMMC 2016-18A SUB	Cayman Islands .....	.....	AMMC CLO 18 Ltd-AMMC 2016-18A SUB	..05/09/2014	3.....	.....	.....9,760,259 .....	.....	.....
000000-00-0	7144 AMMC CLO XII Ltd-AMMC 2013-12A SUB	Cayman Islands .....	.....	AMMC CLO XII Ltd-AMMC 2013-12A SUB	..05/09/2014	3.....	.....	.....4,487,341 .....	.....	.....
000000-00-0	7145 Ammc Clo 19 Ltd-AMMC 2016-19A	Cayman Islands .....	.....	Ammc Clo 19 Ltd-AMMC 2016-19A	..05/09/2014	3.....	.....	.....10,122,035 .....	.....	.....
000000-00-0	7146 Man GLG US CLO-GLGU 2018-1A SUB	Cayman Islands .....	.....	Man GLG US CLO-GLGU 2018-1A SUB	..05/09/2014	3.....	.....	.....16,212,413 .....	.....	.....
000000-00-0	7147 Magnetite XVI Ltd-MAGNE 2015-16A SUB	Cayman Islands .....	.....	Magnetite XVI Ltd-MAGNE 2015-16A SUB	..05/09/2014	3.....	.....	.....1,651,518 .....	.....	.....
000000-00-0	7155 Babson CLO Ltd/Cayman Is-BABSN LP-2A SUB	Cayman Islands .....	.....	Babson CLO Ltd/Cayman Is-BABSN LP-2A SUB	..05/09/2014	3.....	.....	.....23,809,374 .....	.....	.....
000000-00-0	7159 Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A SUB	Cayman Islands .....	.....	Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A SUB	..05/09/2014	3.....	.....	.....4,375,681 .....	.....	.....
000000-00-0	7161 Galaxy XXIII CLO Ltd-GALXY 2017-23A SUBA	Cayman Islands .....	.....	Galaxy XXIII CLO Ltd-GALXY 2017-23A SUBA	..05/09/2014	3.....	.....	.....3,061,010 .....	.....	.....
000000-00-0	7164 JCP Direct Lending CLO 2022 LLC	United States	US.....	JCP Direct Lending CLO 2022 LLC	..03/13/2014	3.....	.....	.....10,305,384 .....	.....	.....
000000-00-0	7165 Loan Asset Issuer LLC SER 2021 M-2	United States	US.....	Loan Asset Issuer LLC SER 2021 M-2	..03/13/2014	3.....	.....	.....14,273,820 .....	.....	.....
000000-00-0	7166 Loan Asset Issuer LLC Series 2022 NG-1	United States	US.....	Loan Asset Issuer LLC Series 2022 NG-1	..03/13/2014	3.....	.....	.....12,223,023 .....	.....	.....
000000-00-0	7167 AMMC CLO 16 Ltd	United States	US.....	AMMC CLO 16 Ltd	..03/13/2014	3.....	.....	.....4,074,448 .....	.....	.....
4699999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated							0	209,559,288	0	XXX
6099999. Total - Unaffiliated							33,991,331	397,992,022	0	XXX
6199999. Total - Affiliated							562,793	(11,985,390)	15,328,326	XXX
6299999 - Totals							34,554,124	386,006,631	15,328,326	XXX

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 3

Showing Other Long-Term Invested Assets **DISPOSED**, Transferred or Repaid During the Current Year

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consideration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Investment Income
000000-00-0	2725 Sprott Private Resource Lending Fund III LP	Toronto	CA.....	Distribution	11/29/2022 ..	12/19/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated								0	0	0	0	0	0	0	0	0	0	0	0
000000-00-0	6116 Sierra Senior Loan Strategy JV I LLC ..	New York	NY.....	Distribution	07/16/2015 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6117 Monarch Capital Partners III LP	New York	NY.....	Distribution	01/12/2015 ..	11/16/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6118 Yukon Capital Partners II LP	Minneapolis	MN.....	Distribution	07/17/2014 ..	11/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6119 Northcreek Mezzanine Fund II LP	Cincinnati	OH.....	Distribution	01/31/2014 ..	10/07/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6120 Northcreek Mezzanine Fund III LP	Cincinnati	OH.....	Distribution	09/10/2019 ..	10/07/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6121 ExlWorks Capital Fund I LP	Chicago	IL.....	Liquidation of Investment	04/17/2017 ..	12/01/2022 ..	.....	(1)	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6122 ExlWorks Capital Fund II Parallel Vehicle LP	Chicago	IL.....	Liquidation of Investment	06/22/2017 ..	12/01/2022 ..	.....	(1)	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6123 NB Private Equity Credit Opportunities Fund LP	New York	NY.....	Distribution	06/07/2017 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6124 Yukon Capital Partners III LP	Minneapolis	MN.....	Distribution	07/18/2017 ..	10/26/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6125 Monarch Capital Partners IV LP	New York	NY.....	Distribution	10/30/2017 ..	11/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6126 Gryphon Mezzanine Partners LP	San Francisco	CA.....	Distribution	11/30/2017 ..	11/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6128 World Trade Finance LLC	Oak Brook	IL.....	Distribution	04/20/2020 ..	09/14/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6129 SAAS Capital Fund III	Cincinnati	OH.....	Distribution	08/09/2018 ..	10/07/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6130 SAAS Capital Fund III (B) LP	Cincinnati	OH.....	Distribution	08/26/2020 ..	11/07/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6131 Great American Capital Partners Fund II LP	Los Angeles	CA.....	Distribution	01/12/2018 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6132 Sagard Credit Partners LP	Toronto	CA.....	Distribution	10/09/2018 ..	11/15/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6133 PineBridge Private Credit Feeder LP ..	New York	NY.....	Distribution	11/28/2018 ..	12/23/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6134 Gryphon Mezzanine Partners II Feeder Fund LP	San Francisco	CA.....	Distribution	12/20/2019 ..	11/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6135 NB Direct Access Insurance SPV LLC ..	Wilmington	DE.....	Distribution	08/21/2020 ..	11/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6136 Calitus Partners III LP	Los Angeles	CA.....	Distribution	06/25/2004 ..	03/02/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6137 Cyprium Parallel Investors V LP	Cleveland	OH.....	Distribution	08/15/2019 ..	11/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6148 TTGA SBIC Pioneer Feeder Fund LP	Purchase	NY.....	Distribution	05/25/2021 ..	12/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
1799999. Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated								0	(2)	0	0	(2)	0	0	16,122,830	0	0	0	0
000000-00-0	1901 High Road Capital Partners Fund II P ..	Greenwich	CT.....	Distribution	05/03/2013 ..	05/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2182 River Cities Capital Fund VI LP	Cincinnati	OH.....	Distribution	02/15/2018 ..	10/07/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2416 Gryphon Partners VI LP	San Francisco	CA.....	Distribution	11/26/2021 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2518 MidOcean Partners VI LP	New York	NY.....	Distribution	11/09/2021 ..	05/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2581 Energy Impact Fund III LP	New York	NY.....	Distribution	11/12/2021 ..	10/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2584 One Equity Partners VIII LP	New York	CA.....	Distribution	01/26/2022 ..	12/13/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2622 OceanSound Partners Fund LP	New York	NY.....	Distribution	12/27/2021 ..	11/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2624 KLOP Domestic Fund III LP	New York	NY.....	Distribution	12/27/2021 ..	12/05/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2633 Weatherby Parent Holdings LLC	Boston	MA.....	Distribution	02/07/2022 ..	09/14/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2635 Karakoram Fund I LP	Manhattan Beach	CA.....	Distribution	01/28/2022 ..	11/24/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2686 SER Capital Partners I LP	Houston	TX.....	Distribution	07/31/2021 ..	09/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2691 PEP Secure Assets Fund II LP	Sydney NSW 2000 .....	.....	Distribution	12/19/2022 ..	12/19/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2692 NexPhase Capital Fund V LP	New York	NY.....	Distribution	12/16/2022 ..	12/19/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2710 Asper DHUK LP	London SE1 9SG .....	.....	Distribution	10/21/2022 ..	12/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2713 Rockland Power Partners IV LP	The Woodlands	TX.....	Distribution	10/20/2022 ..	12/19/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2717 Ampersand 2022 LP	Wellesley	MA.....	Distribution	11/02/2022 ..	11/02/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2733 Capital Z Partners (MGA) L.P.	New York	NY.....	Distribution	12/14/2022 ..	12/19/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6001 A&M Capital Partners LP	GREENWICH	CT.....	Distribution	12/06/2013 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6002 A&M Capital Partners II LP	GREENWICH	CT.....	Distribution	05/25/2018 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6003 Allos III-Q LP	Rowayton	CT.....	Distribution	12/19/2018 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6004 AltEnergy Storage LLC	Rowayton	CT.....	Liquidation of Investment	09/28/2015 ..	12/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	(35,914)
000000-00-0	6005 Arclight Energy Partners Fund VI LP ..	Boston	MA.....	Distribution	08/04/2015 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6006 Cincy Tech Fund IV LLC	Cincinnati	OH.....	Distribution	03/18/2016 ..	11/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	6007 Electric Gaurd Dog LLC	New York	NY.....	Liquidation of Investment	06/08/2016 ..	12/01/2022 ..	.....	67,068	.....	.....	.....	.....67,068	.....	.....	.....	.....	.....	.....0	113,870
000000-00-0	6008 Harvest Intrexon Enterprise Fund I LP ..	San Francisco	CA.....	Distribution	09/04/2015 ..	12/13/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 3

Showing Other Long-Term Invested Assets DISPOSED, Transferred or Repaid During the Current Year

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consideration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Investment Income
000000-00-0	6009 LLR Equity Partners IV LP	PHILADELPHIA	PA	Distribution	03/14/2014	11/07/2022						.0			751,556			.0	
000000-00-0	6010 NB Secondary Opportunities Fund III LP	New York	NY	Distribution	05/23/2013	11/23/2022						.0			1,067,810			.0	
000000-00-0	6011 NB Strategic Co-Investment Partners II LP	New York	NY	Distribution	10/01/2012	01/01/2022						.0			.0			.0	
000000-00-0	6012 NB Strategic Co-Investment Partners III LP	New York	NY	Distribution	01/28/2016	10/14/2022						.0			1,144,491			.0	
000000-00-0	6013 NB Secondary Opportunities Fund IV LP	New York	NY	Distribution	04/19/2017	09/23/2022						.0			1,172,836			.0	
000000-00-0	6014 OLG Investment Partners LP	Cincinnati	OH	Distribution	09/27/2013	07/31/2022						.0			81,433			.0	
000000-00-0	6015 Bridge Growth Partners LP	New York	NY	Distribution	07/15/2014	06/30/2022						.0			136,039			.0	
000000-00-0	6016 Channel 51 LLC	Miami	FL	Distribution	04/29/2016	06/30/2022						.0			16,170			.0	
000000-00-0	6017 Financial Edge Fund LP	Naples	FL	Distribution	11/29/2007	01/01/2022						.0			.0			.0	
000000-00-0	6018 Greenspring Opportunities IV LP	Owing Mills	MD	Distribution	04/25/2016	01/01/2022						.0			.0			.0	
000000-00-0	6019 Narya Capital Fund I LP	Cincinnati	OH	Distribution	03/20/2020	01/01/2022						.0			.0			.0	
000000-00-0	6021 Orchard Tosca Investment Partners LP	CINCINNATI	OH	Distribution	08/19/2011	01/01/2022						.0			.0			.0	
000000-00-0	6022 Patriot Financial Partners II LP	Radnor	PA	Distribution	04/30/2014	10/14/2022						.0			1,738,525			.0	
000000-00-0	6023 Patriot Financial Partners III, L.P.	Radnor	PA	Distribution	07/21/2017	01/01/2022						.0			.0			.0	
000000-00-0	6024 Project Senator Holdings LP	New York	NY	Distribution	05/11/2016	01/01/2022						.0			.0			.0	
000000-00-0	6025 RCOF IFBYPHONE LLC	Cincinnati	OH	Distribution	09/09/2014	01/01/2022						.0			.0			.0	
000000-00-0	6026 River Cities Capital Fund IV LP	Davenport	IA	Distribution	09/30/2012	01/01/2022						.0			.0			.0	
000000-00-0	6027 River Cities Capital Fund V, LP	Davenport	IA	Distribution	12/31/2012	11/18/2022						.0			316,750			.0	
000000-00-0	6030 Snow Phipps II LP	New York	NY	Distribution	01/08/2010	01/01/2022						.0			.0			.0	
000000-00-0	6031 Snow Phipps III LP	New York	NY	Distribution	06/08/2016	06/30/2022						.0			529,173			.0	
000000-00-0	6032 Snow Phipps LP	New York	NY	Distribution	02/06/2007	07/31/2022						.0			41,201			.0	
000000-00-0	6033 Solamere Capital Fund II LP	Boston	MA	Distribution	08/19/2013	10/04/2022						.0			698,155			.0	
000000-00-0	6034 Solamere Capital Fund II-A LP	Boston	MA	Distribution	08/19/2013	06/30/2022						.0			106,891			.0	
000000-00-0	6035 Solamere Portfolio Company Investments II LLC Vivint	Boston	MA	Distribution	01/18/2019	01/01/2022						.0			.0			.0	
000000-00-0	6036 Solamere Portfolio Company Investments II LLC	Boston	MA	Distribution	04/18/2016	01/01/2022						.0			.0			.0	
000000-00-0	6037 Thorley Industries LLC	Pittsburgh	PA	Distribution	09/23/2015	01/01/2022						.0			.0			.0	
000000-00-0	6038 Three Ocean Partners LLC	New York	NY	Distribution	06/01/2011	01/01/2022						.0			.0			.0	0
000000-00-0	6039 Tritium Partners LLC	Austin	TX	Distribution	06/26/2015	06/30/2022						.0			1,473,195			.0	
000000-00-0	6041 L-A Saturn Acquisition LP	Philadelphia	PA	Distribution	01/16/2015	11/22/2022						.0			420,437			.0	
000000-00-0	6042 Cincinnati Cornerstone Investors El III LLC	Cincinnati	OH	Distribution	09/13/2016	01/01/2022						.0			.0			.0	
000000-00-0	6043 BGP FS Holdco LLC	New York	NY	Liquidation of Investment	11/08/2016	09/01/2022		(678,463)				(678,463)		(1)	188,962		399	399	188,562
000000-00-0	6044 MCOF GP LLC	New York	NY	Liquidation of Investment	07/15/2016	12/01/2022		(1,157)				(1,157)			.0			.0	0
000000-00-0	6045 MCOF Management LLC	New York	NY	Liquidation of Investment	07/15/2016	12/01/2022		(2,784)				(2,784)			.0			.0	0
000000-00-0	6046 Medley Credit Opportunity Delaware Fund LP	New York	NY	Liquidation of Investment	10/01/2021	12/01/2022		(41,587)				(41,587)			8,360,557			.0	4,398,429
000000-00-0	6047 Gryphon Partners IV LP	San Francisco	CA	Distribution	12/06/2016	10/26/2022		.0				.0			49,498			.0	
000000-00-0	6048 Gryphon Partners V LP	San Francisco	CA	Distribution	08/29/2018	10/26/2022		.0				.0			1,225,351			.0	
000000-00-0	6049 A&M Capital Opportunities Fund LP	Greenwich	CT	Distribution	10/01/2021	11/30/2022		.0				.0			2,867,938			.0	
000000-00-0	6050 ManchesterStory Venture Fund LP	West Des Moines	IA	Distribution	03/23/2017	01/01/2022		.0				.0			.0			.0	
000000-00-0	6051 Medley Real D Annuity LLC	New York	NY	Liquidation of Investment	03/21/2016	12/01/2022		(40,000)				(40,000)			.0			.0	
000000-00-0	6052 Bridge Growth Partners LP Accedian Holdings	New York	NY	Distribution	05/19/2017	01/01/2022		.0				.0			.0			.0	
000000-00-0	6053 Energy Impact Fund LP	NEW YORK	NY	Distribution	05/11/2017	12/23/2022		.0				.0			2,108,668			.0	
000000-00-0	6054 Greenspring Global Partners VIII LP	Owing Mills	MD	Distribution	07/14/2017	03/31/2022		.0				.0			319,609			.0	
000000-00-0	6055 Greenspring Opportunities V LP	Owing Mills	MD	Distribution	01/22/2018	08/04/2022		.0				.0			805,000			.0	
000000-00-0	6056 OVIP LP	CINCINNATI	OH	Distribution	07/27/2017	01/01/2022		.0				.0			.0			.0	
000000-00-0	6057 LLR Equity Partners V LP	Philadelphia	PA	Distribution	03/31/2017	11/07/2022		.0				.0			425,106			.0	
000000-00-0	6058 Cintrifuse Syndicate Fund II, LLC	Cincinnati	OH	Distribution	09/18/2017	08/01/2022		.0				.0			142,141			.0	
000000-00-0	6059 Cintrifuse Syndicate Fund I LLC	Cincinnati	OH	Distribution	04/29/2013	06/30/2022		.0				.0			142,587			.0	
000000-00-0	6060 Bridge Growth Partners Aggregator LLC	New York	NY	Distribution	09/29/2017	01/01/2022		.0				.0			.0			.0	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 3

Showing Other Long-Term Invested Assets DISPOSED, Transferred or Repaid During the Current Year

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consideration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Investment Income
000000-00-0	6061 Refinery Venture Fund I LP	FORT WORTH	TX	Distribution	11/20/2017	01/01/2022		.0				.0			.0			.0	
000000-00-0	6062 Foresite Capital Fund IV LP	San Francisco	CA	Distribution	04/16/2018	06/30/2022		.0				.0			219,221			.0	
000000-00-0	6063 Rivercrest Capital Partners LP	Fort Worth	TX	Distribution	04/02/2018	09/30/2022		.0				.0			1,477,767			.0	
000000-00-0	6064 Corsair Assist Investors LP	New York	NY	Distribution	05/25/2018	01/01/2022		.0				.0			.0			.0	
000000-00-0	6065 Corsair Boomer Investors LP	New York	NY	Distribution	06/25/2018	01/01/2022		.0				.0			.0			.0	
000000-00-0	6066 Corsair V Financial Services Capital Partners LP	New York	NY	Distribution	06/25/2018	12/13/2022		.0				.0			2,993,691			.0	
000000-00-0	6067 NB Dyal IV US Investors LP	New York	NY	Distribution	06/11/2018	08/25/2022		.0				.0			714,854			.0	
000000-00-0	6068 Trilantic Capital Partners VI LP	New York	NY	Distribution	07/25/2018	07/01/2022		.0				.0			660,735			.0	
000000-00-0	6069 Cincinnati Cornerstone Investors EI IV LLC	Cincinnati	OH	Distribution	09/28/2018	01/01/2022		.0				.0			.0			.0	
000000-00-0	6070 Medley Aspect Management LLC	Wilmington	DE	Liquidation of Investment	07/15/2016	12/01/2022		(1,152)				(1,152)			.0			.0	0
000000-00-0	6071 Cowboy Parent LLC	New York	NY	Distribution	10/29/2018	01/01/2022		.0				.0			.0			.0	
000000-00-0	6072 Solamere Capital Fund III LP	Boston	MA	Distribution	11/20/2018	12/21/2022		.0				.0			449,724			.0	
000000-00-0	6073 Roark Capital Partners Fund V LP	New York	NY	Distribution	11/01/2018	12/23/2022		.0				.0			9,824			.0	
000000-00-0	6074 OTAIP LP	Chicago	IL	Distribution	02/01/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6075 Greenspring Global Partners IX-B LP	Owing Mills	MD	Distribution	02/08/2019	08/04/2022		.0				.0			80,464			.0	
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP	New York	NY	Distribution	02/08/2019	12/02/2022		.0				.0			858,014			.0	
000000-00-0	6077 Bridge Growth Partners LP Accedian Holdings II	New York	NY	Distribution	03/08/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6078 TriArtisan PFC Partners LLC	Wilmington	DE	Distribution	02/27/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6079 Goldner Hawn Fund VII LP	Minneapolis	MN	Distribution	04/29/2019	12/31/2022		.0				.0			2,268,196			.0	
000000-00-0	6080 Cincinnati Cornerstone Investors BWI I LLC	Cincinnati	OH	Distribution	06/28/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6081 OBIP LP	Cincinnati	OH	Distribution	06/27/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6082 Nutraceutical Investco LP	River Side	CT	Distribution	10/18/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6083 Tritium Partners II LLC	Austin	TX	Distribution	11/13/2019	10/28/2022		.0				.0			265,572			.0	
000000-00-0	6084 Cincy Tech Fund V LLC	Cincinnati	OH	Distribution	11/20/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6085 Corsair Blade Investors LP	New York	NY	Distribution	12/16/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6086 Gallant Capital Partners I LP	Los Angeles	CA	Distribution	05/29/2020	12/28/2022		.0				.0			202,074			.0	
000000-00-0	6087 Refinery Venture Fund II LP	Cincinnati	OH	Distribution	11/19/2019	01/01/2022		.0				.0			.0			.0	
000000-00-0	6088 Cross Creek Capital III LP	Salt Lake City	UT	Distribution	03/09/2021	01/01/2022		.0				.0			.0			.0	
000000-00-0	6089 Bridge Growth Partners II LP	New York	NY	Distribution	10/01/2021	06/30/2022		.0				.0			41,529			.0	
000000-00-0	6090 Blue Chip VI Extension Fund II LLC	Cincinnati	OH	Liquidation of Investment	09/15/2015	12/01/2022		.0				.0			.0			.0	0
000000-00-0	6091 CCA Life Settlements Fund II LP	Dublin		Distribution	12/16/2019	11/14/2022		.0				.0			1,066,891			.0	
000000-00-0	6092 Corsair Indigo Investors LP	New York	NY	Distribution	12/07/2020	12/13/2022		.0				.0			200,824			.0	
000000-00-0	6093 Foresite Capital Fund V LP	San Fransico	CA	Distribution	06/08/2020	06/30/2022		.0				.0			69,768			.0	
000000-00-0	6094 Foresite Capital Opportunity Fund V LP	San Fransico	CA	Distribution	06/29/2020	06/30/2022		.0				.0			20,231			.0	
000000-00-0	6095 Greenspring Opportunities VI LP	Owing Mills	MD	Distribution	01/21/2020	01/01/2022		.0				.0			.0			.0	
000000-00-0	6096 LLR Equity Partners VI LP	Philadelphia	PA	Distribution	05/13/2021	01/01/2022		.0				.0			.0			.0	
000000-00-0	6098 Dyal V US Investors LP	New York	NY	Distribution	10/01/2021	11/07/2022		.0				.0			260,098			.0	
000000-00-0	6099 NB Strategic Capital LP	New York	NY	Distribution	03/05/2020	11/18/2022		.0				.0			1,061,926			.0	
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP	New York	NY	Distribution	01/29/2020	07/28/2022		.0				.0			306,740			.0	
000000-00-0	6101 Revelstoke EPIC Fund I LP	DENVER	CA	Distribution	10/01/2021	07/01/2022		.0				.0			4,033			.0	
000000-00-0	6102 Riverwood Capital Partners III LP	Menlo Park	CA	Distribution	03/27/2020	12/08/2022		.0				.0			440,130			.0	
000000-00-0	6103 Cranemere Group Limited	Palo Alto	CA	Distribution	05/21/2014	04/01/2022		.0				.0			54,256,095			.0	
000000-00-0	6104 Vivo Capital Fund IX LP	Palo Alto	CA	Distribution	09/09/2019	07/07/2022		.0				.0			326,336			.0	
000000-00-0	6138 A&M Capital Europe SCSp	Greenwich	CT	Distribution	06/30/2019	09/22/2022		.0				.0			216,567			.0	
000000-00-0	6139 GreyLion Capital LP	New York	NY	Distribution	08/20/2014	10/11/2022		.0				.0			160,137			.0	
000000-00-0	6140 GreyLion Capital II LP	New York	NY	Distribution	02/28/2018	09/21/2022		.0				.0			1,400,060			.0	
000000-00-0	6141 Vida Insurance Credit Opportunity Fund II LP	Austin	TX	Distribution	10/01/2021	12/31/2022		.0				.0			10,860,315			.0	
000000-00-0	6142 TriArtisan Orlando Partners LLC	New York	NY	Distribution	03/12/2018	01/01/2022		.0				.0			.0			.0	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 3

Showing Other Long-Term Invested Assets DISPOSED, Transferred or Repaid During the Current Year

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (De-crease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capital-ized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consid-eration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Invest-ment Income
000000-00-0	6143 Private Equity Solutions SCSP	Luxembourg	LUX.....	Distribution	12/16/2019 ..	01/01/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
000000-00-0	6144 Blackstone Diversified Alternatives Issuer LLC	New York	NY.....	Distribution	05/21/2019 ..	11/30/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....171,742	.....	.....	.....0	.....
000000-00-0	6145 AltEnergy Storage Bridge LLC	Rowayton	CT.....	Liquidation of Investment	03/20/2019 ..	12/01/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
000000-00-0	6146 Desri VI LLC	New York	NY.....	Distribution	12/17/2014 ..	11/01/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....34,642	.....	.....	.....0	.....
000000-00-0	6149 Greyllon Capital Fund III LP	New York	NY.....	Distribution	12/14/2021 ..	12/31/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....117,338	.....	.....	.....0	.....
000000-00-0	6150 DataLink Holdings, LLC	West Palm Beach	FL.....	Distribution	11/23/2020 ..	01/01/2022 ..	2,813,063	.....	.....	.....	.....	.....0	.....	.....	.....2,813,063	.....	.....	.....0	.....
000000-00-0	6151 Quibi Holdings, LLC (Class A)	Beverly Hills	CA.....	Distribution	08/24/2018 ..	01/01/2022 ..	944	.....	.....	.....	.....	.....0	.....	.....	.....944	.....	.....	.....0	.....
000000-00-0	6152 Quick Med Holdings LLC	Pittsburgh	PA.....	Distribution	11/06/2018 ..	01/01/2022 ..	4,014,150	.....	.....	.....	.....	.....0	.....	.....	.....4,014,150	.....	.....	.....0	.....
000000-00-0	6153 TS OpCo Holdings, LLC	Pittsburgh	PA.....	Distribution	09/28/2018 ..	01/01/2022 ..	8,046,692	.....	.....	.....	.....	.....0	.....	.....	.....8,046,692	.....	.....	.....0	.....
000000-00-0	6154 Convest Investment Partners V, LP	West Palm Beach	FL.....	Distribution	11/18/2021 ..	01/01/2022 ..	197,368	.....	.....	.....	.....	.....0	.....	.....	.....197,368	.....	.....	.....0	.....
000000-00-0	6147 Monza Energy LLC	Houston	TX.....	Distribution	04/17/2018 ..	11/04/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....1,538,781	.....	.....	.....0	.....
1999999. Joint Venture Interests - Common Stock - Unaffiliated							15,072,217	(698,075)	0	0	0	(698,075)	0	(1)	128,344,127	1,421	399	1,820	4,661,778
000000-00-0	6040 Vida Longevity Fund LP	Austin	TX.....	Distribution	04/01/2015 ..	12/31/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	509,078	.....	.....	.....0	.....
2099999. Joint Venture Interests - Common Stock - Affiliated							0	0	0	0	0	0	0	0	509,078	0	0	0	0
000000-00-0	6105 L-A Laramar Urban Neighborhood Fund LP	Philadelphia	PA.....	Distribution	10/15/2015 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
000000-00-0	6106 Lubert-Adler Real Estate Fund VII LP ..	Philadelphia	PA.....	Distribution	10/15/2013 ..	08/05/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....1,956,523	.....	.....	.....0	.....
000000-00-0	6107 Lubert-Adler Real Estate Fund VII-B LP ..	Philadelphia	PA.....	Distribution	04/07/2017 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....4,128,860	.....	.....	.....0	.....
000000-00-0	6108 NB Real Estate Secondary Opportunities Fund LP	Philadelphia	PA.....	Distribution	12/05/2018 ..	12/21/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....2,201,890	.....	.....	.....0	.....
000000-00-0	6109 LCN NA Fund III-D LP	Philadelphia	PA.....	Distribution	08/23/2019 ..	11/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....534,705	.....	.....	.....0	.....
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP ..	Philadelphia	PA.....	Distribution	10/01/2021 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....6,923,109	.....	.....	.....0	.....
000000-00-0	6111 Hillpointe Workforce Housing Partnership I LP	Winter Park	FL.....	Distribution	03/17/2020 ..	11/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....2,021,544	.....	.....	.....0	.....
000000-00-0	6112 Hillpointe Workforce Housing Partnership II LP	Winter Park	FL.....	Distribution	11/03/2020 ..	01/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
2199999. Joint Venture Interests - Real Estate - Unaffiliated							0	0	0	0	0	0	0	0	17,766,630	0	0	0	0
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund	Springfield	MA.....	Distribution	10/06/2021 ..	12/22/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....3,624,079	.....	.....	.....0	.....
000000-00-0	2525 MM BIG Peninsula Co-Invest Member LLC ..	Hartford	CT.....	Distribution	06/30/2021 ..	06/03/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....4,119,020	.....	.....	.....0	.....
000000-00-0	2530 MM Horizon Savannah Member LLC	Springfield	MA.....	Distribution	10/25/2021 ..	09/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
000000-00-0	2676 Trailside MM Member II LLC	Hartford	CT.....	Distribution	07/26/2022 ..	09/01/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
2299999. Joint Venture Interests - Real Estate - Affiliated							0	0	0	0	0	0	0	0	7,743,099	0	0	0	0
000000-00-0	6113 Ellington GA RPL I LLC	Old Greenwich	CT.....	Liquidation of Investment	05/04/2020 ..	12/01/2022 ..	.....	(12,176)	.....	.....	.....	(12,176)	.....	.....	.....58,776	.....	.....	.....0	28,719
000000-00-0	6114 Pretium Mortgage Credit Partners I LP ..	New York	NY.....	Distribution	12/04/2014 ..	01/01/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
000000-00-0	6115 SHARB Investors LP	New York	NY.....	Distribution	11/24/2020 ..	01/01/2022 ..	.....	.....0	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
2399999. Joint Venture Interests - Mortgage Loans - Unaffiliated							0	(12,176)	0	0	0	(12,176)	0	0	58,776	0	0	0	28,719
000000-00-0	2461 Barings Real Estate Debt Income Fund LP ..	Hartford	CT.....	Distribution	03/24/2021 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....3,609,127	.....	.....	.....0	.....
2499999. Joint Venture Interests - Mortgage Loans - Affiliated							0	0	0	0	0	0	0	0	3,609,127	0	0	0	0
000000-00-0	2601 BSP TS Co-Invest I LLC	New York	NY.....	Distribution	12/10/2021 ..	04/29/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2616 Stork SPV LP	Greenwich	CT.....	Distribution	12/20/2021 ..	06/24/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0	2673 KSL Capital Partners CV I LP	Denver	CO.....	Distribution	05/25/2022 ..	11/02/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
2599999. Joint Venture Interests - Other - Unaffiliated							0	0	0	0	0	0	0	0	0	0	0	0	0
649526-AF-5	8003 New York Life Insurance Co	Ireland .....	.....	Distribution	03/25/2010 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
878091-BD-0	8005 Teachers Insurance & Annuity	Ireland .....	.....	Distribution	03/31/2010 ..	09/30/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....46,415	(46,415)	.....	.....(46,415)	(46,415)	.....
677412-AF-5	8007 Ohio National Life Ins	Ireland .....	.....	Distribution	04/27/2015 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
878091-BD-8	8008 Teachers Insurance & Annuity	Ireland .....	.....	Distribution	04/27/2015 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
638671-AK-3	8012 Nationwide Mutual Ins Co	Ireland .....	.....	Distribution	08/31/2017 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
743917-AH-9	8015 Prudential Ins Co America	Ireland .....	.....	Distribution	08/03/2016 ..	12/31/2022 ..	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE BA - PART 3

Showing Other Long-Term Invested Assets DISPOSED, Transferred or Repaid During the Current Year

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consideration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Investment Income
401378-AC-8	8017 Guardian Life Insurance Co of America	Ireland .....	.....	Distribution	05/31/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
023138-AA-8	8020 Ambac Assurance Corp	Ireland .....	.....	Distribution	12/31/2018 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
309588-AC-5	8026 Farmers Exchange Capital-Subordinated	Ireland .....	.....	Distribution	07/31/2020 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
628312-AA-8	8502 MUTUAL OF OMAHA SURPLUS NOTE	Wilmington	DE	Distribution	12/06/2016 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
592173-AE-8	8505 MET LIFE 7.80 11/01/2025	New York	NY	Liquidation of Investment	08/31/2017 ..	04/01/2022 .....	.....	.....	.....	.....	.....	.....0	.....	5,070,204	5,148,180	.....	38,988	38,988	49,824
.....	8507 PACIFIC LIFE INSURANCE 9.25 06/15/2039 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....	.....
694475-AA-2 .....	.....	Newport Beach	CA	Distribution	10/01/2021 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
707567-AC-7	8509 PENN MUTUAL LIFE 7.625 06/15/2040	Horsham	PA	Distribution	08/31/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
638671-AE-7	8510 NATIONWIDE MUTL 144A 7.875 04/01/2033	Columbus	OH	Distribution	10/01/2021 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
628312-AB-6	8511 MUTUAL OF OMAHA 6.95 10/15/2040	Omaha	NE	Distribution	12/01/2018 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
309588-AE-1	8514 Farmers Surplus Note 7.20	Cincinnati	OH	Distribution	04/11/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
30958P-AA-1	8515 Farmers Surplus Note 6.151	Cincinnati	OH	Distribution	04/11/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
309601-AE-2	8516 Farmers Ins Exch 4.747 11/01/2057	Ireland .....	.....	Distribution	12/01/2018 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
.....	8517 Savings Bank Life Insurance Company .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
80529E-AA-1	Surplus Note 6.50	Cincinnati	OH	Distribution	08/31/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
.....	8518 Liberty Mutual Insurance Company .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	.....	.....	.....0	.....	.....	.....0	.....
53079Q-AC-1	Surplus Note 7.875	Cincinnati	OH	Distribution	08/31/2017 ..	12/31/2022 .....	.....	.....	.....	.....	.....	.....0	.....	9,542,552	8,829,732	.....	(356,410)	(356,410)	.....
2799999. Surplus Debentures, etc - Unaffiliated								0	0	0	0	0	0	14,659,171	13,931,497	0	(363,837)	(363,837)	49,824
000000-00-0	7135 AMMC CLO XI Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	3,684,586	.....	.....	.....0	.....
000000-00-0	7136 Ammc Clo 20 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	6,553,579	.....	.....	.....0	.....
000000-00-0	7137 AMMC CLO XIV Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	1,804,768	.....	.....	.....0	.....
000000-00-0	7138 AMMC CLO 15 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	7,645,221	.....	.....	.....0	.....
000000-00-0	7139 AMMC CLO XIII Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	201,323	.....	.....	.....0	.....
000000-00-0	7140 AMMC CLO 22 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	11,621,130	.....	.....	.....0	.....
000000-00-0	7141 AMMC CLO 23 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	11,503,691	.....	.....	.....0	.....
000000-00-0	7142 AMMC CLO 21 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	1,633,918	.....	.....	.....0	.....
000000-00-0	7143 AMMC CLO 18 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	5,409,951	.....	.....	.....0	.....
000000-00-0	7144 AMMC CLO XII Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	2,065,560	.....	.....	.....0	.....
000000-00-0	7145 Ammc Clo 19 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	4,635,248	.....	.....	.....0	.....
000000-00-0	7146 Man GLG US CLO	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	8,987,605	.....	.....	.....0	.....
000000-00-0	7147 Magnetite XVI Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	830,901	.....	.....	.....0	.....
000000-00-0	7159 Oaktree CLO 2015-1 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	338,807	.....	.....	.....0	.....
000000-00-0	7161 Galaxy XXIII CLO Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	762,799	.....	.....	.....0	.....
000000-00-0	7164 JCP Direct Lending CLO 2022 LLC	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	5,203,506	.....	.....	.....0	.....
000000-00-0	7165 LOAN ASSET ISSUER LLC SER 2021 M-2	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	7,208,083	.....	.....	.....0	.....
.....	7166 Loan Asset Issuer LLC Series 2022 NG-1 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	.....	.....	.....	.....	.....	.....0	.....
000000-00-0 .....	.....	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	6,171,781	.....	.....	.....0	.....
000000-00-0	7167 AMMC CLO 16 Ltd	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	2,343,160	.....	.....	.....0	.....
4699999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated								0	0	0	0	0	0	0	88,605,616	0	0	0	0
000000-00-0	7111 Barings Clo Ltd 2015-II	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	2,398,765	.....	.....	.....0	.....
000000-00-0	7155 Barings Loan Partners CLO Ltd 3	Cayman Islands	KY	Distribution	05/09/2014 ..	.....	.....	.....	.....	.....	.....	.....0	.....	.....	12,018,569	.....	.....	.....0	.....
4799999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Affiliated								0	0	0	0	0	0	0	14,417,334	0	0	0	0
6099999. Total - Unaffiliated								15,072,217	(710,253)	0	0	(710,251)	0	14,659,170	264,829,476	1,421	(363,438)	(362,017)	4,740,321
6199999. Total - Affiliated								0	0	0	0	0	0	0	26,278,637	0	0	0	0
6299999 - Totals								15,072,217	(710,253)	0	0	(710,251)	0	14,659,170	291,108,114	1,421	(363,438)	(362,017)	4,740,321

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
36179X-NF-9	Ginnie Mae II Pool-POOL #18A8490	4			1.A	25,035,118	99.1056	24,776,448	25,002,523	25,035,118	0	(39)	0	0	5.000	4.981	MON	104,169	104,611	12/19/2022	12/01/2052
38375B-AZ-2	Government National Mort-GNR 2013-H16 FI	4			1.A	418,424	2.3337	192,570	8,251,552	418,424	0	0	0	0	1.447	39.712	MON	9,950	161,297	01/28/2014	07/01/2063
38375U-BQ-2	Government National Mort-GNR 2013-H24 BI	4			1.A	515,732	2.4018	186,663	7,771,793	515,732	0	0	0	0	1.361	27.862	MON	8,812	155,958	02/26/2014	09/01/2063
38375U-CG-3	Government National Mort-GNR 2014-H02 AI	4			1.A	564,148	2.0241	246,991	12,202,461	564,148	0	0	0	0	1.265	33.015	MON	12,860	185,169	03/27/2014	12/01/2063
38375U-DC-1	Government National Mort-GNR 2014-H01 AI	4			1.A	1,887,388	3.3540	993,247	29,613,896	1,887,388	0	0	0	0	1.309	15.706	MON	32,301	308,532	01/29/2014	01/01/2064
38375U-EF-3	Government National Mort-GNR 2014-H03 IS	4			1.A	661,489	4.5866	286,615	6,248,930	661,489	0	0	0	0	1.578	8.951	MON	8,217	61,060	02/10/2014	02/01/2064
38375U-IV-9	Government National Mort-GNR 2014-H16 BI	4			1.A	2,366,682	3.9997	1,225,421	30,637,521	2,366,682	0	0	0	0	1.494	13.767	MON	38,138	337,355	03/03/2015	07/01/2064
38375U-NQ-9	Government National Mort-GNR 2014-H17 DI	4			1.A	1,624,551	3.7739	820,660	21,745,834	1,624,551	0	0	0	0	1.479	14.731	MON	26,796	247,767	08/27/2014	08/01/2064
38375U-PT-1	Government National Mort-GNR 2014-H19 EI	4			1.A	1,402,234	3.9986	723,366	18,090,525	1,402,234	0	0	0	0	1.610	16.990	MON	24,276	246,209	10/01/2014	09/01/2064
38375U-RD-4	Government National Mort-GNR 2014-H23 AI	4			1.A	2,908,925	2.8207	1,023,107	36,271,126	2,908,925	0	0	0	0	0.459	13.771	MON	13,867	387,322	05/06/2015	11/01/2064
38375U-UY-4	Government National Mort-GNR 2015-H08 BI	4			1.A	1,381,755	2.8302	488,564	17,262,543	1,381,755	0	0	0	0	0.016	20.551	MON	235	268,029	04/27/2015	03/01/2065
38382A-3P-8	Government National Mort-GNR 2019-140 SE	4			1.A	1,898,974	8.1313	676,032	8,313,913	1,898,974	0	0	0	0	1.697	(5.172)	MON	4,311	(62,443)	05/21/2020	11/20/2049
38382C-K5-9	Government National Mort-GNR 2020-17 PS	4			1.A	3,203,295	10.9837	1,642,635	14,955,260	3,203,295	0	0	0	0	1.697	(4.813)	MON	7,755	(37,261)	05/15/2020	01/20/2050
38382C-M3-2	Government National Mort-GNR 2020-17 QS	4			1.A	1,396,190	7.3519	507,308	6,900,359	1,396,190	0	0	0	0	1.697	(3.492)	MON	3,578	116	05/15/2020	01/20/2050
38382C-VR-6	Government National Mort-GNR 2020-18 SI	4			1.A	8,221,693	8.1000	2,438,477	30,104,807	8,221,693	0	0	0	0	1.747	(6.125)	MON	16,071	(332,792)	05/13/2020	02/20/2050
38382D-UT-4	Government National Mort-GNR 2020-31 ST	4			1.A	2,644,933	7.8768	829,956	10,536,733	2,644,933	0	0	0	0	1.697	(6.319)	MON	5,464	(35,724)	06/04/2020	03/20/2050
38382D-VF-3	Government National Mort-GNR 2020-31 HS	4			1.A	431,576	4.3846	205,025	4,676,011	431,576	0	0	0	0	1.547	(31.049)	MON	2,211	(706,675)	05/21/2020	05/20/2046
38382F-BU-7	Government National Mort-GNR 2020-77 SU	4			1.A	1,875,933	9.9406	913,287	9,187,466	1,875,933	0	0	0	0	1.747	(3.417)	MON	4,905	64,029	06/18/2020	09/20/2047
38382F-BW-3	Government National Mort-GNR 2020-77 SQ	4			1.A	3,011,422	8.9058	871,194	9,782,277	3,011,422	0	0	0	0	1.697	(8.460)	MON	5,073	(258,487)	05/07/2020	08/20/2049
38382F-NZ-3	Government National Mort-GNR 2020-62 JS	4			1.A	3,775,737	11.6106	1,768,054	15,227,953	3,775,737	0	0	0	0	1.797	(5.923)	MON	8,362	(94,003)	06/08/2020	05/20/2050
38382G-BE-1	Government National Mort-GNR 2020-86 US	4			1.A	3,893,924	7.8456	1,075,044	13,702,485	3,893,924	0	0	0	0	1.747	(7.131)	MON	7,315	(215,587)	06/16/2020	01/20/2050
38382G-BH-4	Government National Mort-GNR 2020-86 KS	4			1.A	2,978,971	5.8978	876,551	14,862,341	2,978,971	0	0	0	0	0.647	(10.058)	MON	2,939	(115,015)	06/08/2020	06/20/2050
38382G-CT-7	Government National Mort-GNR 2020-86 SK	4			1.A	4,662,389	11.7326	2,008,682	17,120,516	4,662,389	0	0	0	0	1.797	(5.217)	MON	9,401	10,674	07/24/2020	06/20/2050
38382H-YB-0	Government National Mort-GNR 2020-116 EI	4			1.A	2,630,814	12.1986	2,545,296	20,865,495	2,630,814	0	0	0	0	2.500	7.024	MON	43,470	138,112	01/15/2021	08/01/2050
38382K-IV-1	Government National Mort-GNR 2020-146 LI	4			1.A	4,231,031	10.2230	4,353,691	42,587,338	4,231,031	0	0	0	0	2.000	6.666	MON	70,979	305,846	10/22/2020	10/01/2050
38382L-JB-8	Government National Mort-GNR 2020-176 SQ	4			1.A	1,638,494	16.4253	1,110,379	6,760,156	1,638,494	0	0	0	0	1.947	(3.639)	MON	4,022	35,558	11/13/2020	11/20/2050
38382L-R7-8	Government National Mort-GNR 2020-185 YI	4			1.A	5,253,856	12.3960	6,016,330	48,534,599	5,253,856	0	0	0	0	2.000	4.608	MON	80,891	274,045	01/05/2021	12/01/2050
38382M-CJ-6	Government National Mort-GNR 2020-189 SN	4			1.A	1,723,025	6.3798	560,181	8,780,569	1,723,025	0	0	0	0	0.647	(10.947)	MON	1,736	(15,537)	12/02/2020	12/20/2050
38382M-E8-8	Government National Mort-GNR 2021-9 DI	4			1.A	4,090,107	12.7808	4,129,828	32,312,775	4,090,107	0	0	0	0	2.500	5.921	MON	67,318	255,303	01/14/2021	01/01/2051
38382M-Z6-9	Government National Mort-GNR 2021-15 SQ	4			1.A	2,573,937	3.6801	477,973	12,988,043	2,573,937	0	0	0	0	0.647	(10.926)	MON	2,568	(37,834)	01/08/2021	10/20/2050
0029999999. Subtotal - Bonds - U.S. Governments - Residential Mortgage-Backed Securities						98,902,747	XXX	63,969,575	541,297,800	98,902,747	0	(39)	0	0	XXX	XXX	XXX	627,990	1,635,634	XXX	XXX
0109999999. Total - U.S. Government Bonds						98,902,747	XXX	63,969,575	541,297,800	98,902,747	0	(39)	0	0	XXX	XXX	XXX	627,990	1,635,634	XXX	XXX
917288-BA-9	Uruguay Government International Bond	D	2		2.B FE	972,019	124.5125	884,039	710,000	972,019	0	(15,947)	0	0	7.875	3.486	JJ	25,782	53,738	03/31/2022	01/15/2033
698299-AW-4	Panama Government International Bond	D	2		2.B FE	738,277	104.3754	626,252	600,000	738,277	0	(5,723)	0	0	6.700	4.367	JJ	17,308	37,408	03/31/2022	01/26/2036
445545-AF-3	Hungary Government International Bond	D	2		2.B FE	737,451	109.3290	557,578	510,000	737,451	0	(6,180)	0	0	7.625	4.122	MS	9,938	29,382	03/31/2022	03/29/2041
50065W-AF-3	Korea National Oil Corp	D	2		1.C FE	8,993,666	98.6095	8,874,859	9,000,000	8,993,666	0	5,550	0	0	4.000	4.066	JJ	158,000	360,000	12/19/2022	01/23/2024
465410-BY-3	Republic of Italy Government International Bond	D	2		2.C FE	1,488,734	83.0350	1,295,346	1,560,000	1,488,734	0	6,734	0	0	2.875	3.639	AO	9,219	54,069	03/31/2022	10/17/2029
30216J-AE-5	Export-Import Bank of India	D	2		2.C FE	740,408	86.9315	682,413	785,000	740,408	0	3,992	0	0	3.250	4.190	JJ	11,764	24,520	04/01/2022	01/15/2030
715638-DF-6	Peruvian Government International Bond	D	1,2		2.B FE	895,490	82.8410	778,705	940,000	895,490	0	3,524	0	0	2.783	3.461	JJ	11,481	24,562	03/31/2022	01/23/2031
085209-AG-9	Bermuda Government International Bond	D	1,2		1.F FE	1,004,278	84.2959	910,396	1,080,000	1,004,278	0	6,358	0	0	2.375	3.426	FA	9,334	22,159	03/31/2022	08/20/2030
91087B-AK-6	Mexico Government International Bond	D	1,2		2.B FE	1,660,305	93.7021	1,471,122	1,570,000	1,660,305	0	(6,093)	0	0	4.750	3.988	AO	13,258	87,833	03/31/2022	04/27/2032
715638-DU-3	Peruvian Government International Bond	D	1,2		2.B FE	888,352	78.9375	742,013	940,000	888,352	0	2,872	0	0	3.000	3.608	JJ	13,003	32,822	03/31/2022	01/15/2034
698299-BF-0	Panama Government International Bond	D	1,2		2.B FE	1,046,017	94.1217	960,041	1,020,000	1,046,017	0	(3,563)	0	0	3.875	3.313	MS	11,418	31,181	03/31/2022	03/17/2028
0219999999. Subtotal - Bonds - All Other Governments - Issuer Obligations						19,164,997	XXX	17,782,764	18,715,000	19,164,997	0	(8,476)	0	0	XXX	XXX	XXX	290,505	757,674	XXX	XXX

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
0309999999	Total - All Other Government Bonds					19,164,997	XXX	17,782,764	18,715,000	19,164,997	0	(8,476)	0	0	XXX	XXX	XXX	290,505	757,674	XXX	XXX
011770-T7-9	State of Alaska-GENERAL OBLIGATION UNLTD				..1.D FE	1,000,000	102.6000	1,026,000	1,000,000	1,000,000	.0	.0	.0	.0	.5,242	.5,241	FA	21,842	52,420	12/08/2010	..08/01/2026
011770-T8-7	State of Alaska-GENERAL OBLIGATION UNLTD				..1.D FE	1,000,000	102.4190	1,024,190	1,000,000	1,000,000	.0	.0	.0	.0	.5,342	.5,341	FA	22,258	53,420	12/08/2010	..08/01/2027
041042-WY-4	State of Arkansas-GENERAL OBLIGATION UNL		2		..1.C FE	4,000,000	.93.1130	3,724,520	4,000,000	4,000,000	.0	.0	.0	.0	.4,111	.4,111	JJ	82,220	164,440	06/30/2014	..07/01/2034
207726-E7-9	State of Connecticut-GENERAL OBLIGATION				..1.D FE	2,353,101	102.3600	2,364,516	2,310,000	2,353,101	.0	(18,168)	.0	.0	.5,770	.4,864	MS	39,246	133,287	12/07/2010	..03/15/2025
246380-BR-4	State of Delaware-GENERAL OBLIGATION UNL				..1.A FE	13,966,634	.98.4220	12,794,860	13,000,000	13,966,634	.0	(131,047)	.0	.0	.4,550	.3,271	JJ	295,750	591,500	12/13/2012	..07/01/2029
373384-M2-9	State of Georgia-GENERAL OBLIGATION UNLT		2		..1.A FE	3,992,344	.99.1300	3,965,200	4,000,000	3,992,344	.0	.882	.0	.0	.4,500	.4,531	FA	75,000	180,000	11/13/2013	..02/01/2030
373384-ST-4	State of Georgia-GENERAL OBLIGATION UNLT				..1.A FE	8,582,299	.99.4960	8,521,832	8,565,000	8,582,299	.0	(3,308)	.0	.0	.4,370	.4,321	AO	93,573	374,291	09/05/2013	..10/01/2027
574192-5F-3	State of Maryland-GENERAL OBLIGATION UNL				..1.A FE	3,439,753	100.3930	3,458,539	3,445,000	3,439,753	.0	.52,823	.0	.0	.4,600	.4,672	MS	52,823	158,470	11/19/2010	..03/01/2025
574192-6N-5	State of Maryland-GENERAL OBLIGATION UNL				..1.A FE	3,500,852	.99.4290	3,480,015	3,500,000	3,500,852	.0	(346)	.0	.0	.4,350	.4,339	FA	63,438	152,250	07/29/2010	..08/01/2025
605580-50-8	State of Mississippi-GENERAL OBLIGATION		1		..1.C FE	37,131,478	102.5280	36,169,828	35,278,000	37,131,478	.0	(449,746)	.0	.0	.5,539	.4,038	AO	488,512	2,014,202	11/12/2013	..10/01/2029
677521-CW-4	State of Ohio-GENERAL OBLIGATION UNLTD				..1.B FE	5,540,424	103.9590	5,161,564	4,965,000	5,540,424	.0	(75,497)	.0	.0	.5,442	.3,478	MS	90,065	270,195	12/16/2014	..09/01/2029
677521-HX-7	State of Ohio-GENERAL OBLIGATION UNLTD				..1.B FE	20,905,797	102.2070	20,441,400	20,000,000	20,905,797	.0	(98,034)	.0	.0	.5,278	.4,564	FA	439,833	1,055,600	11/20/2013	..08/01/2030
68583R-BA-9	Oregon Community College-GENERAL OBLIGAT				..1.C FE	15,652,602	101.1100	15,156,389	14,990,000	15,652,602	.0	(103,454)	.0	.0	.5,600	.4,679	JD	422,052	839,440	12/20/2013	..06/30/2028
68583R-BR-2	Oregon Community College-GENERAL OBLIGAT				..1.E FE	2,671,452	.99.9790	2,642,468	2,643,023	2,671,452	.0	(131,031)	.0	.0	.5,440	.3,242	JD	72,290	207,598	08/23/2012	..06/30/2023
686053-G6-8	Oregon School Boards Ass-GENERAL OBLIGAT				..1.C FE	10,071,795	.98.6660	9,466,711	9,594,705	10,071,795	.0	(168,222)	.0	.0	.4,759	.3,750	JD	229,574	594,247	12/03/2014	..06/30/2028
70914P-ME-9	PENNSYLVANIA ST-BUILD AMERICA GEN OBLIG		1		..1.D FE	3,668,664	.99.6410	3,602,022	3,615,000	3,668,664	.0	(16,219)	.0	.0	.4,650	.4,137	FA	63,504	172,644	07/31/2013	..02/15/2026
70914P-TX-0	Commonwealth of Pennsylv-GENERAL OBLIGAT		2		..1.D FE	9,448,167	.99.2020	9,448,167	10,000,000	9,448,167	.0	.115,467	.0	.0	.3,000	.4,438	AO	75,000	300,000	08/29/2013	..04/01/2027
882722-VP-3	State of Texas-GENERAL OBLIGATION UNLTD				..1.A FE	39,141,417	.99.1100	35,456,603	35,775,000	39,141,417	.0	(268,726)	.0	.0	.4,631	.3,528	AO	414,185	1,656,740	04/13/2016	..04/01/2033
93974C-8F-0	State of Washington-GENERAL OBLIGATION U		2		..1.B FE	4,617,996	100.7260	4,678,723	4,645,000	4,617,996	.0	.5,354	.0	.0	.4,000	.4,143	JJ	92,900	185,800	08/15/2013	..07/01/2027
0419999999	Subtotal - Bonds - U.S. States, Territories and Possessions - Issuer Obligations					190,684,775	XXX	183,055,580	182,325,728	190,684,775	0	(1,340,332)	0	0	XXX	XXX	XXX	3,134,065	9,156,544	XXX	XXX
0509999999	Total - U.S. States, Territories and Possessions Bonds					190,684,775	XXX	183,055,580	182,325,728	190,684,775	0	(1,340,332)	0	0	XXX	XXX	XXX	3,134,065	9,156,544	XXX	XXX
718814-ZZ-2	PHOENIX AZ-BUILD AMERICA GENERAL OBLIGAT		1		..1.B FE	24,413,078	102.1410	22,317,809	21,850,000	24,413,078	.0	(400,423)	.0	.0	.5,269	.3,063	JJ	575,638	1,181,573	12/11/2014	..07/01/2034
810453-6C-9	City of Scottsdale AZ-GENERAL OBLIGATION		2		..1.A FE	6,288,818	100.0300	7,112,133	7,110,000	6,288,818	.0	.46,769	.0	.0	.3,000	.4,159	JJ	106,650	213,300	08/29/2013	..07/01/2031
057507-HU-2	Bakersfield City School -GENERAL OBLIGAT		2		..1.E FE	700,000	.99.0090	.693,063	700,000	700,000	.0	.0	.0	.0	.4,390	.4,386	MN	5,122	34,462	06/28/2012	..05/01/2026
057507-HV-0	Bakersfield City School -GENERAL OBLIGAT		2		..1.E FE	2,860,971	.95.5460	2,866,380	3,000,000	2,860,971	.0	10,068	.0	.0	.4,390	.4,968	MN	21,950	131,700	06/28/2012	..05/01/2033
084154-TY-9	Berkeley Unified School -GENERAL OBLIGAT				..1.B FE	2,521,391	100.4350	2,530,962	2,520,000	2,521,391	.0	(2,481)	.0	.0	.5,200	.5,095	FA	54,600	131,040	05/11/2011	..08/01/2023
134141-ZE-3	Campbell Union School Di-GENERAL OBLIGAT				..1.C FE	3,470,000	101.2340	3,512,820	3,470,000	3,470,000	.0	.0	.0	.0	.5,406	.5,404	FA	78,162	204,302	07/01/2011	..08/01/2027
142665-DJ-4	Carlsbad Unified School -GENERAL OBLIGAT				..1.C FE	4,000,000	102.3050	4,092,200	4,000,000	4,000,000	.0	.0	.0	.0	.5,234	.5,233	FA	87,233	209,360	06/08/2011	..08/01/2026
399262-HD-9	Grossmont Union High Sch-GENERAL OBLIGAT				..1.E FE	10,500,000	101.2980	10,636,290	10,500,000	10,500,000	.0	.0	.0	.0	.5,479	.5,477	FA	239,706	575,295	12/21/2011	..08/01/2025
54438C-PC-0	LOS ANGELES CA CMNTY CLG-GENERAL OBLIGAT				..1.B FE	20,857,157	112.5480	19,093,768	16,965,000	20,857,157	.0	(206,006)	.0	.0	.6,680	.4,413	FA	472,193	1,133,262	04/08/2015	..08/01/2036
797646-NC-6	City & County of San Fra-GENERAL OBLIGAT				..1.A FE	5,194,866	101.5440	5,077,200	5,000,000	5,194,866	.0	(74,413)	.0	.0	.5,450	.3,772	JD	148,361	272,500	07/18/2013	..06/15/2025
797646-NE-2	City & County of San Fra-GENERAL OBLIGAT				..1.A FE	9,034,093	103.5040	8,564,956	8,275,000	9,034,093	.0	(154,840)	.0	.0	.5,750	.3,508	JD	259,053	475,813	09/05/2012	..06/15/2027
797646-NF-9	City & County of San Fra-GENERAL OBLIGAT				..1.A FE	11,527,003	107.5910	11,189,464	10,400,000	11,527,003	.0	(183,167)	.0	.0	.5,930	.3,717	JD	187,520	616,720	08/09/2012	..06/15/2028
801495-D2-5	Santa Clara Unified Scho-GENERAL OBLIGAT				..1.B FE	3,050,000	100.1930	3,055,887	3,050,000	3,050,000	.0	.0	.0	.0	.4,800	.4,800	JJ	73,200	146,400	06/10/2011	..07/01/2023
801546-NN-8	County of Santa Clara CA-GENERAL OBLIGAT		2		..1.B FE	6,435,414	.98.4040	7,375,380	7,495,000	6,435,414	.0	96,462	.0	.0	.3,000	.5,050	FA	93,688	224,850	08/28/2013	..08/01/2031
801546-NS-7	County of Santa Clara CA-GENERAL OBLIGAT		2		..1.B FE	7,306,897	.97.9200	8,812,800	9,000,000	7,306,897	.0	92,501	.0	.0	.3,250	.5,320	FA	121,875	292,500	09/03/2013	..08/01/2035
801546-NU-2	County of Santa Clara CA-GENERAL OBLIGAT		2		..1.B FE	1,703,554	.93.9570	1,879,140	2,000,000	1,703,554	.0	13,770	.0	.0	.3,375	.4,800	FA	28,125	67,500	12/09/2013	..08/01/2037
249218-AJ-7	Denver City & County Sch-CERTIFICATE PAR				..1.D FE	1,574,144	103.0340	1,621,886	1,574,127	1,574,144	.0	(24)	.0	.0	.6,220	.6,219	JD	4,352	116,533	04/05/2011	..12/15/2026
696550-WY-7	Palm Beach County School-CERTIFICATE PAR				..1.D FE	4,961,883	101.4820	5,074,100	5,000,000	4,961,883	.0	13,234	.0	.0	.5,400	.5,719	FA	112,500	270,000	11/04/2010	..08/01/2025
04778C-AF-2	Atlanta Independent Scho-CERTIFICATE PAR				..1.D FE	2,000,000	103.0200	2,060,400	2,000,000	2,000,000	.0	.0	.0	.0	.5,557	.5,555	MS	37,047	111,140	06/09/2011	..03/01/2026
04778C-AG-0	Atlanta Independent Scho-CERTIFICATE PAR				..1.D FE	6,979,712	101.9770	7,087,402	6,950,000	6,979,712	.0	(12,782)	.0	.0	.5,457	.5,242	MS	126,421	379,262	08/09/2011	..03/01/2025
04778C-AH-8	Atlanta Independent Scho-CERTIFICATE PAR				..1.D FE	1,000,000	103.7840	1,037,840	1,000,000	1,000,000	.0	.0	.0	.0	.5,657	.5,655	MS	18,857	56,570	06/09/2011	..03/01/2027
129775-EL-2	City of Calhoun GA-GENERAL OBLIGATION UN				..1.B FE	1,315,000	100.1740	1,317,288	1,315,000	1,315,000	.0	.0	.0	.0	.4,721	.4,717	MS	20,694	62,081	05/05/2011	..09/01/2023

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
129775-EM-0	City of Calhoun GA-GENERAL OBLIGATION UN				..1.B FE	1,000,000	..99.9610	999,610	1,000,000	1,000,000	0	0	0	0	4.821	4.818	MS	16,070	48,210	05/05/2011	09/01/2024
47407M-BG-5	Jefferson City School DI-GENERAL OBLIGAT				..1.B FE	3,100,000	102.5940	3,180,414	3,100,000	3,100,000	0	0	0	0	5.270	5.269	FA	68,071	163,370	07/08/2011	02/01/2028
167505-KK-1	Chicago Board of Educati-GENERAL OBLIGAT				..3.B FE	9,001,470	..86.7280	8,672,800	10,000,000	9,001,470	0	303,371	0	0	1.750	5.429	MJSD	7,778	175,000	05/03/2012	12/15/2025
214489-BE-5	Cook County School Distr-GENERAL OBLIGAT				..1.C FE	215,000	100.0520	215,112	215,000	215,000	0	0	0	0	5.911	5.907	JJ	5,860	13,180	12/16/2010	01/15/2023
777543-TX-7	Village of Rosemont IL-GENERAL OBLIGATIO				..1.E FE	1,350,000	..99.0090	1,336,622	1,350,000	1,350,000	0	0	0	0	4.350	4.348	JD	4,894	58,725	03/22/2012	12/01/2023
777543-TY-5	Village of Rosemont IL-GENERAL OBLIGATIO				..1.E FE	1,750,000	..98.4370	1,722,648	1,750,000	1,750,000	0	0	0	0	4.550	4.549	JD	6,635	79,625	03/22/2012	12/01/2024
806347-LX-6	Village of Schaumburg IL-GENERAL OBLIGAT	2			..1.B FE	6,492,795	100.5880	6,623,720	6,585,000	6,492,795	0	9,610	0	0	4.000	4.209	JD	21,950	263,400	10/22/2013	12/01/2030
815626-GQ-3	Sedgwick County Unified -GENERAL OBLIGAT				..1.C FE	6,033,561	104.9380	5,850,294	5,575,000	6,033,561	0	(68,344)	0	0	6.220	4.575	AO	86,691	346,765	08/07/2013	10/01/2028
100853-RV-4	City of Boston MA-GENERAL OBLIGATION UNL	2			..1.A FE	929,454	100.0320	1,040,333	1,040,000	929,454	0	11,601	0	0	3.000	4.648	AO	7,800	31,200	09/04/2013	10/01/2030
05914F-E7-1	County of Baltimore MD-GENERAL OBLIGATION				..1.A FE	4,000,656	..75.7140	3,028,560	4,000,000	4,000,656	0	(18)	0	0	3.303	3.302	JJ	66,060	132,120	07/19/2016	07/01/2046
741701-H8-2	County of Prince George'-GENERAL OBLIGATION				..1.A FE	4,000,000	101.4500	4,058,000	4,000,000	4,000,000	0	0	0	0	4.750	4.748	MS	63,333	190,000	03/10/2011	03/01/2026
60374Y-8A-8	City of Minneapolis MN-GENERAL OBLIGATION	2			..1.B FE	3,000,000	..96.4390	2,893,170	3,000,000	3,000,000	0	0	0	0	4.379	4.376	MS	43,790	131,370	02/13/2014	03/01/2034
584002-QB-8	County of Mecklenburg NC-GENERAL OBLIGAT	2			..1.A FE	3,000,000	..97.0720	2,912,160	3,000,000	3,000,000	0	0	0	0	4.349	4.346	AO	32,618	130,470	10/13/2011	10/01/2030
631294-4C-6	City of Nashua NH-GENERAL OBLIGATION UNL				..1.B FE	3,129,808	..96.1360	2,884,080	3,000,000	3,129,808	0	(11,922)	0	0	4.226	3.659	JJ	58,460	126,780	04/11/2013	01/15/2032
084203-U0-9	Berkeley County School D-GENERAL OBLIGATION				..1.C FE	4,134,273	100.1150	4,134,750	4,130,000	4,134,273	0	(1,941)	0	0	4.790	4.736	MS	65,942	197,827	08/27/2010	03/01/2025
570799-GG-5	Marlboro County School D-GENERAL OBLIGATION				..1.B FE	3,005,291	100.7200	3,021,600	3,000,000	3,005,291	0	(2,056)	0	0	5.440	5.359	JD	13,600	163,200	07/15/2010	06/01/2025
038573-DG-3	Aransas County Independe-GENERAL OBLIGATION	2			..1.A FE	2,725,000	..99.0110	2,698,050	2,725,000	2,725,000	0	0	0	0	4.430	4.426	FA	45,604	120,718	07/13/2011	02/15/2026
142527-DY-3	Carlisle Independent Sch-GENERAL OBLIGATION	1,2			..1.A FE	5,115,000	..99.1530	5,071,676	5,115,000	5,115,000	0	0	0	0	4.380	4.376	FA	84,636	224,037	07/13/2011	02/15/2026
235308-UL-5	Dallas Independent Schoo-GENERAL OBLIGATION	..SD..	2		..1.B FE	4,490,000	..97.3810	4,372,407	4,490,000	4,490,000	0	0	0	0	5.049	5.046	FA	85,382	221,272	12/06/2013	08/15/2033
283734-TF-8	City of El Paso TX-GENERAL OBLIGATION LT	2			..1.C FE	13,000,000	100.4390	13,057,070	13,000,000	13,000,000	0	0	0	0	5.177	5.173	FA	254,248	673,010	12/18/2013	08/15/2034
442331-QM-9	HOUSTON TX-GENERAL OBLIGATION LTD	1			..1.D FE	15,772,559	103.8440	14,434,316	13,900,000	15,772,559	0	(164,192)	0	0	6.290	4.480	MS	291,437	884,531	05/05/2015	03/01/2032
448492-VJ-4	Hutto Independent School-GENERAL OBLIGATION	2			..1.A FE	2,193,790	..96.7070	2,519,217	2,605,000	2,193,790	0	25,786	0	0	3.125	4.930	FA	33,919	81,406	08/29/2013	08/01/2034
796269-VA-3	San Antonio Independent -GENERAL OBLIGATION	2			..1.A FE	2,115,000	..97.1600	2,054,934	2,115,000	2,115,000	0	0	0	0	4.006	4.004	FA	32,008	84,727	08/24/2011	08/15/2028
954838-MV-7	West Orange-Cove Consoli-GENERAL OBLIGATION	2			..1.A FE	6,075,000	..98.9910	6,013,703	6,075,000	6,075,000	0	0	0	0	4.690	4.685	FA	107,636	284,918	07/12/2011	02/15/2028
655867-SC-4	City of Norfolk VA-GENERAL OBLIGATION UN	1,2			..1.B FE	3,075,000	..99.9240	3,072,663	3,075,000	3,075,000	0	0	0	0	4.115	3.938	FA	52,723	126,536	10/18/2013	08/01/2026
655867-SD-2	City of Norfolk VA-GENERAL OBLIGATION UN	1,2			..1.B FE	1,750,000	..99.9810	1,749,668	1,750,000	1,750,000	0	0	0	0	4.265	4.004	FA	30,987	72,590	10/18/2013	08/01/2027
655867-SE-0	City of Norfolk VA-GENERAL OBLIGATION UN	1,2			..1.B FE	2,865,000	100.7090	2,885,313	2,865,000	2,865,000	0	0	0	0	4.755	4.752	FA	56,763	136,231	10/18/2013	08/01/2030
73723R-J5-3	City of Portsmouth VA-GENERAL OBLIGATION	2			..1.A	12,255,000	..99.9740	12,251,814	12,255,000	12,255,000	0	0	0	0	3.939	3.936	FA	201,135	482,724	06/05/2013	02/01/2030
73723R-J6-1	City of Portsmouth VA-GENERAL OBLIGATION	2			..1.C FE	120,000	..96.8100	116,172	120,000	120,000	0	0	0	0	3.939	3.936	FA	1,970	4,727	06/05/2013	02/01/2030
259579-KL-3	Douglas County School DI-GENERAL OBLIGATION				..1.A FE	5,000,000	..99.0450	4,952,250	5,000,000	5,000,000	0	0	0	0	4.700	4.699	JD	19,583	235,000	05/20/2011	12/01/2025
602245-UM-2	County of Milwaukee WI-GENERAL OBLIGATION				..1.C FE	4,298,595	106.0580	3,898,628	3,675,940	4,298,595	0	(129,104)	0	0	6.840	3.632	JD	20,953	263,138	12/06/2012	12/01/2028
0619999999. Subtotal - Bonds - U.S. Political Subdivisions - Issuer Obligations						272,686,233	XXX	268,730,922	266,685,067	272,686,233	0	(788,541)	0	0	XXX	XXX	XXX	4,761,483	13,052,970	XXX	XXX
0709999999. Total - U.S. Political Subdivisions Bonds						272,686,233	XXX	268,730,922	266,685,067	272,686,233	0	(788,541)	0	0	XXX	XXX	XXX	4,761,483	13,052,970	XXX	XXX
01026C-AD-3	Alabama Economic Settlem-REVENUE BONDS				..1.G FE	12,170,710	..93.5420	11,225,040	12,000,000	12,170,710	0	(14,159)	0	0	4.263	4.083	MS	150,626	511,560	02/02/2017	09/15/2032
010608-5M-5	Alabama Public School an-REVENUE BONDS				..1.C FE	74,436,046	..99.6910	70,082,773	70,300,000	74,436,046	0	(798,113)	0	0	5.150	3.761	MS	1,206,817	3,620,450	12/12/2014	09/01/2027
041083-VB-9	Arkansas Development Fin-REVENUE BONDS	2			..1.B FE	450,857	..98.8010	450,451	450,857	450,857	0	0	0	0	3.100	3.100	MON	3,088	17,607	06/12/2013	07/01/2043
04048R-DS-2	Arizona State University-REVENUE BONDS				..1.C FE	4,549,058	106.3620	4,254,480	4,000,000	4,549,058	0	(61,477)	0	0	6.204	4.062	JJ	124,080	248,160	01/31/2013	07/01/2030
040507-NB-7	Arizona Health Facilitie-REVENUE BONDS				..1.D FE	4,000,000	..95.2780	3,811,120	4,000,000	4,000,000	0	0	0	0	4.162	4.162	JJ	83,240	166,480	10/18/2012	01/01/2030
040627-DX-6	Arizona Power Authority-REVENUE BONDS				..1.C FE	7,500,000	..93.8330	7,037,475	7,500,000	7,500,000	0	0	0	0	4.918	4.917	AO	92,213	368,850	03/19/2014	10/01/2045
13077C-TL-8																					

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
544712-2H-4	LOS ANGELES CNTY CA MET -REVENUE BONDS		1		1.B FE	31,585,670		104,8220	26,840,000	31,585,670	0	(198,308)	0	0	5.735	4.226	JD	897,910	1,539,274	02/26/2015	06/01/2039
54473E-NS-9	LOS ANGELES CNTY CA PUBL-REVENUE BONDS				1.C FE	8,528,111		123.7940	6,750,000	8,528,111	0	(60,102)	0	0	7.618	5.296	FA	214,256	514,215	12/14/2012	08/01/2040
567830-BU-7	County of Marin CA-REVENUE BONDS				1.A FE	4,706,602		100.1990	4,625,000	4,706,602	0	(20,426)	0	0	5.410	4.866	FA	104,255	250,213	08/11/2011	08/01/2026
684273-HC-2	ORANGE CNTY CA LCL TRANSPRTN-BUILD AMERI	1			1.B FE	62,332,815		113.3660	47,550,000	62,332,815	0	(525,136)	0	0	6.908	4.399	FA	1,240,907	3,284,754	12/15/2015	02/15/2041
768874-SG-5	City of Riverside CA Ele-REVENUE BONDS				1.D FE	6,992,182		122.2310	5,060,000	6,992,182	0	(70,163)	0	0	7.605	4.466	AO	96,203	384,813	01/07/2015	10/01/2040
79765R-SV-2	SAN FRANCISCO CITY & CNTY CA-BUILD AMERI	1			1.D FE	3,040,164		105.2350	2,515,000	3,040,164	0	(19,251)	0	0	6.000	4.310	MN	25,150	150,900	04/12/2013	11/01/2040
79768H-AK-4	San Francisco City & Cou-REVENUE BONDS				1.C FE	4,137,795		104.7080	4,000,000	4,137,795	0	(7,387)	0	0	5.750	5.372	AO	57,500	230,000	08/14/2013	10/01/2035
913366-DG-2	Regents of the Universit-REVENUE BONDS	1			1.D FE	4,439,161		105.3880	3,990,000	4,439,161	0	(61,351)	0	0	6.458	4.411	MN	32,925	264,164	03/21/2013	05/15/2029
913366-EQ-9	Regents of the Universit-REVENUE BONDS				1.D FE	7,832,900		106.5380	7,080,000	7,832,900	0	(71,481)	0	0	6.398	4.837	MN	57,881	452,978	09/02/2015	05/15/2031
91412G-GX-7	University of California-REVENUE BONDS	1			1.C FE	946,916		99.3920	920,000	946,916	0	(2,695)	0	0	4.797	4.375	MN	5,639	45,561	03/08/2012	05/15/2031
91412G-TG-0	University of California-REVENUE BONDS				1.C FE	14,140,000		97.3420	14,140,000	14,140,000	0	0	0	0	4.601	4.600	MN	83,130	650,581	09/28/2013	05/15/2031
19633S-AB-9	COLORADO ST BRIDGE ENTERPRISE REVENUE				1.C FE	14,205,256		106.3210	12,000,000	14,205,256	0	(78,200)	0	0	6.078	4.565	JD	60,780	729,360	05/28/2013	12/01/2040
196479-F9-5	Colorado Housing and Fin-REVENUE BONDS	2			1.A FE	3,307,024		93.9350	3,256,069	3,307,024	0	(12,749)	0	0	3.700	3.312	MON	10,040	142,859	02/14/2018	03/01/2048
196479-UX-5	Colorado Housing and Fin-REVENUE BONDS	2			1.A FE	918,460		98.8530	1,000,000	918,460	0	2,419	0	0	4.200	4.846	AO	10,500	42,000	11/08/2013	10/01/2042
196479-V4-8	Colorado Housing and Fin-REVENUE BONDS	2			1.A FE	5,685,774		97.3740	5,589,459	5,685,774	0	(19,984)	0	0	4.200	3.821	MON	39,126	273,849	10/19/2018	11/01/2048
196479-XM-6	Colorado Housing and Fin-REVENUE BONDS	2			1.A FE	615,000		93.4260	615,000	615,000	0	4	0	0	3.193	3.192	MN	3,273	20,169	01/16/2015	11/01/2027
196480-EX-1	Colorado Housing and Fin-REVENUE BONDS	2			1.A FE	2,323,991		90.7240	2,323,991	2,323,991	0	0	0	0	2.907	2.907	MON	16,890	77,649	11/21/2019	01/01/2050
19648A-P2-5	Colorado Health Faciliti-REVENUE BONDS	2			1.B FE	1,007,743		102.5050	1,000,000	1,007,743	0	(7,391)	0	0	5.500	4.698	JJ	27,500	55,000	10/30/2013	01/01/2035
20775C-GL-3	Connecticut Housing Fina-REVENUE BONDS	2			1.A FE	2,205,000		83.5220	1,841,660	2,205,000	0	0	0	0	2.300	2.300	MN	6,480	50,715	01/30/2020	11/15/2035
20775C-YE-8	Connecticut Housing Fina-REVENUE BONDS	2			1.A FE	485,000		98.6450	485,000	485,000	0	11	0	0	3.500	3.500	MN	2,169	16,975	02/07/2018	05/15/2033
20775C-YF-5	Connecticut Housing Fina-REVENUE BONDS	2			1.A FE	1,355,000		1,299,865	1,355,000	1,355,000	0	2	0	0	3.625	3.624	MN	6,276	52,666	02/07/2018	05/15/2035
254768-SQ-8	District of Columbia Hou-REVENUE BONDS	2			1.C FE	5,000,000		98.4890	5,000,000	5,000,000	0	(36)	0	0	4.100	4.099	MS	68,333	205,000	09/26/2018	09/01/2039
25477G-EV-3	District of Columbia-REVENUE BONDS				1.B FE	7,500,000		101.6580	7,500,000	7,500,000	0	0	0	0	5.282	5.281	JD	33,013	396,150	12/03/2010	12/01/2026
25477P-NF-8	District of Columbia Hou-REVENUE BONDS				1.B FE	5,265,139		91.9600	5,265,139	5,265,139	0	0	0	0	3.875	3.875	MON	60,097	205,830	05/19/2014	06/15/2045
296122-UT-9	Escambia County Housing -REVENUE BONDS				1.A FE	1,458,221		96.1890	1,458,221	1,458,221	0	0	0	0	2.850	2.850	MON	10,390	47,415	04/08/2016	11/01/2038
34074M-LW-9	Florida Housing Finance -REVENUE BONDS	2			1.A FE	785,000		95.8260	785,000	785,000	0	0	0	0	3.200	3.200	JJ	12,560	26,082	01/21/2015	07/01/2030
34074M-ND-9	Florida Housing Finance -REVENUE BONDS	2			1.A FE	3,729,450		88.9410	3,729,450	3,729,450	0	0	0	0	3.125	3.125	MON	29,136	128,242	03/23/2016	07/01/2037
34074M-PF-2	Florida Housing Finance -REVENUE BONDS	2			1.A FE	888,563		85.3000	888,533	888,563	0	(9)	0	0	2.450	2.449	MON	5,442	25,408	08/25/2016	01/01/2043
46615M-AS-0	JEA District Energy Syst-REVENUE BONDS	2			1.C FE	2,000,000		96.0850	2,000,000	2,000,000	0	0	0	0	4.238	4.233	AO	21,190	84,760	06/07/2013	10/01/2030
59334H-VF-3	Miami-Dade County Housin-REVENUE BONDS	2			1.A FE	1,023,844		84.8840	1,023,844	1,023,844	0	0	0	0	2.875	2.875	MON	6,092	32,476	06/09/2016	10/01/2038
875124-ER-6	Tampa Bay Water-REVENUE BONDS				1.B FE	1,500,012		94.2180	1,500,000	1,500,012	0	(15)	0	0	2.612	2.611	AO	9,795	39,180	02/04/2015	10/01/2025
875124-ES-4	Tampa Bay Water-REVENUE BONDS	2			1.B FE	3,000,027		93.6750	3,000,000	3,000,027	0	(34)	0	0	2.782	2.781	AO	20,865	83,460	02/04/2015	10/01/2026
875124-GY-9	Tampa Bay Water-REVENUE BONDS	2			1.B FE	2,000,000		91.2590	2,000,000	2,000,000	0	0	0	0	3.507	3.506	AO	17,535	70,140	01/13/2016	10/01/2030
875124-GY-9	Tampa Bay Water-REVENUE BONDS	2			1.B FE	1,500,000		90.5240	1,500,000	1,500,000	0	0	0	0	3.607	3.606	AO	13,526	54,105	01/13/2016	10/01/2031
875287-LC-6	City of Tampa FL-REVENUE BONDS				1.D FE	2,171,950		100.5710	2,170,000	2,171,950	0	(2,717)	0	0	5.250	5.115	AO	28,481	113,925	12/02/2010	10/01/2023
875287-LD-4	City of Tampa FL-REVENUE BONDS				1.D FE	2,248,819		100.9520	2,245,000	2,248,819	0	(2,136)	0	0	5.375	5.267	AO	30,167	120,669	12/02/2010	10/01/2024
37353P-AH-2	Georgia Housing & Financ-REVENUE BONDS	2			1.A FE	8,475,315		91.4440	8,500,000	8,475,315	0	1,133	0	0	3.500	3.534	JD	173,542	297,500	12/21/2017	12/01/2038
90566A-AA-6	City of Union City GA-REVENUE BONDS				1.B FE	10,000,000		100.0280	10,000,000	10,000,000	0	0	0	0	4.730	4.730	JJ	236,500	473,000	07/20/2011	01/01/2027
41980U-AB-7	State of Hawaii Departme-REVENUE BONDS				1.A FE	3,074,398		95.0290	3,074,398	3,074,398	0	0	0	0	3.242	3.242	JJ	49,836	103,091	11/05/2014	01/01/2031
438701-XD-1	City & County Honolulu H-REVENUE BONDS	1,2			1.C FE	3,249,930		99.3480	3,250,000	3,249,930	0	26	0	0	4.411	4.412	JJ	71,679	143,358	07/23/2015	07/01/2035
45129W-KB-5	Idaho Housing & Finance -REVENUE BONDS				1.F FE	8,910,448		105.0970	8,000,000	8,910,448	0	(143,996)	0	0	6.348	4.034	JJ	234,171	507,840	05/23/2013	07/15/2028
167736-VY-3	City of Chicago IL Water-REVENUE BONDS				1.F FE	7,183,931		104.7240	6,710,000	7,183,931	0	(56,087)	0	0	6.642	5.391	MN	74,280	445,678	03/12/2014	11/01/2029
213248-BB-2	County of Cook IL Sales -REVENUE BONDS	2			1.D FE	6,500,000		100.1030	6,500,000	6,500,000	0	0	0	0	5.354	5.350	MN	44,468	348,010	07/12/2013	11/15/2035
45201L-VM-4	Illinois Housing Develop-REVENUE BONDS				1.D FE	840,000		99.6760	840,000	840,000	0	0	0	0	3.355	3.355	JJ	14,091	28,136	05/09/2013	07/01/2023
45201Y-X6-9	Illinois Housing Develop-REVENUE BONDS	2			1.A FE	245,000		100.6650	245,000	245,000	0	12	0	0	4.125	4.124	AO	2,527	22,585	10/18/2018	10/01/2038

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
45201Y-YL-5	ILLINOIS ST HSG DEV AUTH REV PROG SER B	2			1.A FE	2,157,023	89.9320	1,989,916	2,212,690	2,157,023	0	2,000	0	0	2.750	2.914	MON	15,212	61,867	05/07/2015	06/01/2043
45203L-CT-8	Illinois Housing Develop-REVENUE BONDS	2			1.A FE	9,496,815	97.8980	9,305,130	9,504,924	9,496,815	0	615	0	0	3.500	3.509	MON	140,657	396,037	08/24/2018	09/01/2034
452227-JUN-2	State of Illinois-REVENUE BONDS				1.G FE	30,778,961	91.1750	27,379,853	30,030,000	30,778,961	0	(33,857)	0	0	4.620	4.394	JD	61,662	1,387,386	02/24/2017	06/15/2038
914353-ZK-6	University of Illinois-REVENUE BONDS	2			1.D FE	5,614,381	100.2120	5,982,656	5,970,000	5,614,381	0	39,780	0	0	4.000	4.988	AO	59,700	238,800	09/04/2013	04/01/2030
914353-ZM-2	University of Illinois-REVENUE BONDS	2			1.D FE	7,922,192	100.2090	8,668,079	8,650,000	7,922,192	0	60,024	0	0	4.000	5.154	AO	86,500	346,000	09/11/2013	04/01/2032
454624-U5-4	Indiana Bond Bank-REVENUE BONDS	1			1.B FE	2,905,000	100.1140	2,908,312	2,905,000	2,905,000	0	(15,594)	0	0	5.490	4.818	JJ	73,540	176,293	11/19/2010	01/15/2024
45462T-GC-0	Indiana Bond Bank-REVENUE BONDS	2			1.B FE	1,000,000	89.2150	892,150	1,000,000	1,000,000	0	(3)	0	0	3.366	3.366	FA	14,025	33,660	06/21/2017	08/01/2031
45528S-SR-3	Indianapolis Local Publi-REVENUE BONDS				1.D FE	13,087,551	103.0450	12,159,310	11,800,000	13,087,551	0	(154,512)	0	0	5.966	4.161	JJ	324,617	703,988	01/18/2012	01/15/2030
641667-NZ-9	New Albany-Floyd County -REVENUE BONDS	2			1.B FE	5,000,000	96.8140	4,840,700	5,000,000	5,000,000	0	0	0	0	3.110	3.109	JJ	71,703	155,500	04/11/2013	01/15/2027
472904-P3-9	Jefferson County School -REVENUE BONDS	2			1.D FE	11,790,682	99.2090	11,731,464	11,825,000	11,790,682	0	8,965	0	0	4.650	4.806	JD	320,753	549,863	07/21/2011	06/01/2026
491189-FX-9	Kentucky Asset Liability-REVENUE BONDS				1.E FE	3,565,000	99.5840	3,550,170	3,565,000	3,565,000	0	0	0	0	2.998	2.996	AO	26,720	106,879	02/07/2013	04/01/2023
49130T-UP-9	Kentucky Housing Corp-REVENUE BONDS	2			1.A FE	800,020	92.5330	740,264	800,000	800,020	0	(14)	0	0	3.499	3.498	JJ	13,996	33,279	06/09/2016	07/01/2031
575579-WX-1	Massachusetts Bay Transp-REVENUE BONDS				1.C FE	2,135,728	104.7480	2,094,960	2,000,000	2,135,728	0	(12,670)	0	0	5.769	4.788	JJ	57,690	115,380	06/21/2013	07/01/2031
575832-R2-8	Massachusetts State Coll-REVENUE BONDS				1.D FE	1,570,000	100.3190	1,575,008	1,570,000	1,570,000	0	0	0	0	5.788	5.785	MM	15,145	94,730	12/10/2010	05/01/2025
57583R-R9-8	Massachusetts Developm-REVENUE BONDS				1.A	1,438,318	103.7190	1,389,835	1,340,000	1,438,318	0	(17,008)	0	0	5.861	4.262	MS	26,179	80,100	03/20/2015	03/01/2028
57583U-XX-1	Massachusetts Developm-REVENUE BONDS				1.F FE	3,000,000	100.5580	3,016,740	3,000,000	3,000,000	0	0	0	0	5.353	5.352	JD	13,383	160,590	07/31/2013	12/01/2028
57586N-MT-5	Massachusetts Housing Fi-REVENUE BONDS				1.C FE	35,000	99.7430	34,910	35,000	35,000	0	0	0	0	3.629	3.627	JD	106	1,518	09/14/2012	06/01/2023
57586N-MU-2	Massachusetts Housing Fi-REVENUE BONDS				1.C FE	35,000	98.4810	34,468	35,000	35,000	0	0	0	0	3.729	3.728	JD	109	1,560	09/14/2012	12/01/2023
57586N-MW-8	Massachusetts Housing Fi-REVENUE BONDS	2			1.C FE	140,000	94.5950	132,433	140,000	140,000	0	0	0	0	4.029	4.028	JD	470	6,925	09/14/2012	12/01/2027
57587A-XF-0	Massachusetts Housing Fi-REVENUE BONDS	2			1.C FE	3,731,695	92.9950	3,450,115	3,710,000	3,731,695	0	(3,979)	0	0	3.750	3.619	JD	81,156	139,125	12/21/2017	12/01/2042
57587A-XH-6	Massachusetts Housing Fi-REVENUE BONDS	2			1.C FE	7,534,035	85.4630	6,495,188	7,600,000	7,534,035	0	1,125	0	0	3.950	4.000	JD	175,117	300,200	12/20/2017	12/01/2052
576000-KW-2	MASSACHUSETTS ST SCH BLD-REVENUE BONDS				1.C FE	15,994,541	101.6830	15,252,450	15,000,000	15,994,541	0	(201,081)	0	0	5.468	3.834	JD	446,553	820,200	06/27/2014	06/15/2027
576000-LA-9	MASSACHUSETTS ST SCH BLD-REVENUE BONDS	1			1.C FE	10,000,000	98.7190	9,871,900	10,000,000	10,000,000	0	0	0	0	4.885	4.885	JJ	225,253	488,500	07/21/2011	07/15/2028
57604P-SP-5	Massachusetts Clean Wate-REVENUE BONDS				1.A FE	5,112,710	100.2740	4,517,344	4,505,000	5,112,710	0	(186,134)	0	0	5.192	2.272	FA	97,458	247,074	05/07/2015	08/01/2040
57604T-AA-4	Commonwealth of Massachu-REVENUE BONDS				1.B FE	3,000,000	100.2370	3,007,110	3,000,000	3,000,000	0	0	0	0	5.053	5.051	JD	88,428	151,590	12/16/2010	06/01/2024
57604T-AB-2	Commonwealth of Massachu-REVENUE BONDS				1.B FE	6,500,000	100.8490	6,555,185	6,500,000	6,500,000	0	0	0	0	5.203	5.202	JD	197,280	338,195	12/16/2010	06/01/2025
57604T-AC-0	Commonwealth of Massachu-REVENUE BONDS				1.B FE	15,404,544	101.4020	14,667,799	14,465,000	15,404,544	0	(104,261)	0	0	5.631	4.587	JD	475,139	814,524	01/03/2014	06/01/2030
898365-AM-3	Trustees of Boston Colle-REVENUE BONDS				1.D FE	1,220,000	98.9140	1,206,751	1,220,000	1,220,000	0	0	0	0	4.019	4.019	JJ	24,516	49,032	08/14/2013	07/01/2024
898365-AP-6	Trustees of Boston Colle-REVENUE BONDS				1.D FE	11,000,000	97.9450	10,773,950	11,000,000	11,000,000	0	0	0	0	4.519	4.519	JJ	248,545	497,090	08/14/2013	07/01/2028
183596-CY-9	Baltimore Board of Schoo-REVENUE BONDS				1.B FE	6,503,997	102.5010	6,662,565	6,500,000	6,503,997	0	(1,235)	0	0	5.692	5.668	JD	16,444	369,980	02/07/2011	12/15/2025
57419R-D5-1	Maryland Community Devel-REVENUE BONDS	2			1.B FE	19,199,035	88.5720	17,005,824	19,200,000	19,199,035	0	116	0	0	3.463	3.464	MS	221,632	664,896	08/25/2016	09/01/2031
57419R-D6-9	Maryland Community Devel-REVENUE BONDS	2			1.B FE	2,225,733	97.7040	2,159,258	2,210,000	2,225,733	0	(6,279)	0	0	3.500	3.218	MS	25,783	87,245	08/25/2016	09/01/2047
57419R-D8-0	Maryland Community Devel-REVENUE BONDS	2			1.B FE	24,775,000	93.5200	23,169,580	24,775,000	24,775,000	0	518	0	0	4.103	4.102	MS	338,839	1,020,188	04/07/2017	09/01/2032
57419R-PL-3	Maryland Community Devel-REVENUE BONDS	2			1.B FE	395,000	96.5380	381,325	395,000	395,000	0	0	0	0	2.857	2.856	MS	3,762	16,012	09/10/2014	09/01/2040
57419T-GS-4	Maryland Community Devel-REVENUE BONDS	2			1.B FE	3,000,000	87.0890	2,612,670	3,000,000	3,000,000	0	0	0	0	2.300	2.300	MS	23,000	69,000	02/05/2020	09/01/2035
574218-XA-0	Maryland Health & Higher-REVENUE BONDS				1.F FE	3,499,952	93.1050	3,258,675	3,500,000	3,499,952	0	8	0	0	4.068	4.068	JJ	71,190	142,380	01/20/2017	07/01/2028
574218-X5-7	Maryland Health & Higher-REVENUE BONDS				1.F FE	3,999,938	92.7460	3,709,840	4,000,000	3,999,938	0	8	0	0	4.168	4.168	JJ	83,360	166,720	01/20/2017	07/01/2029
59447T-XW-8	Michigan Finance Authori-REVENUE BONDS				1.D FE	4,500,000	82.7370	3,723,165	4,500,000	4,500,000	0	0	0	0	3.084	3.084	JD	11,565	138,780	12/05/2019	12/01/2034
594712-PP-0	MICHIGAN ST UNIV REVENUE-REVENUE BONDS	1,2			1.C FE	35,831,445	103.2070	32,948,835	31,925,000	35,831,445	0	(463,687)	0	0	6.173	4.166	FA	744,498	1,970,730	11/02/2015	02/15/2050
914455-JZ-4	University of Michigan-REVENUE BONDS				1.A FE	4,926,234	104.4120	4,557,584	4,385,000	4,926,234	0	(66,976)	0	0	5.513	3.489	AO	60,161	240,642	10/24/2012	04/01/2030
604115-BA-2	Minnesota Public Facilit-REVENUE BONDS				1.A FE	3,099,480	102.5250	3,080,876	3,005,000	3,099,480	0	(20,334)	0	0	5.125	4.291	MS	51,335	154,006	07/25/2013	03/01/2027
604115-BB-0	Minnesota Public Facilit-REVENUE BONDS				1.A FE	3,259,984	104.1610	3,270,655	3,140,000	3,259,984	0	(20,291)	0	0	5.250	4.413	MS	54,950	154,805	07/25/2013	03/01/2028
60416Q-FH-9	Minnesota Housing Financ-REVENUE BONDS				1.A FE	1,430,780	86.6490	1,265,219	1,460,165	1,430,780	0	1,214	0	0	2.700	2.839	MON	9,856	40,666	05/07/2015	09/01/2041
60416Q-GK-4	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	1,473,472	92.0990	1,357,053	1,473,472	1,473,472	0	0	0	0	2.730	2.730	MON	10,056	42,046	07/15/2016	08/01/2046
60416Q-GM-0	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	410,037	92.2420	428,847	464,915	410,037	0	1,678	0	0	2.350	3.049	MON	910	11,827	10/23/2018	10/01/2046

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
60416Q-HA-5	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	5,136,484	.98.9910	5,084,657	5,136,484	5,136,484	.0	.0	.0	.0	.3.300	.3.300	MON	42,376	186,330	02/14/2018	03/01/2048
60416Q-HE-7	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	4,076,108	.97.9870	4,009,021	4,091,381	4,076,108	.0	.355	.0	.0	.3.450	.3.450	MON	35,288	151,867	08/17/2018	09/01/2048
60416Q-HG-2	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	4,002,369	.100.1390	4,007,932	4,002,369	4,002,369	.0	.0	.0	.0	.3.750	.3.750	MON	37,522	163,812	10/18/2018	11/01/2048
60416Q-HJ-6	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	2,330,509	.99.8410	2,326,804	2,330,509	2,330,509	.0	.0	.0	.0	.3.600	.3.600	MON	20,975	88,841	12/14/2018	01/01/2049
60416Q-HL-1	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	3,344,657	.98.8120	3,304,922	3,344,657	3,344,657	.0	.0	.0	.0	.3.450	.3.450	MON	28,848	126,912	02/08/2019	03/01/2049
60416Q-HN-7	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	404,693	.95.9940	388,481	404,693	404,693	.0	.0	.0	.0	.3.150	.3.150	MON	1,062	12,371	05/15/2019	06/01/2049
60416Q-HS-6	Minnesota Housing Financ-REVENUE BONDS	2			1.A FE	4,463,509	.91.9030	4,102,099	4,463,509	4,463,509	.0	.0	.0	.0	.3.020	.3.020	MON	68,454	179,047	11/14/2019	12/01/2049
60416S-5C-0	Minnesota Housing Financ-REVENUE BONDS	2			1.B FE	1,010,000	.87.0640	.879,346	1,010,000	1,010,000	.0	.0	.0	.0	.2.941	.2.941	JJ	14,852	30,502	01/24/2020	01/01/2035
231266-FD-4	CURATORS OF THE UNIV OF -REVENUE BONDS				1.B FE	17,943,906	.106.3290	15,864,287	14,920,000	17,943,906	.0	(292,328)	.0	.0	.5.960	.3.317	MN	148,205	919,529	03/20/2013	11/01/2039
60636Y-HL-8	Missouri Housing Develop-REVENUE BONDS	2			1.B FE	295,000	.96.1390	.283,610	.295,000	.295,000	.0	.0	.0	.0	.3.723	.3.723	JJ	5,491	15,692	10/17/2012	07/01/2028
60636Y-HM-6	Missouri Housing Develop-REVENUE BONDS	2			1.B FE	215,000	.97.4140	.209,440	.215,000	.215,000	.0	.0	.0	.0	.4.156	.4.156	JJ	4,468	11,928	10/17/2012	07/01/2033
60636Y-IJ-7	Missouri Housing Develop-REVENUE BONDS	2			1.B FE	617,200	.90.7180	.559,911	617,200	617,200	.0	.0	.0	.0	.4.200	.4.200	MON	6,481	26,296	04/16/2014	01/01/2040
60637B-FA-3	MISSOURI ST HSG DEV COMM-TAXABLE-REF-SPL	2			1.B FE	620,103	.92.6420	.574,476	620,103	620,103	.0	.0	.0	.0	.2.970	.2.970	MON	4,604	19,197	11/20/2014	08/01/2036
60637B-HL-1	Missouri Housing Develop-REVENUE BONDS	2			1.B FE	5,639,150	.92.3950	5,351,349	5,791,817	5,639,150	.0	.5.538	.0	.0	.2.400	.2.560	MON	34,751	145,691	09/29/2017	06/01/2044
126775-TJ-4	County of Cabarrus NC-REVENUE BONDS				1.C FE	2,000,000	.99.9640	1,999,280	2,000,000	2,000,000	.0	.0	.0	.0	.5.100	.5.093	AO	25,500	102,000	03/31/2014	04/01/2023
40179P-AA-3	Guilford County Public F-REVENUE BONDS	2			1.B FE	2,250,000	.98.7980	2,222,955	2,250,000	2,250,000	.0	.0	.0	.0	.4.564	.4.559	AO	25,673	102,690	03/15/2012	04/01/2032
658289-B7-7	North Carolina State Uni-REVENUE BONDS				1.C FE	2,500,000	.90.4050	2,260,125	2,500,000	2,500,000	.0	.0	.0	.0	.3.825	.3.825	AO	23,906	95,625	02/13/2013	10/01/2033
658308-AD-3	North Carolina Turnpike -REVENUE BONDS	.SD.			1.B FE	4,000,000	.100.0000	4,000,000	4,000,000	4,000,000	.0	.0	.0	.0	.4.450	.4.450	JJ	97,625	154,593	10/15/2010	01/01/2033
658909-SU-1	North Dakota Housing Fin-REVENUE BONDS	2			1.B FE	1,760,884	.98.2280	1,733,724	1,765,000	1,760,884	.0	.238	.0	.0	.3.850	.3.873	JJ	33,976	77,963	08/15/2018	07/01/2038
443730-FT-8	Hudson County Improvemen-REVENUE BONDS				1.E FE	346,921	.100.4660	.346,608	.345,000	.346,921	.0	(1,738)	.0	.0	.6.640	.6.094	FA	9,545	23,766	07/22/2010	02/01/2024
646108-IM-9	New Jersey Housing & Mor-REVENUE BONDS	2			1.C FE	740,000	.98.6890	.730,299	740,000	740,000	.0	.0	.0	.0	.3.608	.3.606	MN	4,450	26,699	03/21/2013	11/01/2024
646108-MN-7	New Jersey Housing & Mor-REVENUE BONDS	2			1.C FE	1,185,000	.96.9220	1,148,526	1,185,000	1,185,000	.0	.0	.0	.0	.4.208	.4.205	MN	8,311	49,865	03/21/2013	11/01/2028
646136-TM-3	New Jersey Transportatio-REVENUE BONDS	.@SD.			1.B FE	5,455,286	.84.3140	5,901,980	7,000,000	5,455,286	.0	.267,678	.0	.0	.0.000	.5.095	N/A	.0	.0	09/04/2013	12/15/2027
64613A-BC-5	New Jersey Housing & Mor-REVENUE BONDS	2			1.C FE	2,685,052	.101.4420	2,723,718	2,685,000	2,685,052	.0	(23)	.0	.0	.3.800	.3.799	AO	25,508	105,783	06/15/2018	10/01/2032
783186-NH-8	Rutgers The State Univer-REVENUE BONDS				1.E FE	10,096,622	.103.0710	8,714,653	8,455,000	10,096,622	.0	(64,049)	.0	.0	.5.665	.4.090	MN	79,829	478,976	12/13/2012	05/01/2040
783186-NJ-4	Rutgers The State Univer-REVENUE BONDS				1.E FE	3,829,756	.101.1430	3,540,005	3,500,000	3,829,756	.0	(45,188)	.0	.0	.5.545	.3.853	MN	32,346	194,075	08/20/2012	05/01/2029
783186-RC-5	Rutgers The State Univer-REVENUE BONDS				1.E FE	5,000,000	.97.0440	4,852,200	5,000,000	5,000,000	.0	.0	.0	.0	.4.712	.4.711	MN	39,267	235,600	06/14/2013	05/01/2033
783186-UV-9	Rutgers The State Univer-REVENUE BONDS				1.E FE	3,526,944	.64.3450	2,573,800	4,000,000	3,526,944	.0	10,704	.0	.0	.2.681	.3.421	MN	17,873	125,113	03/03/2022	05/01/2046
647200-2G-8	New Mexico Mortgage Fina-REVENUE BONDS	2			1.B FE	1,343,021	.90.6650	1,217,650	1,343,021	1,343,021	.0	.0	.0	.0	.2.750	.2.750	MON	9,233	37,810	06/13/2014	08/01/2035
647200-4S-0	New Mexico Mortgage Fina-REVENUE BONDS	2			1.B FE	2,895,000	.89.5320	2,591,951	2,895,000	2,895,000	.0	.0	.0	.0	.2.600	.2.600	MON	18,818	79,268	08/03/2016	09/01/2040
610730-AA-1	Monroe County Industrial-REVENUE BONDS	1			1.C FE	10,000,000	.98.0940	9,809,400	10,000,000	10,000,000	.0	.0	.0	.0	.4.176	.4.175	MN	69,600	417,510	06/14/2012	05/01/2028
61075T-GO-5	Monroe County Industrial-REVENUE BONDS				1.D FE	1,745,000	.101.4270	1,769,901	1,745,000	1,745,000	.0	.0	.0	.0	.5.046	.5.046	JJ	44,026	88,053	09/11/2013	07/01/2028
61075T-SU-3	Monroe County Industrial-REVENUE BONDS				1.D FE	3,255,000	.101.3440	3,298,747	3,255,000	3,255,000	.0	.0	.0	.0	.5.311	.5.311	JJ	86,437	172,873	09/11/2013	07/01/2033
61075T-LJ-5	Monroe County Industrial-REVENUE BONDS				1.D FE	3,250,034	.95.7590	3,112,168	3,250,000	3,250,034	.0	(2)	.0	.0	.4.631	.4.631	JJ	75,254	150,508	06/17/2015	07/01/2035
610763-PF-5	Monroe County Water Auth-REVENUE BONDS	1			1.B FE	1,070,000	.101.3610	1,084,563	1,070,000	1,070,000	.0	.0	.0	.0	.5.894	.5.891	FA	26,277	74,412	12/14/2010	08/01/2025
64966T-FD-1	New York City Housing De-REVENUE BONDS	2			1.A FE	27,107,205	.95.5050	25,786,350	27,107,205	27,107,205	.0	(75,007)	.0	.0	.3.709	.3.704	MON	83,453	1,001,430	10/24/2014	02/15/2048
64966W-EZ-6	New York City Housing De-REVENUE BONDS	2			1.C FE	7,000,000	.77.1800	5,402,600	7,000,000	7,000,000	.0	.0	.0	.0	.2.811	.2.811	FA	81,988	196,770	02/05/2020	08/01/2035
64971Q-8H-9	New York City Transition-REVENUE BONDS	2			1.A FE	9,369,210	.101.3100	9,573,795	9,450,000	9,369,210	.0	5,696	.0	.0	.4.250	.4.349	MN	66,938	401,625	10/24/2013	11/01/2033
64971Q-J4-6	New York City Transition-REVENUE BONDS				1.A FE	8,122,404	.86.6670	6,933,360	8,000,000	8,122,404	.0	(7,406)	.0	.0	.3.750	.3.600	MN	50,000	300,000	11/15/2012	05/01/2035
64971Q-RB-1	NEW YORK CITY NY TRANSIT-REVENUE BONDS	1			1.A FE	25,148,241	.95.6430	23,910,750	25,000,000	25,148,241	.0	(15,872)	.0	.0	.4.200	.4.110	MN	175,000	1,050,000	12/16/2011	11/01/2030
64971X-ST-6	New York City Transition-REVENUE BONDS	2			1.A	2,919,317	.98.9320	2,898,708	2,930,000	2,919,317	.0	.0	.0	.0	.4.500	.4.944	MN	21,975	131,850	11/08/2013	11/01/2030
64971X-SU-3	New York City Transition-REVENUE BONDS	2			1.A FE	5,017,567	.94.4560	4,788,919	5,070,000	5,017,567	.0	.5,403	.0	.0	.4.500	.4.658	MN	38,025	228,150	11/08/2013	11/01/2030
64972B-R2-3	New York City Housing De-REVENUE BONDS				1.C FE	4,000,000	.96.1430	3,845,720	4,000,000	4,000,000	.0	.0	.0	.0	.3.960	.3.959	MN	26,400	158,400	06/20/2013	05/01/2028
64972B-R3-1	New York City Housing De-REVENUE BONDS				1.C FE	2,500,000	.97.5090	2,437,725	2,500,000	2,500,000	.0	.0	.0	.0	.3.520	.3.519	MN	14,667	88,000	06/20/2013	11/01/2025
64972B-R4-9	New York City Housing De-REVENUE BONDS				1.C FE	9,042,545	.95.9690	8,666,001	9,030,000	9,042,545	.0	(2,146)	.0	.0	.3.780	.3.750	MN	56,889	341,334	08/21/2014	05/01/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
64972C-BD-4	New York City Housing De-REVENUE BONDS				1.C FE	927,099	.75,5370	700,303	927,099	927,099	.0	.0	.0	.0	3.050	3.050	MON	8,326	28,613	06/19/2014	06/15/2036
64972C-FR-9	New York City Housing De-REVENUE BONDS	2			1.C FE	7,000,000	.94,6580	6,626,060	7,000,000	7,000,000	.0	.0	.0	.0	3.890	3.888	MON	45,383	272,300	12/11/2014	11/01/2029
64972C-M6-7	New York City Housing De-REVENUE BONDS				1.B FE	12,397,118	.74,4560	9,219,546	12,382,543	12,397,118	.0	(411)	.0	.0	3.098	3.091	MON	95,903	385,377	09/29/2017	10/01/2046
64972E-ME-6	New York City Housing De-REVENUE BONDS	2			1.C FE	10,000,000	.82,0050	8,200,500	10,000,000	10,000,000	.0	.0	.0	.0	3.242	3.242	MON	54,033	324,200	12/06/2019	11/01/2034
649883-3Y-9	State of New York Mortga-REVENUE BONDS	2			1.B FE	530,003	.98,4790	521,939	530,000	530,003	.0	(3)	.0	.0	3.350	3.349	AO	4,439	19,808	02/28/2018	04/01/2029
649902-T4-5	NEW YORK ST DORM AUTH REVENUE BOND				1.B FE	10,748,679	.98,6820	9,868,200	10,000,000	10,748,679	.0	(144,807)	.0	.0	5.051	3.318	MS	148,724	505,100	03/20/2015	09/15/2027
649907-YA-4	New York State Dormitory-REVENUE BONDS				1.A FE	24,359,022	.97,0360	23,565,193	24,285,000	24,359,022	.0	(4,564)	.0	.0	4.802	4.768	JD	97,180	1,166,166	01/07/2014	12/01/2034
64990F-MT-8	New York State Dormitory-REVENUE BONDS				1.B FE	6,672,555	.102,7360	6,272,033	6,105,000	6,672,555	.0	(22,756)	.0	.0	5.628	4.796	MS	101,168	343,589	06/20/2013	03/15/2039
64990F-MV-3	New York State Dormitory-REVENUE BONDS				1.B FE	2,280,538	.101,2230	2,024,460	2,000,000	2,280,538	.0	(11,863)	.0	.0	5.427	4.222	MS	31,959	108,540	01/31/2013	03/15/2039
73358W-CW-2	Port Authority of New Yo-REVENUE BONDS				1.D FE	10,469,962	.104,1060	9,369,540	9,000,000	10,469,962	.0	(53,813)	.0	.0	5.647	4.323	MON	84,705	508,230	02/07/2013	11/01/2040
73358W-EK-6	PORT AUTH OF NEW YORK & -REVENUE BONDS				1.D FE	571,212	.95,4200	477,100	500,000	571,212	.0	(1,286)	.0	.0	4.926	4.080	AO	6,158	24,630	08/31/2012	10/01/2051
73358W-TZ-7	Port Authority of New Yo-REVENUE BONDS	2			1.D FE	9,000,000	.93,6470	8,428,230	9,000,000	9,000,000	.0	.0	.0	.0	4.426	4.424	AO	84,094	398,340	10/08/2014	10/15/2034
871683-CF-3	Syracuse Industrial Deve-REVENUE BONDS				1.C FE	3,500,000	.102,3730	3,583,055	3,500,000	3,500,000	.0	.0	.0	.0	5.428	5.426	MON	31,663	189,980	06/29/2011	05/01/2027
40727T-DJ-0	County of Hamilton OH-REVENUE BONDS				1.E FE	5,280,000	.82,2910	4,344,965	5,280,000	5,280,000	.0	.0	.0	.0	3.374	3.374	JD	14,846	178,147	12/19/2019	06/01/2034
61354Z-KM-5	County of Montgomery OH-REVENUE BONDS	2			1.A	1,555,540	.100,2750	1,554,263	1,550,000	1,555,540	.0	(6,354)	.0	.0	5.250	4.816	MON	13,563	83,213	03/10/2017	05/01/2029
677377-2P-7	Ohio Housing Finance Age-REVENUE BONDS	2			1.A FE	8,830,002	.86,8770	7,671,239	8,830,000	8,830,002	.0	(1)	.0	.0	2.650	2.650	MON	58,907	253,517	07/15/2016	11/01/2041
677560-XK-8	Ohio Housing Finance Age-REVENUE BONDS	2			1.A FE	785,001	.96,3730	756,528	785,000	785,001	.0	(4)	.0	.0	3.800	3.799	MS	9,943	32,094	09/12/2018	09/01/2038
914119-YR-7	University of Cincinnati-REVENUE BONDS	2			1.D FE	8,003,323	.101,1910	8,095,280	8,000,000	8,003,323	.0	(3,509)	.0	.0	5.153	5.103	JD	240,473	412,240	02/07/2014	06/01/2033
914760-8E-6	University of Oklahoma/T-REVENUE BONDS	2			1.C FE	999,975	.88,8160	888,160	1,000,000	999,975	.0	.5	.0	.0	4.029	4.030	JJ	20,145	40,290	07/12/2017	07/01/2036
91476P-FV-5	University of Oklahoma/T-REVENUE BONDS	2			1.D FE	5,100,000	.100,4420	5,122,542	5,100,000	5,100,000	.0	.0	.0	.0	5.197	5.197	JJ	132,524	265,407	08/23/2013	07/01/2028
91476P-FW-3	University of Oklahoma/T-REVENUE BONDS	2			1.D FE	1,500,000	.100,5970	1,508,955	1,500,000	1,500,000	.0	.0	.0	.0	5.526	5.526	JJ	41,445	82,890	08/23/2013	07/01/2033
91476P-GP-7	University of Oklahoma/T-REVENUE BONDS	2			1.E FE	3,725,000	.98,0960	3,654,076	3,725,000	3,725,000	.0	.0	.0	.0	4.380	4.380	JJ	81,578	163,155	09/26/2013	07/01/2026
68607D-NK-7	OREGON ST DEPT OF TRANSPRTN-BUILD AMERIC	1			1.B FE	3,712,258	.105,0610	3,677,135	3,500,000	3,712,258	.0	(21,699)	.0	.0	5.784	4.847	MON	25,867	202,440	08/14/2013	11/15/2030
686087-MP-9	State of Oregon Housing -REVENUE BONDS	2			1.C FE	1,950,000	.95,2690	1,857,746	1,950,000	1,950,000	.0	.0	.0	.0	2.891	2.891	JJ	28,187	77,346	05/31/2013	07/01/2033
686087-ZL-4	State of Oregon Housing -REVENUE BONDS	2			1.C FE	2,569,949	.99,5180	2,557,613	2,570,000	2,569,949	.0	(6)	.0	.0	3.900	3.900	JJ	50,115	110,744	08/14/2018	07/01/2038
20281P-BQ-4	Commonwealth Financin A-REVENUE BONDS				1.E FE	3,326,565	.101,1660	3,171,554	3,135,000	3,326,565	.0	(41,369)	.0	.0	5.740	4.208	JD	14,996	192,505	10/17/2012	06/01/2027
708797-AN-5	Pennsylvania Housing Fin-REVENUE BONDS	2			1.A FE	7,601,444	.97,3490	7,403,954	7,605,577	7,601,444	.0	261	.0	.0	3.600	3.605	MON	92,788	279,306	07/30/2018	08/01/2035
70879Q-DB-6	Pennsylvania Housing Fin-REVENUE BONDS	2			1.B FE	1,000,000	.96,3270	963,270	1,000,000	1,000,000	.0	.0	.0	.0	3.650	3.649	AO	9,125	36,500	01/16/2019	10/01/2032
70879Q-EW-9	Pennsylvania Housing Fin-REVENUE BONDS	2			1.B FE	7,487,062	.89,6510	6,831,406	7,620,000	7,487,062	.0	9,502	.0	.0	2.500	2.674	AO	47,625	190,500	11/13/2019	10/01/2034
85732P-CG-2	State Public School Buil-REVENUE BONDS				1.E FE	1,000,000	.101,1430	1,011,430	1,000,000	1,000,000	.0	.0	.0	.0	5.426	5.424	MS	15,977	54,260	06/02/2011	09/15/2026
85732P-CD-0	State Public School Buil-REVENUE BONDS				1.E FE	1,500,000	.101,1550	1,517,325	1,500,000	1,500,000	.0	.0	.0	.0	5.426	5.424	MS	23,965	81,390	06/02/2011	09/15/2026
85732P-CF-5	State Public School Buil-REVENUE BONDS				1.E FE	5,124,711	.97,5420	4,877,100	5,000,000	5,124,711	.0	(15,535)	.0	.0	5.138	4.699	MS	75,643	256,900	12/28/2011	09/15/2029
76221T-DH-9	Rhode Island Housing and-REVENUE BONDS	2			1.B FE	140,000	.98,0450	137,263	140,000	140,000	.0	.0	.0	.0	2.913	2.911	AO	1,020	8,304	10/01/2019	10/01/2039
76221T-KB-4	Rhode Island Housing and-REVENUE BONDS	2			1.C FE	4,497,887	.96,3300	4,305,951	4,470,000	4,497,887	.0	(6,004)	.0	.0	3.800	3.639	AO	42,465	169,860	12/20/2017	10/01/2037
76221T-PC-7	Rhode Island Housing and-REVENUE BONDS	2			1.C FE	2,000,000	.70,8070	1,416,140	2,000,000	2,000,000	.0	.0	.0	.0	3.032	3.032	AO	15,160	60,640	01/14/2021	10/01/2040
83755N-AA-8	South Dakota Housing Dev-REVENUE BONDS	2			1.B FE	1,075,000	.91,7880	986,721	1,075,000	1,075,000	.0	.0	.0	.0	3.434	3.433	MON	24,610	41,011	10/14/2016	11/01/2031
582041-WJ-2	Metropolitan Government -REVENUE BONDS		1,2		1.F FE	8,000,000	.96,0940	7,687,520	8,000,000	8,000,000	.0	.0	.0	.0	4.053	4.053	JJ	162,120	324,240	03/18/2016	07/01/2026
582041-XW-2	Metropolitan Government -REVENUE BONDS				1.A FE	8,000,090	.79,5340	6,362,720	8,000,090	8,000,090	.0	(10)	.0	.0	3.437	3.437	AO	68,740	274,960	10/27/2016	10/01/2046
67178K-AA-8	Oak Ridge Industrial Dev-REVENUE BONDS				1.D FE	1,094,195	.102,0900	1,161,597	1,137,795	1,094,195	.0	6,450	.0	.0	5.780	6.304	JD	2,923	69,147	01/28/2010	12/15/2032
880557-3E-1	TENNESSEE ST SCH BOND AU-REVENUE BONDS				1.B FE	4,937,656	.90,1220	4,956,710	5,500,000	4,937,656	.0	136,353	.0	.0	1.515	4.528	MON	3,703	83,325	07/25/2013	09/15/2026
880558-FA-4	Tennessee State School B-REVENUE BONDS		1,2		1.B FE	2,000,000	.98,6540	1,973,080	2,000,000	2,000,000	.0	.0	.0	.0	4.007	4.005	MON	13,357	80,140	08/07/2014	11/01/2034
088518-CL-7	County of Bexar TX-REVENUE BONDS				1.B FE	1,719,218	.108,4690	1,664,999	1,535,000	1,719,218	.0	(14,309)	.0	.0	6.980	5.366	FA	40,476	107,143	02/07/2014	08/15/2032
19625A-AD-4	Colony Local Development-REVENUE BONDS				1.B FE	500,000	.98,9080	494,540	500,000	500,000	.0	.0	.0	.0	3.366	3.364	AO	4,208	16,830	02/07/2013	10/01/2023
19625A-AG-7	Colony Local Development-REVENUE BONDS				1.B FE	12,019,005	.87,8190	9,660,090	11,000,000	12,019,005	.0	(22,858)	.0	.0	4.881	4.271	AO	134,228	536,910	04/19/2016	10/01/2047
19625A-AR-3	Colony Local Development-REVENUE BONDS				1.B FE	1,000,000	.96,5560	965,560	1,000,000	1,000,000	.0	.0	.0	.0	3.666	3.665	AO	9,165	36,660	02/07/2013	10/01/2026

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
19625A-AS-1	Colony Local Development-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	1,210,000	..95.8670	1,159,991	1,210,000	1,210,000	0	0	0	0	...3.766	...3.765	AO	11,392	45,569	02/07/2013	10/01/2027
19625A-AT-9	Colony Local Development-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	1,180,000	..95.0550	1,121,649	1,180,000	1,180,000	0	0	0	0	...3.866	...3.865	AO	11,405	45,619	02/07/2013	10/01/2028
756872-HS-9	Red River Education Fina-REVENUE BONDS .....	.....	2 .....	.....	.. 1.D FE	2,511,588	100.3670	2,514,193	2,505,000	2,511,588	0	(32,013)	0	0	...5.000	...3.677	MS	36,879	125,250	08/28/2013	03/15/2024
756872-HV-2	Red River Education Fina-REVENUE BONDS .....	.....	2 .....	.....	.. 1.D FE	320,456	100.3670	321,174	320,000	320,456	0	(2,260)	0	0	...5.000	...4.265	MS	4,711	16,000	08/28/2013	03/15/2027
756872-HW-0	Red River Education Fina-REVENUE BONDS .....	.....	2 .....	.....	.. 1.D FE	1,601,824	100.3670	1,605,872	1,600,000	1,601,824	0	(9,146)	0	0	...5.000	...4.404	MS	23,556	80,000	08/28/2013	03/15/2028
845040-JP-0	Southwest Higher Educati-REVENUE BONDS .....	.....	2 .....	.....	.. 1.D FE	2,250,000	..92.6240	2,084,040	2,250,000	2,250,000	0	0	0	0	...4.156	...4.153	AO	23,378	93,510	03/20/2013	10/01/2033
882135-7J-9	Texas A&M University-REVENUE BONDS .....	.....	2 .....	.....	.. 1.A FE	4,000,000	..99.8290	3,993,160	4,000,000	4,000,000	0	0	0	0	...4.772	...4.768	MN	24,390	190,880	09/04/2013	05/15/2033
88275F-NU-9	Texas Department of Hous-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	1,345,875	..94.2910	1,268,214	1,345,000	1,345,875	0	(558)	0	0	...3.200	...3.158	MS	14,347	45,867	10/15/2015	09/01/2039
88275F-PA-1	Texas Department of Hous-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	1,069,859	..92.2160	1,039,091	1,126,801	1,069,859	0	1,541	0	0	...3.100	...3.403	MON	11,644	37,202	06/15/2018	09/01/2047
88278P-RN-6	Texas State University S-REVENUE BONDS .....	.....	2 .....	.....	.. 1.C FE	1,416,212	100.2200	1,423,124	1,420,000	1,416,212	0	17,437	0	0	...4.000	...5.291	MS	16,724	56,800	08/16/2013	03/15/2028
882806-GD-8	Texas Tech University Sy-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	3,000,000	..88.1520	2,644,560	3,000,000	3,000,000	0	(3)	0	0	...4.000	...3.999	FA	45,333	120,000	01/31/2017	02/15/2038
88283L-HU-3	TEXAS ST TRANSPRTN COMM-BUILD AMERICA RE .....	.....	1 .....	.....	.. 1.A FE	39,419,958	101.7510	36,589,660	35,960,000	39,419,958	0	(410,188)	0	0	...5.178	...3.654	AO	465,502	1,862,009	10/29/2014	04/01/2030
914729-SU-3	University of North Texa-REVENUE BONDS .....	.....	2 .....	.....	.. 1.C FE	1,999,771	..85.4060	1,708,120	2,000,000	1,999,771	0	27	0	0	...4.122	...4.124	AO	17,404	82,440	01/06/2017	04/15/2040
914729-SV-1	University of North Texa-REVENUE BONDS .....	.....	2 .....	.....	.. 1.C FE	3,999,608	..90.9570	3,638,280	4,000,000	3,999,608	0	41	0	0	...4.022	...4.023	AO	33,964	160,880	01/06/2017	04/15/2036
795681-GM-1	Salt Lake County Municipi-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	1,878,006	102.6750	1,745,475	1,700,000	1,878,006	0	(21,883)	0	0	...5.820	...4.067	JD	8,245	98,940	05/01/2012	12/01/2029
91743P-DD-4	Utah Housing Corp-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	1,436,754	..98.5830	1,360,179	1,379,730	1,436,754	0	(1,495)	0	0	...3.500	...3.270	MON	16,405	58,991	02/07/2020	02/21/2050
91743P-DE-2	Utah Housing Corp-REVENUE BONDS .....	.....	1 .....	.....	.. 1.B FE	1,474,153	101.4320	1,444,725	1,424,328	1,474,153	0	(1,224)	0	0	...3.500	...3.305	MON	4,154	54,577	03/13/2020	03/21/2050
91754R-PR-2	Utah State Board of Rege-REVENUE BONDS .....	.....	.....	.....	.. 1.C FE	4,767,478	105.1700	4,354,038	4,140,000	4,767,478	0	(88,233)	0	0	...6.279	...3.552	AO	64,988	259,951	08/09/2012	04/01/2029
927781-UZ-5	Virginia College Buildin-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	3,894,687	..99.1980	3,918,321	3,950,000	3,894,687	0	24,545	0	0	...4.250	...4.964	FA	69,948	167,875	01/03/2011	02/01/2025
92812Q-3T-2	Virginia Housing Develop-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	4,000,000	..98.1580	3,926,320	4,000,000	4,000,000	0	0	0	0	...3.018	...3.016	AO	30,150	120,690	09/25/2012	10/01/2023
92812Q-3U-9	Virginia Housing Develop-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	2,000,000	..97.0380	1,940,760	2,000,000	2,000,000	0	0	0	0	...3.218	...3.215	AO	16,090	64,360	09/25/2012	10/01/2024
92812Q-3V-7	Virginia Housing Develop-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	2,000,000	..95.6450	1,912,900	2,000,000	2,000,000	0	0	0	0	...3.418	...3.415	AO	17,090	68,360	09/25/2012	10/01/2025
92812U-Q3-5	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	2,620,047	..95.8060	2,511,806	2,621,762	2,620,047	0	54	0	0	...4.300	...4.305	MON	37,579	122,723	12/04/2013	12/25/2043
92812U-Q4-3	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	5,498,814	..89.9500	4,946,184	5,498,814	5,498,814	0	0	0	0	...3.500	...3.500	MON	48,341	205,466	11/21/2014	10/25/2037
92812U-Q6-8	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	3,251,247	..89.3120	2,904,312	3,251,872	3,251,247	0	26	0	0	...3.100	...3.101	MON	33,603	105,555	05/25/2016	06/25/2041
92812U-Q7-6	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	6,425,208	..87.7470	5,637,927	6,425,208	6,425,208	0	0	0	0	...2.950	...2.950	MON	34,750	201,233	10/22/2019	10/25/2049
92812U-Q8-4	Virginia Housing Develop-REVENUE BONDS .....	.....	2 .....	.....	.. 1.A FE	11,141,307	..87.2090	9,716,222	11,141,307	11,141,307	0	0	0	0	...2.850	...2.850	MON	79,382	332,570	01/29/2020	12/25/2049
92812U-XA-1	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	877,624	100.3910	837,282	834,021	877,624	0	(1,967)	0	0	...6.000	...5.493	MON	16,680	55,050	04/07/2014	03/25/2038
92812U-XB-9	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.A FE	615,666	100.3910	587,430	585,143	615,666	0	(1,326)	0	0	...6.000	...5.494	MON	11,703	37,339	04/07/2014	03/25/2038
92812V-CE-4	Virginia Housing Develop-REVENUE BONDS .....	.....	2 .....	.....	.. 1.B FE	13,225,000	..94.7820	12,534,920	13,225,000	13,225,000	0	0	0	0	...3.846	...3.844	MN	84,772	508,634	07/25/2013	11/01/2029
92813T-EE-6	Virginia Housing Develop-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	7,844,682	..92.8010	7,286,301	7,851,533	7,844,682	0	254	0	0	...3.250	...3.256	MON	64,149	259,444	03/21/2013	08/25/2042
92817S-D6-2	Virginia Public School A-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	8,000,000	..87.2590	6,980,720	8,000,000	8,000,000	0	0	0	0	...3.840	...3.840	JD	13,653	307,200	10/12/2012	12/15/2034
92817S-TB-4	Virginia Public School A-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	6,268,977	101.7120	6,102,720	6,000,000	6,268,977	0	(28,814)	0	0	...5.512	...4.799	FA	137,800	330,720	09/25/2012	08/01/2030
92817S-WW-4	Virginia Public School A-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	7,000,000	..98.9820	6,928,740	7,000,000	7,000,000	0	0	0	0	...4.500	...4.500	JD	14,000	315,000	06/16/2011	06/15/2027
29270C-L4-5	Energy Northwest-REVENUE BONDS .....	.....	.....	.....	.. 1.C FE	7,769,787	..88.9640	6,912,503	7,770,000	7,769,787	0	10	0	0	...3.843	...3.843	JJ	149,301	298,601	04/24/2015	07/01/2038
29270C-WJ-0	Energy Northwest-REVENUE BONDS .....	.....	.....	.....	.. 1.C FE	1,000,000	101.1850	1,011,850	1,000,000	1,000,000	0	0	0	0	...5.710	...5.710	JJ	28,550	57,100	12/15/2010	07/01/2024
812631-HS-1	City of Seattle WA Drain-REVENUE BONDS .....	.....	.....	.....	.. 1.B FE	2,941,745	102.5690	2,564,225	2,500,000	2,941,745	0	(17,953)	0	0	...5.550	...4.087	MN	23,125	138,750	12/13/2012	11/01/2039
812643-HE-7	City of Seattle WA Munic-REVENUE BONDS .....	.....	.....	.....	.. 1.C FE	4,268,934	..93.9460	4,030,283	4,290,000	4,268,934	0	3,480	0	0	...3.400	...3.500	JD	12,155	145,860	06/29/2012	06/01/2028
812643-HF-4	City of Seattle WA Munic-REVENUE BONDS .....	.....	.....	.....	.. 1.C FE	5,622,748	94.0300	5,317,397	5,655,000	5,622,748	0	4,377	0	0	...3.500	...3.600	JD	16,494	197,925	06/29/2012	06/01/2029
93978X-EQ-9	Washington State Housing-REVENUE BONDS .....	.....	2 .....	.....	.. 1.A FE	1,687,759	..90.4620	1,528,808	1,690,000	1,687,759	0	10,234	0	0	...3.000	...3.534	MON	12,675	59,238	05/15/2015	09/01/2040
93978X-ER-7	Washington State Housing-REVENUE BONDS .....	.....	2 .....	.....	.. 1.A FE	3,530,000	..91.0430	3,213,818	3,530,000	3,530,000	0	0	0	0	...3.150	...3.150	MON	27,799	135,673	05/20/2015	05/01/2041
940093-R4-1	Washington State Univers-REVENUE BONDS .....	.....	1 .....	.....	.. 1.E FE	9,558,422	102.4930	9,014,259	8,795,000	9,558,422	0	(423,143)	0	0	...5.990	...1.359	AO	131,705	609,932	11/29/2012	10/01/2027
97689Q-EL-6	Wisconsin Housing & Econ-REVENUE BONDS .....	.....	2 .....	.....	.. 1.C FE	1,396,984	100.0190	1,410,268	1,410,000	1,396,984	0	659	0	0	...3.500	...3.574	MS	16,450	56,583	03/20/2020	09/01/2046
95639D-DV-9	West Virginia State Scho-REVENUE BONDS .....	.....	.....	.....	.. 1.E FE	4,254,643	..84.6900	4,234,500	5,000,000	4,254,643	0	194,186	0	0	...0.000	...4.699	N/A	0	0	05/21/2012	06/15/2026
0819999999. Subtotal - Bonds - U.S. Special Revenues - Issuer Obligations						1,374,728,291	XXX	1,281,025,646	1,310,505,403	1,374,728,291	0	(4,322,066)	0	0	XXX	XXX	XXX	17,632,542	60,816,433	XXX	XXX

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
31392C-EM-2	Fannie Mae REMIC Trust 2-FNI 2002-W2 AF5			4	1.A	86,120	102.5528	91,950	89,661	86,120	0	1,155	0	0	6.512	7.897	MON	1,241	6,689	03/12/2002	06/01/2032
83190A-AB-9	Small Business Administr-SBA 523402			4	1.A	531,396	101.2976	512,719	506,152	531,396	0	(5,095)	0	0	6.550	5.252	MON	35,916	33,153	10/01/2010	01/01/2035
31359D-H5-5	Fannie Mae REMICS-FNR 1993-155 PJ			4	1.A	9,251	100.1505	9,254	9,251	9,251	0	(115)	0	0	7.000	6.429	MON	54	1,425	04/01/2004	09/01/2023
31359H-NI-0	Fannie Mae REMICS-FNR 1994-63 PK			4	1.A	5,038	100.5005	5,049	5,024	5,038	0	(51)	0	0	7.000	6.326	MON	29	543	04/01/2004	04/01/2024
31359H-QP-2	Fannie Mae REMICS-FNR 1994-76 KA			4	1.A	264	100.3665	270	269	264	0	48	0	0	7.000	13.122	MON	2	57	04/01/2004	04/01/2024
31359N-ZI-0	Fannie Mae REMICS-FNR 1997-19 PG			4	1.A	28,933	101.5661	29,254	28,803	28,933	0	(113)	0	0	7.000	6.647	MON	168	2,410	04/01/2004	04/01/2027
31359V-GF-4	Fannie Mae REMICS-FNR 1999-1 PJ			4	1.A	113,499	101.8276	113,771	111,729	113,499	0	(909)	0	0	6.500	5.703	MON	605	8,206	04/01/2004	02/01/2029
3136AC-FK-2	Fannie Mae REMICS-FNR 2013-4 GI			4	1.A	131,477	6.2212	100,150	1,609,893	131,477	0	0	0	0	3.000	0.670	MON	4,025	4,885	04/29/2013	02/01/2043
31371K-LU-3	Fannie Mae Pool-POOL #254239			4	1.A	3,013	104.1749	2,900	2,783	3,013	0	(75)	0	0	6.500	3.797	MON	15	200	08/31/2012	03/01/2032
31388T-QZ-9	Fannie Mae Pool-POOL #614372			4	1.A	20,310	100.7450	19,135	18,994	20,310	0	(416)	0	0	7.000	4.585	MON	111	1,381	08/31/2012	01/01/2032
313921-JK-5	Fannie Mae REMICS-FNR 2001-57 PD			4	1.A	48,502	102.6948	48,865	47,583	48,502	0	(379)	0	0	6.500	5.753	MON	258	3,509	04/01/2004	10/01/2031
31392B-SC-1	Fannie Mae REMICS-FNR 2002-6 L			4	1.A	15,962	101.0371	15,911	15,748	15,962	0	(116)	0	0	6.000	5.363	MON	79	1,133	04/01/2004	02/01/2032
31392E-PC-8	Fannie Mae REMICS-FNR 2002-58 PG			4	1.A	240,507	102.0503	240,910	236,070	240,507	0	(1,535)	0	0	6.000	5.345	MON	1,180	15,495	04/01/2004	09/01/2032
31393Y-ED-3	Fannie Mae REMICS-FNR 2004-28 SB			4	1.A	52,993	10.9583	54,866	500,679	52,993	0	0	0	0	2.761	(2.264)	MON	230	13,576	05/28/2013	05/25/2034
31398M-EL-6	Fannie Mae REMICS-FNR 2010-14 SJ			4	1.A	30,482	3.8158	19,619	514,160	30,482	0	0	0	0	2.011	(23.036)	MON	172	11,030	08/27/2010	03/25/2040
3140HN-LY-6	Fannie Mae Pool-POOL #BK8442			4	1.A	23,069,901	78.3640	18,037,049	23,017,020	23,069,901	0	(4,494)	0	0	2.000	1.977	MON	38,362	478,926	03/04/2021	01/01/2051
3140JS-EP-0	Fannie Mae Pool-POOL #BN9141			4	1.A	25,720,276	78.2776	20,200,497	25,806,236	25,720,276	0	7,144	0	0	2.000	2.033	MON	43,010	536,772	04/12/2021	04/01/2051
3140JX-EE-4	Fannie Mae Pool-POOL #B02832			4	1.A	950,166	87.1875	815,103	934,885	950,166	0	(1,388)	0	0	3.000	2.809	MON	4,679	28,412	02/28/2020	09/01/2049
3140KO-EL-8	Fannie Mae Pool-POOL #B04638			4	1.A	2,688,817	87.0938	2,339,539	2,686,230	2,688,817	0	(216)	0	0	3.000	2.989	MON	13,443	83,136	11/07/2019	11/01/2049
3140K2-LK-8	Fannie Mae Pool-POOL #B06629			4	1.A	46,159,843	78.2344	35,955,037	45,958,098	46,159,843	0	(16,199)	0	0	2.000	1.958	MON	76,597	946,267	04/23/2021	04/01/2051
3140K2-PV-0	Fannie Mae Pool-POOL #B06735			4	1.A	45,266,940	78.2344	35,343,303	45,176,172	45,266,940	0	(7,218)	0	0	2.000	1.981	MON	75,294	928,378	04/26/2021	05/01/2051
3140QB-N5-3	Fannie Mae Pool-POOL #CA4011			4	1.A	1,242,168	90.0156	1,101,963	1,224,191	1,242,168	0	(1,673)	0	0	3.500	3.334	MON	7,148	47,613	10/16/2019	08/01/2049
3140QC-DT-0	Fannie Mae Pool-POOL #CA4613			4	1.A	2,001,672	89.8906	1,773,834	1,973,324	2,001,672	0	(3,044)	0	0	3.500	3.337	MON	11,605	76,804	11/07/2019	11/01/2049
3140QC-PN-0	Fannie Mae Pool-POOL #CA4928			4	1.A	2,258,527	87.1250	1,926,788	2,211,522	2,258,527	0	(4,537)	0	0	3.000	2.767	MON	11,075	74,127	02/28/2020	01/01/2050
3140QH-NJ-0	Fannie Mae Pool-POOL #CA9392			4	1.A	62,512,311	78.2776	48,511,605	61,973,818	62,512,311	0	(44,613)	0	0	2.000	1.915	MON	103,290	1,271,762	03/03/2021	03/01/2051
31416K-WIP-9	Fannie Mae Pool-POOL #AA2453			4	1.A	9,300	98.3251	9,054	9,208	9,300	0	(22)	0	0	4.500	4.277	MON	35	445	03/17/2009	02/01/2039
31418D-JW-3	Fannie Mae Pool-POOL #MA3876			4	1.A	2,052,398	87.0938	1,784,480	2,048,918	2,052,398	0	(330)	0	0	3.000	2.980	MON	10,256	66,170	10/25/2019	12/01/2049
31418D-YS-5	Fannie Mae Pool-POOL #MA4320			4	1.A	16,521,649	81.1876	13,171,501	16,223,546	16,521,649	0	(24,599)	0	0	2.500	2.314	MON	33,799	419,631	03/19/2021	04/01/2051
52518R-BE-5	Lehman Structured Securi-LSSC 2002-GE1 A			4	6. *	5,276	15.3676	2,358	15,344	2,358	(2,918)	(10,634)	0	0	0.000	(115.552)	MON	0	0	01/03/2002	07/01/2024
312915-QG-9	Freddie Mac REMICS-FNR 1491 I			4	1.A	1,121	99.9942	1,121	1,121	1,121	0	(6)	0	0	7.500	7.341	MON	7	303	04/01/2004	07/01/2023
312931-A6-5	Freddie Mac Gold Pool-FG A84529			4	1.A	14,815	99.3739	14,625	14,717	14,815	0	(22)	0	0	4.500	4.340	MON	55	727	03/17/2009	02/01/2039
313398-P7-8	Freddie Mac REMICS-FNR 2334 TD			4	1.A	54,533	103.4420	55,933	54,072	54,533	0	(169)	0	0	6.500	6.162	MON	293	3,807	04/01/2004	07/01/2031
3133JL-UE-7	Freddie Mac Pool-FREDDIE MAC POOL-FR QU7			4	1.A	31,720,845	78.9145	24,860,581	31,503,177	31,720,845	0	(17,920)	0	0	2.000	1.931	MON	52,505	637,391	03/04/2021	03/01/2051
3133KP-Q2-7	Freddie Mac Pool-FR RA7673			4	1.A	23,812,903	96.4219	23,402,128	24,270,558	23,812,903	0	1,211	0	0	4.500	4.764	MON	91,015	91,015	12/19/2022	07/01/2052
3133N3-U9-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6			4	1.A	3,657,087	90.8833	3,275,284	3,603,836	3,657,087	0	(4,742)	0	0	3.500	3.333	MON	10,511	132,825	11/08/2019	11/01/2049
3133N3-JV-6	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6			4	1.A	2,620,612	90.8825	2,348,299	2,583,885	2,620,612	0	(3,385)	0	0	3.500	3.345	MON	7,536	103,733	09/18/2019	09/01/2049
3133N3-X3-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6			4	1.A	20,251,236	81.6407	16,146,139	19,777,073	20,251,236	0	(43,550)	0	0	2.500	2.256	MON	41,202	516,277	04/09/2021	05/01/2051
3133T3-BU-1	Freddie Mac REMICS-FNR 1644 K			4	1.A	2,296	100.1709	2,295	2,291	2,296	0	(37)	0	0	6.750	5.940	MON	13	310	04/01/2004	12/01/2023
3133TB-4G-2	Freddie Mac REMICS-FNR 1991 PG			4	1.A	24,226	100.1926	24,183	24,136	24,226	0	(91)	0	0	6.000	5.678	MON	121	1,778	04/01/2004	09/01/2027
3133TC-HE-1	Freddie Mac REMICS-FNR 2018 PG			4	1.A	15,882	101.2680	15,895	15,696	15,882	0	(121)	0	0	6.350	5.643	MON	83	1,154	04/01/2004	01/01/2028
3133TD-3A-2	Freddie Mac REMICS-FNR 2037 HB			4	1.A	32,562	104.4440	33,267	31,851	32,562	0	(480)	0	0	9.000	7.667	MON	239	3,368	04/01/2004	03/01/2028
3133TH-SB-1	Freddie Mac REMICS-FNR 2118 PE			4	1.A	106,756	101.9197	107,469	105,445	106,756	0	(649)	0	0	6.500	5.884	MON	571	7,651	04/01/2004	01/01/2029
3133TS-F2-4	Freddie Mac REMICS-FNR 2303 CK			4	1.A	70,488	102.1824	71,292	69,769	70,488	0	(250)	0	0	6.000	5.608	MON	349	4,442	04/01/2004	04/01/2031
3133TU-S7-4	Freddie Mac REMICS-FNR 2357 QH			4	1.A	33,316	103.0590	33,692	32,692	33,316	0	(232)	0	0	6.500	5.786	MON	177	2,448	04/01/2004	09/01/2031
3137A9-6Y-7	Freddie Mac REMICS-FNR 3850 LS			4	1.A	91,291	4.9469	153,131	3,095,522	101,554	0	0	0	0	0.000	0.000	MON	453	16,931	10/07/2011	05/01/2039

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
3137AC-TN-9	Freddie Mac REMICS-FHR 3897 LI .....	.....	4 .....	.....	1.A	250,711	2.6183	100,577	3,841,358	250,711	0	0	0	0	0.378	0.378	MON	1,479	(10,189)	08/11/2011	01/01/2037
3137FA-NH-7	Freddie Mac REMICS-FHR 4709 WI .....	.....	4 .....	.....	1.A	563,811	3.4394	268,375	7,802,977	563,811	0	0	0	0	0.000	0.000	MON	1,365	702	03/02/2018	10/01/2038
3137FW-WC-0	Freddie Mac REMICS-FHR 5020 AI .....	.....	4 .....	.....	1.A	1,342,852	12.7608	2,269,612	17,785,953	1,342,852	0	0	0	0	2.000	16.447	MON	29,643	231,481	09/15/2020	09/01/2050
31392K-5C-6	Freddie Mac REMICS-FHR 2455 GK .....	.....	4 .....	.....	1.A	221,133	103.3408	223,187	215,972	221,133	0	(1,813)	0	0	6.500	5.617	MON	1,170	15,405	04/01/2004	05/01/2032
31392M-SR-9	Freddie Mac REMICS-FHR 2448 TX .....	.....	4 .....	.....	1.A	248,963	101.8416	282,978	1,201,004	248,963	0	(1,631)	0	0	6.000	5.310	MON	1,658	71,049	04/01/2004	05/01/2032
0829999999. Subtotal - Bonds - U.S. Special Revenues - Residential Mortgage-Backed Securities						316,914,430	XXX	255,926,797	348,988,115	316,921,775	(2,918)	(193,291)	0	0	XXX	XXX	XXX	713,123	6,894,743	XXX	XXX
0909999999. Total - U.S. Special Revenues Bonds						1,691,642,721	XXX	1,536,952,443	1,659,493,518	1,691,650,066	(2,918)	(4,515,357)	0	0	XXX	XXX	XXX	18,345,665	67,711,176	XXX	XXX
00184@-AA-4	Amazon (Euclid Oh) Trust Certificate .....	.....	.....	.....	1.E	4,039,275	88.9862	3,596,220	4,041,323	4,039,275	0	150	0	0	4.095	4.099	MON	42,050	167,869	09/15/2018	06/30/2039
00191#-AA-3	Amazon (Tucson Az) Trust Certificate .....	.....	.....	.....	1.E	4,506,497	88.8656	4,008,175	4,510,379	4,506,497	0	289	0	0	4.095	4.102	MON	47,304	187,169	10/16/2018	08/31/2039
00191@-AA-5	Amazon (Oklahoma City Ok Trust Certifica .....	.....	.....	.....	1.E	8,787,415	89.7710	7,889,482	8,788,453	8,787,415	0	75	0	0	4.233	4.234	MON	32,113	376,843	11/01/2018	09/30/2039
00193*-AA-5	Amazon (Tulsa Ok) Trust Certificate .....	.....	.....	.....	1.E	9,188,864	92.3029	8,482,019	9,189,331	9,188,864	0	35	0	0	4.233	4.233	MON	66,157	394,032	11/01/2018	09/30/2039
00195#-AA-9	Amazon (Toledo Oh) Trust Certificate .....	.....	.....	.....	1.E	15,636,972	86.8348	13,578,334	15,636,972	15,636,972	0	0	0	0	3.570	3.570	MON	92,968	566,936	12/15/2019	10/31/2040
00225#-AA-3	Amazon (Grand Rapids, M Trust Certifica .....	.....	.....	.....	1.E	4,240,500	88.8064	3,768,785	4,243,822	4,240,500	0	238	0	0	4.095	4.101	MON	44,504	176,092	11/16/2018	09/30/2039
00511B-AA-5	Acuris Finance Us Inc / -SECURED .....	.....	1,2 .....	.....	4.B FE	4,100,000	79.9125	3,276,413	4,100,000	4,100,000	0	0	0	0	5.000	4.998	MN	34,167	205,000	06/16/2021	05/01/2028
00910G-A*-4	Air Cargo Logistics CtlI Trust Certificat .....	.....	.....	.....	1.E	6,243,808	91.0972	5,687,934	6,243,808	6,243,808	0	0	0	0	4.533	4.533	MON	183,704	66,651	01/09/2020	02/10/2041
00910G-A@-2	Air Cargo Logistics CtlI Trust Certificat .....	.....	.....	.....	1.E	7,460,973	92.8094	6,924,485	7,460,973	7,460,973	0	0	0	0	5.039	5.039	MON	21,931	373,772	01/09/2020	02/10/2041
03522A-AH-3	Anheuser-Busch Cos LLC /-SENIOR UNSECURE .....	.....	1,2 .....	.....	2.C FE	19,761,067	94.2191	15,686,535	16,649,000	19,761,067	0	(202,127)	0	0	4.700	2.915	FA	326,043	782,503	06/09/2021	02/01/2036
03690A-AF-3	Antero Midstream Partner-SENIOR UNSECURE .....	.....	1,2 .....	.....	3.C FE	3,025,361	92.9330	2,787,990	3,000,000	3,025,361	0	(6,328)	0	0	5.750	5.443	JJ	79,542	165,792	02/22/2022	01/15/2028
04015@-AB-6	Ares Finance Co II LLC-SENIOR UNSECURED .....	.....	1,2 .....	.....	2.A FE	6,885,589	82.8443	5,840,521	7,050,000	6,885,589	0	15,063	0	0	3.250	3.609	JD	10,183	239,308	03/30/2022	06/15/2030
04018V-AA-1	ARES FINANCE CO-SUBORDINATED .....	.....	2 .....	.....	2.C FE	9,632,232	75.7417	7,331,794	9,680,000	9,632,232	0	795	0	0	4.125	4.125	JD	200,759	399,512	06/24/2021	06/30/2051
043671-AA-4	Aseko Inc-FIRST LIEN .....	.....	2 .....	.....	1.E PL	7,440,000	98.7452	7,346,644	7,440,000	7,440,000	0	0	0	0	6.500	6.499	MON	21,493	282,100	05/26/2022	06/15/2025
05351K-B@-5	Avant Credit Card Master AVCCMT Series 2 .....	.....	.....	.....	2.C PL	10,280,529	97.2500	10,133,450	10,420,000	10,280,529	0	7,612	0	0	10.000	10.388	MON	169,325	293,786	09/20/2022	04/15/2027
05351K-B*-9	Avant Credit Card Master AVCCMT Series 2 .....	.....	.....	.....	1.C PL	15,305,099	97.7900	15,040,102	15,380,000	15,305,099	0	0	0	0	6.880	7.012	MON	171,948	298,338	09/20/2022	04/15/2027
05351K-B@-7	Avant Credit Card Master AVCCMT Series 2 .....	.....	.....	.....	1.G PL	8,169,278	99.6500	8,171,300	8,200,000	8,169,278	0	1,896	0	0	8.150	8.254	MON	108,599	188,423	09/20/2022	04/15/2027
05463*-AA-7	Axiom Hoya LLC Senior Unsecured Notes .....	.....	.....	.....	2.C PL	21,500,000	72.3374	15,552,541	21,500,000	21,500,000	0	0	0	0	3.800	3.800	MJSD	195,172	817,000	07/01/2021	12/31/2050
05553L-AA-1	BOPE Ulysses Intermediat-USLBMH 7 3/4 04 .....	.....	1,2 .....	.....	5.B FE	358,108	61.0167	339,253	556,000	358,108	0	13,388	0	0	7.750	20.733	AO	10,773	32,318	07/07/2022	04/01/2027
05586*-AA-9	BGS Spartanburg 2017 Trust Certificate .....	.....	.....	.....	2.A S	9,368,243	92.4356	8,659,589	9,368,240	9,368,243	0	(1)	0	0	3.970	3.970	MON	47,643	380,330	07/15/2017	07/15/2032
05587*-AA-8	BGS Fedex Series 2017A Trust Certificate .....	.....	.....	.....	1.E PL	8,176,037	89.5389	7,320,491	8,175,766	8,176,037	0	(27)	0	0	4.260	4.260	MON	15,479	357,258	09/15/2017	03/15/2037
05588*-AA-7	BGS Huntersville 2017 Trust Certificate .....	.....	.....	.....	2.C S	13,540,585	92.5426	12,530,792	13,540,585	13,540,585	0	(2)	0	0	4.430	4.430	MON	26,660	607,298	05/15/2018	05/15/2038
05590#-AA-9	BPHQ 2017 Trust Certificate BP Corp Nort .....	.....	.....	.....	1.F	2,841,512	92.5645	2,630,231	2,841,512	2,841,512	0	2	0	0	3.540	3.540	MON	77,642	151,580	11/21/2017	11/15/2032
05682*-AE-4	Bain Capital Holdings LP Senior Notes Se .....	.....	.....	.....	1.D PL	7,500,000	79.9700	5,997,750	7,500,000	7,500,000	0	0	0	0	3.180	3.180	AO	50,350	174,900	04/07/2022	04/15/2034
05682*-AF-1	Bain Capital Holdings LP Senior Notes Se .....	.....	.....	.....	1.D PL	20,000,000	76.4400	15,288,000	20,000,000	20,000,000	0	0	0	0	3.330	3.330	AO	140,600	488,400	04/07/2022	04/15/2037
05723K-AF-7	Baker Hughes a GE Co LLC-SENIOR UNSECURE .....	.....	1,2 .....	.....	1.G FE	77,092,527	78.5376	53,012,095	67,499,000	77,092,527	0	(253,965)	0	0	4.080	3.232	JD	122,398	10,603,684	01/20/2022	12/15/2047
06424@-AA-1	Bank Of America (Houston Pass-Thru Certi .....	.....	.....	.....	1.C S	6,569,858	89.7110	5,867,942	6,540,940	6,569,858	0	(5,388)	0	0	3.460	3.389	MON	10,059	232,540	10/01/2019	12/31/2029
10240#-AA-3	FERADYNE BOIHUNTER 14.00 07/17/2024 .....	.....	.....	.....	5.B GI	8,789,480	33.2000	2,918,107	8,789,480	8,789,480	0	0	0	0	14.000	13.998	MON	1,298,890	1,247,618	12/17/2021	07/17/2024
11750*-AA-7	Bryan Health (Kearney NE Senior Secured .....	.....	.....	.....	1.E	14,188,549	89.4763	12,695,389	14,188,549	14,188,549	0	0	0	0	3.810	3.810	MON	69,103	374,836	04/22/2022	12/15/2046
12585@-AA-4	CHP (Fresno Ca) Trust Certificate .....	.....	.....	.....	1.F	8,701,378	94.9961	8,265,969	8,701,377	8,701,378	0	(2)	0	0	3.190	3.190	MON	35,807	301,643	10/21/2016	02/15/2028
12657N-AA-8	COP Holdco LP / BIP-V Ch-FIRST LIEN .....	.....	1,2 .....	.....	4.A FE	2,774,602	87.3434	2,620,303	3,000,000	2,774,602	0	10,852	0	0	5.500	6.677	JD	172,333	607,153	06/08/2022	06/15/2031
12665V-AA-0	CVS Pass-Through Trust S-FIRST LIEN .....	.....	.....	.....	2.B FE	5,785,384	89.0275	5,150,575	5,785,372	5,785,384	0	(3)	0	0	4.163	4.163	MON	14,049	247,086	07/14/2014	08/11/2036
12694*-AA-4	CVS (New Albany, IN) Trust Certificate .....	.....	.....	.....	2.B	5,248,078	92.3128	4,844,634	5,248,078	5,248,078	0	11	0	0	5.140	5.140	MON	205,224	399,478	12/22/2015	01/15/2041
12697*-AA-7	Cric KY HQ LLC Senior Secured Note .....	.....	.....	.....	1.D PL	7,429,754	90.4682	6,721,451	7,429,754	7,429,754	0	(7)	0	0	4.560	4.560	MON	71,997	341,852	12/29/2016	03/15/2042
12707*-AA-9	CVS (NC SC PA & VA) Con Trust Certifica .....	.....	.....	.....	2.B	12,555,341	110.2317	13,839,947	12,555,324	12,555,341	0	(2)	0	0	4.880	4.880	MON	78,438	623,171	05/17/2018	01/15/2044
12724@-AA-6	CVS (Clawson & Richmond Trust Certificat .....	.....	.....	.....	2.B	7,952,373	90.0071	7,099,958	7,888,220	7,952,373	0	(8,153)	0	0	4.050	3.965	MON	14,199	329,021	03/30/2020	01/15/2035
12733#-AA-3	CTL Pass-Thru Trust Seri Trust Certifica .....	.....	.....	.....	2.A	12,351,302	73.3137	9,055,196	12,351,302	12,351,302	0	0	0	0	2.670	2.670	MON	69,781	333,415	02/17/2021	10/15/2043

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest				Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
12762*-AA-1	CDI Tuscany Intermediate Senior Secured				.. 2.A PL	..6,997,752	..97.3310	..6,810,982	..6,997,752	..6,997,752	0	0	0	0	..5.830	..5.831	MJSD	..108,826	..108,826	..09/26/2022	..06/30/2040
13177*-AA-8	Camargo Investments I LL Senior Note				.. 1.F PL	..5,143,369	..99.9105	..5,138,766	..5,143,369	..5,143,369	0	0	0	0	..6.250	..6.250	MON	..331,283	..321,461	..06/14/2019	..05/31/2023
14445L-AA-5	Carriage Purchaser Inc-SENIOR UNSECURED		1,2	.....	.. 5.A FE	..499,509	..70.9333	..468,869	..661,000	..499,509	0	..1,558	0	0	..7.875	..13.472	AO	..10,989	..10,989	..11/17/2022	..10/15/2029
18972E-AB-1	Clydesdale Acquisition H-SENIOR UNSECURE		1,2	.....	.. 5.B FE	..3,445,707	..84.4170	..3,087,130	..3,657,000	..3,445,707	0	..12,881	0	0	..8.750	..9.875	AO	..67,553	..229,324	..03/30/2022	..04/15/2030
18977W-2C-3	CNO Global Funding-SECURED			.....	.. 1.G FE	..15,710,433	..84.6587	..15,429,896	..18,226,000	..15,710,433	0	..88,659	0	0	..2.650	..5.342	JJ	..234,786	..312,961	..12/02/2022	..01/06/2029
22160E-AA-6	Costco (Monterey Park C Trust Certifica			.....	.. 1.E	..6,995,337	..84.7989	..5,932,892	..6,996,425	..6,995,337	0	..53	0	0	..3.910	..3.911	MON	..8,359	..275,967	..10/03/2017	..06/20/2043
22163E-AA-1	Costco (Oceanside NY) Le Trust Certifica			.....	.. 1.E	..15,922,843	..76.0689	..12,112,332	..15,922,843	..15,922,843	0	0	0	0	..3.140	..3.140	MON	..63,952	..504,638	..11/14/2019	..11/30/2041
22970*-AA-8	BNSF (Dayton, Texas) Con Trust Certifica			.....	.. 1.D PL	..21,539,938	..93.1072	..20,054,646	..21,539,308	..21,539,938	0	..(60)	0	0	..4.070	..4.070	MON	..146,792	..873,120	..03/12/2015	..05/15/2034
22977E-AA-9	CTL Pass-Thru Trust Seri Trust Certifica			.....	.. 1.E	..8,653,562	..84.1277	..7,280,035	..8,653,553	..8,653,562	0	..(1)	0	0	..3.870	..3.870	MON	..14,884	..340,181	..12/15/2016	..12/15/2038
24703T-AA-4	Dell International LLC /-FIRST LIEN		1,2	.....	.. 2.B FE	..3,201,855	..100.1806	..3,207,783	..3,202,000	..3,201,855	0	..105	0	0	..5.450	..5.454	JD	..7,756	..174,509	..05/17/2016	..06/15/2023
24703T-AC-0	Dell International LLC /-FIRST LIEN		1,2	.....	.. 2.B FE	..999,259	..101.1771	..1,011,771	..1,000,000	..999,259	0	..252	0	0	..5.850	..5.881	JJ	..26,975	..58,500	..04/03/2020	..07/15/2025
24703T-AG-1	Dell International LLC /-FIRST LIEN		1,2	.....	.. 2.B FE	..2,814,531	..97.9998	..2,939,994	..3,000,000	..2,814,531	0	..3,111	0	0	..5.300	..6.442	AO	..39,750	..39,750	..11/04/2022	..10/01/2029
24703T-AJ-5	Dell International LLC /-FIRST LIEN		1,2	.....	.. 2.B FE	..28,980,634	..112.7711	..22,554,216	..20,000,000	..28,980,634	0	..(505,267)	0	0	..8.100	..1,572,750	0	..747,000	..1,572,750	..01/20/2022	..07/15/2036
25461L-AA-0	DTV 5 7/8 08/15/27-SECURED		1,2	.....	.. 3.B FE	..4,238,982	..89.7210	..3,761,104	..4,192,000	..4,238,982	0	..(11,434)	0	0	..5.875	..5.527	FA	..93,039	..246,280	..12/06/2021	..08/15/2027
25512D-AA-7	Diversified ABS Phase V Senior Secured N			.....	.. 2.B FE	..52,529,616	..82.5700	..43,373,704	..52,529,616	..52,529,616	0	0	0	0	..5.780	..5.780	MON	..461,120	..9,835,391	..05/26/2022	..12/31/2030
26443E-AA-6	Dulles Discovery 1 Contr Pass-Thru Certi			.....	.. 1.B	..10,319,696	..83.9244	..8,660,743	..10,319,696	..10,319,696	0	0	0	0	..2.964	..2.964	MON	..125,315	..313,699	..11/07/2019	..06/05/2037
30290Y-AJ-0	FS Global Credit Opportu-FSGLBL 2.95 01/		1,2	.....	.. 1.D FE	..15,000,000	..90.2083	..13,531,245	..15,000,000	..15,000,000	0	0	0	0	..2.950	..2.950	JJ	..185,604	..442,500	..10/29/2021	..01/31/2027
30292E-AA-2	FBI Bronx Control Trust Pass-Thru Certif			.....	.. 1.B PL	..11,594,113	..93.0129	..10,784,021	..11,594,113	..11,594,113	0	..(1)	0	0	..3.910	..3.910	MON	..20,148	..463,664	..02/02/2018	..07/15/2033
31307I-AA-9	FDL-CC LLC Senior Note Tranche A-1			.....	.. 1.B	..2,086,360	..95.3756	..1,989,676	..2,086,148	..2,086,360	0	..(27)	0	0	..4.537	..4.536	MON	..77,029	..138,424	..02/15/2015	..02/15/2035
31307I-AC-5	FDL-CC LLC Senior Note Tranche A-3			.....	.. 1.B	..2,139,947	..93.3374	..1,997,299	..2,139,870	..2,139,947	0	..(7)	0	0	..4.537	..4.537	MON	..36,911	..(753,177)	..06/15/2017	..06/15/2037
31429E-AA-2	Fedex Chino Control Pass Trust Certifica			.....	.. 2.B	..18,671,185	..86.2457	..16,103,095	..18,671,185	..18,671,185	0	0	0	0	..3.490	..3.490	MON	..496,143	..966,247	..07/15/2020	..10/15/2035
31429E-AB-0	Fedex Chino Control Pass Trust Certifica			.....	.. 1.G PL	..6,000,000	..92.9949	..5,579,694	..6,000,000	..6,000,000	0	0	0	0	..5.190	..5.190	MON	..13,840	..311,400	..07/15/2020	..10/15/2035
33803W-AA-7	Fishers Lane Associates -SECURED			.....	.. 1.B	..8,638,421	..93.9077	..8,112,128	..8,638,408	..8,638,421	0	..(4)	0	0	..3.666	..3.666	MON	..22,872	..333,284	..06/21/2012	..08/05/2030
34107E-AA-7	Florida Pipeline Holding Senior Secured			.....	.. 2.B PL	..26,134,771	..81.5500	..21,312,906	..26,134,771	..26,134,771	0	0	0	0	..2.920	..2.920	FA	..288,296	..783,494	..07/15/2021	..08/15/2038
35824E-AA-4	Fresno County (Rowell Bu Trust Certifica			.....	.. 1.D S	..9,038,084	..80.3079	..7,198,562	..8,963,703	..9,038,084	0	..(3,275)	0	0	..3.270	..3.208	MON	..37,457	..293,349	..06/02/2020	..05/15/2040
36164Q-NA-2	GE CAPITAL INTL FUNDING-SENIOR UNSECURED			.....	.. 2.B FE	..37,116,280	..92.2762	..30,527,748	..33,083,000	..37,116,280	0	..(227,241)	0	0	..4.418	..3.249	MN	..186,761	..1,642,621	..02/25/2022	..11/15/2035
36184I-AJ-8	GLP Capital LP / GLP Fin-SENIOR UNSECURE		1,2	.....	.. 2.C FE	..5,040,285	..98.2841	..4,914,204	..5,000,000	..5,040,285	0	..(17,152)	0	0	..5.250	..4.855	JD	..21,875	..262,500	..09/17/2018	..06/01/2025
36184I-AK-5	GLP Capital LP / GLP Fin-SENIOR UNSECURE		1,2	.....	.. 2.C FE	..2,989,755	..97.9374	..2,938,122	..3,000,000	..2,989,755	0	..765	0	0	..5.750	..5.823	JD	..14,375	..100,625	..07/22/2022	..06/01/2028
36184I-AL-3	GLP Capital LP / GLP Fin-SENIOR UNSECURE		1,2	.....	.. 2.C FE	..9,779,460	..94.6330	..9,463,304	..10,000,000	..9,779,460	0	..12,960	0	0	..5.300	..5.737	JJ	..244,389	..244,389	..07/22/2022	..01/15/2029
36198E-AA-0	GE Huntsville 2020A Leas Trust Certifica			.....	.. 2.A	..12,971,289	..88.7567	..11,512,888	..12,971,289	..12,971,289	0	0	0	0	..4.560	..4.560	MON	..23,802	..597,205	..12/29/2020	..04/15/2046
36200E-AA-8	GE Huntsville 2020B Leas Trust Certifica			.....	.. 2.A	..3,061,483	..88.8923	..2,721,422	..3,061,483	..3,061,483	0	0	0	0	..4.560	..4.560	MON	..6,205	..81,640	..12/30/2020	..04/15/2046
36248E-AA-0	GSA (Anchorage AK) CTL P Pass-Thru Certi			.....	.. 1.B	..12,566,357	..94.2051	..11,777,092	..12,501,544	..12,566,357	0	..(14,799)	0	0	..3.500	..3.425	MON	..19,447	..461,133	..03/24/2016	..11/15/2030
36249E-AA-1	GSA Gth I US Government Lease-Backed Pas			.....	.. 1.B	..6,396,435	..93.4621	..6,396,317	..6,396,435	..6,396,435	0	..(6)	0	0	..4.560	..4.560	MON	..223,040	..458,488	..06/13/2017	..05/15/2038
36298G-AA-7	GSPA Monetization Trust-SECURED			.....	.. 2.A FE	..8,697,304	..96.0176	..8,301,149	..8,645,441	..8,697,304	0	..(11,451)	0</								

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
43722#-AA-1	Home Depot (Monterey Par Trust Certifica .....	.....	.....	.....	1.F	9,121,915	..84.2602	7,686,142	9,121,913	9,121,915	0	(1)	0	0	3.710	3.710	MON	99,973	342,283	10/06/2017	06/15/2038
43722*-AA-5	Home Depot South Windsor Pass-Thru Certi .....	.....	.....	.....	1.F	9,611,424	..79.5697	7,647,781	9,611,424	9,611,424	0	0	0	0	3.370	3.370	MON	95,649	327,098	08/15/2020	10/15/2040
43942#-AA-7	Hope Gas Holdings, LLC Senior Unsecured .....	.....	.....	.....	2.C PL	23,000,000	..94.2775	21,683,825	23,000,000	23,000,000	0	0	0	0	4.950	4.946	JD	382,663	382,663	08/31/2022	12/31/2032
48121#-AP-6	JRD Holdings LLC Senior Note Series 2021 .....	.....	.....	.....	2.B PL	7,000,000	..76.4157	5,349,099	7,000,000	7,000,000	0	0	0	0	2.830	2.830	AO	141,421	186,550	10/14/2021	10/14/2033
48255B-AA-4	MULTIPLE GUARANTORS-SENIOR UNSECURED	1,2	.....	.....	1.F FE	19,757,844	..63.6562	14,004,364	22,000,000	19,757,844	0	35,664	0	0	3.250	3.831	JD	31,778	760,681	03/08/2022	12/15/2051
50196#-AA-5	LON North American Fund Term Loan .....	.....	.....	.....	1.F PL	6,598,192	..92.3976	6,096,571	6,598,192	6,598,192	0	0	0	0	5.500	5.500	JAJO	180,442	400,513	09/14/2022	07/26/2034
50243#-AA-8	LVCVA (Las Vegas NV) Rec Trust Certifica .....	.....	.....	.....	4.A YE	14,741,050	..93.7081	13,813,557	14,741,050	14,741,050	0	34	0	0	4.920	4.920	JD	401,349	743,422	03/15/2019	12/15/2039
58989V-2E-3	Met Tower Global Funding-SECURED .....	.....	.....	.....	1.D FE	6,777,381	..96.4235	6,749,643	7,000,000	6,777,381	0	7,051	0	0	3.700	5.096	JD	12,950	142,450	11/29/2022	06/13/2025
58182*-AD-8	MetLife Core Property Ho Senior Green No .....	.....	.....	.....	2.B	20,000,000	..77.0866	15,417,320	20,000,000	20,000,000	0	0	0	0	2.620	2.620	MON	26,200	524,000	12/13/2021	12/13/2031
58565J-AA-9	Midas OpCo Holdings LLC-SENIOR UNSECURED	1,2	.....	.....	4.B FE	2,591,000	..81.9890	2,124,335	2,591,000	2,591,000	0	0	0	0	5.625	5.623	FA	55,059	145,744	08/12/2021	08/15/2029
62878H-AB-7	NATF AMERICA LLC Senior Notes Series 9 .....	.....	.....	.....	1.C FE	28,000,000	..90.5400	25,351,200	28,000,000	28,000,000	0	0	0	0	5.210	5.210	IMJSD	64,836	672,669	07/15/2022	06/15/2029
62922L-AA-6	NGL Energy Operating LLC-SECURED	1,2	.....	.....	4.B FE	2,555,074	..89.0000	2,225,000	2,500,000	2,555,074	0	(24,083)	0	0	7.500	6.350	FA	78,125	187,500	06/17/2022	02/01/2026
62935*-AB-6	NOAA Maryland LLC Senior Note Tranche B .....	.....	.....	.....	1.B Z	10,078,429	..102.9227	10,292,270	10,000,000	10,078,429	0	(4,206)	0	0	5.926	5.837	MON	26,338	592,600	05/17/2019	05/15/2035
63946T-AA-9	NB Direct Access Insuran Senior Secured .....	.....	.....	.....	2.A PL	4,976,829	..0.9125	45,415	4,976,829	4,976,829	0	0	0	0	5.000	5.000	JAJO	255,130	233,582	08/01/2022	07/29/2025
64755#-AA-9	New Mountain Guardian III Senior Notes S .....	.....	.....	.....	2.C PL	11,600,000	..91.7400	10,641,840	11,600,000	11,600,000	0	0	0	0	3.570	3.570	JJ	190,955	415,270	08/04/2022	07/15/2025
64755#-AB-7	New Mountain Guardian III Senior Notes S .....	.....	.....	.....	2.C PL	4,400,000	..91.8500	4,041,400	4,400,000	4,400,000	0	0	0	0	3.620	3.620	JJ	73,446	159,722	12/21/2021	07/15/2025
65444#-AA-1	9 Campus Circle Westlake Senior Secured .....	.....	.....	.....	1.G	1,053,644	..97.8869	1,031,379	1,053,644	1,053,644	0	(1)	0	0	3.480	3.480	MON	6,539	48,806	07/11/2014	07/01/2024
66415*-AA-8	Northeast Energy Center Senior Secured N .....	.....	.....	.....	2.C	15,000,000	..81.5441	12,231,615	15,000,000	15,000,000	0	0	0	0	3.440	3.440	IMJSD	130,433	510,498	01/06/2022	12/13/2038
66815L-2F-5	Northwestern Mutual Glob-SECURED .....	.....	.....	.....	1.A FE	8,957,395	..88.2635	8,826,352	10,000,000	8,957,395	0	15,795	0	0	1.750	4.616	JJ	82,639	82,639	12/05/2022	01/11/2027
683720-AA-4	Open Text Holdings Inc-SENIOR UNSECURED	1,2	.....	.....	3.C FE	2,372,367	..81.0250	2,057,225	2,539,000	2,372,367	0	11,097	0	0	4.125	5.240	FA	39,566	91,933	05/31/2022	02/15/2030
683720-AC-0	Open Text Holdings Inc-SENIOR UNSECURED	1,2	.....	.....	3.C FE	1,323,233	..77.7637	1,088,692	1,400,000	1,323,233	0	5,643	0	0	4.125	4.890	JD	4,813	63,685	03/16/2022	12/01/2031
70176#-AB-5	Parmer 3 1 Austin Tx Con Trust Certifica .....	.....	.....	.....	1.D PL	15,078,652	..96.8177	14,522,655	15,000,000	15,078,652	0	(6,818)	0	0	4.800	4.729	MON	32,000	720,000	06/27/2017	01/15/2032
70215#-AA-8	Partstat (Varian 2020 I Pass-Thru Certif .....	.....	.....	.....	1.F Z	9,983,369	..88.1673	8,802,067	9,983,369	9,983,369	0	0	0	0	3.250	3.250	IMJSD	96,699	335,186	03/17/2020	03/15/2030
70466W-AA-7	PEACHTREE FUNDING TRUST-SR UNSECURED	1	.....	.....	2.B FE	15,364,356	..96.5978	14,837,419	15,360,000	15,364,356	0	(2,177)	0	0	3.976	3.960	FA	230,714	610,714	05/05/2015	02/15/2025
71367#-AA-4	PERENfra Laguna LLC Senior Secured Notes .....	.....	.....	.....	2.C PL	14,780,538	..80.2458	11,860,761	14,780,538	14,780,538	0	0	0	0	3.580	3.581	OCT	111,708	518,933	12/28/2021	10/15/2049
71367#-AB-2	PERENfra Laguna LLC Senior Secured Notes .....	.....	.....	.....	2.B Z	15,000,000	..99.7870	14,968,050	15,000,000	15,000,000	0	0	0	0	6.220	6.223	OCT	38,875	38,875	12/16/2022	10/15/2050
722844-AA-5	Pine Street Trust I-SENIOR UNSECURED	1,2	.....	.....	2.A FE	40,500,207	..92.6804	37,998,972	41,000,000	40,500,207	0	30,947	0	0	4.572	4.803	FA	708,152	1,723,644	07/22/2022	02/15/2029
72303#-AA-7	Pinebridge Private Credi Term Loan FAC .....	.....	.....	.....	1.E PL	22,426,223	..98.2992	22,069,098	22,450,944	22,426,223	0	1,843	0	0	6.000	6.000	IMJSD	329,392	1,312,779	05/03/2022	12/31/2031
74166M-AE-6	Prime Security Services -PRSESE 6 1/4 01	1,2	.....	.....	4.C FE	1,256,728	..90.9280	1,198,431	1,256,728	1,256,728	0	5,392	0	0	6.250	7.352	JJ	37,984	72,015	09/29/2022	01/15/2028
74339#-AA-9	Project Axis Garner NC C Trust Certificat .....	.....	.....	.....	1.D	13,839,447	..88.2693	12,215,803	13,839,243	13,839,447	0	(15)	0	0	4.034	4.034	MON	24,812	566,520	11/18/2018	11/15/2039
74969P-AA-6	RP Escrow Issuer LLC-SECURED	1,2	.....	.....	4.C FE	5,016,255	..76.4150	3,820,750	5,000,000	5,016,255	0	(7,780)	0	0	5.250	5.072	JD	11,667	262,500	10/28/2021	12/15/2025
78454*-AA-5	SMIF 2018 FINANCE LLC Term Loan .....	.....	.....	.....	2.A Z	1,924,971	..89.1809	1,716,706	1,924,971	1,924,971	0	0	0	0	7.137	7.137	JAJO	106,736	93,805	02/12/2020	07/16/2040
82817*-AA-9	Silver Spring Metro Cent Senior Note Tra .....	.....	.....	.....	1.B	3,192,916	..94.8192	3,027,497	3,192,916	3,192,916	0	0	0	0	3.810	3.810	MON	83,721	160,208	11/18/2013	05/05/2029
82817#-AA-7	Silver Spring Metro Cent Senior Note Tra .....	.....	.....	.....	1.B	1,592,301	..95.0273	1,513,132	1,592,313	1,592,301	0	4	0	0	3.890	3.890	MON	14,993	66,588	11/18/2013	01/07/2029
82817#-AB-5	Silver Spring Metro Cent Senior Note Tra .....	.....	.....	.....	1.B	8,000,018	..103.5582	8,284,656	8,000,000	8,000,018	0	(3)	0	0	6.414	6.414	MON	208,099	513,120	11/18/2013	01/07/2029
841215-AA-0	Southaven Combined Cycle-SECURED .....	.....	.....	.....	1.D FE	3,498,406	..94.3187	3,498,406	3,498,312	3,498,406	0	0	0	0	3.846	3.845	FA	50,828	141,050	08/06/2013	08/15/2033
85208N-AD-2	Sprint Spectrum Co LLC -/FIRST LIEN	1,2	.....	.....	2.A FE	12,937,500	..98.5863	12,754,596	12,937,500	12,937,500	0	0	0	0	4.738	4.738	IMJSD	206,029	777,386	03/14/2018	03/20/2025
85235*-AA-6	St Louis County Control Trust Certificat .....	.....	.....	.....	1.G	27,710,942	..89.7212	24,862,588	27,710,940	27,710,942	0	(2)	0	0	3.790	3.790	MON	222,775	1,068,991	12/28/2016	12/15/2036
85917E-AA-0	STERLING CAPITAL TRUST IX L-140 10/01/37 .....	.....	.....	.....	2.C FE	9,461,058	..0.8653	95,183	11,000,000	9,461,058	0	71,961	0	0	5.143	6.623	JAJO	141,429	357,201	10/01/2017	10/01/2037
86909#-AA-5	Susquehanna (18 Properti Trust Certifica .....	.....	.....	.....	1.G	5,780,504	..96.9261	5,602,808	5,780,495	5,780,503	0	(1)	0	0	5.730	5.730	MON	340,746	335,346	12/23/2013	12/23/2036
89441#-AA-4	Traverse City Control Tr Trust Certifica .....	.....	.....	.....	1.D Z	9,667,075	..92.9016	8,820,860	9,494,842	9,667,075	0	(13,530)	0	0	4.613	4.460	MON	167,456	446,714	09/18/2018	11/15/2039
90272*-AA-0	UHC (Senior Note) CTL Pa Trust Certifica .....	.....	.....	.....	1.F	3,440,456	..91.3756	3,144,495	3,441,285	3,440,456	0	121	0	0	3.500	3.503	MON	15,445	124,284	05/21/2013	05/15/2033
9037#-AA-1	U.S. Department of Agric Trust Certifica .....	.....	.....	.....	1.B	3,730,259	..84.8285	3,164,323	3,730,259	3,730,259	0	0	0	0	3.228	3.228	MON	25,579	78,458	07/07/2020	04/15/2038
91845#-AA-2	VZ (Senior Note) CTL Pas Trust Certifica .....	.....	.....	.....	2.A	7,848,803	..89.2228	7,002,744	7,848,604	7,848,803	0	(23)	0	0	3.812	3.812	MON	13,297	306,233	05/19/2015	05/15/2035
91854*-AA-4	VZ (Irving TX)(Senior No Trust Certifica .....	.....	.....	.....	2.A	8,259,638	..88.8778	7,340,980	8,259,632	8,259,632	0	(1)	0	0	3.620	3.620	MON	38,294	305,177	08/17/2016	08/15/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
91855*-AA-3	VA (Ponce, PR) CTL Trust Certificate				1.B	12,205,326	.88.7306	10,829,859	12,205,326	12,205,326	.0	.0	.0	.0	.4.350	.4.350	MON	335,527	568,402	03/29/2019	02/15/2042
918638-AA-1	VHG Capital, L.P. Senior Notes Series A				1.D PL	20,000,000	.82.3000	16,460,000	20,000,000	20,000,000	.0	.0	.0	.0	.3.110	.3.110	AO	658,283	630,639	11/02/2021	10/21/2031
918638-AB-9	VHG Capital, L.P. Senior Notes Series B				1.D PL	10,000,000	.79.8700	7,987,000	10,000,000	10,000,000	.0	.0	.0	.0	.3.210	.3.210	AO	173,875	321,000	11/02/2021	10/21/2033
92346L-AE-3	Veritas US Inc / Veritas-SECURED			1,2	4.C FE	1,888,783	.68.3580	1,367,160	2,000,000	1,888,783	.0	26,283	.0	.0	.7.500	.9.915	MS	50,000	125,000	03/28/2022	09/01/2025
92890H-AD-4	WEA FINANCE LLC/WESTFIEL-UNSECURED			1,2	2.A FE	31,523,569	.69.1289	19,356,780	28,001,000	31,523,569	.0	(105,837)	.0	.0	.4.750	.3.874	MS	384,236	1,330,048	10/07/2021	09/17/2044
92943G-AA-9	WR Grace Holdings LLC-SENIOR UNSECURED			1,2	4.C FE	3,029,214	.80.8520	2,425,560	3,000,000	3,029,214	.0	(7,213)	.0	.0	.5.625	.5.324	FA	63,750	168,750	10/27/2021	08/15/2029
92981H-AA-4	WEC 99J-73 LLC Senior Secured Note				2.B	2,106,258	.80.2296	1,656,974	2,065,290	2,106,268	.0	(1,031)	.0	.0	.4.250	.4.250	MON	36,916	92,321	09/25/2020	09/15/2039
92981H-AA-6	WEC 99J-58 LLC Senior Secured Note				2.B	1,222,283	.94.8134	1,139,321	1,201,646	1,222,283	.0	(4,536)	.0	.0	.4.250	.3.991	MON	2,270	53,632	09/25/2020	09/15/2030
92982H-AA-3	WEC 99J-22 LLC Senior Secured Note				2.B	1,818,131	.80.2296	1,430,591	1,783,121	1,818,141	.0	(1,261)	.0	.0	.4.250	.4.250	MON	57,778	125,099	09/25/2020	09/15/2039
92982H-AA-7	WEC 99J-27 LLC Senior Secured Note				2.B	1,961,348	.80.2296	1,543,275	1,923,573	1,961,358	.0	(1,360)	.0	.0	.4.250	.4.250	MON	55,280	127,947	09/25/2020	09/15/2039
92982H-AA-5	Wec 2000B-CSF-11 LLC Senior Secured Note				2.B	1,257,007	.94.8134	1,171,689	1,235,784	1,257,007	.0	(4,665)	.0	.0	.4.250	.3.991	MON	2,334	55,156	09/25/2020	09/15/2030
92983H-AA-6	WEC 99J-4 LLC Senior Secured Note				2.B	1,242,565	.91.7148	1,118,798	1,219,866	1,242,565	.0	(2,953)	.0	.0	.4.250	.4.050	MON	2,304	53,418	09/25/2020	09/15/2034
92983H-AA-4	WEC 99J-72 LLC Senior Secured Note				2.B	1,874,169	.80.2296	1,474,685	1,838,081	1,874,179	.0	(1,299)	.0	.0	.4.250	.4.250	MON	52,823	122,260	09/25/2020	09/15/2039
96042H-AA-4	Westkin Portfolio (LAS & Trust Certifica				1.D PL	8,885,477	.102.2886	9,009,073	8,807,505	8,885,477	.0	(5,803)	.0	.0	.6.050	.5.964	MON	23,682	542,569	12/06/2018	11/15/2038
96928H-DZ-7	William Blair & Company, Trust Certifica				1.F	6,944,678	.99.7702	6,901,751	6,917,648	6,944,678	.0	(6,311)	.0	.0	.5.600	.5.531	MON	17,217	407,525	04/28/2011	10/15/2029
96928H-FV-4	William Blair & Company, Trust Certifica				1.E	8,333,826	.88.2681	7,356,095	8,333,810	8,333,826	.0	(1)	.0	.0	.4.090	.4.090	MON	15,149	345,625	09/30/2014	09/15/2044
96928H-AA-3	William Blair & Company Trust Certificat				1.A Z	522,083	.99.5769	519,874	522,083	522,083	.0	.0	.0	.0	.4.000	.4.000	MON	928	41,034	10/31/2013	06/15/2023
96930H-AA-9	William Blair & Company Trust Certificat				2.B Z	4,356,971	.86.0262	3,748,128	4,356,961	4,356,971	.0	.6	.0	.0	.4.370	.4.370	MON	146,278	236,979	09/11/2015	08/15/2035
L7598H-AC-4	PILI 1 Portfolio SCSp Senior Unsecured N				1.E PL	22,000,000	.86.5000	19,030,000	22,000,000	22,000,000	.0	.0	.0	.0	.4.970	.4.970	MON	716,784	716,784	05/05/2022	05/05/2037
05178T-AA-9	Aurora Military Housing -SECURED				1.F FE	823,755	.102.0508	840,561	823,669	823,755	.0	(11)	.0	.0	.5.820	.5.818	JJ	22,105	48,488	06/28/2011	07/15/2034
010392-FJ-2	Alabama Power Co-SENIOR UNSECURED				1.G FE	5,421,965	.80.4550	4,025,165	5,003,000	5,421,965	.0	(13,744)	.0	.0	.3.850	.3.274	JD	16,051	208,667	01/20/2022	12/01/2042
55342U-AL-8	MPT Operating Partnershi-SENIOR UNSECURE			1,2	3.A FE	259,655	.73.0417	265,097	300,000	276,288	.0	2,808	.0	16,633	.3.692	.9.518	JUN	7,335	7,335	10/05/2022	06/05/2028
74267C-AC-0	ProAssurance Corp-SENIOR UNSECURED				2.C FE	12,014,016	.99.3028	11,916,336	12,000,000	12,014,016	.0	(15,687)	.0	.0	.5.300	.5.156	MON	81,267	636,000	12/13/2013	11/15/2023
743674-BD-4	Protective Life Corp-SENIOR UNSECURED			1,2	1.G FE	8,302,126	.93.7846	8,440,618	9,000,000	8,302,126	.0	18,455	.0	.0	.4.300	.5.909	MS	97,825	468,700	10/28/2022	09/30/2028
29366M-AB-4	Entergy Arkansas LLC-SECURED			1,2	1.F FE	13,858,943	.61.1151	9,506,451	15,555,000	13,858,943	.0	34,056	.0	.0	.2.650	.3.239	JD	18,320	430,528	01/19/2022	06/15/2051
29366M-AC-2	Entergy Arkansas LLC-FIRST LIEN			1,2	1.F FE	8,465,397	.70.0445	5,810,892	8,296,000	8,465,397	.0	(3,171)	.0	.0	.3.350	.3.241	JD	12,352	290,268	01/20/2022	06/15/2052
828730-AB-7	Simmons First National C-SUBORDINATED			2	2.B FE	22,000,000	.97.0000	21,340,000	22,000,000	22,000,000	.0	(579)	.0	.0	.5.000	.4.991	AO	275,000	1,100,000	03/21/2018	04/01/2028
90319H-AA-1	UOA Fayetteville (Univer Senior Secured				1.C	11,189,661	.86.1361	9,549,090	11,086,049	11,189,661	.0	(8,374)	.0	.0	.3.350	.3.282	MON	364,548	378,640	03/22/2021	03/15/2041
931142-ER-0	Walmart Inc-SENIOR UNSECURED			1,2	1.C FE	8,883,387	.88.7289	8,872,892	10,000,000	8,883,387	.0	27,687	.0	.0	.1.050	.4.340	MS	30,333	30,333	11/22/2022	09/17/2026
05380T-AA-7	Avnet Inc-SENIOR UNSECURED			1,2	2.C FE	28,639,812	.77.4844	22,470,485	29,000,000	28,639,812	.0	34,961	.0	.0	.3.000	.2.894	MON	111,167	908,333	07/14/2022	05/15/2031
06654D-AC-1	Banner Health-UNSECURED			1,2	1.D FE	9,599,722	.70.2789	7,027,887	10,000,000	9,599,722	.0	7,622	.0	.0	.3.181	.3.409	JJ	159,050	318,100	03/03/2022	01/01/2050
142339-AH-3	Carlisle Cos Inc-SENIOR UNSECURED			1,2	2.B FE	6,813,170	.93.0382	6,730,381	7,234,000	6,813,170	.0	6,645	.0	.0	.3.750	.5.102	JD	22,606	195,106	12/02/2022	12/01/2027
142339-AL-4	Carlisle Cos Inc-SENIOR UNSECURED			1,2	2.B FE	4,377,228	.76.3815	3,819,074	5,000,000	4,377,228	.0	43,028	.0	.0	.2.200	.3.823	MS	36,667	91,667	03/15/2022	03/01/2032
35952F-AB-6	Fort Huachuca-YPG Commu-UNSECURED				2.B FE	1,951,909	.105.5970	2,024,270	1,916,977	1,951,909	.0	(25,812)	.0	.0	.8.000	.7.024	JD	6,816	183,411	10/19/2009	12/15/2026
59048H-AA-6	Mesa Air Group, Inc. Class A Notes			1	2.B PL	3,718,984	.91.7400	3,410,570	3,717,648	3,718,984	.0	(368)	.0	.0	.4.750	.4.743	JJ	81,427	183,028	12/14/2015	07/15/2029
760759-AF-7	Republic Services Inc-SENIOR UNSECURED N				2.B FE	3,910,944	.105.5490	3,166,486	3,000,000	3,910,944	.0	(56,856)	.0	.0	.6.086	.3.082	MS	53,760	236,340	03/22/2022	03/15/2035
760759-AM-2	Republic Services Inc-SENIOR UNSECURED			1,2	2.B FE	4,363,390	.100.0072	4,364,314	4,364,000	4,363,390	.0	982	.0	.0	.4.750	.4.774	MON	26,487	207,290	05/02/2011	05/15/2023
760759-BA-7	Republic Services Inc-SENIOR UNSECURED			1,2	2.B FE	9,703,491	.79.7208	7,972,084	10,000,000	9,703,491	.0	23,091	.0	.0	.2.375	.2.709	MS	69,931	272,465	01/21/2022	03/15/2033
862121-AA-8	STORE Capital Corp-SENIOR UNSECURED			1,2	2.B FE	13,121,031	.89.6781	11,321,863	12,625,000	13,121,031	.0	(71,716)	.0	.0	.4.500	.3.626	MS	167,281	451,344	03/15/2022	03/15/2028
862121-AB-6	STORE Capital Corp-SENIOR UNSECURED			1,2	2.B FE	1,975,577	.89.4029	1,788,057	2,000,000	1,975,577	.0	1,397	.0	.0	.4.625	.4.854	MS	27,236	73,486	07/25/2022	03/15/2029
862121-AC-4	STORE Capital Corp-SENIOR UNSECURED			1,2	2.B FE	20,991,672	.76.3726	16,801,981	22,000,000	20,991,672	.0	57,837	.0	.0	.2.750	.3.755	MON	72,264	585,521	07/22/2022	11/18/2030
898813-AL-4	Tucson Electric Power Co-SENIOR UNSECURE			1	1.G FE	6,999,220	.99.7904	6,985,327	7,000,000	6,999,220	.0	2,218	.0	.0	.3.850	.3.883	MS	79,553	269,500	09/11/2012	03/15/2023
95763P-EF-4	Western Alliance Bank-SUBORDINATED			2	2.B PL	12,000,000	.94.4731	11,336,777	12,000,000	12,000,000	.0	.0	.0	.0	.5.250	.5.250	JD	52,500	630,000	05/20/2020	06/01/2030
00846U-AN-1	Agilent Technologies Inc-SENIOR UNSECURE			1,2	2.A FE	15,312,656	.80.9919	12,676,036	15,651,000	15,312,656	.0	29,385	.0	.0	.2.300	.2.590	MS	108,992	399,326	03/04/2022	03/12/2031
00914A-AF-9	Air Lease Corp-SENIOR UNSECURED			1,2	2.B FE	22,967,473	.93.2746	21,396,249	22,939,000	22,967,473	.0	(13,047)	.0	.0	.2.300	.2.236	FA	219,832	747,429	01/20/2022	02/01/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
00914A-AK-8	Air Lease Corp-SENIOR UNSECURED			1,2	2.B FE	8,634,339	.82.6041	7,434,373	9,000,000	8,634,339	.0	32,769	.0	.0	3.125	3.722	JD	23,438	304,688	02/25/2022	12/01/2030
00914A-AT-9	Air Lease Corp-SENIOR UNSECURED			1,2	2.B FE	10,003,399	.99.8434	9,984,340	10,000,000	10,003,399	.0	(522)	.0	.0	5.850	5.840	JD	42,250	42,250	12/05/2022	12/15/2027
015271-AY-5	Alexandria Real Estate E-SENIOR UNSECURE			1,2	2.A FE	4,670,913	.81.4163	4,070,817	5,000,000	4,670,913	.0	18,113	.0	.0	2.950	3.671	MS	43,431	129,063	03/22/2022	03/15/2034
02666T-AA-5	American Homes 4 Rent LP-SENIOR UNSECURE			1,2	2.C FE	1,565,310	.92.7228	1,546,617	1,668,000	1,565,310	.0	2,918	.0	.0	4.250	5.650	FA	26,781	82,931	12/05/2022	02/15/2028
02666T-AB-3	American Homes 4 Rent LP-SENIOR UNSECURE			1,2	2.C FE	9,806,365	.94.6810	9,644,203	10,186,000	9,806,365	.0	3,633	.0	.0	4.900	5.627	FA	188,554	188,554	12/05/2022	02/15/2029
02666T-AE-7	American Homes 4 Rent LP-SENIOR UNSECURE			1,2	2.C FE	40,080,500	.84.1005	34,481,217	41,000,000	40,080,500	.0	57,910	.0	.0	3.625	3.915	AO	313,764	1,089,917	03/31/2022	04/15/2032
031162-BE-9	AMGEN INC-SENIOR UNSECURED				2.A FE	7,625,139	.91.6027	5,619,826	6,135,000	7,625,139	.0	(57,162)	.0	.0	4.950	3.215	AO	75,921	303,683	04/27/2021	10/01/2041
031162-BZ-2	AMGEN INC-SENIOR UNSECURED			1,2	2.A FE	32,637,413	.83.8347	23,473,705	28,000,000	32,637,413	.0	(142,681)	.0	.0	4.400	3.327	MN	205,333	1,232,000	02/25/2021	05/01/2045
031162-CR-9	Amgen Inc-SENIOR UNSECURED			1,2	2.A FE	7,314,172	.74.0498	5,923,985	8,000,000	7,314,172	.0	23,190	.0	.0	3.150	3.837	FA	91,000	217,000	02/25/2022	02/21/2040
037833-BX-7	APPLE INC-SENIOR UNSECURED			1,2	1.B FE	14,453,909	.95.3216	10,925,764	11,462,000	14,453,909	.0	(90,660)	.0	.0	4.650	3.046	FA	189,505	532,983	06/03/2021	02/23/2046
037833-BY-5	APPLE INC-SENIOR UNSECURED			1,2	1.B FE	12,081,609	.96.0296	12,003,700	12,500,000	12,081,609	.0	11,259	.0	.0	3.250	4.400	FA	144,444	144,444	11/29/2022	02/23/2026
04015C-AA-6	ARES FINANCE CO LLC-UNSECURED NOTE			1,2	2.A FE	16,938,608	.95.2804	16,197,675	17,000,000	16,938,608	.0	32,276	.0	.0	4.000	4.211	AO	156,778	680,000	10/01/2024	10/08/2024
05367A-AH-6	Aviation Capital Group L-SENIOR UNSECURE			1,2	2.C FE	3,994,868	.94.6913	3,787,652	4,000,000	3,994,868	.0	1,604	.0	.0	4.875	4.923	AO	48,750	195,000	09/14/2015	10/01/2025
05369A-AD-3	Aviation Capital Group L-SENIOR UNSECURE			1,2	2.B FE	2,187,876	.93.2527	2,051,560	2,200,000	2,187,876	.0	4,319	.0	.0	4.125	4.352	FA	37,813	90,750	07/25/2018	08/01/2025
05465C-AB-6	Axos Financial Inc-SUBORDINATED			2	2.C FE	40,000,000	.93.2429	37,297,148	40,000,000	40,000,000	.0	.0	.0	.0	4.000	4.000	MS	533,333	1,364,444	02/16/2022	03/01/2032
05580M-70-2	B. RILEY FINANCIAL INC-SENIOR UNSECURED				2.A PL	5,009,023	.24.5500	4,920,728	200,437	5,009,023	.0	1,138	.0	.0	6.750	0.295	FMAN	2,293	338,237	03/20/2020	05/31/2024
05580M-79-3	B. Riley Financial Inc-SENIOR UNSECURED				2.A PL	25,000,000	.20.0100	20,010,000	1,000,000	25,000,000	.0	.0	.0	.0	5.000	0.200	MJSD	8,472	1,140,000	12/01/2021	12/31/2026
05580M-82-7	B. Riley Financial Inc-SENIOR UNSECURED				2.A PL	4,000,000	.22.1400	3,542,400	160,000	4,000,000	.0	.0	.0	.0	5.500	0.220	MJSD	1,491	220,000	02/25/2021	03/31/2026
05990K-AC-0	Banc of California Inc-SENIOR UNSECURED			2	2.B FE	37,595,658	.98.3500	36,881,250	37,500,000	37,595,658	.0	(45,757)	.0	.0	5.250	4.623	AO	415,625	9,789,222	12/14/2017	04/15/2025
090572-AQ-1	Bio-Rad Laboratories Inc-SENIOR UNSECURE			1,2	2.B FE	36,359,051	.85.6820	31,685,189	36,980,000	36,359,051	.0	38,582	.0	.0	3.700	4.365	MS	402,877	1,584,938	05/23/2022	03/15/2032
09259E-AB-4	BlackRock TCP Capital Co-SENIOR UNSECURE			1,2	2.C FE	9,974,150	.89.1751	8,917,514	10,000,000	9,974,150	.0	7,785	.0	.0	2.850	2.937	FA	112,417	285,000	02/02/2021	02/09/2026
11135F-AQ-4	Broadcom Inc-SENIOR UNSECURED			1,2	2.C FE	10,680,631	.89.7091	8,970,909	10,000,000	10,680,631	.0	(73,769)	.0	.0	4.150	3.139	MN	53,028	468,028	01/18/2022	11/15/2030
11135F-BF-7	Broadcom Inc-SENIOR UNSECURED			1,2	2.C FE	11,976,627	.75.0637	9,007,640	12,000,000	11,976,627	.0	1,976	.0	.0	2.600	2.622	FA	117,867	312,000	01/04/2021	02/15/2033
11135F-BJ-9	Broadcom Inc-SENIOR UNSECURED			1,2	2.C FE	16,903,308	.71.5125	12,157,127	17,000,000	16,903,308	.0	3,729	.0	.0	3.500	3.543	FA	224,778	595,000	02/22/2021	02/15/2041
11135F-BL-4	Broadcom Inc-SENIOR UNSECURED			1,2	2.C FE	9,049,080	.79.3918	7,114,299	8,961,000	9,049,080	.0	(6,491)	.0	.0	3.469	3.362	AO	65,625	310,857	03/31/2021	04/15/2034
14162V-AB-2	Sabra Health Care LP-SENIOR UNSECURED			1,2	2.C FE	4,000,191	.95.0333	3,801,332	4,000,000	4,000,191	.0	(106)	.0	.0	5.125	5.122	FA	77,444	205,000	07/07/2016	08/15/2026
16308N-AA-2	Cheever Escrow Issuer LL-SECURED			1,2	4.C FE	1,429,945	.95.3700	1,380,958	1,448,000	1,429,945	.0	820	.0	.0	7.125	7.434	AO	34,677	34,677	08/25/2022	10/01/2027
166756-AT-3	Chevron USA Inc-SENIOR UNSECURED			1,2	1.D FE	25,762,807	.109.3121	19,452,079	17,795,000	25,762,807	.0	(345,346)	.0	.0	6.000	2.776	MS	355,900	1,067,700	07/14/2021	03/01/2041
17858P-AB-7	City of Hope-SENIOR UNSECURED			1,2	1.F FE	21,927,346	.82.3837	15,760,009	19,130,000	21,927,346	.0	(59,271)	.0	.0	4.378	3.495	FA	316,393	825,555	03/31/2022	08/15/2048
19260Q-AA-2	Coinbase Global Inc-SENIOR UNSECURED			1,2	3.B FE	4,929,438	.48.3444	2,417,222	5,000,000	4,929,438	.0	6,723	.0	.0	3.625	4.313	AO	45,313	181,250	09/01/2021	10/01/2031
20848V-AB-1	Consensus Cloud Solution-SENIOR UNSECURE			2	4.B FE	1,963,374	.91.7750	1,835,500	2,000,000	1,963,374	.0	3,374	.0	.0	6.500	6.886	AO	27,444	160,333	04/07/2022	10/15/2028
21871X-AA-7	Corebridge Financial Inc-SENIOR UNSECURE			1,2	2.B FE	9,946,925	.95.8863	9,588,632	10,000,000	9,946,925	.0	14,725	.0	.0	3.500	3.745	AO	84,583	258,611	04/25/2022	04/04/2025
21871X-AC-3	SAFG Retirement Services-SENIOR UNSECURE			1,2	2.B FE	7,916,790	.93.2883	8,149,669	8,736,000	7,916,790	.0	32,113	.0	.0	3.650	6.185	AO	76,173	76,173	10/19/2022	04/05/2027
21871X-AE-9	Corebridge Financial Inc-SENIOR UNSECURE			1,2	2.B FE	9,451,555	.91.5434	9,154,344	10,000,000	9,451,555	.0	31,916	.0	.0	3.850	4.876	AO	91,972	284,472	07/22/2022	04/05/2029
21871X-AG-4	SAFG Retirement Services-SENIOR UNSECURE			1,2	2.B FE	11,939,070	.87.7219	10,965,239	12,500,000	11,939,070	.0	28,692	.0	.0	3.900	4.494	AO	116,458	396,229	05/20/2022	04/05/2032
25389J-AV-8	Digital Realty Trust LP-SENIOR UNSECURED			1,2	2.B FE	6,853,570	.100.6072	6,983,149	6,941,000	6,853,570	.0	2,433	.0	.0	5.550	5.841	JJ	100,587	100,587	11/15/2022	01/15/2028
254010-AD-3	Dignity Health-SECURED				1.G FE	4,000,000	.97.0060	3,880,242	4,000,000	4,000,000	.0	.0	.0	.0	3.812	3.811	MN	25,413	152,480	10/07/2014	11/01/2024
254687-DD-5	Walt Disney Co/The-SENIOR UNSECURED			1,2	2.A FE	4,042,105	.97.0657	3,882,628	4,000,000	4,042,105	.0	(15,656)	.0	.0	3.700	3.265	AO	31,244	148,000	10/14/2015	10/15/2025
254687-EJ-4	Walt Disney Co/The-SENIOR UNSECURED			1,2	2.A FE	4,945,705	.92.2911	3,691,645	4,000,000	4,945,705	.0	(30,755)	.0	.0	4.750	3.205	MS	55,944	190,000	04/29/2021	09/15/2044
254687-FR-2	Walt Disney Co/The-SENIOR UNSECURED			1,2	1.G FE	17,111,530	.93.6892	13,116,494	14,000,000	17,111,530	.0	(142,314)	.0	.0	4.625	2.934	MS	176,264	647,500	02/24/2021	03/23/2040
25468P-DB-9	WALT DISNEY COMPANY/THE-SR UNSECURED				2.A FE	22,413,357	.86.3519	17,270,380	20,000,000	22,413,357	.0	(71,843)	.0	.0	4.125	3.332	JD	68,750	893,750	01/19/2022	06/01/2044
29717P-AT-4	Essex Portfolio LP-SENIOR UNSECURED			1,2	2.A FE	1,568,268	.91.0436	1,547,742	1,700,000	1,568,268	.0	1,208	.0	.0	4.000	5.497	MS	22,667	22,667	12/05/2022	03/01/2029
29717P-AU-1	Essex Portfolio LP-SENIOR UNSECURED			1,2	2.A FE	6,020,619	.84.5396	5,917,769	7,000,000	6,020,619	.0	7,759	.0	.0	3.000	5.417	JJ	96,833	96,833	12/05/2022	01/15/2030
29717P-AY-3	Essex Portfolio LP-SENIOR UNSECURED			1,2	2.A FE	10,917,207	.83.0324	11,242,592	13,540,000	10,917,207	.0	78,304	.0	.0	1.700	6.130	MS	76,727	76,727	11/04/2022	03/01/2028
31847R-AE-2	First American Financial-SENIOR UNSECURE				2.B FE	2,999,802	.99.8925	2,996,775	3,000,000	2,999,802	.0	1,186	.0	.0	4.300	4.341	FA	53,750	129,000	01/24/2013	02/01/2023

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
31847R-AF-9	First American Financial-SENIOR UNSECURE				2.B FE	6,999,619	98.4263	6,889,841	7,000,000	6,999,619	0	17	0	0	4.600	4.600	MN	41,144	322,000		11/05/2014	11/15/2024
31847R-AG-7	First American Financial-SENIOR UNSECURE			1,2	2.B FE	6,977,997	83.9979	5,879,852	7,000,000	6,977,997	0	2,484	0	0	4.000	4.049	MN	35,778	280,000		05/08/2020	05/15/2030
33616C-AB-6	FIRST REPUBLIC BANK-SUBORDINATED			2	2.A FE	15,898,828	76.2121	10,952,447	14,371,000	15,898,828	0	(46,083)	0	0	4.375	4.501	FA	261,971	628,731		07/25/2016	08/01/2046
33616C-AC-4	FIRST REPUBLIC BANK-SUBORDINATED			2	2.A FE	6,902,476	78.9902	5,529,313	7,000,000	6,902,476	0	2,129	0	0	4.625	4.722	FA	124,104	323,750		02/06/2017	02/13/2047
350868-AJ-0	Four Corners Property Tr Senior Unsecure				2.B FE	15,000,000	80.0748	12,011,220	15,000,000	15,000,000	0	0	0	0	3.090	3.090	MS	133,900	365,650		03/17/2022	03/17/2031
358268-AA-4	County of Fresno CA Trust Certificates				1.C	9,653,353	93.9389	8,992,552	9,572,766	9,653,353	0	(6,626)	0	0	4.680	4.604	MON	57,718	456,389		08/24/2018	06/15/2038
375558-AS-2	GILEAD SCIENCES INC-SENIOR UNSECURED NOT			1,2	2.A FE	13,119,299	101.9326	9,997,552	9,808,000	13,119,299	0	(130,158)	0	0	5.650	3.208	JD	46,179	554,152		02/24/2021	12/01/2041
375558-AX-1	GILEAD SCIENCES INC-SR UNSECURED			1,2	2.A FE	15,585,216	92.2757	11,995,845	13,000,000	15,585,216	0	(84,138)	0	0	4.800	3.450	AO	156,000	624,000		04/29/2021	04/01/2044
375558-BS-1	Gilead Sciences Inc-SENIOR UNSECURED			1,2	2.A FE	22,107,238	69.9874	16,097,107	23,000,000	22,107,238	0	38,025	0	0	2.600	2.881	AO	149,500	598,000		02/22/2021	10/01/2040
43371H-AA-1	Hoag Memorial Hospital P-UNSECURED			1,2	1.C FE	30,318,396	79.3228	24,030,034	30,294,000	30,318,396	0	(904)	0	0	3.803	3.803	JJ	531,237	867,261		03/23/2022	07/15/2052
44409M-AA-4	Hudson Pacific Propertie-SENIOR UNSECURE			1,2	2.C FE	9,990,690	85.0657	8,506,569	10,000,000	9,990,690	0	1,636	0	0	3.950	3.970	MN	65,833	395,000		09/25/2017	11/01/2027
44409M-AB-2	Hudson Pacific Propertie-SENIOR UNSECURE			1,2	2.C FE	4,955,126	85.2549	4,262,746	5,000,000	4,955,126	0	5,974	0	0	4.650	4.817	AO	58,125	232,500		02/20/2019	04/01/2029
44891A-BG-1	Hyundai Capital America-SENIOR UNSECURED			1,2	2.A FE	8,724,307	89.8973	8,989,725	10,000,000	8,724,307	0	52,507	0	0	3.000	6.594	FA	117,500	117,500		10/19/2022	02/10/2027
44891A-BJ-5	Hyundai Capital America-SENIOR UNSECURED				2.A FE	2,999,434	100.1443	3,004,328	3,000,000	2,999,434	0	950	0	0	5.750	5.784	AO	40,729	172,500		04/02/2020	04/06/2023
44891A-BK-2	Hyundai Capital America-SENIOR UNSECURED			1,2	2.A FE	2,998,719	100.3371	3,010,114	3,000,000	2,998,719	0	386	0	0	5.875	5.890	AO	41,125	176,250		04/02/2020	04/07/2025
44891A-BZ-9	Hyundai Capital America-SENIOR UNSECURED			1,2	2.A FE	4,202,529	86.2548	4,312,741	5,000,000	4,202,529	0	31,479	0	0	1.650	6.561	MS	23,833	23,833		10/28/2022	09/17/2026
44891A-CA-3	Hyundai Capital America-SENIOR UNSECURED			1,2	2.A FE	5,461,653	82.2458	5,748,983	6,990,000	5,461,653	0	31,115	0	0	2.100	6.783	MS	43,222	43,222		11/15/2022	09/15/2028
45005*-AC-4	IRG Industrial, LLC Senior Note Series C				2.C FE	30,000,000	88.8740	26,662,200	30,000,000	30,000,000	0	0	0	0	4.480	4.479	FA	470,400	1,344,000		03/03/2021	02/25/2031
458140-BV-1	Intel Corp-SENIOR UNSECURED			1,2	1.E FE	3,800,523	69.9151	2,796,602	4,000,000	3,800,523	0	7,243	0	0	2.800	3.156	FA	43,244	155,244		01/20/2022	08/12/2041
458140-BW-9	Intel Corp-SENIOR UNSECURED			1,2	1.E FE	9,664,395	65.4491	6,544,910	10,000,000	9,664,395	0	6,495	0	0	3.050	3.230	FA	117,764	422,764		01/20/2022	08/12/2051
48203R-AD-6	Juniper Networks Inc-SENIOR UNSECURED NO				2.B FE	40,654,264	93.4241	28,027,233	30,000,000	40,654,264	0	(420,110)	0	0	5.950	3.331	MS	525,583	1,785,000		10/05/2021	03/15/2041
48203R-AM-6	Juniper Networks Inc-SENIOR UNSECURED			1,2	2.B FE	6,997,655	89.0715	6,235,006	7,000,000	6,997,655	0	277	0	0	3.750	3.755	FA	99,167	262,500		08/19/2019	08/15/2029
48203R-AP-9	Juniper Networks Inc-SENIOR UNSECURED			1,2	2.B FE	9,286,471	75.8192	7,581,919	10,000,000	9,286,471	0	74,371	0	0	2.000	3.017	JD	11,667	211,667		01/18/2022	12/10/2030
482480-AE-0	KLA Corp-SENIOR UNSECURED			1,2	1.G FE	4,056,744	99.7695	4,056,744	4,059,000	4,056,744	0	2,288	0	0	4.650	4.679	MN	31,457	427,576		10/30/2014	11/01/2024
48305Q-AE-3	Kaiser Foundation Hospit-UNSECURED			1,2	1.D FE	8,093,991	72.7335	5,891,411	8,100,000	8,093,991	0	147	0	0	3.266	3.270	MN	44,091	308,637		02/07/2022	11/01/2049
48305Q-AG-8	Kaiser Foundation Hospit-UNSECURED			1,2	1.D FE	5,133,873	68.8561	4,131,363	6,000,000	5,133,873	0	13,233	0	0	3.002	3.841	JD	15,010	195,130		03/15/2022	06/01/2051
49338L-AB-9	Keysight Technologies In-SENIOR UNSECURE			1,2	2.B FE	11,999,167	98.5513	11,826,160	12,000,000	11,999,167	0	75	0	0	4.550	4.551	AO	92,517	546,000		10/06/2014	10/30/2024
502175-E*-9	LTC Properties Inc Senior Unsecured Note				2.C	22,500,000	79.5858	17,906,805	22,500,000	22,500,000	0	0	0	0	3.660	3.660	FMAN	100,650	512,400		05/17/2022	05/17/2033
512807-AS-7	Lam Research Corp-SENIOR UNSECURED			1,2	1.G FE	4,940,237	96.8140	4,743,884	4,900,000	4,940,237	0	(8,469)	0	0	3.750	3.463	MS	54,104	145,979		04/25/2022	03/15/2026
58278L-AA-4	MCREIF SubREIT LLC-SENIOR UNSECURED			1,2	1.F PL	8,000,000	99.4270	7,954,160	8,000,000	8,000,000	0	0	0	0	6.750	6.743	MN	82,500	540,000		11/06/2020	11/06/2023
652315-AA-0	Newport Realty Trust Inc-SECURED			1,2	2.A PL	12,500,000	92.4305	11,553,813	12,500,000	12,500,000	0	0	0	0	6.250	6.249	MJSD	65,104	781,250		11/13/2019	12/01/2024
681639-AA-8	Olympus Water US Holding-SECURED			1,2	4.C FE	3,726,928	81.4591	3,200,529	3,929,000	3,726,928	0	20,699	0	0	4.250	5.279	AO	41,746	147,433		04/18/2022	10/01/2028
69331C-AH-1	PG&E Corp-FIRST LIEN			1,2	3.C FE	1,648,578	91.4141	1,554,040	1,700,000	1,648,578	0	5,953	0	0	5.000	5.647	JJ	42,500	85,000		03/31/2022	07/01/2028
69331C-AJ-7	PG&E Corp-FIRST LIEN			1,2	3.C FE	3,880,018	91.0000	3,535,350	3,885,000	3,880,018	0	529	0	0	5.250	5.271	JJ	101,981	203,963		06/23/2021	07/01/2030
69403W-AA-5	Pacific Beacon LLC-FIRST LIEN				2.B FE	3,224,777	100.0675	3,079,058	3,076,980	3,224,777	0	(80,178)	0	0	5.379	3.912	JJ	76,319	176,563		08/14/2012	07/15/2026
69478X-AC-9	Pacific Premier Bancorp -SUBORDINATED				2.B FE	5,000,000	98.0000	4,900,000	5,000,000	5,000,000	0	0	0	0	5.750	5.746	MS	94,236	287,500		08/27/2014	09/03/2024
69478X-AD-7	Pacific Premier Bancorp -SUBORDINATED			2	2.B FE	18,000,000	96.7000	17,406,000	18,000,000	18,000,000	0	0	0	0	4.875	4.875	MN	112,125	877,500		05/03/2019	05/15/2029
69478X-AE-5	Pacific Premier Bancorp -SUBORDINATED			2	2.B FE	8,000,000	96.5000	7,720,000	8,000,000	8,000,000	0	0	0	0	5.375	5.375	JD	19,111	430,000		06/09/2020	06/15/2030
69506Y-SC-4	Pacific Western Bank-SUBORDINATED			2	2.A PL	10,000,000	92.7125	9,271,250	10,000,000	10,000,000	0	0	0	0								

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
759509-AE-2	Reliance Steel & Aluminu-SENIOR UNSECURE	1,2			2.B FE	4,999,047	.99.8827	4,994,135	5,000,000	4,999,047	.0	2,168	.0	.0	4.500	4.545	AO	47,500	225,000	04/09/2013	04/15/2023
759509-AG-7	Reliance Steel & Aluminu-SENIOR UNSECURE	1,2			2.B FE	9,548,522	.78.7299	7,872,986	10,000,000	9,548,522	.0	49,622	.0	.0	2.150	2.812	FA	81,222	296,222	01/18/2022	08/15/2030
778296-AD-5	Ross Stores Inc-SENIOR UNSECURED	1,2			2.A FE	3,983,941	.94.6065	3,784,262	4,000,000	3,983,941	.0	4,171	.0	.0	4.800	4.865	AO	40,533	443,867	04/02/2020	04/15/2030
784860-AE-1	SVB Financial Group-SENIOR UNSECURED	1,2			2.B FE	24,411,893	.82.6732	19,628,269	23,742,000	24,411,893	.0	(77,816)	.0	.0	3.125	2.690	JD	53,584	795,522	01/21/2022	06/05/2030
784860-AH-4	SVB Financial Group-SENIOR UNSECURED	1,2			2.B FE	6,438,766	.83.4080	5,838,557	7,000,000	6,438,766	.0	68,486	.0	.0	2.100	3.762	MN	18,783	165,783	04/04/2022	05/15/2028
896239-AB-6	Trimble Inc-SENIOR UNSECURED	1,2			2.C FE	13,498,904	.99.3048	13,406,151	13,500,000	13,498,904	.0	1,839	.0	.0	4.150	4.164	JD	24,900	560,250	06/13/2018	06/15/2023
896777-A8-9	TriplePoint Venture Grow Senior Note Ser				2.B FE	12,500,000	.94.9396	11,867,450	12,500,000	12,500,000	.0	.0	.0	.0	4.500	4.498	MS	187,500	562,500	03/01/2021	03/01/2026
90229*-AA-4	2015 ESA Project Company Senior Secured				2.B PL	11,514,456	.86.7300	9,986,487	11,514,456	11,514,456	.0	.0	.0	.0	3.040	3.040	MJSD	90,275	241,426	11/04/2021	06/30/2031
90353T-AK-6	Uber Technologies Inc-SENIOR UNSECURED	1,2			4.C FE	1,728,616	.87.1250	1,742,500	2,000,000	1,728,616	.0	3,616	.0	.0	4.500	7.103	FA	34,000	34,000	11/17/2022	08/15/2029
914886-AF-3	University of Southern C-SENIOR UNSECURE	1,2			1.C FE	15,511,952	.67.7339	11,853,436	17,500,000	15,511,952	.0	30,602	.0	.0	2.945	3.580	AO	128,844	644,219	03/14/2022	10/01/2051
92928Q-AD-0	WEA Finance LLC-SENIOR UNSECURED	1,2			2.B FE	4,060,547	.66.3195	2,520,805	3,801,000	4,060,547	.0	(5,723)	.0	.0	4.625	4.184	MS	49,321	175,796	10/06/2021	09/20/2048
92928Q-AF-5	WEA Finance LLC-SENIOR UNSECURED	1,2			2.B FE	34,657,417	.81.2520	28,844,467	35,500,000	34,657,417	.0	89,612	.0	.0	3.500	3.919	JD	55,222	1,297,722	03/22/2022	06/15/2029
95000U-2A-0	Wells Fargo & Co-SENIOR UNSECURED	2			2.A FE	1,966,333	.92.7101	1,854,201	2,000,000	1,966,333	.0	5,494	.0	.0	3.584	3.933	MN	7,765	71,680	03/14/2018	05/22/2028
958102-AR-6	Western Digital Corp-SENIOR UNSECURED	1,2			2.C FE	9,734,959	.72.2527	7,225,273	10,000,000	9,734,959	.0	22,959	.0	.0	3.100	3.442	FA	129,167	328,083	01/18/2022	02/01/2032
98138H-AH-4	Workday Inc-SENIOR UNSECURED	1,2			2.B FE	1,817,598	.91.8338	1,836,676	2,000,000	1,817,598	.0	5,778	.0	.0	3.700	5.440	AO	18,500	18,500	09/30/2022	04/01/2029
98138H-AJ-0	Workday Inc-SENIOR UNSECURED	1,2			2.B FE	12,286,598	.88.0590	10,840,065	12,310,000	12,286,598	.0	(539)	.0	.0	3.800	3.824	AO	116,945	720,037	03/30/2022	04/01/2032
012873-AH-8	Ovintiv Inc-SENIOR UNSECURED				2.C FE	11,460,784	.109.8136	10,981,361	10,000,000	11,460,784	.0	(64,616)	.0	.0	8.125	5.749	MS	239,236	645,486	07/22/2022	09/15/2030
012873-AJ-1	Encana Corp-SENIOR UNSECURED				2.C FE	3,818,463	.106.4409	3,193,226	3,000,000	3,818,463	.0	(72,117)	.0	.0	7.375	3.722	MN	36,875	258,125	01/20/2022	11/01/2031
042735-BC-3	Arrow Electronics Inc-SENIOR UNSECURED N	1			2.C FE	2,999,371	.99.8335	2,995,006	3,000,000	2,999,371	.0	2,681	.0	.0	4.500	4.593	MS	45,000	135,000	02/12/2013	03/01/2023
04273W-AC-5	Arrow Electronics Inc-SENIOR UNSECURED	1,2			2.C FE	19,728,648	.79.0749	15,814,988	20,000,000	19,728,648	.0	23,348	.0	.0	2.950	3.122	FA	222,889	639,167	01/20/2022	02/15/2032
25470X-BB-0	DISH DBS Corp-SENIOR UNSECURED	1,2			4.C FE	3,406,281	.70.5563	2,382,685	3,377,000	3,406,281	.0	(10,375)	.0	.0	7.375	6.991	JJ	124,527	249,054	11/12/2021	07/01/2028
25470X-BE-4	DISH DBS Corp-SECURED	1,2			4.A FE	2,205,000	.84.0773	1,853,903	2,205,000	2,205,000	.0	.0	.0	.0	5.250	5.248	JD	9,647	115,763	11/10/2021	12/01/2026
25470X-BF-1	DISH DBS Corp-SECURED	1,2			4.A FE	2,838,000	.79.6779	2,261,260	2,838,000	2,838,000	.0	.0	.0	.0	5.750	5.749	JD	13,599	163,185	11/10/2021	12/01/2028
292505-AD-6	ENCANA CORP-BOND				2.C FE	6,262,167	.100.5207	5,026,037	5,000,000	6,262,167	.0	(80,483)	.0	.0	6.500	3.793	FA	122,778	447,778	01/19/2022	08/15/2034
292505-AE-4	ENCANA CORP-SENIOR UNSECURED NOTE	1			2.C FE	7,052,019	.100.7935	5,611,175	5,567,000	7,052,019	.0	(68,675)	.0	.0	6.625	4.169	FA	139,330	508,143	01/19/2022	08/15/2037
57778K-AC-9	Maxar Technologies Inc-FIRST LIEN	1,2			4.B FE	5,250,000	.104.1970	5,470,343	5,250,000	5,250,000	.0	.0	.0	.0	7.750	7.750	JD	18,083	222,651	06/09/2022	06/15/2027
60871R-AD-2	MOLSON COORS BREWING CO-SENIOR UNSECURED	1			2.C FE	42,901,672	.88.6359	32,595,852	36,775,000	42,901,672	.0	(212,052)	.0	.0	5.000	3.777	MN	306,458	9,659,222	04/27/2021	05/01/2042
60871R-AH-3	MOLSON COORS BREWING CO-SENIOR UNSECURED	1,2			2.C FE	19,059,375	.77.6981	13,519,464	17,400,000	19,059,375	.0	(46,459)	.0	.0	4.200	3.584	JJ	336,980	730,800	08/04/2021	07/15/2046
651639-AP-1	Newmont Mining Corp-SENIOR UNSECURED NOT	1,2			2.A FE	5,663,924	.91.3650	4,083,100	4,469,000	5,663,924	.0	(47,052)	.0	.0	4.875	2.997	MS	64,149	217,864	07/13/2021	03/15/2042
744448-AU-4	PUBLIC SERVICE COLORADO-SECURED	1,2			1.F FE	4,738,634	.78.9650	3,393,914	4,298,000	4,738,634	.0	(16,942)	.0	.0	3.600	2.900	MS	45,559	154,728	06/08/2021	09/15/2042
77340R-AS-6	Rockies Express Pipeline-SENIOR UNSECURE	1,2			3.A FE	6,995,842	.94.1190	6,588,330	7,000,000	6,995,842	.0	1,564	.0	.0	3.600	3.625	MN	32,200	252,000	01/16/2020	05/15/2025
90265E-AM-2	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	4,581,938	.92.8239	4,641,193	5,000,000	4,581,938	.0	13,838	.0	.0	3.500	5.629	JJ	87,500	87,500	10/28/2022	07/01/2027
90265E-AJ-1	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	17,890,962	.83.5385	14,569,945	17,441,000	17,890,962	.0	(46,604)	.0	.0	3.000	2.653	FA	197,665	636,563	01/24/2022	08/15/2031
90265E-AS-9	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	8,479,326	.76.8768	6,301,589	8,197,000	8,479,326	.0	(20,438)	.0	.0	3.100	2.751	MN	42,351	254,107	06/08/2021	11/01/2034
90265E-AT-7	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	5,426,990	.74.2577	4,956,704	6,675,000	5,426,990	.0	62,092	.0	.0	2.100	4.526	FA	58,406	128,494	05/20/2022	08/01/2032
90265E-AU-4	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	5,359,221	.71.1561	4,269,367	6,000,000	5,359,221	.0	43,521	.0	.0	1.900	3.130	MS	33,567	147,567	03/01/2022	03/15/2033
90265E-AV-2	UDR Inc-SENIOR UNSECURED	1,2			2.A FE	11,320,138	.71.5554	8,944,429	12,500,000	11,320,138	.0	76,763	.0	.0	2.100	3.167	JD	11,667	274,167	03/04/2022	06/15/2033
959802-AX-7	Western Union Co/The-SENIOR UNSECURED	1,2			2.B FE	9,999,080	.99.7172	9,971,716	10,000,000	9,999,080	.0	1,504	.0	.0	4.250	4.266	JD	25,972	425,000	06/06/2018	06/09/2023
00817Y-AF-5	Aetna Inc-SENIOR UNSUBORDINATED NOTE	1			2.B FE	15,200,304	.106.6531	11,599,724	10,848,000	15,200,304	.0	(259,445)	.0	.0	6.625	2.983	JD	31,941	718,680	06/04/2021	06/15/2036
00817Y-AJ-7	Aetna Inc-SR UNSECURED	1,2			2.B FE	3,394,998	.86.5025	2,394,388	2,768,000	3,394,998	.0	(24,582)	.0	.0	4.500	2.929	MN	15,916	124,560	08/02/2021	05/15/2042
00817Y-AZ-1	AETNA INC-SENIOR UNSECURED	1,2			2.B FE	4,159,411	.77.2342	2,802,056	3,628,000	4,159,411	.0	(14,805)	.0	.0	3.875	3.016	FA	53,110	140,585	08/02/2021	08/15/2047
03838W-AA-9	Aquarion Co-SENIOR UNSECURED	1,2			2.A FE	11,990,458	.98.0907	11,770,880	12,000,000	11,990,458	.0	5,320	.0	.0	4.000	4.049	FA	181,333	480,000	08/19/2014	08/15/2024
084423-AP-7	BERKLEY (WR) CORPORATION-SR UNSECURED				2.A FE	8,967,439	.102.6419	8,211,352	8,000,000	8,967,439	.0	(58,699)	.0	.0	6.250	5.042	FA	188,889	635,938	01/27/2017	02/15/2037
125523-AG-5	Cigna Corp-SENIOR UNSECURED	1,2			2.A FE	14,566,650	.97.7765	14,356,529	14,683,000	14,566,650	.0	(12,559)	.0	.0	4.125	4.881	MN	77,392	283,642	11/22/2022	11/15/2025
125523-BD-1	Cigna Corp-SENIOR UNSECURED				2.A FE	7,487,433	.104.7582	5,792,081	5,529,000	7,487,433	.0	(112,285)	.0	.0	6.150	3.008	MN	43,449	340,034	06/08/2021	11/15/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
224399-AR-6	Crane Co-SENIOR UNSECURED			1,2	2.B FE	7,500,000	.99.1111	7,433,334	7,500,000	7,500,000	.0	.89	.0	.0	4.450	4.450	JD	14,833	333,750	12/10/2013	12/15/2023
378272-AF-5	GLENCORE FUNDING LLC-SENIOR UNSECURED NO			1	2.A FE	6,953,429	.99.3419	6,953,936	7,000,000	6,953,429	.0	.107,424	.0	.0	4.125	5.764	MN	24,865	288,750	06/25/2013	05/30/2023
416515-AP-9	Hartford Financial Servi-SR UNSECURED				2.A FE	16,725,402	101.2502	12,006,249	11,858,000	16,725,402	.0	(187,512)	.0	.0	6.100	3.177	AO	180,835	723,338	07/14/2021	10/01/2041
416515-AS-3	Hartford Financial Servi-SENIOR UNSECURE				2.A FE	6,201,001	.99.0675	4,608,619	4,652,000	6,201,001	.0	(89,622)	.0	.0	5.950	2.986	AO	58,434	276,794	06/08/2021	10/15/2036
416515-BA-1	Hartford Financial Servi-SR UNSECURED				2.A FE	5,016,660	104.0498	3,514,801	3,378,000	5,016,660	.0	(71,623)	.0	.0	6.625	3.001	MS	56,570	223,793	07/16/2021	03/30/2040
416515-BB-9	HARTFORD FINANCIAL SERVI-SENIOR UNSECURE				2.A FE	2,517,305	.79.9807	1,635,606	2,045,000	2,517,305	.0	(17,091)	.0	.0	4.300	2.800	AO	18,564	87,935	08/04/2021	04/15/2043
416515-BE-3	Hartford Financial Servi-SENIOR UNSECURE	1,2			2.A FE	1,862,959	.85.6178	1,819,378	2,125,000	1,862,959	.0	2.330	.0	.0	2.800	5.007	FA	21,817	21,817	12/02/2022	08/19/2029
428291-AM-0	Hexcel Corp-SENIOR UNSECURED			1,2	3.A FE	4,995,644	.97.6472	4,882,360	5,000,000	4,995,644	.0	1.420	.0	.0	4.950	4.984	FA	93,500	247,500	07/29/2015	08/15/2025
428291-AN-8	HEXCEL CORP-SENIOR UNSECURED			1,5	3.A FE	4,989,892	.92.4953	4,624,765	5,000,000	4,989,892	.0	2.155	.0	.0	4.200	4.253	FA	79,333	210,000	02/13/2017	02/15/2027
85571B-AU-9	Starwood Property Trust -SENIOR UNSECURE			1,2	3.C FE	1,991,000	.87.6429	1,744,969	1,991,000	1,991,000	.0	.0	.0	.0	3.625	3.625	JJ	33,280	72,174	06/29/2021	07/15/2026
85917A-AB-6	Sterling Bancorp/DE-SUBORDINATED			2	2.A FE	15,000,000	.92.2500	13,837,500	15,000,000	15,000,000	.0	.0	.0	.0	4.000	4.000	JD	301,667	600,000	12/12/2019	12/30/2029
85917A-AC-4	Sterling Bancorp/DE-SUBORDINATED			2	2.A FE	7,500,000	.90.0000	6,750,000	7,500,000	7,500,000	.0	.0	.0	.0	3.875	3.875	MN	48,438	290,625	10/28/2020	11/01/2030
87165B-AD-5	SYNCHRONY FINANCIAL-SENIOR UNSECURED			1,2	2.C FE	13,997,459	.97.7944	13,691,217	14,000,000	13,997,459	.0	1.223	.0	.0	4.250	4.238	FA	224,778	595,000	09/29/2014	08/15/2024
87165B-AR-4	Synchrony Financial-SENIOR UNSECURED			1,2	2.C FE	19,742,820	.74.8942	15,844,621	21,156,000	19,742,820	.0	107,755	.0	.0	2.875	3.765	AO	106,441	714,676	03/17/2022	10/28/2031
892231-AB-7	Townsquare Media Inc-SECURED			1,2	4.B FE	6,294,324	.89.3000	5,460,695	6,115,000	6,294,324	.0	(75,423)	.0	.0	6.875	5.095	FA	175,169	408,375	11/22/2021	02/01/2026
93884P-CQ-1	Washington Gas Light Co-SENIOR UNSECURED				1.G FE	1,644,540	104.1234	1,561,851	1,500,000	1,644,540	.0	(56,403)	.0	.0	6.490	4.223	MS	28,664	394,989	08/31/2012	09/27/2027
00164T-AA-6	AMC East Communities LLC-SECURED				1.F FE	3,507,907	100.6214	3,455,834	3,434,493	3,507,907	.0	(25,329)	.0	.0	5.740	5.251	JJ	90,903	205,785	01/03/2012	01/15/2028
008513-AB-1	Agree LP-SENIOR UNSECURED			1,2	2.B FE	22,013,745	.81.4763	19,167,288	23,525,000	22,013,745	.0	72,123	.0	.0	2.900	3.841	AO	170,556	687,235	07/26/2022	10/01/2030
008513-AB-9	Agree LP-SENIOR UNSECURED			1,2	2.B FE	80,113	.81.8682	81,868	100,000	80,113	.0	.449	.0	.0	2.000	6.372	JD	89	1,089	11/04/2022	06/15/2028
008513-AC-7	Agree LP-SENIOR UNSECURED			1,2	2.B FE	32,922,834	.75.3768	25,292,668	33,555,000	32,922,834	.0	49,307	.0	.0	2.600	2.808	JD	38,775	883,882	01/19/2022	06/15/2033
045054-AL-7	Ashtead Capital Inc-SENIOR UNSECURED			1,2	2.C FE	5,368,362	.90.6878	5,266,189	5,829,000	5,368,362	.0	3.632	.0	.0	4.250	5.799	MN	41,289	58,997	12/05/2022	11/01/2029
04685A-2V-2	Athene Global Funding-SECURED				1.E FE	4,247,506	.84.2085	4,210,426	5,000,000	4,247,506	.0	14,956	.0	.0	2.500	5.883	MS	33,681	33,681	11/15/2022	03/24/2028
04685A-2Y-6	Athene Global Funding-SECURED				1.E FE	9,170,690	.76.8668	7,544,474	9,815,000	9,170,690	.0	53,955	.0	.0	2.673	3.582	JD	17,490	279,845	02/25/2022	06/07/2031
04685A-2Z-3	Athene Global Funding-SECURED				1.E FE	12,332,643	.86.6380	11,649,347	13,446,000	12,332,643	.0	198,166	.0	.0	1.608	4.179	JD	1,201	217,413	04/25/2022	06/29/2026
05969A-AA-3	Bancorp Bank/The-SENIOR UNSECURED	2			2.B FE	19,562,301	.95.5000	19,100,000	20,000,000	19,562,301	.0	12,301	.0	.0	4.750	5.650	FA	279,722	614,861	11/30/2022	08/15/2025
09256B-AK-3	BLACKSTONE HOLDINGS FINA-SENIOR UNSECURE			1,2	1.E FE	6,238,734	.75.6389	4,046,683	5,350,000	6,238,734	.0	(24,534)	.0	.0	4.000	3.028	AO	52,906	214,000	10/04/2021	10/02/2047
09261B-AH-3	Blackstone Holdings Fina-SENIOR UNSECURE			1,2	1.E FE	22,017,597	.64.5169	15,484,056	24,000,000	22,097,597	.0	30,337	.0	.0	3.200	3.639	JJ	322,133	748,800	03/08/2022	01/30/2052
117665-AC-3	Bryn Mawr Bank Corp-SUBORDINATED			2	2.A FE	5,000,000	100.5000	5,025,000	5,000,000	5,000,000	.0	.0	.0	.0	7.674	7.845	FMAN	50,095	231,924	07/31/2015	08/15/2025
117665-AD-1	Bryn Mawr Bank Corp-SUBORDINATED				2.A FE	5,000,127	.97.0000	4,850,000	5,000,000	5,000,127	.0	.112	.0	.0	6.819	6.822	MJSD	231,552	221,708	12/08/2017	12/15/2027
212168-AA-6	Continental Wind LLC-FIRST LIEN				2.B FE	5,588,060	100.4010	5,610,467	5,588,060	5,588,060	.0	.0	.0	.0	6.000	5.999	FA	112,693	349,276	09/23/2013	02/28/2033
25466A-AJ-0	Discover Bank-SENIOR UNSECURED			2	2.B FE	4,634,485	.92.2040	4,610,200	5,000,000	4,634,485	.0	6.235	.0	.0	3.450	5.742	JJ	73,792	73,792	12/05/2022	07/27/2026
25466A-AN-1	Discover Bank-SUBORDINATED			2	2.B FE	7,000,000	.96.0927	6,726,488	7,000,000	7,000,000	.0	.0	.0	.0	4.682	4.682	FA	129,275	327,740	08/06/2018	08/09/2028
25466A-AP-6	Discover Bank-SENIOR UNSECURED			2	2.B FE	3,284,976	.93.9131	3,431,585	3,654,000	3,284,976	.0	.8254	.0	.0	4.650	6.816	MS	50,973	100,057	11/04/2022	09/13/2028
26078J-AE-0	DowDuPont Inc-SENIOR UNSECURED			1,2	2.A FE	60,647,823	.97.1328	46,623,725	48,000,000	60,647,823	.0	(622,195)	.0	.0	5.319	3.139	MN	326,232	10,441,557	02/24/2022	11/15/2038
33829T-AA-4	FIVE CORNERS FUNDING TRS-UNSECURED NOTE			1	1.G FE	13,998,480	.99.6709	13,953,922	14,000,000	13,998,480	.0	1,469	.0	.0	4.419	4.428	MN	79,051	618,660	12/10/2013	11/15/2023
35908M-AB-6	Frontier Communications -2ND LIEN			1,2	5.A FE	3,019,065	.78.7115	2,361,344	3,000,000	3,019,065	.0	(3,128)	.0	.0	6.000	5.812	JJ	83,000	180,000	11/15/2022	01/15/2030
36143L-2D-6	GA Global Funding Trust-SECURED				1.G FE	9,990,246	.82.9122	9,483,502	11,438,000	9,990,246	.0	87,682	.0	.0	1.950	4.446	MS	65,673	191,563	10/19/2022	09/15/2028
36143L-2H-7	GA Global Funding Trust-SECURED				1.F FE	20,017,042	.78.8302	16,554,350	21,000,000	20,017,042	.0	75,022	.0	.0	2.900	3.510	JJ	296,042	600,542	03/04/2022	01/06/2032
36143L-2J-3	GA Global Funding Trust-SECURED				1.F FE	12,453,386	.95.1766	11,897,076	12,500,000	12,453,386	.0	12,511	.0	.0	3.850	4.021	AO	106,944	347,569	04/25/2022	04/11/2025
38242F-AD-6	Goodman North American P Gtd Senior Note				2.B PL	15,000,000	.76.2654	11,439,810	15,000,000	15,000,000	.0	.0	.0	.0	2.660	2.660	AO	90,883	399,000	10/28/2021	10/09/2031
391382-AB-4	GREAT-WEST LIFE CO FINANC-SENIOR UNSECURE			1,2	1.F FE	12,909,994	.77.7205	10,103,662	13,000,000	12,909,994	.0	2.075	.0	.0	4.150	4.195	JD	41,961	539,500	05/23/2017	06/03/2047
46849L-SQ-5	Jackson National Life GI-SECURED				1.F FE	2,912,907	.92.9552	2,902,990	3,123,000	2,912,907	.0	6.955	.0	.0	6.950	5.279	AO	16,404	16,404	11/15/2022	04/29/2026
46849L-TC-5	Jackson National Life GI-SECURED				1.F FE	14,989,353	.96.2104	14,431,563	15,000,000	14,989,353	.0	3,968	.0	.0	3.875	3.905	JD	32,292	581,250	06/06/2018	06/11/2025
48250A-AA-1	KKR Group Finance Co III-SENIOR UNSECURE			1,2	1.F FE	2,656,753	.87.5139	1,764,279	2,016,000	2,656,753	.0	(21,608)	.0	.0	5.125	3.057	JD	8,610	103,320	07/16/2021	06/01/2044
48252A-AA-9	KKR Group Finance Co VI -SENIOR UNSECURE			1,2	1.F FE	21,004,636	.89.9759	18,919,239	21,027,000	21,004,636	.0	3,715	.0	.0	3.750	3.791	JJ	394,256	788,513	04/14/2020	07/01/2029

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
573874-AJ-3	Marvell Technology Inc-SENIOR UNSECURED			1,2	2.C FE	9,983,991	.80.5480	8,054,801	10,000,000	9,983,991	.0	1,652	.0	.0	2.950	2.972	AO	62,278	295,000	04/05/2021	04/15/2031
64952W-CH-4	NEW YORK LIFE GLOBAL FDG-SECURED				1.A FE	5,484,713	.92.0061	5,469,763	5,945,000	5,484,713	.0	12,044	.0	.0	2.350	4.754	JJ	64,809	64,809	11/22/2022	07/14/2026
64952W-ED-1	New York Life Global Fun-SECURED				1.A FE	7,146,934	.88.2803	6,815,238	7,720,000	7,146,934	.0	105,213	.0	.0	1.150	3.458	JD	5,425	94,205	04/25/2022	06/09/2026
76119L-AB-7	Resideo Funding Inc-SENIOR UNSECURED	1,2			3.C FE	2,478,002	.80.2740	2,162,582	2,694,000	2,478,002	.0	19,727	.0	.0	4.000	5.449	MS	35,920	89,800	03/30/2022	09/01/2029
76209P-AA-1	RGA Global Funding-SECURED				1.E FE	3,613,478	.88.3988	3,635,843	4,113,000	3,613,478	.0	19,004	.0	.0	2.000	5.490	MN	7,084	48,214	10/28/2022	11/30/2026
82808F-AA-6	Silver Point Specialty C Senior Unsecure				2.C PL	25,000,000	.92.5496	23,137,400	25,000,000	25,000,000	.0	.0	.0	.0	4.000	3.999	MN	658,333	955,556	01/21/2022	11/04/2026
83416W-AA-1	Solar Star Funding LLC-FIRST LIEN				2.B FE	5,506,659	.97.5830	5,373,553	5,506,651	5,506,659	.0	20	.0	.0	5.375	5.375	JD	154,702	309,134	06/20/2013	06/30/2035
83416W-AB-9	SOLAR STAR FUNDING LLC-SECURED	1			2.B FE	5,260,374	.87.0671	4,580,518	5,260,905	5,260,374	.0	64	.0	.0	3.950	3.951	JD	108,829	218,003	03/04/2015	06/30/2035
929328-AF-9	WSFS Financial Corp-SENIOR UNSECURED	2			1.G FE	5,000,000	.90.9272	4,546,360	5,000,000	5,000,000	.0	.0	.0	.0	2.750	2.750	JD	6,111	137,500	12/03/2020	12/15/2030
05329W-AM-4	AUTONATION INC-SR UNSECURED	1,5			2.C FE	3,995,750	.97.1003	3,884,012	4,000,000	3,995,750	.0	1,335	.0	.0	4.500	4.539	AO	45,000	180,000	09/16/2015	10/01/2025
05329W-AS-1	AutoNation Inc-SENIOR UNSECURED	1,2			2.C FE	9,459,155	.71.9797	7,197,965	10,000,000	9,459,155	.0	51,255	.0	.0	2.400	3.123	FA	100,000	341,333	01/18/2022	08/01/2031
066836-AB-3	Baptist Health South Flo-FIRST LIEN				1.E FE	15,124,645	.85.4728	12,820,916	15,000,000	15,124,645	.0	(4,306)	.0	.0	4.342	4.277	MN	83,222	651,300	07/06/2017	11/15/2041
088555-ZE-0	BIDTELLECT INC - Convertible Bond				5.B GI	262,622	.0.0000	0	262,622	262,622	.0	.0	.0	.0	10.000	10.000	MON	26,554	26,262	12/01/2021	06/30/2023
08889F-AA-4	Bidtellect, Inc. Promissory Note				5.B GI	1,963,415	100.0000	1,963,415	1,963,415	1,963,415	.0	.0	.0	.0	10.000	10.000	MON	212,703	196,341	12/01/2021	06/30/2023
115236-AC-5	Brown & Brown Inc-SENIOR UNSECURED	1,2			2.C FE	4,823,104	.76.4643	3,823,215	5,000,000	4,823,104	.0	17,604	.0	.0	2.375	2.862	MS	34,965	153,715	01/21/2022	03/15/2031
115236-AE-1	Brown & Brown Inc-SENIOR UNSECURED	1,2			2.C FE	30,120,127	.86.6719	26,001,570	30,000,000	30,120,127	.0	(15,573)	.0	.0	4.200	3.982	MS	364,000	994,000	03/18/2022	03/17/2032
126408-GS-6	CSX CORP-UNSECURED NOTE	1			2.A FE	7,385,899	108.3189	5,415,945	5,000,000	7,385,899	.0	(106,285)	.0	.0	6.220	2.742	AO	52,697	311,000	08/04/2021	04/30/2040
14444C-AR-5	Carrier Global Corp-SENIOR UNSECURED	1,2			2.C FE	76,0645	.76.0645	26,622,586	35,000,000	36,989,782	.0	(90,891)	.0	.0	3.377	2.944	AO	282,355	1,181,950	07/14/2021	04/05/2040
14989P-AA-2	CEAMER FINANCE II LLC Senior Secured Not				2.B PL	25,000,000	.96.7681	24,192,025	25,000,000	25,000,000	.0	.0	.0	.0	6.920	6.913	MN	576,667	576,667	09/01/2022	11/15/2037
15201P-AA-7	CenterState Bank Corp-SUBORDINATED	2			2.B FE	19,000,000	.94.5000	17,955,000	19,000,000	19,000,000	.0	.0	.0	.0	5.750	5.750	JD	91,042	1,092,500	05/21/2020	06/01/2030
19624R-AA-4	Colony Capital Inc-SENIOR UNSECURED				3.B FE	21,538,519	.99.0625	21,298,438	21,500,000	21,538,519	.0	(134,443)	.0	.0	5.000	4.346	AO	226,944	1,075,000	10/06/2017	04/15/2023
29977G-AA-0	TIAA FSB Holdings Inc-SUBORDINATED	2			2.B FE	20,000,100	.98.0600	19,612,000	20,000,000	20,000,100	.0	(52)	.0	.0	5.750	5.750	JJ	571,806	1,150,000	06/26/2015	07/02/2025
29977G-AB-8	TIAA FSB Holdings Inc-SUBORDINATED				2.B FE	2,000,000	100.0000	2,000,000	2,000,000	2,000,000	.0	.0	.0	.0	9.473	9.471	MJSD	8,947	130,928	03/09/2016	03/15/2026
31620M-BU-9	Fidelity National Inform-SENIOR UNSECURE	1,2			2.B FE	11,932,318	.69.3981	8,327,776	12,000,000	11,932,318	.0	2,714	.0	.0	3.100	3.141	MS	124,000	372,000	02/23/2021	03/01/2041
341081-EP-8	FLORIDA POWER & LIGHT CO-BOND	1			1.E FE	7,580,588	103.1937	6,346,409	6,150,000	7,580,588	.0	(99,347)	.0	.0	5.850	3.140	FA	149,906	329,794	02/25/2022	02/01/2033
341081-FF-9	FLORIDA POWER & LIGHT CO-SECURED	1,2			1.E FE	14,234,376	.86.8718	10,424,617	12,000,000	14,234,376	.0	(90,300)	.0	.0	4.125	2.830	FA	206,250	495,000	06/08/2021	02/01/2042
341081-FQ-5	Florida Power & Light Co-SECURED	1,2			1.D FE	18,894,880	.83.1417	13,774,077	16,567,000	18,894,880	.0	(58,762)	.0	.0	3.950	3.128	MS	218,132	872,529	01/18/2022	03/01/2048
413875-AN-5	HARRIS CORPORATION-SENIOR UNSECURED NOTE				2.B FE	13,758,855	102.4796	9,627,954	9,395,000	13,758,855	.0	(184,226)	.0	.0	6.150	2.832	JD	25,680	577,793	08/03/2021	12/15/2040
413875-AT-2	HARRIS CORPORATION-SENIOR UNSECURED	1,2			2.B FE	39,856,136	.89.5773	26,873,181	30,000,000	39,856,136	.0	(316,577)	.0	.0	5.054	2.992	AO	269,547	1,516,200	10/05/2021	04/27/2045
526057-CR-3	Lennar Corp-SENIOR UNSECURED	1,2			2.B FE	16,949,657	100.4960	17,829,234	16,866,000	17,829,234	.0	(644,939)	.0	.0	5.875	1.647	MN	126,612	1,117,490	10/20/2022	11/15/2024
61945C-AC-7	Mosaic Co/The-SENIOR UNSECURED	1,2			2.B FE	4,998,826	.99.6075	4,980,376	5,000,000	4,998,826	.0	1,059	.0	.0	4.250	4.273	MN	27,153	212,500	11/07/2013	11/15/2023
61945C-AD-5	Mosaic Co/The-SENIOR UNSECURED	1,2			2.B FE	31,453,556	.97.9511	26,644,653	27,202,000	31,453,556	.0	(309,679)	.0	.0	5.450	5.478	MN	189,432	1,608,778	11/08/2013	11/15/2033
61945C-AE-3	Mosaic Co/The-SENIOR UNSECURED	1,2			2.B FE	3,673,340	.92.9057	2,700,768	2,907,000	3,673,340	.0	(24,672)	.0	.0	5.625	3.761	MN	20,894	163,519	02/24/2021	11/15/2043
637417-AK-2	National Retail Properti-SENIOR UNSECURE	1,2			2.A FE	2,118,257	.90.7440	2,186,022	2,409,000	2,118,257	.0	7,516	.0	.0	3.500	6.469	AO	17,800	17,800	11/04/2022	10/15/2027
637417-AL-0	National Retail Properti-SENIOR UNSECURE	1,2			2.A FE	2,860,169	.92.6787	2,835,043	3,059,000	2,860,169	.0	2,796	.0	.0	4.300	5.630	AO	27,769	27,769	12/02/2022	10/15/2028
637417-AM-8	National Retail Properti-SENIOR UNSECURE	1,2			2.A FE	8,374,988	.82.9009	5,803,062	7,000,000	8,374,988	.0	(32,857)	.0	.0	4.800	3.609	AO	70,933	336,000	06/03/2021	10/15/2048
65339K-BZ-2	NextEra Energy Capital H-SENIOR UNSECURE	1,2			2.A FE	2,850,868	.80.5875	2,417,626	3,000,000	2,850,868	.0	11,818	.0	.0	2.440	3.074	JJ	33,753	76,860	03/01/2022	01/15/2032
667469-AA-8	NORTHWEST FLORIDA TIMBER-SECURED				1.E FE	14,892,658	.89.3645	13,404,677	15,000,000	14,892,658	.0	14,451	.0	.0	4.750	4.885	MS	217,708	712,500	04/03/2014	03/04/2029
686514-AH-3	Orlando Health Obligated-SENIOR UNSECURE	1,2			1.F FE	4,121,819	.69.3958	2,803,592	4,040,000	4,121,819	.0	(1,771)	.0	.0	3.327	3.214	AO	33,603	168,014	02/07/2022	10/01/2050
754730-AF-6	RAYMOND JAMES FINANCIAL-SENIOR UNSECURED	1			1.G FE	15,510,874	.89.5774	10,749,283	12,000,000	15,510,874	.0	(99,106)	.0	.0	4.950	3.175	JJ	273,900	594,000	10/06/2021	07/15/2046
754730-AG-4	Raymond James Financial -SENIOR UNSECURE	1,2			1.G FE	7,979,524	.96.2549	7,700,395	8,000,000	7,979,524	.0	2,261	.0	.0	4.650	4.691	AO	93,000	372,000	03/26/2020	04/01/2030
75884R-AX-1	Regency Centers LP-SENIOR UNSECURED	1,2			2.A FE	1,883,845	.92.4252	1,883,201	2,004,000	1,883,845	.0	1,387	.0	.0	4.125	5.462	MS	24,340	24,340	12/02/2022	03/15/2028
75884R-AZ-6	Regency Centers LP-SENIOR UNSECURED	1,2			2.A FE	10,487,903	.83.8137	8,951,304	10,680,000	10,487,903	.0	21,076	.0	.0	2.950	3.250	MS	92,768	407,828	02/24/2022	09/15/2029
875127-AV-4	Tampa Electric Co-NOTE	1			1.G FE	19,753,482	104.2157	14,553,720	13,965,000	19,753,482	.0	(352,230)	.0	.0	6.550	2.810	MN	116,879	914,708	10/06/2021	05/15/2036
875127-BF-8	Tampa Electric Co-SENIOR UNSECURED	1,2			1.G FE	12,069,526	.82.2703	8,202,353	9,970,000	12,069,526	.0	(48,012)	.0	.0	4.450	3.244	JD	19,718	463,383	01/19/2022	06/15/2049

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
87819#-AA-2	TD Bank (Miami, FL) CTL Trust Certificat				1.D	4,232,112	.76.9670	3,257,326	4,232,107	4,232,112	.0	(1)	.0	.0	3.790	3.790	MON	20,534	163,129	01/31/2013	01/15/2038
894164-AA-0	Travel + Leisure Co-SECURED			1,2	3.C FE	8,249,000	.80.7850	6,663,955	8,249,000	8,249,000	.0	.0	.0	.0	4.500	4.499	JD	30,934	371,205	11/15/2021	12/01/2029
96524V-A#-3	WhiteHorse Finance, Inc. Senior Note Ser				2.A PL	5,000,000	.97.0920	4,854,600	5,000,000	5,000,000	.0	.0	.0	.0	5.375	5.374	JD	288,906	268,750	12/04/2020	12/04/2026
96524V-A*-7	WhiteHorse Finance, Inc. Senior Note Ser				2.A PL	24,000,000	.99.5084	23,882,016	24,000,000	24,000,000	.0	.0	.0	.0	6.000	5.995	FA	576,000	1,440,000	08/07/2018	08/07/2023
96524V-A@-5	WhiteHorse Finance, Inc. Senior Note				2.A PL	7,000,000	.97.5085	6,825,595	7,000,000	7,000,000	.0	.0	.0	.0	5.375	5.373	AO	74,205	376,250	10/20/2020	10/20/2025
98310W-AM-0	Travel + Leisure Co-FIRST LIEN			1,2	3.C FE	13,270,781	.98.4025	12,957,641	13,168,000	13,270,781	.0	(37,086)	.0	.0	6.600	6.597	AO	217,272	869,088	09/10/2015	10/01/2025
98310W-AN-8	Travel + Leisure Co-FIRST LIEN			1,2	3.C FE	14,041,893	.94.7577	13,266,082	14,000,000	14,041,893	.0	(9,428)	.0	.0	6.000	5.710	AO	210,000	840,000	04/19/2017	04/01/2027
03076K-AA-6	Ameris Bancorp-SUBORDINATED			2	2.B FE	9,000,000	.97.0000	8,730,000	9,000,000	9,000,000	.0	(46)	.0	.0	8.385	8.380	MJSD	35,636	526,579	03/08/2017	03/15/2027
03464A-A@-9	Angel Oak Financial Stra Senior Note Ser				1.D Z	25,000,000	.85.4422	21,360,550	25,000,000	25,000,000	.0	.0	.0	.0	2.800	2.800	JJ	336,389	700,000	07/08/2021	07/08/2028
043436-AX-2	Asbury Automotive Group -SENIOR UNSECURE			1,2	3.B FE	3,000,000	.81.9050	2,457,150	3,000,000	3,000,000	.0	.0	.0	.0	5.000	4.999	FA	19,167	150,000	11/04/2021	02/15/2032
191216-CY-4	Coca-Cola Co/The-SENIOR UNSECURED				1.E FE	14,860,229	.66.5000	10,558,870	15,878,000	14,860,229	.0	13,664	.0	.0	2.750	3.038	JD	36,387	473,032	01/20/2022	06/01/2060
195869-AP-7	COLONIAL PIPELINE CO-SR UNSECURED			1,2	1.G FE	4,995,773	.96.2792	4,813,959	5,000,000	4,995,773	.0	1,358	.0	.0	3.750	3.781	AO	46,875	187,500	09/16/2015	10/01/2025
224044-BY-2	COX COMMUNICATIONS INC-SENIOR UNSECURED				2.B FE	730,359	.83.1228	502,062	604,000	730,359	.0	(4,433)	.0	.0	4.700	3.265	JD	1,262	28,388	10/07/2021	12/15/2042
224044-CC-9	Cox Communications Inc-SENIOR UNSECURED			1,2	2.B FE	10,323,418	.81.0501	6,938,698	8,561,000	10,323,418	.0	(62,748)	.0	.0	4.500	3.110	JD	193,693	385,245	08/02/2021	06/30/2043
224044-CE-5	Cox Communications Inc-SENIOR UNSECURED			1,2	2.B FE	11,684,939	.96.6234	11,498,179	11,900,000	11,684,939	.0	99,326	.0	.0	3.850	4.770	FA	190,896	475,368	10/14/2015	02/01/2025
224044-CF-2	COX COMMUNICATIONS INC-SR UNSECURED			1,2	2.B FE	11,622,313	.88.6308	8,701,768	9,818,000	11,622,313	.0	(129,224)	.0	.0	4.800	2.919	FA	196,360	471,264	06/09/2021	02/01/2035
224044-CL-9	Cox Communications Inc-SENIOR UNSECURED			1,2	2.B FE	9,239,088	.76.1136	7,611,362	10,000,000	9,239,088	.0	80,188	.0	.0	1.800	2.903	AO	45,000	225,000	01/25/2022	10/01/2030
224044-CO-5	Cox Communications Inc-SENIOR UNSECURED			1,2	2.B FE	33,840,352	.79.5910	27,684,134	34,783,000	33,840,352	.0	91,490	.0	.0	2.600	2.965	JD	40,194	944,552	01/21/2022	06/15/2031
23110A-AA-4	Cumulus Media New Holdin-FIRST LIEN			1,2	4.B FE	2,419,544	.84.0000	2,091,600	2,490,000	2,419,544	.0	10,469	.0	.0	6.750	7.687	JJ	84,038	168,075	05/25/2022	07/01/2026
23316#-AA-5	DEA (Nashville TN) LLC Pass-Thru Certifi				1.B	8,842,019	.82.7328	7,315,250	8,842,019	8,842,019	.0	.0	.0	.0	3.228	3.228	MON	68,420	290,690	08/12/2020	08/05/2040
316041-CP-5	Fidelity Bank/Atlanta GA-SUBORDINATED			2	2.A FE	7,000,000	.104.0000	7,000,000	7,000,000	7,000,000	.0	7,280.0	.0	.0	5.875	5.873	MN	34,271	411,250	05/29/2015	05/31/2030
372460-AC-9	Genuine Parts Co-SENIOR UNSECURED			1,2	2.B FE	26,497,953	.80.2395	22,707,773	28,300,000	26,497,953	.0	132,507	.0	.0	2.750	3.577	FA	324,271	758,794	03/17/2022	02/01/2032
37363J-AK-7	Georgia Tech Foundation -UNSECURED				1.B FE	6,094,430	.81.1012	4,716,036	5,815,000	6,094,430	.0	(6,518)	.0	.0	3.843	3.557	MN	37,245	223,470	09/12/2016	11/01/2048
437076-BF-8	Home Depot Inc/The-SENIOR UNSECURED NOTE			1,2	1.F FE	4,782,124	.89.5050	3,535,449	3,950,000	4,782,124	.0	(26,666)	.0	.0	4.400	3.064	MS	51,174	173,800	06/03/2021	03/15/2045
437076-BM-3	Home Depot Inc/The-SENIOR UNSECURED			1,2	1.F FE	1,910,206	.95.2253	1,904,505	2,000,000	1,910,206	.0	2,546	.0	.0	3.000	4.499	AO	15,000	15,000	11/22/2022	04/01/2026
437076-BX-9	Home Depot Inc/The-SENIOR UNSECURED			1,2	1.F FE	5,612,653	.91.1757	4,558,783	5,000,000	5,612,653	.0	(11,397)	.0	.0	4.500	3.748	JD	15,625	240,625	03/08/2022	12/06/2048
437076-BZ-4	Home Depot Inc/The-SENIOR UNSECURED			1,2	1.F FE	15,154,449	.71.0708	10,660,625	15,000,000	15,154,449	.0	(3,351)	.0	.0	3.125	3.068	JD	20,833	489,583	01/20/2022	12/15/2049
437076-CK-6	Home Depot Inc/The-SENIOR UNSECURED			1,2	1.F FE	9,353,474	.65.9712	6,597,121	10,000,000	9,353,474	.0	12,974	.0	.0	2.750	3.091	MS	80,972	351,389	01/20/2022	09/15/2051
670001-AH-9	Novellis Corp-SENIOR UNSECURED			1,2	3.C FE	5,024,141	.81.4900	4,074,500	5,000,000	5,024,141	.0	(3,163)	.0	.0	3.875	3.791	FA	73,194	193,750	09/22/2021	08/15/2031
720198-AC-4	Piedmont Operating Partn-SENIOR UNSECURE			1,2	2.B FE	999,795	.99.3931	983,931	1,000,000	999,795	.0	434	.0	.0	3.400	3.445	JD	833	34,000	05/06/2013	06/01/2023
720198-AD-2	Piedmont Operating Partn-SENIOR UNSECURE			1,2	2.B FE	6,997,817	.98.3550	6,884,853	7,000,000	6,997,817	.0	1,395	.0	.0	4.450	4.472	MS	91,719	311,500	02/25/2014	03/15/2024
745867-AP-6	PulteGroup Inc-SENIOR UNSECURED				2.B FE	12,471,239	.99.8274	9,982,737	10,000,000	12,471,239	.0	(184,261)	.0	.0	6.375	3.511	MN	81,458	718,958	01/18/2022	05/15/2033
78161C-AN-5	Synovus Financial Corp-SENIOR UNSECURED			1,2	2.C FE	32,886,849	.98.5129	32,408,128	32,895,000	32,886,849	.0	(1,065)	.0	.0	5.200	5.097	FA	665,210	665,210	08/10/2022	08/11/2025
891906-AB-5	Global Payments Inc-SENIOR UNSECURED			1,2	2.C FE	8,996,475	.99.5344	8,958,092	9,000,000	8,996,475	.0	7,717	.0	.0	3.750	3.840	JD	28,125	337,500	05/15/2013	06/01/2023
90985F-AF-3	United Community Banks I-SENIOR UNSECURE			2	2.A FE	15,000,000	.100.7500	15,112,500	15,000,000	15,000,000	.0	.0	.0	.0	5.500	5.485	FA	313,958	825,000	07/31/2015	02/14/2027
90985F-AG-1	United Community Banks I-SUBORDINATED			2	2.B FE	10,000,000	.97.0000	7,700,000	10,000,000	10,000,000	.0	(153)	.0	.0	4.500	4.498	JJ	188,750	450,000	01/10/2018	01/30/2028
90985F-AH-9	United Community Banks I-SENIOR UNSECURE			2	2.A FE	12,000,000	.95.0000	11,400,000	12,000,000	12,000,000	.0	.0	.0	.0	5.000	5.000	JD	26,667	600,000	06/12/2020	06/15/2030
911312-AJ-5	UNITED PARCEL SERVICE IN-SENIOR UNSECURE			1	1.F FE	46,075,980	.111.1704	36,686,219	33,000,000	46,075,980	.0	(660,436)	.0	.0	6.200	2.924	JJ	943,433	9,815,839	01/19/2022	01/15/2038
911312-BV-7	United Parcel Service In-SENIOR UNSECURE			1,2	1.F FE	3,339,224	.100.1560	2,604,055	2,600,000	3,339,224	.0	(33,467)	.0	.0	5.200	3.024	AO	33,800	135,200	02/25/2021	04/01/2040
911312-BW-5	United Parcel Service In-SENIOR UNSECURE			1,2	1.F FE	20,067,198	.104.1504	16,455,763	15,800,000	20,067,198	.0	(74,168)	.0	.0	5.300	3.701	AO	209,350	1,046,750	03/11/2022	04/01/2050
911312-BX-3	United Parcel Service In-SENIOR UNSECURE			1,2	1.F FE	22,988,455	.98.5234	22,660,377	23,000,000	22,988,455	.0	4,362	.0	.0	3.900	3.921	AO	224,250	897,000	03/19/2020	04/01/2025
92940P-AG-9	WRKCo Inc-SENIOR UNSECURED			1,2	2.B FE	2,277,432	.79.6837	1,872,567	2,350,000	2,277,432	.0	4,724	.0	.0	3.000	3.352	JD	3,133	73,633	03/03/2022	06/15/2033
419870-JF-8	Hawaiian Electric Indust Senior Unsecure				2.B IF	15,500,000	.99.2537	15,384,324	15,500,000	15,500,000	.0	.0	.0	.0	5.430	5.431	MN	37,407	140,275	11/01/2022	11/01/2032
677071-AF-9	Ohana Military Communiti-UNSECURED				1.D FE	1,064,919	.100.5434	1,067,157	1,061,389	1,064,919	.0	(1,802)	.0	.0	5.675	5.573	AO	15,058	66,834	06/10/2010	10/01/2026
677071-AM-4	Ohana Military Communiti-UNSECURED				1.D FE	706,880	.99.9760	700,731	700,899	706,880	.0	(3,038)	.0	.0	5.462	5.206	AO	9,571	42,479	07/07/2011	10/01/2026

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
422340-AD-4	Heartland Financial USA -SUBORDINATED	2			2.B FE	6,000,443	.98.0000	5,880,000	6,000,000	6,000,443	.0	(210)	.0	.0	5.750	5.746	JD	173,458	345,000	12/12/2014	12/30/2024
422340-AE-2	Heartland Financial USA -SUBORDINATED	2			2.B FE	5,790,000	.84.0000	4,863,600	5,790,000	5,790,000	.0	.0	.0	.0	2.750	2.750	MS	46,883	159,225	08/31/2021	09/15/2031
74251V-AR-3	Principal Financial Group-SENIOR UNSECURE	1,2			1.G FE	4,986,584	.92.4951	4,624,754	5,000,000	4,986,584	.0	1,810	.0	.0	3.700	3.747	MN	23,639	185,000	05/07/2019	05/15/2029
89787E-AA-9	Trustage Financial Group-SENIOR UNSECURE	1,2			2.B FE	64,554,941	.86.6495	56,322,195	65,000,000	64,554,941	.0	25,541	.0	.0	4.625	4.716	AO	634,653	10,091,861	03/22/2022	04/15/2032
422704-AH-9	Hecla Mining Co-SENIOR UNSECURED	1,2			4.B FE	9,359,845	.98.5270	8,733,433	8,864,000	9,359,845	.0	(116,300)	.0	.0	7.250	5.573	FA	242,775	642,640	10/13/2021	02/15/2028
002824-BH-2	ABBOTT LABORATORIES-SENIOR UNSECURED	1,2			1.E FE	13,024,303	.98.0237	9,802,369	10,000,000	13,024,303	.0	(81,497)	.0	.0	4.900	3.078	MN	42,194	532,194	01/20/2022	11/30/2046
00287Y-AW-9	ABBVIE INC-SENIOR UNSECURED	1,2			2.A FE	6,181,262	.86.2174	4,310,868	5,000,000	6,181,262	.0	(35,460)	.0	.0	4.450	3.013	MN	29,049	222,500	08/03/2021	05/14/2046
00287Y-CA-5	AbbVie Inc-SENIOR UNSECURED	1,2			2.A FE	29,379,375	.85.5772	22,250,059	26,000,000	29,379,375	.0	(157,240)	.0	.0	4.050	3.037	MN	117,000	1,053,000	04/29/2021	11/21/2039
00287Y-CY-3	AbbVie Inc-SENIOR UNSECURED	1,2			2.A FE	11,443,873	.93.6130	9,361,299	10,000,000	11,443,873	.0	(94,827)	.0	.0	4.550	3.072	MS	133,972	588,972	01/20/2022	03/15/2035
007589-AC-8	Advocate Health & Hospit-SENIOR UNSECURE	1,2			1.C FE	4,736,047	.72.7150	3,635,751	5,000,000	4,736,047	.0	4,397	.0	.0	3.387	3.699	AO	35,752	205,102	03/16/2022	10/15/2049
032177-AJ-6	Amsted Industries Inc-SENIOR UNSECURED	1,2			3.C FE	1,801,577	.85.3500	1,707,000	2,000,000	1,801,577	.0	11,577	.0	.0	4.625	6.329	MN	11,819	58,069	06/08/2022	05/15/2030
071813-BP-3	Baxter International Inc-SENIOR UNSECURE	1,2			2.B FE	5,351,331	.71.1437	3,628,330	5,100,000	5,351,331	.0	(7,255)	.0	.0	3.500	3.197	FA	67,433	178,500	02/25/2021	08/15/2046
126117-AW-0	CNA Financial Corp-SENIOR UNSECURED	1,2			2.B FE	4,755,124	.78.7367	3,936,836	5,000,000	4,755,124	.0	26,574	.0	.0	2.050	2.767	FA	38,722	141,222	01/21/2022	08/15/2030
14575E-AA-3	Cars.com Inc-SENIOR UNSECURED	1,2			4.C FE	1,446,162	.88.6950	1,515,798	1,709,000	1,446,162	.0	6,329	.0	.0	6.375	9.905	MN	18,158	72,633	10/18/2022	11/01/2028
17287H-AA-8	Citadel Finance LLC-SENIOR UNSECURED	1,2			2.C FE	12,959,976	.89.0540	11,577,023	13,000,000	12,959,976	.0	11,542	.0	.0	3.375	3.477	MS	136,500	438,750	03/03/2021	03/09/2026
20268J-AD-5	CommonSpirit Health-SECURED	1,2			1.E FE	11,151,895	.74.6425	8,453,268	11,325,000	11,151,895	.0	1,360	.0	.0	3.817	3.256	AO	108,069	444,919	01/21/2022	10/01/2049
205887-CE-0	Conagra Brands Inc-SENIOR UNSECURED	1,2			2.C FE	11,645,951	.92.4089	8,316,805	9,000,000	11,645,951	.0	(62,985)	.0	.0	5.400	3.617	MN	81,000	486,000	04/29/2021	11/01/2048
20903X-AF-0	Consolidated Communicati-FIRST LIEN	1,2			4.C FE	1,177,002	.78.0190	1,151,560	1,476,000	1,177,002	.0	1,737	.0	.0	6.500	11.393	AO	23,985	23,985	12/12/2022	10/01/2035
244199-BH-7	Deere & Co-SENIOR UNSECURED	1,2			1.F FE	2,634,745	.96.1353	2,637,953	2,744,000	2,634,745	.0	4,484	.0	.0	2.750	4.601	AO	15,930	15,930	11/22/2022	04/15/2025
319383-AD-7	First Busey Corp-SUBORDINATED	2			2.B FE	8,000,000	.99.1250	7,930,000	8,000,000	8,000,000	.0	.0	.0	.0	5.250	5.250	JD	35,000	420,000	05/28/2020	06/01/2030
319383-AE-5	First Busey Corp-SUBORDINATED	2			2.B FE	12,500,000	.92.8413	11,605,163	12,500,000	12,500,000	.0	.0	.0	.0	5.000	5.000	JD	27,778	362,847	05/25/2022	06/15/2032
361448-AO-6	GATX CORP-SENIOR UNSECURED NOTE				2.B FE	8,996,697	.99.6528	8,968,750	9,000,000	8,996,697	.0	11,307	.0	.0	3.900	4.031	MS	88,725	351,000	03/14/2013	03/30/2023
361448-AW-3	GATX CORP-SR UNSECURED	1,2			2.B FE	5,125,182	.95.1769	4,758,844	5,000,000	5,125,182	.0	(57,018)	.0	.0	3.250	1.965	MS	41,076	203,576	01/20/2022	03/30/2025
361448-BF-9	GATX Corp-SENIOR UNSECURED	1,2			2.B FE	14,430,756	.88.7708	13,315,625	15,000,000	14,430,756	.0	39,054	.0	.0	4.000	4.604	JD	301,667	835,078	05/20/2022	06/30/2030
361448-BG-7	GATX Corp-SENIOR UNSECURED	1,2			2.B FE	3,703,539	.74.4472	3,052,334	4,100,000	3,703,539	.0	33,014	.0	.0	1.900	3.221	JD	6,492	84,392	03/04/2022	06/01/2031
448579-AF-9	Hyatt Hotels Corp-SENIOR UNSECURED	1,2			2.C FE	23,000,629	.98.2802	22,604,441	23,000,000	23,000,629	.0	(541)	.0	.0	4.850	4.854	MS	328,453	1,115,500	03/01/2016	03/15/2026
46124J-A*-3	InvenTrust Properties Co Senior Unsecure				2.C PL	5,000,000	.93.9610	4,698,050	5,000,000	5,000,000	.0	.0	.0	.0	5.070	5.070	FA	98,583	98,583	08/11/2022	08/11/2029
46124J-A8-1	InvenTrust Properties Co Senior Unsecure				2.C PL	20,000,000	.92.7593	18,551,860	20,000,000	20,000,000	.0	.0	.0	.0	5.200	5.200	FA	404,444	404,444	08/11/2022	08/11/2032
488401-AB-6	Kemper Corp-SENIOR UNSECURED	1,2			2.C FE	42,068,275	.97.6932	41,031,152	42,000,000	42,068,275	.0	(37,179)	.0	.0	4.350	4.088	FA	690,200	1,827,000	09/19/2017	02/15/2025
488401-AC-4	Kemper Corp-SENIOR UNSECURED	1,2			2.C FE	33,183,651	.77.6260	28,857,451	37,175,000	33,183,651	.0	335,376	.0	.0	2.400	4.027	MS	225,528	1,117,728	03/18/2022	09/30/2030
488401-AD-2	Kemper Corp-SENIOR UNSECURED	1,2			2.C FE	9,635,168	.84.0387	8,403,874	10,000,000	9,635,168	.0	24,568	.0	.0	3.800	4.286	FA	135,111	325,111	03/22/2022	02/23/2032
55266C-XM-3	West Loop BC-SUBORDINATED	2			1.G FE	27,000,000	.99.7500	26,932,500	27,000,000	27,000,000	.0	(233)	.0	.0	6.634	3.997	MJSD	154,231	1,144,231	11/14/2017	12/01/2027
58013M-EV-2	MCDONALD'S CORP-SENIOR UNSECURED	1,2			2.A FE	6,357,002	.89.4187	4,466,464	4,995,000	6,357,002	.0	(43,949)	.0	.0	4.600	2.908	MN	22,339	229,770	08/03/2021	05/26/2045
610335-AB-7	Monroe Capital Corp-SENIOR UNSECURED	1,2			2.A PL	7,473,254	.90.1500	6,761,250	7,500,000	7,473,254	.0	7,636	.0	.0	4.750	4.873	FA	134,583	356,250	01/15/2021	02/15/2026
67080L-AA-3	Nuveen LLC-SENIOR UNSECURED	1,2			1.C FE	10,304,677	.93.5108	10,286,189	11,000,000	10,304,677	.0	12,967	.0	.0	4.000	5.270	MN	73,333	73,333	12/05/2022	11/01/2028
67181H-AD-0	Oak Street Real Estate C Senior Secured				2.A PL	18,750,000	.100.4252	18,829,725	18,750,000	18,750,000	.0	.0	.0	.0	6.630	6.630	MN	210,641	210,641	12/12/2016	11/01/2027
67181H-AE-8	Oak Street Real Estate C Senior Secured				2.A PL	5,000,000	.100.3046	5,015,230	5,000,000	5,000,000	.0	.0	.0	.0	6.730	6.730	AO	57,018	57,018	10/31/2022	10/31/2029
680223-AJ-3	Old Republic Internation-SENIOR UNSECURE	1,2			2.B FE	28,150,918	.99.2916	27,801,637	28,000,000	28,150,918	.0	(86,908)	.0	.0	4.875	4.935	AO	341,250	1,365,000	09/22/2014	10/01/2024
680277-AB-6	Old Second Bancorp Inc-SENIOR UNSECURED	2			2.B FE	5,000,000	.100.0000	5,000,000	5,000,000	5,000,000	.0	.0	.0	.0	8.604	8.601	MJSD	215,708	215,708	12/12/2016	06/31/2026
749607-AC-1	RLI Corp-SENIOR UNSECURED				2.B FE	8,997,459	.99.5997	8,963,973	9,000,000	8,997,459	.0	2,580	.0	.0	4.875	4.906	MS	129,188	438,750	09/25/2013	09/15/2023
82922T-AA-7	Sinai Health System-SECURED				1.B FE	3,410,000	.90.2568	3,077,757	3,410,000	3,410,000	.0	.0	.0	.0	3.034	3.034	JJ	46,269	105,289	11/06/2012	01/20/2036
873050-BH-3	TXL Co-UNSECURED				1.F FE	5,193,664	.108.5400	5,192,001	5,000,000	5,193,664	.0	(59,162)	.0	.0	7.070	6.333	JJ	29,458	913,208	06/30/2004	07/01/2029
91412N-AG-5	University of Chicago/Th-UNSECURED				1.C FE	896,000	.99.1936	888,774	896,000	896,000	.0	.0	.0	.0	3.065	3.063	AO	6,866	37,278	01/24/2012	10/01/2024
91412N-BG-4	University of Chicago/Th-UNSECURED	1,2			1.C FE	4,999,742	.69.9472	3,749,168	5,360,000	4,999,742	.0	5,615	.0	.0	3.000	3.359	AO	40,200	201,000	03/03/2022	10/01/2052
96928*-CQ-8	William Blair & Company, Trust Certificat				2.B	2,394,242	.103.7498	2,484,014	2,394,235	2,394,235	.0	.0	.0	.0	6.660	6.660	MON	7,087	164,632	12/16/2009	06/15/2033

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
96928*-CR-6	William Blair & Company, Trust Certificat .....	.....	.....	.....	2.B	3,297,875	.....	3,426,974	3,297,866	3,297,875	0	(2)	0	0	6.660	6.660	MON	9,762	225,892	12/23/2009	05/15/2034
96928*-CX-3	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.F	9,297,957	.....	9,548,013	9,242,976	9,297,957	0	(5,462)	0	0	6.190	6.120	MON	25,428	584,337	03/18/2010	01/15/2035
96928*-DA-2	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.D Z	8,800,961	.....	8,841,873	8,756,393	8,800,961	0	(8,262)	0	0	5.370	5.296	MON	20,899	491,041	06/01/2010	08/15/2031
96928*-DJ-3	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.B	6,197,724	.....	6,230,136	6,197,709	6,197,724	0	(2)	0	0	5.250	5.250	MON	25,276	339,703	09/28/2010	09/15/2031
96928*-EN-3	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.D Z	6,202,094	.....	5,844,245	6,166,266	6,202,094	0	(7,182)	0	0	4.160	4.095	MON	33,047	267,581	01/06/2012	02/15/2034
96928*-EZ-6	William Blair & Company, Trust Certifica .....	.....	.....	.....	4.A	10,267,976	.....	8,217,612	10,267,959	10,267,976	0	(3)	0	0	5.040	5.040	MON	239,421	576,253	08/17/2012	09/15/2033
96928*-FH-5	William Blair & Company, Trust Certifica .....	.....	.....	.....	2.A Z	3,603,861	.....	3,623,890	3,603,852	3,603,861	0	0	0	0	6.170	6.170	MON	192,818	344,938	04/03/2013	04/15/2025
96928*-FK-8	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.D Z	7,470,751	.....	7,761,240	7,470,294	7,470,751	0	(64)	0	0	5.930	5.929	MON	58,274	456,310	05/15/2013	11/15/2032
96928*-FQ-5	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.B YE	7,208,487	.....	6,788,507	7,208,480	7,208,487	0	(2)	0	0	4.010	4.010	MON	12,847	299,469	12/20/2013	09/15/2033
96928*-FX-0	William Blair & Company, Trust Certifica .....	.....	.....	.....	1.B	16,380,332	.....	15,050,905	16,380,315	16,380,332	0	(3)	0	0	4.010	4.010	MON	29,193	674,010	12/23/2014	02/15/2036
96928*-FY-8	William Blair & Company, Trust Certifica .....	.....	.....	.....	2.B Z	5,306,157	.....	4,913,315	5,306,150	5,306,157	0	(1)	0	0	4.510	4.510	MON	30,681	247,727	02/11/2015	01/15/2035
97650W-AF-5	Wintrust Financial Corp-SUBORDINATED .....	.....	.....	.....	2.B FE	5,000,000	.....	4,912,187	5,000,000	5,000,000	0	0	0	0	5.000	4.999	JD	12,500	250,000	06/10/2014	06/13/2024
97650W-AG-3	Wintrust Financial Corp-SUBORDINATED .....	.....	.....	.....	2.B FE	25,000,000	.....	22,834,783	25,000,000	25,000,000	0	0	0	0	4.850	4.849	JD	84,201	1,212,500	06/03/2019	06/06/2029
12621E-AL-7	CNO Financial Group Inc-SENIOR UNSECURED .....	.....	.....	1,2	2.C FE	14,583,650	.....	14,400,056	15,059,000	14,583,650	0	10,044	0	0	5.250	5.845	MN	68,079	239,754	12/05/2022	05/30/2029
373865-AD-6	German American Bancorp-SUBORDINATED .....	.....	.....	2	2.B FE	4,000,000	.....	3,766,292	4,000,000	4,000,000	0	0	0	0	4.500	4.500	JD	90,500	180,000	06/25/2022	06/30/2029
455434-BT-6	INDIANAPOLIS PIWR & LIGHT-SECURED .....	.....	.....	1,2	1.F FE	15,498,793	.....	11,128,465	13,747,000	15,498,793	0	(48,364)	0	0	4.050	3.255	MN	92,792	649,546	01/18/2022	05/01/2046
633717-AA-1	National Bank of Indiana-SUBORDINATED .....	.....	.....	2	2.B PL	5,000,000	.....	4,767,125	5,000,000	5,000,000	0	0	0	0	5.500	5.500	MS	80,972	275,000	08/28/2019	09/15/2029
65473P-AL-9	NiSource Inc-SENIOR UNSECURED .....	.....	.....	1,2	2.B FE	27,631,090	.....	22,874,331	30,000,000	27,631,090	0	239,990	0	0	1.700	2.793	FA	192,667	702,667	01/21/2022	02/15/2031
65473Q-AX-1	NISOURCE FINANCE CORP-SENIOR UNSECURED N .....	.....	.....	1,2	2.B FE	4,745,773	.....	3,352,224	3,320,000	4,745,773	0	(59,948)	0	0	5.950	2.872	JD	8,780	197,540	08/03/2021	06/15/2041
65473Q-BB-8	NISOURCE FINANCE CORP-SENIOR UNSECURED B .....	.....	.....	1,2	2.B FE	6,536,807	.....	4,713,608	5,000,000	6,536,807	0	(55,936)	0	0	5.250	3.140	FA	99,167	262,500	07/14/2021	02/15/2043
65473Q-BD-4	NISOURCE FINANCE CORP-SENIOR UNSECURED B .....	.....	.....	1,2	2.B FE	13,908,159	.....	10,159,924	10,414,000	13,908,159	0	(107,940)	0	0	5.650	3.434	FA	245,163	588,391	07/16/2021	02/01/2045
65473Q-BG-7	NISOURCE FINANCE CORP-SENIOR UNSECURED .....	.....	.....	1,2	2.B FE	8,744,897	.....	6,007,028	7,684,000	8,744,897	0	(28,003)	0	0	3.950	3.143	MS	76,723	303,518	10/04/2021	03/30/2048
680033-AC-1	Old National Bancorp/IN-SENIOR UNSECURED .....	.....	.....	.....	1.G FE	19,000,000	.....	18,598,165	19,000,000	19,000,000	0	0	0	0	4.125	4.123	FA	296,083	783,750	08/12/2014	08/15/2024
682691-AA-8	OneMain Finance Corp-SENIOR UNSECURED .....	.....	.....	1,2	3.B FE	1,978,571	.....	1,495,183	2,000,000	1,978,571	0	2,304	0	0	4.000	4.163	MS	23,556	80,000	06/23/2021	09/15/2030
828807-CL-9	Simon Property Group LP-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	3,838,309	.....	2,585,109	3,020,000	3,838,309	0	(32,663)	0	0	4.750	2.868	MS	42,238	143,450	08/03/2021	03/15/2042
828807-CZ-8	SIMON PROPERTY GROUP LP-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	6,030,199	.....	4,093,719	5,060,000	6,030,199	0	(27,889)	0	0	4.250	3.093	MN	18,518	215,050	07/16/2021	11/30/2046
828807-DF-1	Simon Property Group LP-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	1,197,964	.....	1,246,485	1,490,000	1,197,964	0	9,033	0	0	2.450	6.051	MS	10,952	23,727	11/04/2022	09/13/2029
828807-DQ-7	Simon Property Group LP-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	7,769,368	.....	6,465,522	8,300,000	7,769,368	0	68,844	0	0	2.250	3.065	JJ	86,113	288,988	03/04/2022	01/15/2032
828807-DT-1	Simon Property Group LP-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	9,545,155	.....	8,032,923	10,000,000	9,545,155	0	35,655	0	0	2.650	3.232	FA	110,417	257,639	02/25/2022	02/01/2032
85172F-AP-4	OneMain Finance Corp-SENIOR UNSECURED .....	.....	.....	1,2	3.B FE	985,999	.....	964,770	1,000,000	985,999	0	3,499	0	0	6.125	7.348	MS	18,035	48,660	08/31/2022	03/15/2024
918418-AA-8	Virginia (Lafayette, IN) Trust Certifica .....	.....	.....	.....	1.B	5,340,689	.....	4,653,999	5,340,689	5,340,689	0	0	0	0	3.250	3.250	MON	178,804	161,033	12/04/2019	08/15/2036
94973V-BF-3	ANTHEM INC-SR UNSECURED .....	.....	.....	.....	2.B FE	10,429,447	.....	7,360,383	7,760,000	10,429,447	0	(90,960)	0	0	5.100	2.903	JJ	182,489	395,760	08/03/2021	01/15/2044
852060-AD-4	SPRINT CAPITAL CORP-SENIOR UNSECURED .....	.....	.....	.....	3.A FE	3,515,669	.....	3,166,648	3,045,000	3,515,669	0	(59,970)	0	0	6.875	3.903	MN	26,749	236,093	02/23/2022	09/15/2028
852060-AT-9	Sprint Capital Corp-SENIOR UNSECURED .....	.....	.....	.....	3.A FE	9,534,354	.....	8,330,700	7,000,000	9,534,354	0	(198,826)	0	0	8.750	4.007	MS	180,347	792,847	02/10/2022	03/15/2032
096630-AE-8	Boardwalk Pipelines LP-SENIOR UNSECURED .....	.....	.....	1,2	2.C FE	4,976,814	.....	5,065,162	5,000,000	4,976,814	0	5,854	0	0	5.950	6.100	JD	24,792	297,500	05/11/2016	06/01/2026
444859-BB-7	Humana Inc-SENIOR UNSECURED NOTE .....	.....	.....	1,2	2.C FE	3,167,424	.....	2,211,148	2,522,000	3,167,424	0	(24,478)	0	0	4.625	2.948	JD	9,720	116,643	04/25/2022	12/01/2042
444859-BE-1	Humana Inc-SR UNSECURED .....	.....	.....	1,2	2.C FE	13,203,822	.....	9,079,024	10,000,000	13,203,822	0	(107,566)	0	0	4.950	2.916	AO	123,750	495,000	08/04/2021	10/01/2044
698813-AA-0	Papa John's International-SENIOR UNSECURE .....	.....	.....	1,2	4.A FE	2,693,000	.....	2,248,655	2,693,000	2,693,000	0	0	0	0	3.875	3.874	MS	30,726	104,354	09/08/2021	09/15/2029
92277G-AB-3	VENTAS REALTY LP-SR UNSECURED .....	.....	.....	1,2	2.A FE	15,425,158	.....	10,706,776	11,731,000	15,425,158	0	(123,526)	0	0	5.700	3.513	MS	169,024	668,667	10/05/2021	09/30/2043
92277G-AF-4	VENTAS REALTY LP-SR UNSECURED .....	.....	.....	1,2	2.A FE	4,530,664	.....	3,177,817	4,081,000	4,530,664	0	(13,534)	0	0	4.375	3.634	FA	74,393	178,544	06/08/2021	02/01/2045
92277G-AL-1	Ventas Realty LP-SENIOR UNSECURED .....	.....	.....	1,2	2.A FE	1,723,962	.....	1,721,176	1,829,000	1,723,962	0	3,364	0	0	3.850	5.378	AO	17,604	50,740	11/15/2022	04/01/2027
92277G-AM-9	Ventas Realty LP-SENIOR UNSECURED .....	.....	.....	1,2	2.A FE	4,554,604	.....	4,625,468	5,000,000	4,554,604	0	12,705	0	0	4.000	6.031	MS	66,667	88,889	10/28/2022	03/01/2028
22960*-AA-0	CTL PASS THRU TR SER 2013 (OCHSNR SLIDE .....	.....	.....	.....	1.G	6,444,952	.....	6,448,766	6,444,821	6,444,952	0	(41)	0	0	5.260	5.260	MON	43,649	362,486	12/30/2013	12/15/2028
29364P-AP-8	Entergy New Orleans LLC-FIRST LIEN .....	.....	.....	1,2	2.B FE	5,000,000	.....	4,804,865	5,000,000	5,000,000	0	0	0	0	4.000	3.999	JD	16,667	200,000	05/18/2016	06/01/2026
29364W-AS-7	Entergy Louisiana LLC-SECURED .....	.....	.....	1,2	1.F FE	2,999,199	.....	2,988,966	3,000,000	2,999,199	0	963	0	0	4.050	4.084	MS	40,500	121,500	08/19/2013	09/01/2023

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
29364W-AU-2	Entergy Louisiana LLC-FIRST LIEN			1,2	1.F FE	4,998,975	.95.8758	4,793,789	5,000,000	4,998,975	.0	336	.0	.0	3.780	3.788	AO	47,250	189,000	06/24/2014	04/01/2025
29365P-AR-3	Entergy Gulf States Loui-FIRST LIEN			1,2	1.F FE	5,998,770	.96.1900	5,771,400	6,000,000	5,998,770	.0	403	.0	.0	3.780	3.788	AO	56,700	226,800	06/24/2014	04/01/2025
45074J-AA-2	ITT Holdings LLC-SENIOR UNSECURED			2	4.B FE	5,589,935	.83.6683	4,677,892	5,591,000	5,589,935	.0	(2,824)	.0	.0	6.500	7.037	FA	151,423	363,415	12/02/2021	08/01/2029
68621T-AA-0	Origin Bank-SUBORDINATED			2	2.C FE	8,000,000	.97.0000	7,760,000	8,000,000	8,000,000	.0	.0	.0	.0	4.500	4.500	MN	60,000	360,000	10/08/2020	11/01/2030
68622B-AA-8	Origin Bank-SUBORDINATED			2	2.B FE	13,000,000	.91.5000	11,895,000	13,000,000	13,000,000	.0	.0	.0	.0	4.250	4.250	FA	208,722	552,500	02/06/2020	02/15/2030
78518F-AA-5	Saber Midstream LLC Senior Secured Notes				2.C PL	37,978,438	.95.8664	36,491,489	38,064,941	37,978,438	.0	12,871	.0	.0	4.090	4.131	MJSD	800,341	1,179,689	04/06/2022	03/31/2029
008252-AM-0	Affiliated Managers Grou-SENIOR UNSECURE				1.G FE	13,723,083	.98.9625	13,591,511	13,734,000	13,723,083	.0	7,294	.0	.0	4.250	4.319	FA	220,507	600,307	01/04/2016	02/15/2024
032654-AN-5	Analog Devices Inc-SENIOR UNSECURED			1,2	1.G FE	15,062,237	.95.5688	14,335,322	15,000,000	15,062,237	.0	(10,513)	.0	.0	3.500	3.379	JD	37,917	562,917	04/25/2022	12/05/2026
032654-AW-5	Analog Devices Inc-SENIOR UNSECURED			1,2	1.G FE	14,460,741	.73.7875	11,068,124	15,000,000	14,460,741	.0	19,885	.0	.0	2.800	3.053	AO	105,000	520,333	01/18/2022	10/01/2041
05684B-AB-3	Bain Capital Specialty F-SENIOR UNSECURE			1,2	2.C FE	16,910,380	.86.2737	14,666,527	17,000,000	16,910,380	.0	26,168	.0	.0	2.950	3.124	MS	154,629	501,500	03/03/2021	03/10/2026
09062X-AH-6	Biogen Inc-SENIOR UNSECURED			1,2	2.A FE	19,183,000	.81.5655	16,313,102	20,000,000	19,183,000	.0	92,800	.0	.0	2.250	2.871	MN	75,000	525,000	01/24/2022	05/01/2030
10112R-BA-1	Boston Properties LP-SENIOR UNSECURED			1,2	2.A FE	4,622,518	.92.7596	4,637,979	5,000,000	4,622,518	.0	8,226	.0	.0	4.500	6.035	JD	18,750	393,750	11/15/2022	12/01/2028
10112R-BG-8	Boston Properties LP-SENIOR UNSECURED			1,2	2.A FE	1,068,638	.103.2653	1,072,926	1,039,000	1,068,638	.0	(742)	.0	.0	6.750	6.058	JD	8,572	8,572	11/15/2022	12/01/2027
10948W-AA-1	Brightsphere Investment -SENIOR UNSECURE				3.A FE	44,743,128	.90.5254	40,736,439	45,000,000	44,743,128	.0	63,075	.0	.0	4.800	4.974	JJ	924,000	9,980,472	12/21/2016	07/27/2026
11373M-AA-5	Brookline Bancorp Inc-SUBORDINATED			2	2.C FE	2,500,000	.96.2110	2,405,275	2,500,000	2,500,000	.0	.0	.0	.0	6.000	6.000	MS	44,167	150,000	09/11/2014	09/15/2029
19567P-AH-2	Colonial Gas Co-FIRST LIEN				1.F FE	14,725,906	.106.1150	14,856,100	14,000,000	14,725,906	.0	(114,694)	.0	.0	7.120	5.955	AO	376,569	996,207	08/31/2012	04/07/2028
26847@-AA-8	Edx/Ge Inventory Supply Pass-Thru Certif				2.A	2,856,319	.94.9985	2,713,449	2,856,307	2,856,319	.0	(28)	.0	.0	3.250	3.249	JAJO	72,326	107,346	12/28/2017	04/15/2028
26848@-AA-5	EDX/GE Inventory Supply Pass-Thru Certif				2.A	4,934,448	.96.5680	4,765,028	4,934,376	4,934,448	.0	(44)	.0	.0	4.400	4.399	JAJO	158,824	227,122	10/01/2018	01/15/2029
26848*-AA-9	EDX/GE Inventory Supply Pass-Thru Certif				2.A	1,416,172	.94.3638	1,336,354	1,416,172	1,416,172	.0	.0	.0	.0	3.290	3.290	JAJO	22,404	52,718	01/03/2020	01/15/2030
278265-AE-3	Eaton Vance Corp-SENIOR UNSECURED			1,2	1.G FE	3,494,014	.92.3721	3,233,024	3,500,000	3,494,014	.0	3,311	.0	.0	3.500	3.543	AO	28,924	312,715	04/03/2017	04/06/2027
302508-AQ-9	FMR LLC-UNSECURED				1.E FE	6,499,093	.107.8254	6,469,524	6,000,000	6,499,093	.0	(444,233)	.0	.0	7.570	5.996	JD	20,187	1,511,816	10/28/2022	06/15/2029
369604-BH-5	General Electric Co-SENIOR UNSECURED BON				2.B FE	12,447,414	.86.6269	8,662,688	10,000,000	12,447,414	.0	(82,226)	.0	.0	4.500	2.940	MS	137,500	450,000	08/03/2021	03/11/2044
369604-BX-0	General Electric Co-SENIOR UNSECURED			1,2	2.B FE	11,623,304	.81.7321	8,173,208	10,000,000	11,623,304	.0	(73,106)	.0	.0	4.250	3.013	MN	70,833	425,000	07/14/2021	05/01/2040
369626-AB-7	GENERAL ELECTRIC Co-SR UNSECURED GMTN				2.B FE	43,654	.110.3573	41,936	38,000	43,654	.0	(216)	.0	.0	6.875	5.469	JJ	1,241	2,613	01/24/2012	01/10/2039
410867-AA-3	Hanover Insurance Group -SENIOR UNSECURE				2.B FE	109,146	.104.7938	118,417	113,000	109,146	.0	1,160	.0	.0	7.625	9.027	AO	1,819	8,616	05/22/2003	10/15/2025
44106M-AV-4	Service Properties Trust-SENIOR UNSECURE			1,2	4.B FE	1,982,315	.83.5000	1,670,000	2,000,000	1,982,315	.0	5,015	.0	.0	5.250	5.560	FA	39,667	105,000	01/29/2016	02/15/2026
44106M-AW-2	Service Properties Trust-SENIOR UNSECURE			1,2	4.B FE	7,961,059	.78.2810	6,262,482	8,000,000	7,961,059	.0	8,196	.0	.0	4.950	5.081	FA	149,600	396,000	01/10/2017	02/15/2027
44106M-AY-8	Service Properties Trust-SENIOR UNSECURE			1,2	4.B FE	3,442,513	.66.2806	2,319,820	3,500,000	3,442,513	.0	6,650	.0	.0	4.375	4.648	FA	57,847	153,125	01/30/2018	02/15/2030
49271V-AJ-9	Keurig Dr Pepper Inc-SENIOR UNSECURED			1,2	2.B FE	20,148,045	.87.3161	17,463,218	20,000,000	20,148,045	.0	(22,455)	.0	.0	3.200	3.488	MN	106,667	746,667	03/17/2022	05/01/2030
49271V-AJ-9	Keurig Dr Pepper Inc-SENIOR UNSECURED			1,2	2.B FE	7,818,624	.80.4892	6,680,604	8,300,000	7,818,624	.0	41,524	.0	.0	2.250	3.054	MS	54,988	241,738	03/03/2022	03/15/2031
49271V-AQ-3	Keurig Dr Pepper Inc-SENIOR UNSECURED			1,2	2.B FE	14,228,000	.91.1595	13,673,931	15,000,000	14,228,000	.0	38,900	.0	.0	4.050	4.741	AO	128,250	420,188	05/20/2022	04/15/2032
53079E-AZ-7	LIBERTY MUTUAL GROUP INC-SENIOR UNSECURE				2.B FE	4,555,869	.98.3825	3,216,123	3,269,000	4,555,869	.0	(45,192)	.0	.0	6.500	3.645	MN	35,414	212,485	06/09/2021	05/01/2042
53079E-BA-3	Liberty Mutual Group Inc-SENIOR UNSECURE				2.B FE	2,425,201	.99.2908	2,408,794	2,426,000	2,425,201	.0	1,605	.0	.0	4.250	4.320	JD	1,605	103,105	06/13/2013	06/15/2023
53079E-BG-8	Liberty Mutual Group Inc-SENIOR UNSECURE				2.B FE	13,565,535	.93.6242	12,708,549	13,574,000	13,565,535	.0	1,112	.0	.0	4.569	4.580	FA	258,415	620,196	01/28/2019	02/01/2029
53079E-BJ-2	Liberty Mutual Group Inc-SENIOR UNSECURE			1,2	2.B FE	11,184,390	.70.5724	7,057,242	10,000,000	11,184,390	.0	(26,483)	.0	.0	3.951	3.290	AO	83,410	395,100	10/05/2021	10/15/2050
53636C-AA-2	LiquiGlide Inc-SECURED			2	1.F PL	7,630,000	.93.6893	7,148,495	7,630,000	7,630,000	.0	.0	.0	.0	5.500	5.501	FIAN	108,410	362,531	02/23/2022	02/24/2026
541056-AA-5	GoTo Group Inc-SECURED			1,2	4.B FE	959,665	.53.6140	670,175	1,250,000	959,665	.0	15,915	.0	.0	5.500	12.164	MS	22,917	57,292	08/22/2022	09/01/2027
664675-AM-7	Northeastern University-UNSECURED				1.E FE	6,000,000	.99.7554	5,985,325	6,000,000	6,000,000	.0	.0	.0	.0	5.285	5.284	MS	105,700	317,100	01/10/2014	03/01/2032
714046-AA-2	PerkinElmer Inc-SENIOR UNSECURED			1,2	2.B FE	9,997,130	.80.7073	9,070,732	10,000,000	9,997,130	.0	289	.0	.0	2.550	2.554	MS	75,083	255,000	03/04/2021	03/15/2031
740816-AD-5	PRES & FELLOWS OF HARVAR-BOND	SD			1.A FE	1,415,783	.107.2210	1,259,846	1,175,000	1,415,783	.0	(10,924)	.0	.0	5.625	3.874	AO	27,773	66,094	01/11/2013	10/01/2038
740816-AG-8	PRES & FELLOWS OF HARVAR-UNSECURED				1.A FE	20,163,232	.117.9784	17,696,759	15,000,000	20,163,232	.0	(233,387)	.0	.0	6.500	3.646	JJ	449,583	975,000	08/23/2012	01/15/2039
740816-AK-9	PRES & FELLOWS OF HARVAR-SENIOR UNSECURE			1	1.A FE	4,000,000	.92.2924	3,691,695	4,000,000	4,000,000	.0	.0	.0	.0	3.529	3.520	AO	35,290	141,160	04/29/2013	10/01/2031
81618T-AC-4	Office Properties Income-SENIOR UNSECURE			1,2	3.A FE	9,949,981	.90.6980	9,069,801	10,000,000	9,949,981	.0	22,161	.0	.0	4.500	4.753	FA	187,500	450,000	01/29/2015	02/01/2025
81721M-AM-1	Diversified Healthcare T-SENIOR UNSECURE			1,2	5.A FE	7,922,891	.56.7070	4,536,560	8,000,000	7,922,891	.0	12,851	.0	.0	4.750	4.964	FA	143,556	380,000	02/08/2018	02/15/2028
11523*-AA-3	Brown Advisory Managemen Senior Secured				1.G PL	14,000,000	.77.6295	10,868,130	14,000,000	14,000,000	.0	.0	.0	.0	2.890	2.890	MN	51,699	404,600	11/15/2021	11/15/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
127608-AA-1	CGA Capital Corp Pass Thru Ctls Series 2 .....	.....	.....	.....	1.B	9,141,424 .....	.....	8,282,505	9,141,424	9,141,424	0	0	0	0	2.500	2.500	MON	91,450	239,641	03/03/2021	03/10/2031
20727P-AG-9	Congressional Bancshares-CGLBNC 4 01/01/ .....	.....	.....	2	2.A PL	15,000,000 .....	.....	13,125,000	15,000,000	15,000,000	0	0	0	0	4.000	4.000	JJ	300,000	600,000	12/15/2021	01/01/2032
25470D-AJ-8	DISCOVERY COMMUNICATIONS-SENIOR UNSECURE .....	.....	.....	.....	2.C FE	1,147,506 .....	.....	742,647	1,000,000	1,147,506	0	(4,757)	0	0	4.875	3.822	AO	12,188	48,750	06/02/2021	04/01/2043
268948-AA-4	Eagle Bancorp Inc-SUBORDINATED .....	.....	.....	.....	2.B FE	4,000,000 .....	.....	3,955,685	4,000,000	4,000,000	0	0	0	0	5.750	5.746	MS	76,667	230,000	07/31/2014	09/01/2024
313747-AV-9	FEDERAL REALTY INVESTMEN-SR UNSECURED .....	.....	.....	1,5	2.A FE	2,156,807 .....	.....	1,488,096	1,895,000	2,156,807	0	(7,567)	0	0	4.500	3.571	JD	7,106	92,381	01/19/2022	12/01/2044
313747-AX-5	FEDERAL REALTY INVESTMEN-SENIOR UNSECURE .....	.....	.....	1,2	2.A FE	10,696,642 .....	.....	6,694,813	10,000,000	10,696,642	0	(20,155)	0	0	3.625	3.196	FA	151,042	362,500	07/15/2021	08/01/2046
313747-AZ-0	Federal Realty Investmen-SENIOR UNSECURE .....	.....	.....	1,2	2.A FE	1,622,897 .....	.....	1,643,348	1,900,000	1,622,897	0	5,902	0	0	3.200	5.954	JD	2,702	33,102	10/28/2022	06/15/2029
44107T-BA-3	Host Hotels & Resorts LP-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	9,509,367 .....	.....	7,638,766	10,000,000	9,509,367	0	43,767	0	0	2.900	3.544	JD	12,889	320,611	01/18/2022	12/15/2031
478111-AC-1	Johns Hopkins Health Sys-UNSECURED .....	.....	.....	.....	1.D FE	23,965,378 .....	.....	19,037,365	23,609,000	23,965,378	0	(7,354)	0	0	3.837	3.739	MN	115,751	1,009,371	03/24/2022	05/15/2046
518058-AH-1	LaSalle Property Fund, L Gtd Senior Note .....	.....	.....	.....	2.B	10,000,000 .....	.....	8,244,310	10,000,000	10,000,000	0	0	0	0	2.580	2.580	MN	36,550	165,550	05/10/2022	05/10/2029
524901-AR-6	Legg Mason Inc-SENIOR UNSECURED BOND .....	.....	.....	1	1.F FE	5,719,592 .....	.....	3,911,099	4,000,000	5,719,592	0	(58,723)	0	0	5.625	2.885	JJ	103,750	225,000	08/02/2021	01/15/2044
539830-BU-2	Lockheed Martin Corp-SENIOR UNSECURED .....	.....	.....	1,2	1.G FE	10,068,948 .....	.....	10,065,954	10,000,000	10,068,948	0	(2,652)	0	0	4.950	4.675	AO	92,125	92,125	11/22/2022	10/15/2025
571903-BD-4	Marriott International I-SENIOR UNSECURE .....	.....	.....	1,2	2.B FE	5,000,000 .....	.....	5,039,385	5,000,000	5,000,000	0	23	0	0	5.750	5.747	MN	47,917	287,500	04/14/2020	05/01/2025
571903-BF-9	Marriott International I-SENIOR UNSECURE .....	.....	.....	1,2	2.B FE	15,124,616 .....	.....	12,515,247	15,000,000	15,124,616	0	(11,235)	0	0	3.500	3.650	AO	110,833	635,833	02/24/2022	10/15/2032
571903-BG-7	Marriott International I-SENIOR UNSECURE .....	.....	.....	1,2	2.B FE	9,795,113 .....	.....	8,112,121	10,000,000	9,795,113	0	19,913	0	0	2.850	3.132	AO	60,167	345,167	01/21/2022	04/15/2031
571903-BH-5	Marriott International I-SENIOR UNSECURE .....	.....	.....	1,2	2.B FE	14,790,091 .....	.....	11,513,873	15,000,000	14,790,091	0	16,542	0	0	2.750	2.902	AO	87,083	412,500	10/06/2021	10/15/2033
58942H-AB-7	Mercy Health/OH-SECURED .....	.....	.....	1,2	1.E FE	8,000,132 .....	.....	7,425,876	8,000,000	8,000,132	0	(61)	0	0	3.555	3.554	FA	118,500	284,400	12/12/2017	08/01/2027
58967L-AA-2	Midcap Financial Issuer -SENIOR UNSECURE .....	.....	.....	1,2	4.A FE	7,023,645 .....	.....	5,960,054	6,923,000	7,023,645	0	(26,720)	0	0	6.500	6.009	MN	74,999	449,995	10/14/2021	05/01/2028
58969A-AA-7	Midcap Financial Issuer -SENIOR UNSECURE .....	.....	.....	1,2	4.A FE	8,197,117 .....	.....	6,686,473	8,282,000	8,197,117	0	9,531	0	0	5.625	5.804	JJ	214,814	465,863	10/26/2021	01/15/2030
681936-BB-5	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	9,013,382 .....	.....	8,764,382	8,900,000	9,013,382	0	(106,501)	0	0	4.950	1.721	AO	110,138	488,813	01/20/2022	04/01/2024
681936-BD-1	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	4,990,097 .....	.....	4,854,026	5,000,000	4,990,097	0	4,489	0	0	4.500	4.602	JJ	103,750	225,000	09/04/2014	01/15/2025
681936-BH-2	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	4,994,916 .....	.....	4,905,746	5,000,000	4,994,916	0	1,468	0	0	5.250	5.286	JJ	121,042	262,500	09/16/2015	01/15/2026
681936-BJ-8	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	1,235,677 .....	.....	1,225,402	1,236,000	1,235,677	0	466	0	0	4.375	4.415	FA	22,531	54,075	06/30/2016	08/01/2023
681936-BL-3	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	10,185,679 .....	.....	8,224,828	10,000,000	10,185,679	0	(23,921)	0	0	3.625	3.305	AO	90,625	453,125	01/18/2022	10/01/2029
681936-BM-1	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	25,107,014 .....	.....	19,137,916	24,732,000	25,107,014	0	(42,241)	0	0	3.375	3.048	FA	347,794	834,705	10/04/2021	02/01/2031
681936-BN-9	Omega Healthcare Investo-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	17,890,873 .....	.....	12,985,474	18,000,000	17,890,873	0	8,719	0	0	3.250	3.320	AO	123,500	588,250	03/03/2021	04/15/2033
691205-AA-6	Owl Rock Technology Fina-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	7,567,476 .....	.....	6,930,518	7,250,000	7,567,476	0	(121,071)	0	0	6.750	4.809	JD	246,047	489,375	09/16/2020	06/30/2025
691205-AC-2	Owl Rock Technology Fina-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	13,943,883 .....	.....	12,715,343	14,000,000	13,943,883	0	17,142	0	0	4.750	4.896	JD	29,556	665,000	09/16/2020	12/15/2025
691205-AE-8	Owl Rock Technology Fina-SENIOR UNSECURE .....	.....	.....	1,2	2.C FE	4,978,145 .....	.....	4,381,950	5,000,000	4,978,145	0	5,774	0	0	3.750	3.886	JD	7,292	187,500	12/10/2020	06/17/2026
75606*-AC-4	Realterm Logistics Incom Senior Note Ser .....	.....	.....	.....	2.B PL	36,100,000 .....	.....	32,692,557	36,100,000	36,100,000	0	0	0	0	4.870	4.870	MN	185,574	1,064,609	05/23/2022	05/23/2032
75606*-AD-2	Realterm Logistics Incom Senior Note Ser .....	.....	.....	.....	2.B PL	28,900,000 .....	.....	25,651,004	28,900,000	28,900,000	0	0	0	0	5.020	5.020	MN	153,138	878,528	05/23/2022	05/23/2034
800363-AB-9	Sandy Spring Bancorp Inc-SUBORDINATED .....	.....	.....	2	2.B FE	10,000,000 .....	.....	9,275,000	10,000,000	10,000,000	0	0	0	0	4.250	4.250	MN	54,306	425,000	10/29/2019	11/15/2029
800363-AC-7	Sandy Spring Bancorp Inc-SUBORDINATED .....	.....	.....	2	2.B FE	25,000,000 .....	.....	22,180,400	25,000,000	25,000,000	0	0	0	0	3.875	3.875	MS	244,878	761,545	03/15/2022	03/30/2032
468223-AW-2	Jackson Laboratory/The-UNSECURED .....	.....	.....	1,2	1.E FE	975,895 .....	.....	614,957	1,000,000	975,895	0	425	0	0	3.468	3.604	JJ	17,340	34,680	03/08/2022	07/01/2051
125896-BN-9	CMS ENERGY CORP-SENIOR UNSECURED BOND .....	.....	.....	1,2	2.B FE	18,094,361 .....	.....	12,488,207	13,708,000	18,094,361	0	(154,547)	0	0	4.875	2.821	MS	222,755	668,265	08/03/2021	03/01/2044
16372F-AA-0	Chemical Bank Pass-Thru Certificate .....	.....	.....	.....	2.A	13,325,848 .....	.....	11,248,402	13,325,848	13,325,848	0	0	0	0	4.589 .....	.....	MON	188,892	601,206	02/10/2020	06/10/2044
260543-CG-6	Dow Chemical Co/The-SENIOR UNSECURED NOT .....	.....	.....	1,2	2.A FE	60,895,230 .....	.....	43,160,588	52,041,000	60,895,230	0	(326,536)	0	0	4.375	3.190	MN	290,924	10,097,266	07/16/2021	11/15/2042
26067*-AA-3	Dow (Midland Ml) Control Trust Certifica .....	.....	.....	.....	2.A	9,964,905 .....	.....	9,718,666	9,936,433	9,964,905	0	(3,393)	0	0	5.180	5.146	MON	109,225	527,991	12/11/2013	03/15/2034
337930-AD-3	Flagstar Bancorp Inc-SUBORDINATED .....	.....	.....	2	2.C FE	8,000,000 .....	.....	7,254,814	8,000,000	8,000,000	0	0	0	0	4.125 .....	.....	MN	51,333	326,333	10/23/2020	11/01/2030
345277-AE-7	FORD HOLDINGS LLC-SENIOR UNSECURED .....	.....	.....	.....	3.B FE	3,982,773 .....	.....	3,553,486	3,179,000	3,982,773	0	(91,063)	0	0	9.300	5.049	MS	98,549	295,647	03/30/2017	03/01/2030
345370-CA-6	Ford Motor Co-SENIOR UNSECURED NOTE .....	.....	.....	.....	3.B FE	2,470,000 .....	.....	2,051,420	2,000,000	2,470,000	0	0	0	0	7.450	7.450	JJ	68,292	142,792	02/18/2022	07/16/2031
345397-XL-2	Ford Motor Credit Co LLC-SENIOR UNSECURE .....	.....	.....	.....	3.B FE	10,000,000 .....	.....	9,340,000	10,000,000	10,000,000	0	0	0	0	4.134	4.133	FA	168,805	413,400	07/30/2015	08/04/2025
345397-XU-2	Ford Motor Credit Co LLC-SENIOR UNSECURE .....	.....	.....	.....	3.A FE	15,000,000 .....	.....	13,981,734	15,000,000	15,000,000	0	0	0	0	4.389	4.389	JJ	316,374	658,350	01/05/2016	01/08/2026
345397-YG-2	FORD MOTOR CREDIT CO LLC-SENIOR UNSECURE .....	.....	.....	2	3.A FE	1,000,000 .....	.....	972,750	1,000,000	1,000,000	0	0	0	0	3.810	3.810	JJ	18,203	38,100	01/04/2017	01/09/2024
36186C-BY-8	ALLY FINL INC SR GTD NT .....	.....	.....	.....	2.C FE	13,426,634 .....	.....	10,311,901	10,000,000	13,426,634	0	(309,466)	0	0	8.000	3.463	MN	133,333	933,333	01/18/2022	11/01/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
37045V-AF-7	GENERAL MOTORS CO-SENIOR UNSECURED				.. 2.C FE	27,262,530	..92.4636	18,492,714	20,000,000	27,262,530	..0	(229,023)	..0	..0	..6.250	3.721	AO	309,028	1,250,000	10/05/2021	10/02/2043
37045V-AG-5	General Motors Co-SENIOR UNSECURED				.. 2.C FE	8,343,856	..97.0366	7,762,931	8,000,000	8,343,856	..0	(139,824)	..0	..0	..4.000	2.035	AO	80,000	400,000	01/19/2022	04/01/2025
37045V-AY-6	General Motors Co-SENIOR UNSECURED		1,2		.. 2.C FE	9,715,795	..95.5537	9,555,374	10,000,000	9,715,795	..0	2,195	..0	..0	..5.400	5.913	AO	114,000	114,000	12/02/2022	10/15/2029
46817M-AL-1	Jackson Financial Inc-SENIOR UNSECURED		1,2		.. 2.B FE	79,319,745	..77.7519	65,197,259	83,853,000	79,319,745	..0	112,352	..0	..0	..3.125	3.830	MN	276,598	1,586,802	09/23/2022	11/23/2031
46817M-AN-7	Jackson Financial Inc-SENIOR UNSECURED		1,2		.. 2.B FE	4,264,956	..63.9196	3,195,978	5,000,000	4,264,956	..0	3,189	..0	..0	..4.000	4.963	MN	21,111	121,111	09/23/2022	11/23/2051
46817M-AR-8	Jackson Financial Inc-SENIOR UNSECURED		1,2		.. 2.B FE	27,180,532	..98.8039	27,088,069	27,416,000	27,180,532	..0	4,648	..0	..0	..5.170	6.307	JD	90,557	901,798	10/19/2022	06/08/2027
521865-BC-8	Lear Corp-SENIOR UNSECURED		1,2		.. 2.B FE	9,607,618	..75.3908	7,539,076	10,000,000	9,607,618	..0	35,818	..0	..0	..2.600	3.101	JJ	119,889	298,278	01/18/2022	01/15/2032
581760-AS-4	McLaren Health Care Corp-SECURED				.. 1.E FE	10,749,370	..90.6065	9,740,203	10,750,000	10,749,370	..0	5	..0	..0	..4.534	4.534	MN	62,280	487,405	03/18/2015	05/15/2038
59748T-AA-7	MIDLAND COGEN VENTURE-SENIOR SECURED NOT		1		.. 3.B FE	2,035,219	..101.5000	2,065,722	2,035,194	2,035,219	..0	(145)	..0	..0	..6.000	5.994	MS	35,955	142,010	08/17/2011	03/15/2025
85855C-AD-2	Stellantis Finance US In-SENIOR UNSECURE		1,2		.. 2.B FE	37,157,172	..99.1684	38,179,819	38,500,000	37,157,172	..0	39,008	..0	..0	..5.625	6.788	JJ	655,703	655,703	11/15/2022	01/12/2028
85917W-AA-0	Sterling Bancorp Inc/MI-SUBORDINATED		2		.. 1.G FE	7,500,000	..100.0000	7,500,000	7,500,000	7,500,000	..0	0	..0	..0	..8.332	8.332	JAJO	515,627	419,041	08/04/2017	04/15/2026
863667-AG-6	STRYKER CORP-SR UNSECURED		1,2		.. 2.A FE	5,929,319	..85.0209	4,251,046	5,000,000	5,929,319	..0	(31,077)	..0	..0	..4.375	3.153	MN	27,951	218,750	04/27/2021	05/15/2044
896517-AB-5	Trinity Health Corp-SENIOR UNSECURED		1,2		.. 1.D FE	8,244,460	..69.6309	5,945,780	8,539,000	8,244,460	..0	12,404	..0	..0	..2.632	2.880	JD	18,729	224,746	06/04/2021	12/01/2040
N52698-AE-8	Lineage Logistics, LLC Senior Guaranteed				.. 2.B PL	23,078,250	..93.6800	22,576,646	22,500,000	24,099,750	..0	0	..0	..1,021,500	..3.330	3.330	FA	286,545	286,545	08/15/2022	08/20/2027
05490L-AA-7	Blue Cross and Blue Shie-SENIOR UNSECURE		1,2		.. 2.A FE	3,000,000	..95.6232	2,868,696	3,000,000	3,000,000	..0	30	..0	..0	..3.790	3.789	MN	18,950	113,700	04/21/2015	05/01/2025
107015-AA-7	Bremer Financial Corp-SUBORDINATED				.. 2.B FE	22,000,000	..98.1723	21,597,906	22,000,000	22,000,000	..0	0	..0	..0	..5.200	5.200	JD	575,178	1,144,000	12/29/2014	12/30/2024
141781-GF-5	Cargill Inc. Senior Note				.. 1.F	397,398	..100.6435	397,277	394,737	397,398	..0	(12,915)	..0	..0	..7.280	5.884	JD	14,448	43,025	10/29/2004	06/30/2023
229658-AA-3	WAG (Edina, Minnesota) C Trust Certifica				.. 2.B	3,942,302	..91.2955	3,573,326	3,914,023	3,942,302	..0	(2,706)	..0	..0	..4.590	4.522	MON	23,014	183,786	12/17/2014	07/15/2037
278865-AV-2	Ecolab Inc-SENIOR UNSECURED		1,2		.. 1.G FE	2,277,019	..92.8580	2,266,663	2,441,000	2,277,019	..0	3,862	..0	..0	..2.700	4.632	MN	10,985	10,985	11/22/2022	11/01/2026
278865-BN-9	Ecolab Inc-SENIOR UNSECURED		1,2		.. 1.G FE	12,726,591	..62.8197	8,556,043	13,620,000	12,726,591	..0	18,007	..0	..0	..2.700	3.042	JD	16,344	384,084	01/20/2022	12/15/2051
370334-BJ-2	General Mills Inc-SENIOR UNSECURED NOTE				.. 2.B FE	2,607,638	..98.6768	1,973,536	2,000,000	2,607,638	..0	(25,827)	..0	..0	..5.400	3.128	JD	4,800	108,000	02/25/2021	06/15/2040
86669P-AA-3	Sun Country Pass Through Series 2022-1A				.. 1.G PL	23,941,564	..88.8591	21,274,258	23,941,564	23,941,564	..0	0	..0	..0	..4.840	4.840	MS	840,037	840,037	09/15/2022	03/15/2031
86669Q-AA-1	Sun Country Pass Through Series 2022-1B				.. 2.B PL	6,642,175	..88.7839	5,897,182	6,642,175	6,642,175	..0	0	..0	..0	..5.750	5.751	MS	281,481	281,481	09/15/2022	03/15/2029
91159H-BJ-7	US Bancorp-SUBORDINATED		2		.. 1.F FE	4,488,448	..76.0933	3,618,235	4,755,000	4,488,448	..0	12,519	..0	..0	..2.491	2.988	MN	19,083	137,530	03/04/2022	11/03/2036
91159H-JF-8	US Bancorp-SENIOR UNSECURED		1,2		.. 1.F FE	10,089,888	..97.8210	10,329,898	10,560,000	10,089,888	..0	12,407	..0	..0	..4.548	5.487	JJ	212,119	212,119	11/04/2022	07/22/2028
91324P-CV-2	UnitedHealth Group Inc-SENIOR UNSECURED				.. 1.F FE	3,111,502	..95.2845	3,102,462	3,256,000	3,111,502	..0	4,171	..0	..0	..3.100	4.604	MS	29,720	29,720	11/22/2022	03/15/2026
91324P-DL-3	UnitedHealth Group Inc-SENIOR UNSECURED		1,2		.. 1.F FE	8,832,750	..87.0226	7,057,533	8,110,000	8,832,750	..0	(13,314)	..0	..0	..4.250	3.700	JD	15,319	359,994	03/17/2022	06/15/2048
91324P-EE-8	UnitedHealth Group Inc-SENIOR UNSECURED		1,2		.. 1.F FE	45,494,830	..75.3926	33,926,675	45,000,000	45,494,830	..0	(21,540)	..0	..0	..3.050	2.866	MN	175,375	1,450,444	06/09/2021	05/15/2041
91324P-EF-5	UnitedHealth Group Inc-SENIOR UNSECURED		1,2		.. 1.F FE	11,598,555	..72.1881	8,214,282	11,379,000	11,598,555	..0	(4,498)	..0	..0	..3.250	3.145	MN	47,254	417,072	01/20/2022	05/15/2051
035229-CQ-4	ANHEUSER-BUSCH COS LLC-DEBENTURE				.. 1.A FE	8,044,459	..104.0611	7,014,755	6,741,000	8,044,459	..0	(84,446)	..0	..0	..5.950	3.634	JJ	184,947	385,492	03/10/2022	01/15/2033
03523T-BU-1	Anheuser-Busch InBev Wor-SENIOR UNSECURE		1,2		.. 2.A FE	24,598,455	..99.4575	19,117,724	19,222,000	24,598,455	..0	(264,287)	..0	..0	..5.450	3.159	JJ	459,780	1,047,599	07/14/2021	01/23/2039
120568-BC-3	Bunge Ltd Finance Corp-SENIOR UNSECURED		1,5		.. 2.B FE	24,242,342	..82.2721	20,786,879	25,266,000	24,242,342	..0	71,342	..0	..0	..2.750	3.292	MN	90,712	713,119	05/23/2022	05/14/2031
1248EP-BJ-9	CCO HLDGS LLC/CAP CORP-SENIOR UNSECURED		1,2		.. 3.C FE	1,003,343	..92.9270	929,270	1,000,000	1,003,343	..0	(1,137)	..0	..0	..5.125	4.968	MN	8,542	59,792	02/24/2022	05/01/2027
1248EP-CN-1	CCO Holdings LLC / CCO H-SENIOR UNSECURE		1,2		.. 3.C FE	391,102	..79.6000	407,552	512,000	391,102	..0	1,980	..0	..0	..4.500	8.162	MN	3,840	15,360	10/20/2022	05/01/2032
1248EP-CQ-4	CCO Holdings LLC / CCO H-SENIOR UNSECURE		1,2		.. 3.C FE	2,764,110	..81.1040	2,433,120	3,000,000	2,764,110	..0	15,360	..0	..0	..4.750	5.879	FA	59,375	135,375	03/15/2022	02/01/2032
15135B-AT-8	Centene Corp-SENIOR UNSECURED		1,2		.. 2.C FE	3,003,345	..91.4741	2,744,222	3,000,000	3,003,345	..0	(405)	..0	..0	..4.625	4.599	JD	6,167	144,917	03/22/2022	12/15/2029
161175-BQ-6	Charter Communications O-FIRST LIEN		1,2		.. 2.C FE	7,998,116	..98.8215	7,													

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
485170-AS-3	Kansas City Southern-SENIOR UNSECURED			1,2	2.B FE	33,047,642	.89.8160	24,444,309	27,216,000	33,047,642	0	(171,319)	0	0	4.950	3.544	FA	508,939	1,347,192	02/26/2021	08/15/2045
67103H-AJ-6	O'Reilly Automotive Inc-SENIOR UNSECURED			1,2	2.A FE	4,998,423	.94.2282	4,711,409	5,000,000	4,998,423	0	(11,601)	0	0	4.200	4.204	AO	52,500	596,167	03/25/2020	04/01/2030
67103H-AK-3	O'Reilly Automotive Inc-SENIOR UNSECURED			1,2	2.B FE	7,538,437	.77.4482	6,428,204	8,300,000	7,538,437	0	65,698	0	0	1.750	3.021	MS	42,768	188,018	03/04/2022	03/15/2031
860630-AD-4	Stifel Financial Corp-SENIOR UNSECURED N				2.C FE	10,563,491	.97.9815	10,371,339	10,585,000	10,563,491	0	2,307	0	0	4.250	4.386	JJ	203,688	670,331	12/28/2016	07/18/2024
902788-AA-6	UMB Financial Corp-SUBORDINATED			2	2.A FE	14,000,000	.91.8550	12,859,700	14,000,000	14,000,000	0	0	0	0	3.700	3.700	MS	149,644	518,000	09/14/2020	09/17/2030
96038#-AA-8	Westin (St Louis MO) Lea Trust Certifica				1.D PL	9,696,621	.88.3672	8,568,613	9,696,599	9,696,621	0	16	0	0	4.453	4.453	MON	361,074	775,659	08/10/2017	07/15/2047
318916-AA-1	First Bancshares Inc/The-SUBORDINATED			2	2.C FE	3,999,508	.99.7327	3,989,308	4,000,000	3,999,508	0	330	0	0	5.875	5.884	MN	39,167	235,000	04/24/2018	05/01/2028
318916-AB-9	First Bancshares Inc/The-SUBORDINATED			2	2.C FE	1,999,840	.97.0000	1,940,000	2,000,000	1,999,840	0	16	0	0	6.400	6.401	FMAN	21,333	128,000	04/24/2018	05/01/2033
75970E-AD-9	Renasant Corp-SUBORDINATED			2	2.B FE	7,250,000	.85.2021	6,177,150	7,250,000	7,250,000	0	0	0	0	4.500	4.500	MS	96,063	326,250	08/31/2020	09/15/2035
75970E-AE-7	Renasant Corp-SUBORDINATED			2	2.B FE	11,625,000	.86.0314	10,001,146	11,625,000	11,625,000	0	0	0	0	3.000	3.000	JD	29,063	348,750	11/17/2021	12/01/2031
898402-AA-0	Trustmark Corp-SUBORDINATED			2	2.C FE	4,000,000	.90.9541	3,638,164	4,000,000	4,000,000	0	0	0	0	3.625	3.625	JD	12,083	145,000	11/18/2020	12/01/2030
32055Y-AA-0	First Interstate BancSys-SUBORDINATED			2	2.B FE	8,000,000	.108.0490	8,643,920	8,000,000	8,000,000	0	0	0	0	5.250	5.250	MN	53,667	420,000	05/13/2020	05/15/2030
06051G-FB-0	Bank of America Corp-SENIOR UNSECURED				1.G FE	6,999,324	.99.0912	6,936,381	7,000,000	6,999,324	0	474	0	0	4.125	4.132	JJ	127,531	288,750	01/15/2014	01/22/2024
06051G-FF-1	Bank of America Corp-SENIOR UNSECURED NO				1.G FE	4,861,277	.98.7389	4,802,662	4,864,000	4,861,277	0	1,896	0	0	4.000	4.042	AO	48,640	194,560	03/27/2014	04/01/2024
06051G-FH-7	Bank of America Corp-SUBORDINATED NOTE				2.A FE	12,998,305	.98.4858	12,803,155	13,000,000	12,998,305	0	625	0	0	4.200	4.205	FA	189,583	546,000	08/21/2014	08/26/2024
06051G-FM-6	Bank of America Corp-SUBORDINATED				2.A FE	10,402,848	.97.9180	9,791,795	10,000,000	10,402,848	0	(177,452)	0	0	4.000	1.992	JJ	176,667	376,667	01/21/2022	01/22/2025
06051G-FU-8	BANK OF AMERICA CORP-SUBORDINATED				2.A FE	7,009,146	.98.0229	6,861,605	7,000,000	7,009,146	0	(2,695)	0	0	4.450	4.404	MS	102,103	311,500	02/29/2016	03/03/2026
06051G-GL-7	Bank of America Corp-SENIOR UNSECURED			1,2	1.G FE	3,000,000	.92.6841	2,780,522	3,000,000	3,000,000	0	0	0	0	3.705	3.705	AO	20,686	111,150	04/19/2017	04/24/2028
06051G-HD-4	Bank of America Corp-SENIOR UNSECURED			1,2	1.F FE	17,086,546	.90.5854	15,540,826	17,156,000	17,086,546	0	10,272	0	0	3.419	3.495	JD	17,923	586,564	12/20/2017	12/20/2028
06051G-HG-7	Bank of America Corp-SENIOR UNSECURED			1,2	1.F FE	16,917,437	.92.5369	15,731,280	17,000,000	16,917,437	0	11,426	0	0	3.970	4.059	MS	217,468	674,900	04/19/2018	03/05/2029
06051G-KC-2	Bank of America Corp-SUBORDINATED			1,2	2.A FE	9,348,672	.73.7216	7,372,159	10,000,000	9,348,672	0	35,672	0	0	2.482	3.067	MS	68,944	317,144	01/18/2022	09/21/2036
06051G-KK-4	Bank of America Corp-SENIOR UNSECURED			1,2	1.G FE	9,676,254	.80.5978	8,059,778	10,000,000	9,676,254	0	22,354	0	0	2.972	3.353	FA	121,357	269,957	02/24/2022	02/04/2033
06051G-KL-2	Bank of America Corp-SUBORDINATED			1,2	2.A FE	36,745,000	.82.7408	30,403,114	36,745,000	36,745,000	0	0	0	0	3.846	3.846	MS	443,592	1,150,198	03/03/2022	03/08/2037
06051G-LA-5	Bank of America Corp-SENIOR UNSECURED			1,2	1.G FE	8,000,000	.98.9436	7,915,489	8,000,000	8,000,000	0	0	0	0	4.827	4.827	JJ	0	0	07/19/2022	07/22/2026
07330M-AA-5	Branch Banking & Trust C-SUBORDINATED			2	1.F FE	4,995,646	.94.7695	4,738,473	5,000,000	4,995,646	0	1,743	0	0	3.800	3.824	AO	32,194	302,733	09/22/2014	10/30/2026
10922N-AF-0	Brighthouse Financial In-SENIOR UNSECURE			1,2	2.B FE	8,440,821	.73.6248	5,521,863	7,500,000	8,440,821	0	(23,419)	0	0	4.700	3.891	JD	8,813	352,500	10/07/2021	06/22/2047
10922N-AG-8	Brighthouse Financial In-SENIOR UNSECURE			1,2	2.B FE	46,762,277	.95.1139	39,260,152	41,277,000	46,762,277	0	(612,952)	0	0	5.625	3.493	MN	296,678	10,367,107	03/23/2022	05/15/2030
10922N-AH-6	Brighthouse Financial In-SENIOR UNSECURE			1,2	2.B FE	2,254,702	.63.5593	1,752,331	2,757,000	2,254,702	0	6,286	0	0	3.850	5.054	JD	2,654	117,643	03/10/2022	12/22/2051
16877#-AA-0	Childress Klien-Cambridg Senior Secured				1.B	12,213,273	.90.1221	10,997,581	12,202,980	12,213,273	0	(1,221)	0	0	3.652	3.644	MON	182,633	419,152	01/05/2017	02/05/2036
16877#-AB-8	Childress Klein-Cambridg Senior Secured				1.B	16,158,137	.99.8151	16,130,640	16,160,521	16,158,137	0	120	0	0	5.438	5.440	MON	209,938	878,809	01/05/2017	01/05/2036
29299A-WS-1	GOB ENERGY - Bond				6. *	207	.32.2500	161,250	500,000	207	0	207	0	0	7.420	2,302.932	JAJO	45,654	45,654	09/26/2008	10/15/2030
337358-BH-7	Wachovia Corp-SUBORDINATED				2.B FE	5,152,128	.107.3455	5,367,275	5,000,000	5,152,128	0	(210,094)	0	0	7.574	6.604	FA	157,792	1,426,197	05/20/2008	08/01/2026
431282-AR-3	Highwoods Realty LP-SENIOR UNSECURED			1,2	2.B FE	6,986,929	.87.2692	6,108,841	7,000,000	6,986,929	0	1,728	0	0	4.200	4.233	AO	62,067	294,000	02/26/2019	04/15/2029
45687A-AJ-1	Trane Technologies Globa-SENIOR UNSECURE				2.B FE	1,999,772	.99.7631	1,995,262	2,000,000	1,999,772	0	407	0	0	4.250	4.271	JD	3,778	85,000	06/17/2013	06/15/2023
548661-DU-8	Lowe's Cos Inc-SENIOR UNSECURED			1,2	2.A FE	4,981,559	.95.7689	4,788,443	5,000,000	4,981,559	0	7,385	0	0	4.500	4.559	AO	47,500	799,000	03/24/2020	04/15/2030
548661-EA-1	Lowe's Cos Inc-SENIOR UNSECURED			1,2	2.A FE	19,912,469	.82.9692	16,593,830	20,000,000	19,912,469	0	8,669	0	0	5.265	2.684	AO	131,250	656,250	01/21/2022	04/01/2031
548661-EG-8	Lowe's Cos Inc-SENIOR UNSECURED			1,2	2.A FE	9,845,336	.93.9443	9,394,426	10,000,000	9,845,336	0	22,336	0	0	3.350	3.746	AO	83,750	257,764	04/25/2022	04/01/2027
548661-EH-6	Lowe's Cos Inc-SENIOR UNSECURED			1,2	2.A FE	19,798,284	.89.4176	18,777,692	21,000,000	19,798,284	0	62,314	0	0	3.750	4.513	AO	196,875	605,938	05/23/2022	04/01/2032
637138-AC-2	Truist Financial Corp-SENIOR UNSECURED				1.G FE	18,000,000	.98.7064	17,767,159	18,000,000	18,000,000	0										

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
946898-AG-4	WBI Energy Transmission, Senior Unsecur	.....	.....	.....	2.C	15,000,000	72.7654	10,914,810	15,000,000	15,000,000	0	0	0	0	3.670	3.670	JD	287,483	550,500	12/23/2021	12/23/2041
229738-AA-3	Great West Casualty Comp Trust Certifica	.....	.....	.....	1.C PL	13,718,420	89.0314	12,179,602	13,680,119	13,721,422	0	13,988	0	0	4.620	4.620	MON	692,220	983,917	06/15/2017	12/15/2037
335720-AB-4	First National of Nebras-SUBORDINATED	.....	2	.....	2.B FE	16,000,000	96.0958	15,375,326	16,000,000	16,000,000	0	382	0	0	4.375	4.368	AO	175,000	700,000	03/13/2018	04/01/2028
87236Y-AD-0	TD Ameritrade Holding Co-SENIOR UNSECURE	.....	1.2	.....	1.F FE	4,998,987	95.4453	4,772,266	5,000,000	4,998,987	0	(1,175)	0	0	3.625	3.633	AO	45,313	513,768	10/23/2014	04/01/2025
449148-AB-7	Hypertherm, Inc. Senior Secured Notes	.....	.....	.....	2.C PL	4,190,068	83.0344	3,479,198	4,190,068	4,190,068	0	0	0	0	3.190	3.190	MJSD	134,034	133,663	12/30/2021	12/30/2031
449148-AC-5	Hypertherm, Inc. Senior Secured Notes	.....	.....	.....	2.C PL	5,447,088	80.4560	4,382,509	5,447,088	5,447,088	0	0	0	0	3.380	3.380	MJSD	184,623	184,112	12/30/2021	12/30/2033
449148-AD-3	Hypertherm, Inc. Senior Secured Notes	.....	.....	.....	2.C PL	2,514,041	77.6891	1,953,136	2,514,041	2,514,041	0	0	0	0	3.610	3.610	MJSD	91,009	90,757	12/30/2021	12/30/2036
449148-AE-1	Hypertherm, Inc. Senior Secured Note Ser	.....	.....	.....	2.C PL	8,380,136	77.6891	6,510,452	8,380,136	8,380,136	0	0	0	0	3.610	3.610	MJSD	282,355	282,355	01/26/2022	12/30/2036
075887-BG-3	BECTON DICKINSON & CO-SR UNSECURED	.....	1.2	.....	2.B FE	24,124,994	89.6069	17,626,565	19,671,000	24,124,994	0	(142,721)	0	0	4.685	3.214	JD	40,959	921,586	08/03/2021	12/15/2044
134429-BJ-7	Campbell Soup Co-SENIOR UNSECURED	.....	1.2	.....	2.B FE	9,745,979	83.0591	8,305,905	10,000,000	9,745,979	0	28,979	0	0	2.375	2.761	AO	44,201	281,701	01/20/2022	04/24/2030
171232-AQ-4	CHUBB CORP-SR UNSECURED	.....	.....	.....	1.F FE	14,955,329	106.5033	12,141,378	11,400,000	14,955,329	0	(156,169)	0	0	6.000	3.262	MN	95,000	779,000	03/04/2022	05/11/2037
20786W-AD-9	ConnectOne Bancorp Inc-SUBORDINATED	.....	2	.....	2.C FE	5,000,000	99.0000	4,950,000	5,000,000	5,000,000	0	(110)	0	0	5.200	5.193	FA	108,333	260,000	01/11/2018	02/01/2028
233835-AQ-0	DAIMLER FINANCE NA LLC-SR UNSECURED	.....	.....	.....	1.G FE	15,529,458	123.4537	14,814,449	12,000,000	15,529,458	0	(362,456)	0	0	8.500	4.161	JJ	461,833	1,020,000	03/10/2016	01/18/2031
478160-BJ-2	Johnson & Johnson-SR UNSECURED	SD	1.2	.....	1.A FE	398,546	98.1253	392,501	400,000	398,546	0	827	0	0	4.375	4.417	JD	18,764	120,264	12/02/2013	12/05/2033
58769J-AB-3	Mercedes-Benz Finance No-SENIOR UNSECURE	.....	.....	.....	1.G FE	18,329,110	100.6734	18,387,993	18,265,000	18,329,110	0	(2,599)	0	0	5.375	5.241	MN	89,993	89,993	11/29/2022	11/26/2025
58933Y-BF-1	Merck & Co Inc-SENIOR UNSECURED	.....	1.2	.....	1.E FE	9,295,119	67.6270	6,762,696	10,000,000	9,295,119	0	14,119	0	0	2.750	3.122	JD	16,042	291,042	01/18/2022	12/10/2051
58933Y-BG-9	Merck & Co Inc-SENIOR UNSECURED	.....	1.2	.....	1.E FE	9,205,675	64.3393	6,433,933	10,000,000	9,205,675	0	9,575	0	0	2.900	3.262	JD	16,917	306,917	01/18/2022	12/10/2061
675234-AB-4	OceanFirst Financial Cor-SUBORDINATED	.....	2	.....	2.B FE	10,000,000	96.0000	9,600,000	10,000,000	10,000,000	0	0	0	0	5.250	5.250	MN	67,083	525,000	04/29/2020	05/15/2030
744320-AY-8	Prudential Financial Inc-SENIOR UNSECURE	.....	1.2	.....	1.G FE	51,266,757	80.0943	40,854,485	51,008,000	51,266,757	0	(6,298)	0	0	3.905	3.873	JD	132,791	9,812,334	12/07/2017	12/07/2047
744320-BS-3	Prudential Financial Inc-SENIOR UNSECURE	.....	.....	.....	1.G FE	2,018,877	93.1011	1,675,820	1,800,000	2,018,877	0	(7,433)	0	0	5.625	4.634	MN	13,781	101,250	12/15/2016	05/12/2041
744320-BU-8	PRUDENTIAL FINANCIAL INC-SR UNSECURED	.....	.....	.....	1.G FE	1,789,722	94.3304	1,477,213	1,566,000	1,789,722	0	(7,277)	0	0	5.800	4.654	MN	11,354	90,828	12/15/2016	11/16/2041
74456Q-CA-2	Public Service Electric -SECURED	.....	1.2	.....	1.F FE	3,057,301	71.4849	2,359,001	3,300,000	3,057,301	0	4,339	0	0	3.200	3.634	FA	44,000	96,800	03/09/2022	08/01/2049
74834L-BC-3	Quest Diagnostics Inc-SENIOR UNSECURED	.....	1.2	.....	2.B FE	10,044,875	83.3201	8,332,009	10,000,000	10,044,875	0	(4,325)	0	0	2.800	2.739	JD	140,778	280,778	01/24/2022	06/30/2031
78403D-AZ-3	SBA Tower Trust-SECURED	.....	2	.....	1.F FE	4,000,000	100.0000	4,000,000	4,000,000	4,000,000	0	0	0	0	6.599	6.599	MON	11,732	27,862	11/15/2022	01/15/2028
919794-AB-3	VALLEY NATIONAL BANCORP-SUBORDINATED NOT	.....	.....	.....	2.B FE	15,013,815	99.6635	14,949,521	15,000,000	15,013,815	0	(19,467)	0	0	5.125	4.985	MS	200,729	768,750	10/23/2013	09/27/2023
919794-AC-1	Valley National Bancorp-SUBORDINATED	.....	.....	.....	2.B FE	14,998,231	97.6787	14,651,810	15,000,000	14,998,231	0	647	0	0	4.550	4.555	JD	343,146	682,500	06/16/2015	06/30/2025
919794-AG-2	Valley National Bancorp-SUBORDINATED	.....	2	.....	2.B FE	30,000,000	96.5474	28,964,226	30,000,000	30,000,000	0	0	0	0	6.250	6.249	MS	526,042	684,375	09/15/2022	09/30/2032
24422E-VB-2	John Deere Capital Corp-SENIOR UNSECURED	.....	.....	.....	1.F FE	4,254,938	92.0718	4,069,572	4,420,000	4,254,938	0	28,048	0	0	2.250	3.330	MS	29,559	79,284	04/25/2022	09/14/2026
24422E-VK-2	John Deere Capital Corp-SENIOR UNSECURED	.....	.....	.....	1.F FE	2,715,089	88.8911	2,698,735	3,036,000	2,715,089	0	8,222	0	0	0.700	4.458	JJ	9,800	9,800	11/29/2022	01/15/2026
517834-AV-5	Las Vegas Sands Corp-SENIOR UNSECURED	.....	1.2	.....	3.A FE	10,016,382	90.2760	9,027,600	10,000,000	10,016,382	0	(4,593)	0	0	3.500	3.327	FA	129,306	350,000	08/07/2019	08/18/2026
026874-AZ-0	AMERICAN INTL GROUP-NOTE	.....	.....	.....	2.B FE	7,969,045	105.6557	6,288,630	5,952,000	7,969,045	0	(120,320)	0	0	6.250	3.123	MN	62,000	372,000	06/03/2021	05/01/2036
026874-DA-2	AMERICAN INTL GROUP-SR UNSECURED	.....	1.2	.....	2.B FE	19,520,504	87.0063	13,590,383	15,620,000	19,520,504	0	(132,858)	0	0	4.500	2.905	JJ	322,163	702,900	08/04/2021	07/16/2044
03524B-AF-3	ANHEUSER-BUSCH INBEV FIN-SR UNSECURED	.....	.....	.....	2.A FE	18,846,299	89.4419	16,846,299	21,071,000	25,212,342	0	(134,263)	0	0	4.625	3.320	FA	406,056	974,534	07/16/2021	02/01/2044
03761U-AG-1	Apollo Investment Corp-SENIOR UNSECURED	.....	.....	.....	2.C FE	2,244,331	94.8669	2,134,504	2,250,000	2,244,331	0	2,324	0	0	5.250	5.371	MS	38,719	118,125	02/24/2015	03/03/2025
03765H-AA-9	Apollo Management Holdin-SENIOR UNSECURE	.....	.....	.....	1.G FE	19,229,704	97.0819	18,680,497	19,242,000	19,229,704	0	8,144	0	0	4.000	4.045	MN	66,278	804,677	12/29/2015	05/30/2024
03765H-AF-8	Apollo Management Holdin-SENIOR UNSECURE	.....	1.2	.....	1.G FE	10,089,656	11.623,940	10,089,656	12,424,000	11,623,940	0	69,620	23,778	0	2.650	3.624	JD	353,014	353,014	09/15/2022	06/05/2030
038923-AD-0	Arbor Realty Trust Inc-SENIOR UNSECURED	.....	1.2	.....	1.F PL	12,998,605	98.4700	12,801,100	13,000,000	12,998,605	0	3,000	0	0	5.625	5.645	MN	121,875	731,250	05/10/2018	05/01/2023
038923-AJ-7	Arbor Realty Trust Inc-SENIOR UNSECURED	.....	.....	.....	1.F PL	7,500,000	96.2700	7,220,250	7,500,000	7,500,000	0	0	0	0	5.750	5.745	AO	107,813	431,250	03/22/2019	04/01/2024
038923-AK-2	Arbor Realty Trust Inc-SENIOR UNSECURED	.....	.....	.....	1.F PL	5,600,000	93.2000	5,219,200	6,000,000	5,600,000	0	0	0	0	4.750	4.748	AO	66,500	266,000	10/10/2019	10/15/2024
038923-AW-8	Arbor Realty Trust Inc-SENIOR UNSECURED	.....	1.2	.....	1.F PL	7,500,000	88.2500	6,618,750	7,500,000	7,500,000	0	0	0	0	5.000	4.998	AO	63,542	375,000	04/30/2021	04/30/2026
03939C-AB-9	ARCH CAPITAL FINANCE LLC-SENIOR UNSECURE	.....	1.2	.....	2.A FE	27,504,398	86.8523	18,172,975	20,924,000	27,504,398	0	(187,916)	0	0	5.031	3.128	JD	46,786	1,052,686	10/07/2021	12/15/2046
04010L-AV-5	Ares Capital Corp-SENIOR UNSECURED	.....	1.2	.....	2.C FE	5,992,545	94.8779	5,692,674	6,000,000	5,992,545	0	3,085	0	0	4.250	4.308	MS	85,000	255,000	01/08/2018	03/01/2025
04010L-BB-8	Ares Capital Corp-SENIOR UNSECURED	.....	1.2	.....	2.C FE	10,144,658	80.4407	8,044,073	10,000,000	10,144,658	0	(25,191)	0	0	2.875	2.581	JD	12,778	287,500	10/05/2021	06/15/2028
04621W-AC-4	Assured Guaranty US Hold-SENIOR UNSECURE	.....	.....	.....	2.A FE	3,958,536	99.5777	3,943,275	3,960,000	3,958,536	0	917	0	0	5.000	5.026	JJ	99,000	198,000	06/17/2014	07/01/2024
054561-AJ-4	AXA Equitable Holdings I-SENIOR UNSECURE	.....	1.2	.....	2.A FE	3,767,044	95.3507	3,777,794	3,962,000	3,767,044	0	15,317	0	0	4.350	5.429	AO	33,991	139,599	11/15/2022	04/20/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
05541T-AM-3	BGC Partners Inc-SENIOR UNSECURED			1,2	2.C FE	9,983,739	95.6438	9,564,375	10,000,000	9,983,739	0	8,575	0	0	3.750	3.844	AO	93,750	375,000	09/25/2019	10/01/2024
05541T-AP-6	BGC Partners Inc-SENIOR UNSECURED			1,2	2.C FE	4,395,890	93.5962	4,118,233	4,400,000	4,395,890	0	1,248	0	0	4.375	4.408	JD	8,556	192,500	07/10/2020	12/15/2025
09257W-AC-4	Blackstone Mortgage Trus-SENIOR UNSECURE				3.C FE	5,995,483	99.5000	5,970,000	6,000,000	5,995,483	0	23,354	0	0	4.750	5.087	MS	83,917	344,903	03/23/2018	03/15/2023
09260M-AA-5	Blackstone Diversified A-SECURED				1.F FE	20,489,000	91.5880	18,765,465	20,489,000	20,489,000	0	0	0	0	5.250	5.249	MN	137,447	1,075,673	05/21/2019	05/15/2029
09260M-AC-1	Blackstone Diversified A-SECURED				2.B FE	6,139,000	92.4640	5,676,365	6,139,000	6,139,000	0	0	0	0	6.250	6.248	MN	49,027	383,688	05/21/2019	05/15/2029
09261H-AF-4	Blackstone Private Credi Senior Unsecure				2.C FE	49,377,000	92.0400	45,446,591	49,377,000	49,377,000	0	0	0	0	5.610	5.610	MN	1,831,311	9,651,783	05/03/2022	05/03/2027
09261H-AF-6	Blackstone Private Credi Senior Unsecure				2.B FE	22,500,000	86.2600	19,408,500	22,500,000	22,500,000	0	0	0	0	3.270	3.269	FA	273,863	735,750	08/17/2021	08/17/2026
09261H-AB-3	Blackstone Private Credi-SENIOR UNSECURE				2.C FE	8,995,539	91.9416	8,393,349	9,129,000	8,995,539	0	30,168	0	0	1.750	2.631	MS	47,040	126,918	07/08/2022	09/15/2024
09261H-AH-0	Blackstone Private Credi-SENIOR UNSECURE				2.C FE	7,466,065	91.6705	6,875,291	7,500,000	7,466,065	0	6,798	0	0	2.350	2.596	MN	19,094	107,219	08/11/2022	11/22/2024
09261H-AK-3	Blackstone Private Credi-SENIOR UNSECURE	1,2			2.C FE	4,800,829	84.2952	4,214,758	5,000,000	4,800,829	0	16,710	0	0	3.250	4.294	MS	47,847	129,097	08/10/2022	03/15/2027
09261L-AC-2	Blackstone Secured Lendi-SENIOR UNSECURE	1,2			2.C FE	22,995,004	91.9811	21,155,648	23,000,000	22,995,004	0	549	0	0	3.625	3.285	JJ	384,451	833,750	11/23/2020	01/15/2026
09261X-AB-8	Blackstone Secured Lendi-SENIOR UNSECURE	1,2			2.C FE	7,437,399	87.7251	6,579,382	7,500,000	7,437,399	0	15,688	0	0	2.750	2.989	MS	60,156	206,250	03/09/2021	09/16/2026
09261X-AG-7	Blackstone Secured Lendi-SENIOR UNSECURE	1,2			2.C FE	9,988,345	77.9552	7,795,519	10,000,000	9,988,345	0	911	0	0	2.850	2.872	MS	214,542	214,542	06/30/2022	09/30/2028
09581J-AA-4	BLUE OIL FIN LLC-SENIOR UNSECURED	1,2			2.B FE	19,448,544	73.5823	14,716,458	20,000,000	19,448,544	0	52,141	0	0	3.125	3.502	JD	36,458	643,229	01/18/2022	06/10/2031
09581J-AC-0	Blue Owl Finance LLC-SENIOR UNSECURED	1,2			2.B FE	9,806,556	59.2300	5,922,995	10,000,000	9,806,556	0	3,382	0	0	4.125	4.242	AO	96,250	412,500	10/05/2021	10/07/2051
110122-CN-6	Bristol-Myers Squibb Co-SENIOR UNSECURED	1,2			1.F FE	5,339,152	95.4123	5,295,380	5,550,000	5,339,152	0	5,658	0	0	3.200	4.397	JD	7,893	96,693	11/22/2022	06/15/2026
110122-CR-7	Bristol-Myers Squibb Co-SENIOR UNSECURED	1,2			1.F FE	41,040,267	86.4431	30,255,068	35,000,000	41,040,267	0	(135,133)	0	0	4.250	3.267	AO	268,576	1,756,076	01/19/2022	10/26/2049
110122-DH-8	Bristol-Myers Squibb Co-SENIOR UNSECURED	1,2			1.F FE	9,981,750	91.5987	7,327,897	8,000,000	9,981,750	0	(67,344)	0	0	4.625	3.017	MN	47,278	370,000	02/26/2021	05/15/2044
11135E-AA-2	Broadstone Net Lease LLC-SENIOR UNSECURE	1,2			2.B FE	9,843,859	74.9288	7,885,503	10,524,000	9,843,859	0	53,711	0	0	2.600	3.462	MS	80,567	283,809	03/18/2022	09/15/2031
12325J-AD-3	Business Development Cor-SENIOR UNSECURE				2.C PL	11,243,965	99.2483	11,165,428	11,250,000	11,243,965	0	12,679	0	0	5.375	5.495	MN	52,070	604,688	05/11/2018	05/30/2023
12325J-AJ-0	Business Development Cor-SENIOR UNSECURE	1,2			2.C FE	9,923,516	87.8837	8,788,369	10,000,000	9,923,516	0	2,678	0	0	3.250	3.500	MS	82,153	325,000	03/24/2021	03/30/2026
124857-AZ-6	ViacomCBS Inc-SENIOR UNSECURED	1,2			2.B FE	9,935,909	88.9803	8,898,027	10,000,000	9,935,909	0	8,459	0	0	4.200	4.315	JD	35,000	420,000	02/20/2019	06/01/2029
126307-BA-4	CSC Holdings LLC-SENIOR UNSECURED	1,2			5.A FE	12,824,091	56.3400	7,222,788	12,820,000	12,824,091	0	(3,705)	0	0	5.750	5.601	JJ	339,908	737,150	09/27/2021	01/15/2030
126307-BD-8	CSC Holdings LLC-SENIOR UNSECURED	1,2			5.A FE	2,944,645	54.7583	1,642,750	3,000,000	2,944,645	0	5,587	0	0	4.625	4.908	JD	11,563	138,750	06/29/2021	12/01/2030
138616-AE-7	Cantor Fitzgerald LP-SENIOR UNSECURED	1,2			2.C FE	9,991,166	98.1347	9,813,470	10,000,000	9,991,166	0	5,791	0	0	4.875	4.939	MN	81,250	487,500	04/24/2019	05/01/2024
17259U-A*-6	CION Investment Corporat Senior Note				2.B PL	15,000,000	94.9963	14,249,445	15,000,000	15,000,000	0	0	0	0	4.500	4.499	FA	262,500	675,000	02/11/2021	02/11/2026
172967-CC-3	CITIGROUP INC-SUBORDINATED				2.B FE	12,350,936	100.1435	10,014,346	10,000,000	12,350,936	0	(167,764)	0	0	6.000	3.388	AO	101,667	701,667	01/18/2022	10/31/2033
172967-HB-0	CITIGROUP INC-SUBORDINATED				2.B FE	16,800,942	100.6387	16,102,190	16,000,000	16,800,942	0	(266,728)	0	0	5.500	3.510	MS	264,000	1,028,500	01/21/2022	09/13/2025
172967-JL-6	CITIGROUP INC-SUBORDINATED				2.B FE	4,998,140	97.2975	4,864,876	5,000,000	4,998,140	0	684	0	0	3.875	3.890	MS	51,128	193,750	03/19/2015	03/26/2025
172967-KU-4	Citigroup Inc-SUBORDINATED				2.B FE	44,746,063	93.0985	41,894,330	45,000,000	44,746,063	0	39,389	0	0	4.125	4.239	JJ	804,375	9,676,722	01/19/2017	07/25/2028
172967-NA-5	Citigroup Inc-SENIOR UNSECURED	1,2			1.G FE	9,731,355	86.8697	9,976,982	11,485,000	9,731,355	0	67,876	0	0	1.462	5.374	JD	10,261	94,217	10/19/2022	06/09/2027
172967-NN-7	Citigroup Inc-SENIOR UNSECURED	1,2			1.G FE	32,149,657	85.5915	27,389,283	32,000,000	32,149,657	0	(11,943)	0	0	3.785	3.724	MS	955,502	955,502	03/16/2022	03/17/2033
189754-AA-2	Tapestry Inc-SENIOR UNSECURED	1,2			2.C FE	6,911,662	97.5613	6,829,291	7,000,000	6,911,662	0	36,125	0	0	4.250	4.846	AO	74,375	297,500	10/26/2015	04/01/2025
189754-AC-8	Tapestry Inc-SENIOR UNSECURED	1,2			2.C FE	15,616,777	93.1296	14,583,166	15,659,000	15,616,777	0	8,219	0	0	4.125	4.190	JJ	297,847	645,934	07/06/2017	07/15/2027
219350-AX-3	Corning Inc-SENIOR UNSECURED				2.A FE	7,113,316	91.0973	5,465,840	6,000,000	7,113,316	0	(61,767)	0	0	4.700	3.076	MS	83,033	282,000	07/14/2021	03/15/2037
219350-BL-8	Corning Inc-SENIOR UNSECURED	1,2			2.A FE	1,824,188	91.5585	1,190,260	1,300,000	1,824,188	0	(3,846)	0	0	5.850	3.063	MN	9,718	85,768	01/20/2022	11/15/2068
225655-A@-8	Crescent Capital BDC, In Senior Note Ser				2.C FE	5,000,000	93.5885	4,679,425	5,000,000	5,000,000	0	0	0	0	4.000	3.999	FA	74,444	200,000	02/17/2021	02/17/2026
24765*-AA-3	Delta Epsilon Delaware, Senior Note Seri				1.F FE	2,500,000	94.5376	2,363,440	2,500,000	2,500,000	0	0	0	0	5.510	5.510	FA	48,595	48,595	08/24/2022	08/24/2029
29977A-BF-1	Evercore Inc. Senior Note Series F				2.A	6,000,000	90.6600	5,439,600	6,000,000	6,000,000	0	0	0	0	4.440	4.440	FA	311,540	133,200	08/01/2019	08/01/2031
29977A-B@-3	Evercore Inc. Senior Note Series E				2.A	3,000,000	92.1264	2,763,792	3,000,000	3,000,000	0	0	0	0	4.340	4.340	FA	152,262	65,100	08/01/2019	08/01/2029
317585-AA-5	Financial Institutions I-SUBORDINATED	2			2.C FE	5,000,000	97.5000	4,875,000	5,000,000	5,000,000	0	0	0	0	6.000	6.000	AO	63,333	300,000	04/09/2015	04/15/2030
37960X-AB-3	Global Infrastructure So-SENIOR UNSECURE	1,2			2.A FE	3,745,000	80.4375	3,012,384	3,745,000	3,745,000	0	0	0	0	7.500	7.499	AO	59,296	205,975	04/05/2022	04/15/2032
38141E-C2-3	GOLDMAN SACHS GROUP INC-SR UNSECURED	1,2			2.A FE	21,990,673	98.0317	21,566,967	22,000,000	21,990,673	0	5,750	0	0	3.850	3.879	JJ	407,031	847,000	07/03/2014	07/08/2024
38141G-RD-8	GOLDMAN SACHS GROUP INC-SR UNSECURED				2.A FE	6,298,243	99.9161	6,294,716	6,300,000	6,298,243	0	27,485	0	0	3.625	4.076	JJ	100,866	228,375	11/05/2013	01/22/2023
38141G-WL-4	Goldman Sachs Group Inc-/SENIOR UNSECURE	1,2			2.A FE	16,000,808	92.8577	14,857,224	16,000,000	16,000,808	0	(195)	0	0	3.691	3.690	JD	42,652	590,560	07/06/2017	06/05/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
38141G-WQ-3	Goldman Sachs Group Inc-/SENIOR UNSECURE	1,2			2.A FE	21,150,000	.96.3973	20,388,035	21,150,000	21,150,000	0	0	0	0	3.272	3.272	MS	176,852	692,028	09/26/2017	09/29/2025
38141G-XG-4	Goldman Sachs Group Inc-/SENIOR UNSECURE	1,2			1.F FE	8,666,375	.83.5174	7,516,566	9,000,000	8,666,375	0	33,755	0	0	2.600	3.187	FA	93,600	210,600	03/03/2022	02/07/2030
38141G-ZM-9	Goldman Sachs Group Inc-/SENIOR UNSECURE	1,2			1.F FE	67,242,162	.81.5940	55,973,470	68,600,000	67,242,162	0	83,325	0	0	3.102	2.981	FA	750,701	9,686,859	01/21/2022	02/24/2033
38143U-8H-7	GOLDMAN SACHS GROUP INC-/SENIOR UNSECURED	2			2.A FE	6,994,408	.96.1276	6,728,929	7,000,000	6,994,408	0	1,566	0	0	3.750	3.776	FA	91,875	262,500	02/22/2016	02/25/2026
38145G-AH-3	GOLDMAN SACHS GROUP INC-/SENIOR UNSECURE	1,2			2.A FE	7,879,970	.93.8397	7,507,178	8,000,000	7,879,970	0	28,094	0	0	3.500	3.920	MN	35,000	280,014	01/19/2017	11/16/2026
38147U-AC-1	Goldman Sachs BDC Inc-/SENIOR UNSECURED	1,2			2.C FE	3,498,626	.96.3046	3,370,662	3,500,000	3,498,626	0	568	0	0	3.750	3.768	FA	51,406	131,250	02/06/2020	02/10/2025
38173M-AA-0	Golub Capital BDC Inc-/SENIOR UNSECURED	1,2			2.C FE	10,996,553	.96.0965	10,570,615	11,000,000	10,996,553	0	2,289	0	0	3.375	3.397	AO	78,375	371,250	09/29/2020	04/15/2024
38173M-AB-8	Golub Capital BDC Inc-/SENIOR UNSECURED	1,2			2.C FE	9,979,605	.84.8942	8,489,419	10,000,000	9,979,605	0	5,227	0	0	2.500	2.558	FA	88,194	250,000	02/17/2021	08/24/2026
44107H-AF-9	NY Society for Relief of-/SECURED	1,2			1.E FE	4,570,900	.61.6243	3,081,214	5,000,000	4,570,900	0	8,950	0	0	2.667	3.132	AO	33,338	166,688	01/21/2022	10/01/2050
451102-BT-3	Icahn Enterprises LP / I-/SENIOR UNSECURE	1,2			3.C FE	5,039,382	.96.4860	4,824,302	5,000,000	5,039,382	0	(23,118)	0	0	6.250	5.639	MN	39,931	352,431	02/22/2022	05/15/2026
451102-BZ-9	Icahn Enterprises LP / I-/SENIOR UNSECURE	1,2			3.C FE	9,615,270	.91.7500	8,552,018	9,321,000	9,615,270	0	(68,469)	0	0	5.250	4.354	MN	62,528	489,353	10/14/2021	05/15/2027
451102-CC-9	Icahn Enterprises LP / I-/SENIOR UNSECURE	1,2			3.C FE	1,987,642	.84.0517	1,681,033	2,000,000	1,987,642	0	1,721	0	0	4.375	4.492	FA	36,458	87,500	06/28/2021	02/01/2029
459200-JG-7	International Business M-/SENIOR UNSECURE				1.G FE	6,922,149	.95.9590	6,649,956	6,930,000	6,922,149	0	1,589	0	0	3.450	3.487	FA	87,665	207,207	04/25/2022	02/19/2026
459200-KB-6	International Business M-/SENIOR UNSECURE				1.G FE	22,623,730	.86.2093	17,378,931	20,159,000	22,623,730	0	(110,286)	0	0	4.150	3.185	MN	106,899	895,772	01/20/2022	05/15/2039
459200-KC-4	International Business M-/SENIOR UNSECURE				1.G FE	17,214,389	.83.1458	12,471,873	15,000,000	17,214,389	0	(47,911)	0	0	4.250	3.398	MN	81,458	718,958	01/20/2022	05/15/2049
459506-AP-6	International Flavors & -/SENIOR UNSECURE	1,2			2.C FE	8,783,866	.83.6691	8,857,209	10,586,000	8,783,866	0	45,763	0	0	1.832	5.969	AO	40,942	46,301	12/02/2022	10/15/2027
459506-AQ-4	International Flavors & -/SENIOR UNSECURE	1,2			2.C FE	38,305,245	.79.1339	32,600,797	41,197,000	38,305,245	0	255,729	0	0	2.300	3.319	MN	157,922	1,105,453	03/31/2022	11/01/2030
459506-AR-2	International Flavors & -/SENIOR UNSECURE	1,2			2.C FE	32,099,439	.71.5178	22,655,409	31,678,000	32,099,439	0	(18,571)	0	0	3.268	3.324	MN	132,280	1,035,237	04/27/2021	11/15/2040
460690-BS-8	Interpublic Group of Cos-/SENIOR UNSECURE	1,2			2.B FE	9,979,790	.70.6693	7,066,932	10,000,000	9,979,790	0	781	0	0	3.375	3.390	MS	112,500	337,500	02/23/2021	03/01/2041
46625H-JX-9	JPMorgan Chase & Co-/SR UNSECURED				1.F FE	16,986,843	.98.2820	16,707,943	17,000,000	16,986,843	0	8,836	0	0	3.625	3.681	MN	82,167	616,250	05/06/2014	05/13/2024
46625H-JY-7	JPMorgan Chase & Co-/SUBORDINATED NOTE				1.G FE	12,986,616	.97.9078	12,728,019	13,000,000	12,986,616	0	7,181	0	0	3.875	3.936	MS	155,323	503,750	09/03/2014	09/10/2024
46647P-AJ-5	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.F FE	10,000,000	.82.7981	8,279,808	10,000,000	10,000,000	0	0	0	0	3.882	3.882	JJ	169,298	388,200	07/17/2017	07/24/2038
46647P-AM-8	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.F FE	4,891,841	.90.8261	4,541,307	5,000,000	4,891,841	0	15,515	0	0	3.509	3.913	JJ	77,003	175,450	03/14/2018	01/23/2029
46647P-AR-7	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.F FE	7,000,000	.92.5081	6,475,569	7,000,000	7,000,000	0	0	0	0	4.005	4.005	AO	52,955	280,350	04/16/2018	04/23/2029
46647P-AV-8	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.F FE	5,000,000	.93.2907	4,664,535	5,000,000	5,000,000	0	0	0	0	4.203	4.203	JJ	92,233	210,150	07/16/2018	07/23/2029
46647P-BP-0	JPMorgan Chase & Co-/SUBORDINATED	1,2			1.G FE	9,742,633	.82.3650	8,236,498	10,000,000	9,742,633	0	21,933	0	0	2.956	3.310	MN	39,413	335,013	02/28/2022	05/13/2031
46647P-CJ-8	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.E FE	32,438,824	.81.4266	27,277,894	33,500,000	32,438,824	0	71,196	0	0	2.963	3.335	JJ	430,129	926,431	03/11/2022	01/25/2033
46647P-CZ-7	JPMorgan Chase & Co-/SENIOR UNSECURED	1,2			1.E FE	10,022,519	.97.1473	9,714,727	10,000,000	10,022,519	0	(6,781)	0	0	4.080	3.975	AO	73,667	277,667	04/25/2022	04/26/2026
47233J-BH-0	Jefferies Group LLC / Je-/SENIOR UNSECURE				2.B FE	19,755,009	.89.4501	17,890,020	20,000,000	19,755,009	0	28,849	0	0	4.150	4.352	JJ	364,278	830,000	02/09/2018	01/23/2030
48249D-AA-9	KKR Group Finance Co II -/SENIOR UNSECURE	1,2			1.F FE	3,770,246	.92.0412	2,648,946	2,878,000	3,770,246	0	(31,873)	0	0	5.500	3.332	FA	65,954	158,290	10/07/2021	02/01/2043
49446R-AT-6	Kimco Realty Corp-/SENIOR UNSECURED	1,2			2.A FE	1,243,228	.77.2559	772,559	1,000,000	1,243,228	0	(6,751)	0	0	4.450	3.024	MS	14,833	44,500	08/03/2021	09/01/2047
49446R-AX-7	Kimco Realty Corp-/SENIOR UNSECURED	1,2			2.A FE	3,251,078	.83.7988	3,351,953	4,000,000	3,251,078	0	18,078	0	0	1.900	6.189	MS	25,333	25,333	11/04/2022	03/01/2028
49446R-AZ-2	Kimco Realty Corp-/SENIOR UNSECURED	1,2			2.A FE	10,027,377	.82.8782	8,287,816	10,000,000	10,027,377	0	(2,273)	0	0	3.200	3.025	AO	80,000	272,000	03/01/2022	04/01/2032
49446R-BA-6	Kimco Realty Corp-/SENIOR UNSECURED	1,2			2.A FE	14,915,958	.92.0899	13,813,479	15,000,000	14,915,958	0	1,458	0	0	4.600	4.670	FA	243,417	243,417	08/10/2022	02/01/2033
505742-AM-8	Ladder Capital Finance H-/SENIOR UNSECURE	1,2			3.B FE	1,290,423	.84.2498	1,263,747	1,500,000	1,290,423	0	22,923	0	0	4.250	8.357	FA	26,563	58,438	06/14/2022	02/01/2027
505742-AP-1	Ladder Capital Finance H-/SENIOR UNSECURE	1,2			3.B FE	2,484,741	.80.3106	2,088,076	2,600,000	2,484,741	0	12,526	0	0	4.750	5.577	JD	5,489	128,989	07/14/2022	06/15/2029
52107Q-AH-8	LAZARD GROUP LLC-/SENIOR UNSECURED	1,2			2.A FE	8,262,272	.92.6876	7,971,131	8,600,000	8,262,272	0	29,560	0	0	3.625	4.658	MS	103,917	520,288	10/28/2022	03/01/2027
52107Q-AJ-4	Lazard Group LLC-/SENIOR UNSECURED	1,2			2.A FE	11,159,964	.92.9485	10,070,972	10,835,000	11,159,964	0	(59,386)	0	0	4.500	3.257	MS	138,146	920,701	02/24/2022	09/19/2028
527288-BE-3	Jefferies Financial Grou-/SENIOR UNSECURE	1,2			2.B FE	16,769,880	.99.6815	16,752,473	16,806,000	16,769,880	0	41,102	0	0	5.500	5.767	AO	187,434	924,330	03/02/2016	10/18/2023
527288-BF-0	Leucadia National Corp-/SENIOR UNSECURED	1,2			2.B FE	4,081,602	.96.4804	4,824,020	5,000,000	4,081,602	0	15,699	0	0	6.625	8.523	AO	62,569	331,250	03/10/2016	10/23/2043
55272X-AA-0	MFA Financial Inc-/SENIOR UNSECURED				2.C PL	14,951,460	.90.7500	13,612,500	15,000,000	14,951,460	0	30,446	0	0	6.250	6.484	JD	41,667	937,500	05/30/2019	06/15/2024
579063-AB-4	Condor Merger Sub Inc-/SENIOR UNSECURED	1,2			5.B FE	5,638,716	.79.6780	5,312,929	6,668,000	5,638,716	0	43,551	0	0	7.375	10.503	FA	185,778	428,928	07/14/2022	02/15/2030
586054-AB-4	MEMORIAL SLOAN-KETTERING-/SR UNSECURED				1.D FE	11,239,235	.83.3717	8,337,165	10,000,000	11,239,235	0	(18,965)	0	0	4.125	3.452	JJ	206,250	412,500	03/08/2022	07/01/2052
59156R-BB-3	METLIFE INC-/SR UNSECURED				1.G FE	10,003,956	.99.7125	9,971,252	10,000,000	10,003,956	0	(5,522)	0	0	4.368	4.310	MJSD	19,413	436,800	09/03/2013	09/15/2023
59408T-AA-8	Michael Kors USA Inc-/SENIOR UNSECURED	1,2			2.C FE	9,167,823	.95.7930	9,770,886	10,200,000	9,167,823	0	484,450	0	0	4.250	10.438	MN	72,250	468,875	04/16/2020	11/01/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
		C o d e	F o r e i g n	Bond Char			Rate Used to Obtain Fair Value	Fair Value		Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
CUSIP Identification	Description				NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Par Value												
617446-BL-6	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	12,608,246	.82.8605	10,831,518	13,072,000	12,608,246	.0	41,609	.0	.0	2.699	3.202	JJ	155,826	332,233	02/25/2022	01/22/2031
617446-8U-6	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	7,485,825	.75.1438	6,236,933	8,300,000	7,485,825	.0	62,554	.0	.0	1.794	3.034	FA	55,838	130,289	03/03/2022	02/13/2032
61744Y-AP-3	Morgan Stanley-SENIOR UNSECURED			1,2	1.G FE	26,423,231	.91.6292	24,739,871	27,000,000	26,423,231	.0	61,868	.0	.0	3.772	4.500	JJ	444,153	975,900	09/30/2022	01/24/2029
61746B-DQ-6	Morgan Stanley-SR UNSECURED			1	1.G FE	7,989,040	.98.4391	7,875,124	8,000,000	7,989,040	.0	7,636	.0	.0	3.875	3.979	AO	53,389	310,000	04/23/2014	04/29/2024
61746B-DZ-6	Morgan Stanley-SENIOR UNSECURED				1.G FE	18,046,499	.96.7894	17,422,097	18,000,000	18,046,499	.0	(14,153)	.0	.0	3.875	3.784	JJ	298,375	697,500	12/14/2016	01/27/2026
61747Y-DU-6	MORGAN STANLEY-SUBORDINATED				2.A FE	9,996,124	.99.7521	9,975,206	10,000,000	9,996,124	.0	8,717	.0	.0	4.100	4.191	MN	44,417	410,000	05/22/2013	05/22/2023
61747Y-ED-3	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	22,952,952	.76.6593	19,548,114	25,500,000	22,952,952	.0	174,822	.0	.0	2.239	3.476	JJ	253,753	539,226	03/16/2022	07/21/2032
61747Y-EF-8	Morgan Stanley-SUBORDINATED			2	2.A FE	32,806,691	.72.6944	25,443,030	35,000,000	32,806,691	.0	119,191	.0	.0	2.484	3.046	MS	253,575	1,122,975	01/21/2022	09/16/2036
61747Y-EL-5	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	3,801,617	.81.1828	3,247,312	4,000,000	3,801,617	.0	12,937	.0	.0	2.943	3.533	JJ	52,320	110,199	03/11/2022	01/21/2033
61747Y-ET-8	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	11,185,289	.98.3916	11,000,178	11,180,000	11,185,289	.0	(1,011)	.0	.0	4.679	4.679	JJ	233,947	233,947	07/18/2022	07/17/2026
61747Y-EV-3	Morgan Stanley-SENIOR UNSECURED			1,2	1.E FE	10,441,974	.103.2400	10,324,004	10,000,000	10,441,974	.0	(5,826)	.0	.0	6.296	5.240	AO	127,669	127,669	12/02/2022	10/18/2028
61774A-A*-4	Morgan Stanley Direct Le Senior Unsecure				2.C PL	10,000,000	.99.8731	9,987,310	10,000,000	10,000,000	.0	.0	.0	.0	7.550	7.557	MS	226,500	226,500	09/13/2022	09/13/2025
623115-AC-6	Mount Sinai Hospitals Gr-SECURED				1.G FE	5,450,184	.85.5188	4,660,775	5,450,000	5,450,184	.0	(11)	.0	.0	3.831	3.831	JJ	104,395	208,790	12/14/2017	07/01/2035
62952E-AD-9	NYU Langone Hospitals-SECURED				1.F FE	4,999,674	.87.2252	4,361,259	5,000,000	4,999,674	.0	16	.0	.0	4.168	4.169	JJ	104,200	208,400	05/23/2017	07/01/2037
636180-BL-4	NATIONAL FUEL GAS CO-SENIOR UNSECURED NO			1	2.C FE	3,499,705	.99.8005	3,493,018	3,500,000	3,499,705	.0	1,278	.0	.0	3.750	3.777	MS	43,750	168,750	02/12/2020	03/01/2023
636180-BM-2	National Fuel Gas Co-SENIOR UNSECURED			1,2	2.C FE	17,983,179	.99.3483	17,882,685	18,000,000	17,983,179	.0	5,886	.0	.0	5.200	5.239	JJ	431,600	936,000	06/22/2015	07/15/2025
64128X-AG-5	NEUBERGER BERMAN GRP/FIN-SENIOR UNSECURE			1,2	2.B FE	7,601,076	.95.4610	7,718,019	8,085,000	7,601,076	.0	14,558	.0	.0	4.500	6.133	MS	107,126	119,001	11/15/2022	03/15/2027
647551-B*-0	New Mountain Finance Cor Senior Note Ser				2.C PL	8,000,000	.99.8926	7,991,408	8,000,000	8,000,000	.0	(278)	.0	.0	4.870	4.863	JJ	147,182	389,600	01/23/2018	01/30/2023
647551-C*-9	New Mountain Finance Cor 3.875% Note due				2.C PL	12,500,000	.91.1200	11,390,000	12,500,000	12,500,000	.0	.0	.0	.0	3.875	3.874	JJ	204,514	484,375	01/29/2021	01/29/2026
649322-AC-8	New York and Presbyteria-UNSECURED				1.C FE	8,687,446	.83.7042	7,424,560	8,870,000	8,687,446	.0	9,924	.0	.0	3.563	3.755	FA	131,683	316,038	12/12/2016	08/01/2036
649445-AC-7	New York Community Banco-SUBORDINATED			2	2.C FE	21,000,000	.96.7478	20,317,044	21,000,000	21,000,000	.0	.0	.0	.0	5.900	5.900	MN	189,292	1,239,000	11/02/2018	11/06/2028
649604-AG-0	New York Mortgage Trust -SENIOR UNSECURE			1,2	2.A PL	7,500,000	.92.8808	6,966,058	7,500,000	7,500,000	.0	.0	.0	.0	5.750	5.747	AO	73,073	431,250	04/15/2021	04/30/2026
650119-AA-8	New York University-UNSECURED			1	1.D FE	4,975,640	.97.9544	4,893,804	4,996,000	4,975,640	.0	2,812	.0	.0	5.236	5.332	JJ	130,795	271,356	09/28/2010	07/01/2032
65158N-AB-8	Newmark Group Inc-SENIOR UNSECURED			1,2	2.C FE	9,979,262	.99.0672	9,906,717	10,000,000	9,979,262	.0	21,439	.0	.0	6.125	6.362	MN	78,264	612,500	11/01/2018	11/15/2023
661919-BD-7	Omnicom Group Inc-SENIOR UNSECURED			1,2	2.A FE	11,981,752	.81.4054	9,768,648	12,000,000	11,981,752	.0	1,858	.0	.0	2.600	2.620	FA	130,000	312,000	04/28/2021	08/01/2031
69121K-AD-6	Owl Rock Capital Corp-SENIOR UNSECURED			1,2	2.C FE	7,965,069	.92.0878	7,367,020	8,000,000	7,965,069	.0	10,480	.0	.0	4.250	4.404	JJ	156,778	340,000	07/16/2020	01/15/2026
69122J-AA-5	Owl Rock Capital Corpora Senior Unsecure				2.B FE	5,000,000	.99.2970	4,964,850	5,000,000	5,000,000	.0	.0	.0	.0	7.580	7.580	JJ	168,444	168,444	07/21/2022	07/21/2027
693656-AC-4	PVH Corp-SENIOR UNSECURED			1,2	2.C FE	9,980,327	.96.5629	9,656,288	10,000,000	9,980,327	.0	7,127	.0	.0	4.625	4.708	JJ	219,688	462,500	07/06/2020	07/10/2025
70522H-AA-6	Peco Pallet Holdings Inc Senior Secured				2.B PL	12,500,000	.91.5491	11,443,638	12,500,000	12,500,000	.0	.0	.0	.0	3.280	3.280	MJSD	35,306	356,472	02/16/2022	03/01/2027
750038-AA-5	Renewable Energy Alterna Senior Secured				2.C PL	3,832,907	.76.0000	2,913,010	3,832,907	3,832,907	.0	3,883	.0	.0	3.820	3.820	MS	148,408	131,901	04/25/2022	09/30/2046
77775*-BU-4	Rosenthal & Rosenthal, I Senior Note				2.B PL	6,000,389	.97.9370	5,876,220	6,000,000	6,000,389	.0	(1,370)	.0	.0	4.380	4.364	JJ	121,180	266,207	01/18/2018	01/15/2025
77775*-BV-2	Rosenthal & Rosenthal, I Senior Note				2.B PL	13,734,000	.98.5591	13,536,107	13,734,000	13,734,000	.0	.0	.0	.0	5.320	5.317	JJ	671,791	757,502	01/31/2019	01/31/2026
78409V-BA-1	S&P Global Inc-SENIOR UNSECURED			1,2	1.G FE	4,774,718	.91.3938	4,569,689	5,000,000	4,774,718	.0	33,468	.0	.0	2.450	3.624	MS	40,833	96,299	12/01/2021	03/01/2027
78409V-BD-5	S&P Global Inc-SENIOR UNSECURED			1,2	1.G FE	9,959,865	.78.1301	7,813,007	10,000,000	9,959,865	.0	65	.0	.0	3.700	3.722	MS	123,333	290,861	03/08/2022	03/01/2052
78409V-BE-3	S&P Global Inc-SENIOR UNSECURED			1,2	1.G FE	5,899,810	.78.2051	4,504,611	5,760,000	5,899,810	.0	(1,541)	.0	.0	3.900	3.780	MS	74,880	176,592	03/17/2022	03/01/2062
78646U-AA-0	Safehold Inc. Senior Unsecured Notes				2.A PL	25,000,000	.69.9967	17,499,175	25,000,000	25,000,000	.0	.0	.0	.0	3.980	3.980	FA	375,889	925,903	03/28/2022	02/15/2052
82669G-CB-8	Signature Bank/New York -SUBORDINATED			2	2.B FE	15,000,000	.94.5000	14,175,000	15,000,000	15,000,000	.0	.0	.0	.0	4.125	4.125	MN	103,125	618,750	10/24/2019	11/01/2029
82669G-CK-8	Signature Bank/New York -SUBORDINATED			2	2.B FE	16,196,507	.91.2960	15,292,080	16,750,000	16,196,507	.0	32,757	.0	.0	4.000	4.507	AO	141,444	476,444	06/07/2022	10/15/2030
82967N-BG-2	Sirius XM Radio Inc-SENIOR UNSECURED			1,2	3.C FE	2,963,209	.82.5210	2,475,630	3,000,000	2,963,209	.0	4,074	.0	.0	4.125	4.135	JJ	61,875	123,750	12/01/2021	07/01/2030
82967N-BL-1	Sirius XM Radio Inc-SENIOR UNSECURED			1,2	3.C FE	2,855,816	.88.5430	2,656,290	3,000,000	2,855,816	.0	20,816	.0	.0	3.125	4.562	MS	31,250	78,125	05/26/2022	09/01/2026
82967N-BM-9	Sirius XM Radio Inc-SENIOR UNSECURED			1,2	3.C FE	389,704	.78.7883	393,941	500,000	389,704	.0	2,204	.0	.0	3.875	7.362	MS	6,458	6,458	09/29/2022	09/01/2031
86275H-AA-1	Strategic Credit Opportu Senior Note Ser				2.B PL	10,000,000	.89.0000	8,900,000	10,000,000	10,000,000	.0	.0	.0	.0	4.250	4.250	JAJJ	106,250	425,000	03/31/2021	04/01/2026
872280-AA-9	TOG BDC, Inc. Senior Note Series 2020				2.A FE	5,000,000	.96.6823	4,834,115	5,000,000	5,000,000	.0	.0	.0	.0	4.500	4.500	MJSD	56,875	225,000	12/10/2020	12/31/2024
872280-AA-1	TOG BDC, Inc. Senior Note Series 2019				2.A FE	7,500,000	.97.1397	7,285,478	7,500,000	7,500,000	.0	.0	.0	.0	4.750	4.750	MJSD	90,052	356,250	12/30/2019	12/31/2024
886758-AB-3	Tiger Global Management Senior Note Seri				1.F PL	25,000,000	.89.7237	22,430,925	25,000,000	25,000,000	.0	.0	.0	.0	3.820	3.820	AO	206,917	684,417	04/13/2022	04/13/2029

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
886758-AC-1	Tiger Global Management Senior Note Seri				.. 1.F PL	30,000,000	..86.6507	25,995,210	30,000,000	30,000,000	0	0	0	0	..3.930	..3.930	AO	844,950	844,950	04/13/2022	04/13/2032
886758-AD-9	Tiger Global Management Senior Note Seri				.. 1.F PL	10,000,000	..84.2833	8,428,330	10,000,000	10,000,000	0	0	0	0	..4.080	..4.080	AO	292,400	292,400	04/13/2022	04/13/2034
89682*-AA-6	TriplePoint Private Vent Senior Unsecure				2.C FE	30,000,000	..91.8300	27,549,000	30,000,000	30,000,000	0	0	0	0	..5.860	..5.860	AO	415,083	1,294,083	04/06/2022	04/06/2027
910304-AA-2	United Financial Bancorp-SUBORDINATED				2.B PL	4,000,000	..99.5715	3,982,859	4,000,000	4,000,000	0	0	0	0	..5.750	..5.746	AO	57,500	230,000	09/18/2014	10/01/2024
92343V-BG-8	VERIZON COMMUNICATIONS-SENIOR UNSECURED			1,2	2.A FE	11,634,371	..79.5501	7,955,012	10,000,000	11,634,371	0	(63,289)	0	0	..3.850	..2.754	MN	64,167	385,000	08/03/2021	11/01/2042
92343V-EA-8	Verizon Communications I-SENIOR UNSECURE				2.A FE	23,716,886	..93.8189	21,578,349	23,000,000	23,716,886	0	(42,723)	0	0	..4.500	..4.127	FA	405,375	986,250	03/16/2022	08/10/2033
92343V-EU-4	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	5,107,243	..93.7197	4,782,515	5,103,000	5,107,243	0	(539)	0	0	..4.016	..4.002	JD	15,940	204,936	02/28/2019	12/03/2029
92343V-FW-9	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	1,610,167	..61.7287	973,462	1,577,000	1,610,167	0	(586)	0	0	..2.987	..2.888	AO	7,982	47,105	10/07/2020	10/30/2056
92343V-GG-3	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	4,526,894	..89.8184	4,490,919	5,000,000	4,526,894	0	13,594	0	0	..1.450	4.648	MS	20,340	20,340	11/22/2022	03/20/2026
92343V-GJ-7	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	9,965,472	..82.2766	8,227,663	10,000,000	9,965,472	0	3,700	0	0	..2.550	..2.597	MS	70,833	255,000	03/11/2021	03/21/2031
92343V-GK-4	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	17,037,435	..75.3422	13,561,601	18,000,000	17,037,435	0	29,685	0	0	..3.400	..3.809	MS	168,300	780,300	02/25/2022	03/22/2041
92343V-GN-8	Verizon Communications I-SENIOR UNSECURE			1,2	2.A FE	38,092,331	..79.4014	31,919,343	40,200,000	38,092,331	0	131,735	0	0	..2.355	..3.008	MS	278,754	752,109	04/28/2022	03/15/2032
925524-AV-2	ViacomCBS Inc-SENIOR UNSECURED				2.B FE	11,988,642	..90.3352	9,033,521	10,000,000	11,988,642	0	(150,758)	0	0	..5.500	..3.228	MN	70,278	620,278	01/18/2022	05/15/2033
92556H-AB-3	ViacomCBS Inc-SENIOR UNSECURED			1,2	2.B FE	22,639,320	..89.1097	17,821,946	20,000,000	22,639,320	0	(275,480)	0	0	..4.950	..3.035	JJ	456,500	951,500	01/25/2022	01/15/2031
92556H-AC-1	ViacomCBS Inc-SENIOR UNSECURED			1,2	2.B FE	10,336,545	..73.0590	7,305,897	10,000,000	10,336,545	0	(4,755)	0	0	..4.950	..4.727	MN	57,750	552,750	03/10/2022	05/19/2050
92556H-AD-9	ViacomCBS Inc-SENIOR UNSECURED			1,2	2.B FE	30,192,071	..81.6639	21,374,712	26,174,000	30,192,071	0	(390,578)	0	0	..4.200	..2.325	MN	128,253	1,099,308	02/12/2021	05/19/2032
929043-AL-1	Vornado Realty LP-SENIOR UNSECURED			1,2	2.C FE	10,056,114	..74.3014	7,430,137	10,000,000	10,056,114	0	(5,486)	0	0	..3.400	..3.321	JD	28,333	368,333	01/18/2022	06/01/2031
929089-AB-6	Voya Financial Inc-SENIOR UNSECURED				2.B FE	12,215,390	..95.1559	11,720,353	12,317,000	12,215,390	0	18,604	0	0	..3.650	..3.907	JD	19,981	469,551	04/25/2022	06/15/2026
929089-AC-4	Voya Financial Inc-SENIOR UNSECURED				2.B FE	44,213,147	..81.3259	28,021,642	34,456,000	44,213,147	0	(280,073)	0	0	..4.800	..3.093	JD	73,506	1,653,888	10/05/2021	06/15/2046
92939B-AT-1	WMG Acquisition Corp-SECURED			1,2	3.C FE	2,481,208	..85.7810	2,144,525	2,500,000	2,481,208	0	2,349	0	0	..3.750	..3.875	JD	7,813	93,750	11/17/2021	12/01/2029
92936U-AH-2	WP Carey Inc-SENIOR UNSECURED			1,2	2.B FE	26,294,587	..74.1557	20,505,534	27,652,000	26,294,587	0	112,791	0	0	..2.250	..2.804	AO	155,543	622,170	06/08/2021	04/01/2033
92936U-AJ-8	WP Carey Inc-SENIOR UNSECURED			1,2	2.B FE	1,198,857	..77.9594	1,026,725	1,317,000	1,198,857	0	8,448	0	0	..2.450	..3.617	FA	13,444	29,578	03/17/2022	02/01/2032
96779*-AA-1	Community Bank System, Inc.- Junior Sub				1.G FE	7,718,805	..0.9801	78,408	8,000,000	7,718,805	0	17,805	0	0	..7.396	..7.858	MJSD	244,079	422,679	02/01/2018	06/19/2034
970648-AL-5	Willis North America Inc-SENIOR UNSECURE			1,2	2.B FE	9,910,299	..96.7745	9,889,386	10,219,000	9,910,299	0	7,445	0	0	..4.650	..5.419	JD	21,119	451,905	12/02/2022	06/15/2027
68538*-AA-1	Stripes 2013 Aircraft 1 Note				4.A PL	769,633	..99.6963	767,327	769,664	769,633	0	344	0	0	..4.353	..4.366	MON	25,033	24,958	08/21/2014	04/20/2023
009818-AA-9	Akron Childrens Hospital Trust Certifica				1.F	8,350,877	..82.5547	6,829,657	8,272,888	8,350,877	0	(2,500)	0	0	..3.965	..3.909	MON	69,333	330,003	08/22/2019	08/15/2050
14149Y-BD-9	CARDINAL HEALTH INC-SENIOR UNSECURED			1,2	2.B FE	17,435,022	..84.9543	12,751,640	15,010,000	17,435,022	0	(68,449)	0	0	..4.900	..3.814	MS	216,561	735,490	02/23/2021	09/15/2045
185899-AK-7	Cleveland-Cliffs Inc-SENIOR UNSECURED			1,2	3.C FE	1,926,422	..89.2140	1,784,280	2,000,000	1,926,422	0	8,169	0	0	..4.625	..5.331	MS	30,833	110,036	03/14/2022	03/01/2029
316773-CH-1	Fifth Third Bancorp-SUBORDINATED				2.B FE	3,002,298	..123.6379	3,709,138	3,000,000	3,002,298	0	(92)	0	0	..8.250	..8.239	MS	82,500	247,500	02/28/2008	03/01/2038
320209-AA-7	First Financial Bancorp-SUBORDINATED				2.B FE	15,000,000	..97.1590	14,573,850	15,000,000	15,000,000	0	0	0	0	..5.125	..5.123	FA	269,063	768,750	08/20/2015	08/25/2025
320209-AB-5	First Financial Bancorp-SUBORDINATED			2	2.B FE	10,000,000	..96.0000	9,600,000	10,000,000	10,000,000	0	0	0	0	..5.250	..5.250	MN	67,083	525,000	04/24/2020	05/15/2030
42217K-BB-1	WELLTOWER INC-SENIOR UNSECURED			1,2	2.A FE	1,475,560	..84.8789	1,014,303	1,195,000	1,475,560	0	(9,786)	0	0	..5.125	..3.470	MS	18,033	61,244	10/06/2021	03/15/2043
42217K-BC-9	WELLTOWER INC-NOTE			1,2	2.A FE	4,993,661	..98.8993	4,944,967	5,000,000	4,993,661	0	5,739	0	0	..4.500	..4.625	JJ	103,750	225,000	10/02/2013	01/15/2024
501044-CR-0	KROGER CO/THE-SENIOR UNSECURED			1,2	2.A FE	13,046,011	..91.0549	9,382,292	10,304,000	13,046,011	0	(106,289)	0	0	..5.000	..3.115	AO	108,764	515,200	08/04/2021	04/15/2042
501044-CT-6	KROGER CO/THE-SR UNSECURED			1,2	2.A FE	6,647,250	..92.2934	4,614,670	5,000,000	6,647,250	0	(59,304)	0	0	..5.150	..2.962	FA	107,292	257,500	08/04/2021	08/01/2043
55336V-AA-8	MPLX 4 02/15/25-SENIOR UNSECURED			1,2	2.B FE	5,388,095	..96.9405	5,323,001	5,491,000	5,388,095	0	45,618	0								

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
		C o d e	F o r e i g n	Bond Char			Rate Used to Obtain Fair Value	Fair Value			Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
70109H-AN-5	Parker-Hannifin Corp-SR UNSECURED	1,2	2	A FE	7,715,106	85,1730	5,527,725	6,490,000	7,715,106	0	(39,289)	0	0	0	4.450	3.222	MN	32,089	288,805	02/25/2021	11/21/2044
71845J-AA-6	Phillips Edison Grocery -SENIOR UNSECURE	1,2	2	C FE	5,939,051	73,5855	4,415,130	6,000,000	5,939,051	0	6,150	0	0	0	2.625	2.755	MN	20,125	157,500	10/07/2021	11/15/2031
743315-AJ-2	Progressive Corp/The-SENIOR UNSECURED	1,2	1	F FE	4,737,346	108,8048	4,846,165	4,454,000	4,737,346	0	(6,452)	0	0	0	6.625	5.397	MS	98,359	98,359	10/28/2022	03/01/2029
749685-AY-9	RPM International Inc-SENIOR UNSECURED	1,2	2	C FE	25,260,803	78,8656	20,585,488	26,102,000	25,260,803	0	62,358	0	0	0	2.950	3.363	JJ	355,060	718,675	03/10/2022	01/15/2032
824348-AX-4	SHERWIN-WILLIAMS CO-SENIOR UNSECURED	1,2	2	B FE	7,685,972	84,5932	6,267,507	7,409,000	7,685,972	0	(5,085)	0	0	0	4.500	4.249	JD	27,784	361,189	03/10/2022	06/01/2047
87227R-QE-7	TOF National Bank-SUBORDINATED	2	2	A FE	7,000,000	96,7305	6,771,133	7,000,000	7,000,000	0	0	0	0	0	5.500	5.500	MN	58,819	385,000	05/01/2020	05/06/2030
878055-AE-2	TOF National Bank-SUBORDINATED	2	2	A FE	7,987,231	100,1275	8,010,202	8,000,000	7,987,231	0	5,309	0	0	0	4.600	4.676	FA	126,756	368,000	02/24/2015	02/27/2025
893647-BE-6	TransDigm Inc-SECURED	1,2	4	A FE	2,946,363	98,8090	2,964,270	3,000,000	2,946,363	0	7,863	0	0	0	6.250	6.876	MS	55,208	148,958	06/16/2022	03/15/2026
95040Q-AD-6	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	4,588,384	93,7889	4,689,445	5,000,000	4,588,384	0	12,434	0	0	0	4.250	6.092	AO	44,861	44,861	10/19/2022	04/15/2028
95040Q-AH-7	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	2,386,828	91,7641	2,339,985	2,550,000	2,386,828	0	1,481	0	0	0	4.125	5.349	MS	30,972	30,972	12/05/2022	03/15/2029
95040Q-AK-0	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	4,462,536	90,1287	4,506,436	5,000,000	4,462,536	0	19,286	0	0	0	2.700	5.659	FA	51,000	51,000	10/28/2022	02/15/2027
95040Q-AL-8	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	10,004,964	79,9961	7,999,611	10,000,000	10,004,964	0	(536)	0	0	0	2.750	2.740	JJ	126,806	264,306	01/21/2022	01/15/2031
95040Q-AM-6	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	22,909,534	79,6350	18,316,057	23,000,000	22,909,534	0	9,263	0	0	0	2.800	2.853	JD	53,667	655,667	01/25/2022	06/01/2031
95040Q-AN-4	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	3,714,314	81,2500	3,650,561	4,493,000	3,714,314	0	7,320	0	0	0	2.050	5.457	JJ	42,471	42,471	12/05/2022	01/15/2029
95040Q-AP-9	Welltower Inc-SENIOR UNSECURED	1,2	2	A FE	4,747,461	78,2518	3,912,592	5,000,000	4,747,461	0	20,161	0	0	0	2.750	3.404	JJ	63,403	153,542	02/24/2022	01/15/2032
981811-AF-9	Worthington Industries I-SENIOR UNSECURE	1,2	2	B FE	6,995,505	83,1112	5,817,783	7,000,000	6,995,505	0	353	0	0	0	4.300	4.308	FA	125,417	301,000	07/25/2017	08/01/2032
165167-DG-9	Chesapeake Energy Corp-SENIOR UNSECURED	1,2	3	B FE	2,099,354	94,7534	1,895,069	2,000,000	2,099,354	0	(35,697)	0	0	0	5.875	3.847	FA	48,958	117,500	09/14/2021	02/01/2029
190897-AA-6	BOKF Merger Corp Number -SUBORDINATED	2	2	B FE	7,000,000	97,0000	6,790,000	7,000,000	7,000,000	0	0	0	0	0	5.625	5.625	JD	6,563	393,750	06/22/2015	06/25/2030
423452-AG-6	Helmerich & Payne Inc-SENIOR UNSECURED	1,2	2	A FE	17,897,522	80,9900	14,942,661	18,450,000	17,897,522	0	31,300	0	0	0	2.900	3.297	MS	136,735	404,260	06/02/2022	09/29/2031
559080-AG-1	MAGELLAN MIDSTREAM PARTN-SENIOR UNSECURE	1,2	2	A FE	8,815,213	86,2602	5,979,557	6,932,000	8,815,213	0	(64,327)	0	0	0	5.150	3.302	AO	75,366	356,998	08/03/2021	10/15/2043
682680-AU-7	ONEOK Inc-SENIOR UNSECURED	1,2	2	C FE	5,588,672	94,4667	5,847,486	6,190,000	5,588,672	0	18,153	0	0	0	4.550	6.676	JJ	129,870	181,436	10/19/2022	07/15/2028
682680-AW-3	ONEOK Inc-SENIOR UNSECURED	1,2	2	C FE	9,380,040	92,2465	9,224,651	10,000,000	9,380,040	0	7,356	0	0	0	4.350	5.543	MS	128,083	402,133	12/05/2022	03/15/2029
68268N-AL-7	ONEOK Partners LP-SENIOR UNSECURED	1,2	2	B FE	3,500,000	99,8531	3,494,858	3,500,000	3,500,000	0	183	0	0	0	5.000	4.999	MS	51,528	175,000	09/09/2013	09/15/2023
68268N-AP-8	ONEOK Partners LP-SENIOR UNSECURED	1,2	2	B FE	24,488,020	98,5639	23,767,696	24,114,000	24,488,020	0	(174,740)	0	0	0	4.900	4.923	MS	347,911	1,284,225	03/17/2015	03/15/2025
969457-BW-9	Williams Cos Inc/The-SENIOR UNSECURED	1,2	2	B FE	2,710,923	98,8603	2,718,658	2,750,000	2,710,923	0	24,633	0	0	0	4.550	5.562	JD	2,433	125,125	08/05/2015	06/24/2024
96950F-AL-8	Williams Cos Inc/The-SENIOR UNSECURED	1,2	2	B FE	12,991,439	99,2934	12,908,146	13,000,000	12,991,439	0	8,718	0	0	0	4.500	4.572	MN	74,750	585,000	11/12/2013	11/15/2023
96950F-AM-6	Williams Cos Inc/The-SENIOR UNSECURED	1,2	2	B FE	4,998,479	98,6509	4,932,543	5,000,000	4,998,479	0	1,023	0	0	0	4.300	4.322	MS	69,875	215,000	02/27/2014	03/04/2024
03666H-AA-9	Antares Holdings LP-SENIOR UNSECURED	1,2	2	C FE	19,000,000	98,2584	18,669,096	19,000,000	19,000,000	0	(725)	0	0	0	6.000	5.992	FA	430,667	1,140,000	07/19/2018	08/15/2023
03666H-AC-5	Antares Holdings LP-SENIOR UNSECURED	1,2	2	C FE	3,472,190	86,1246	3,014,361	3,500,000	3,472,190	0	7,133	0	0	0	3.950	4.193	JD	63,749	138,250	01/21/2021	07/15/2026
03666H-AU-3	Antares Holdings LP-SENIOR UNSECURED	1,2	2	C FE	12,524,184	80,2220	10,099,950	12,590,000	12,524,184	0	15,120	0	0	0	2.750	2.888	JJ	159,648	346,225	07/14/2021	01/15/2027
784440-AA-6	SIP HoldCo LLC Senior Secured Notes	1,2	2	B PL	12,297,005	80,9912	9,959,492	12,297,005	12,297,005	0	0	0	0	0	3.360	3.360	JD	226,972	418,229	12/29/2021	12/15/2046
55167#-AA-7	Umpqua Holdings Corporation - Private Bo	1,2	2	C FE	8,997,205	1,0000	90,000	9,000,000	8,997,205	0	132	0	0	0	7.876	7.880	MUSD	381,266	380,773	03/01/2018	03/26/2033
902530-AA-1	UA (Portland OR) CTL Pas Trust Certifica	1,2	3	C Z	13,106,583	90,5360	11,793,438	13,026,241	13,106,583	0	(12,283)	0	0	0	4.870	4.870	MON	81,343	654,331	03/10/2017	02/15/2032
00440E-AH-0	CHUBB INA HOLDINGS INC-SENIOR UNSECURED	1,2	1	F FE	2,505,646	110,8467	2,036,253	1,837,000	2,505,646	0	(32,078)	0	0	0	6.700	3.309	MN	15,727	138,806	03/03/2022	05/15/2036
00653V-AC-5	AdaptHealth LLC-SENIOR UNSECURED	1,2	4	B FE	3,568,715	83,3850	2,998,525	3,596,000	3,568,715	0	3,437	0	0	0	4.625	4.760	FA	69,298	166,315	10/26/2021	08/01/2029
03073E-AT-2	AmerisourceBergen Corp-SENIOR UNSECURED	1,2	2	A FE	47,509,748	82,8400	39,763,459	48,000,000	47,509,748	0	49,020	0	0	0	2.700	2.804	MS	381,600	1,534,500	01/24/2022	03/15/2031
05453G-AC-9	Axalta Coating Systems L-SENIOR UNSECURE	1,2	4	A FE	2,449,605	82,5000	2,062,500	2,500,000	2,449,605	0	7,187	0	0	0	3.375	3.746	FA	31,875	84,375	09/29/2021	02/15/2029
171239-AJ-5	Chubb INA Holdings Inc-SENIOR UNSECURED	1,2	1	F FE	19,289,273	65,2941	13,058,812	20,000,000	19,289,273	0	9,273	0	0	0	3.050	3.210	JD	27,111	682,861	01/20/2022	12/15/2061
20030N-DH-1	Comcast Corp-SENIOR UNSECURED	1,2	1	G FE	48,096,629	82,7980	35,603,140	43,000,000	48,096,629	0	(234,790)	0	0	0	3.750	2.854	AO	403,125	1,612,500	07/14/2021	04/01/2040
20030N-DS-7	Comcast Corp-SENIOR UNSECURED	1,2	1	G FE	18,481,709	64,6558	12,931,156	20,000,000	18,481,709	0	17,632	0	0	0	2.887	3.297	MN	96,233	384,933	06/07/2022	11/01/2051
22966R-AG-1	CubeSmart LP-SENIOR UNSECURED	1,2	2	B FE	4,135,985	75,2246	3,761,228	5,000,000	4,135,985	0	52,385	0	0	0	2.000	4.570	FA	37,778	87,778	05/20/2022	02/15/2031
22966R-AJ-5	CubeSmart LP-SENIOR UNSECURED	1,2	2	B FE	16,790,641	82,5240	15,885,878	19,250,000	16,790,641	0	104,084	0	0	0	2.250	4.722	JD	19,250	348,547	12/05/2022	12/15/2028
22966R-AJ-5	CubeSmart LP-SENIOR UNSECURED	1,2	2	B FE	5,025,971	76,5818	4,082,578	5,331,000	5,025,971	0	23,468	0	0	0	2.500	3.229	FA	50,348	144,751	03/04/2022	02/15/2032
23204G-AG-5	Customers Bancorp Inc-SENIOR UNSECURED	2	2	B FE	15,085,000	89,1250	13,444,506	15,085,000	15,085,000	0	0	0	0	0	2.875	2.875	FA	163,840	433,694	08/03/2021	08/15/2031
23204H-BM-9	Customers Bank-SUBORDINATED	2	2	B FE	7,021,127	96,5000	6,755,000	7,000,000	7,021,127	0	(13,274)	0	0	0	6.125	5.909	JD	5,955	428,750	12/19/2018	06/26/2029

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
26884L-AH-2	EQT Corp-SENIOR UNSECURED			1,2	2.C FE	9,928,354	100.3083	10,030,829	10,000,000	9,928,354	0	30,625	0	0	6.125	6.493	FA	255,208	641,667		01/24/2020	02/01/2025
302520-AB-7	FNB Corp/PA-SUBORDINATED				2.B FE	5,000,000	94.5000	4,725,000	5,000,000	5,000,000	0	0	0	0	4.875	4.873	AO	60,260	243,750		09/29/2015	10/02/2025
302520-AC-5	FNB Corp/PA-SENIOR UNSECURED			2	2.B FE	12,683,273	98.7588	12,542,365	12,700,000	12,683,273	0	1,053	0	0	5.150	5.201	FA	228,918	228,918		08/18/2022	08/25/2025
30259J-AA-1	FNB Corp/PA-SUBORDINATED			2	2.B FE	8,000,000	94.7821	7,582,570	8,000,000	8,000,000	0	0	0	0	4.950	4.950	FA	150,700	396,000		02/11/2019	02/14/2029
31982Q-AX-7	First Commonwealth Bank-SUBORDINATED			2	2.C FE	8,000,000	97.7900	7,823,200	8,000,000	8,000,000	0	(134)	0	0	4.875	4.871	JD	32,500	390,000		05/16/2018	06/01/2028
31982Q-AY-5	First Commonwealth Bank-SUBORDINATED			2	2.C FE	8,000,292	92.2500	7,380,000	8,000,000	8,000,292	0	(109)	0	0	5.500	5.498	JD	36,667	440,000		05/16/2018	06/01/2033
360271-AJ-9	Fulton Financial Corp-SUBORDINATED				2.A FE	7,989,924	97.9976	7,839,810	8,000,000	7,989,924	0	4,879	0	0	4.500	4.568	MN	46,000	372,635		11/12/2014	11/15/2024
360271-AM-2	Fulton Financial Corp-SUBORDINATED			2	2.A FE	10,000,000	78.0000	7,800,000	10,000,000	10,000,000	0	0	0	0	3.750	3.750	MS	110,417	375,000		02/25/2020	03/15/2035
534187-AW-9	Lincoln National Corp-SENIOR UNSECURED				2.A FE	2,187,851	97.6549	1,501,932	1,538,000	2,187,851	0	(35,117)	0	0	6.300	2.790	AO	22,070	96,894		08/03/2021	10/09/2037
534187-BA-6	LINCOLN NATIONAL CORP-SENIOR NOTE				2.A FE	5,789,094	103.7773	3,971,558	3,827,000	5,789,094	0	(83,157)	0	0	7.000	3.157	JD	11,906	267,890		07/13/2021	06/15/2040
561409-AC-7	Malvern Bancorp Inc-SUBORDINATED			2	3.A FE	5,000,000	98.9500	4,947,500	5,000,000	5,000,000	0	(15)	0	0	6.125	6.125	FMAN	77,413	243,338		01/31/2017	02/15/2027
644274-AG-7	New Enterprise Stone & L-SENIOR UNSECURE			1,2	5.B FE	3,362,359	92.5414	3,238,949	3,500,000	3,362,359	0	11,109	0	0	9.750	10.707	JJ	157,354	327,979		05/25/2022	07/15/2028
644274-AH-5	New Enterprise Stone & L-SECURED			1,2	4.B FE	1,804,539	88.9167	1,778,333	2,000,000	1,804,539	0	9,539	0	0	5.250	7.434	JJ	48,417	48,417		08/29/2022	07/15/2028
69349L-AM-0	PNC Bank NA-SUBORDINATED			2	1.G FE	8,997,396	99.3239	8,939,155	9,000,000	8,997,396	0	4,136	0	0	3.800	3.848	JJ	148,200	342,000		07/24/2013	07/25/2023
69352P-AQ-6	PPL Capital Funding Inc-SENIOR UNSECURED			1,2	2.A FE	3,998,981	92.7675	3,710,701	4,000,000	3,998,981	0	163	0	0	4.125	4.128	AO	34,833	265,833		04/01/2020	04/15/2030
707569-AV-1	Penn National Gaming Inc-SENIOR UNSECURE			1,2	4.C FE	3,000,000	79.3625	2,380,875	3,000,000	3,000,000	0	0	0	0	4.125	4.125	JJ	61,875	123,750		06/24/2021	07/01/2029
709599-AN-4	PENSKE TRUCK LEASING/PTL-SENIOR UNSECURE			1	2.B FE	4,999,677	99.9692	4,998,459	5,000,000	4,999,677	0	5,053	0	0	4.250	4.355	JJ	96,806	212,500		01/14/2013	01/17/2023
709599-BM-5	Penske Truck Leasing Co -SENIOR UNSECURE			1,2	2.B FE	878,479	87.4279	874,279	1,000,000	878,479	0	2,119	0	0	1.700	5.618	JD	756	9,256		12/05/2022	06/15/2026
709599-BN-3	Penske Truck Leasing Co -SENIOR UNSECURE			1,2	2.B FE	1,892,194	95.3253	1,906,506	2,000,000	1,892,194	0	5,274	0	0	4.400	5.777	JJ	49,378	49,378		09/30/2022	07/01/2027
915271-AC-4	Univest Financial Corp-SUBORDINATED			2	2.B FE	4,000,000	95.0000	3,800,000	4,000,000	4,000,000	0	0	0	0	5.000	4.981	FA	75,556	200,000		07/29/2020	08/15/2030
915271-AJ-2	Univest Financial Corp-SUBORDINATED			2	2.B FE	15,000,000	97.4520	14,617,800	15,000,000	15,000,000	0	0	0	0	7.250	7.250	MN	138,958	138,958		11/07/2022	11/15/2032
92556V-AD-8	Viatis Inc-SENIOR UNSECURED			1,2	2.C FE	17,477,346	78.2984	14,010,709	17,894,000	17,477,346	0	46,284	0	0	2.700	3.051	JD	12,078	495,216		01/20/2022	06/22/2030
92556V-AE-6	Viatis Inc-SENIOR UNSECURED			1,2	2.C FE	43,112,233	66.9520	26,780,808	40,000,000	43,112,233	0	(135,669)	0	0	3.850	3.250	JD	38,500	1,540,000		10/05/2021	06/22/2040
960386-AM-2	Westinghouse Air Brake T-SENIOR UNSECURE			1,2	2.C FE	9,608,344	96.0465	9,604,650	10,000,000	9,608,344	0	57,037	0	0	4.950	5.763	MS	145,750	547,250		12/20/2018	09/15/2028
126650-AN-0	CVS Pass-Through Trust-FIRST LIEN				2.B	913,675	99.7858	910,113	912,066	913,675	0	(3,137)	0	0	6.204	5.985	MON	3,301	66,894		09/09/2003	10/10/2025
126650-AW-0	CVS Pass-Through Trust-FIRST LIEN				2.B	1,094,677	98.3981	1,077,115	1,094,650	1,094,677	0	(29)	0	0	5.298	5.296	MON	3,383	64,524		12/09/2004	01/11/2027
126650-CX-6	CVS Health Corp-SENIOR UNSECURED			1,2	2.B FE	4,959,728	96.7478	4,837,388	5,000,000	4,959,728	0	7,941	0	0	4.300	4.473	MS	57,333	255,133		03/06/2018	03/25/2028
126650-CY-4	CVS Health Corp-SENIOR UNSECURED			1,2	2.B FE	11,792,966	91.6056	9,160,558	10,000,000	11,792,966	0	(93,662)	0	0	4.780	3.240	MS	127,467	478,000		06/03/2021	03/25/2038
174610-AW-5	Citizens Financial Group-SUBORDINATED			2	2.B FE	36,000,000	74.1244	26,684,784	36,000,000	36,000,000	0	0	0	0	2.638	2.638	MS	240,058	949,680		09/30/2020	09/30/2032
418056-AZ-0	Hasbro Inc-SENIOR UNSECURED			1,2	2.B FE	11,201,738	88.7266	10,647,187	12,000,000	11,201,738	0	38,159	0	0	3.900	5.051	MN	54,600	617,825		09/30/2022	11/19/2029
883203-CB-5	Textron Inc-SENIOR UNSECURED			1,2	2.B FE	19,845,889	85.3389	17,067,780	20,000,000	19,845,889	0	10,589	0	0	3.000	3.454	JD	50,000	650,000		03/18/2022	06/01/2030
883203-CC-3	Textron Inc-SENIOR UNSECURED			1,2	2.B FE	18,905,618	80.1384	16,027,684	20,000,000	18,905,618	0	96,418	0	0	2.450	3.211	MS	144,278	634,278		03/10/2022	03/15/2031
60081H-AF-5	Milliken & Co Senior Note Series C				2.B	5,000,000	81.5035	4,075,175	5,000,000	5,000,000	0	0	0	0	2.710	2.710	AO	28,606	135,500		10/18/2021	10/15/2031
60081H-A8-7	Milliken & Co Senior Note Series B				2.B	5,000,000	85.4344	4,271,720	5,000,000	5,000,000	0	0	0	0	2.400	2.400	AO	25,333	120,000		10/18/2021	10/15/2028
33738K-AA-3	WELLS FARGO BANK NA-SUBORDINATED				1.F FE	1,426,403	100.7111	1,339,457	1,330,000	1,426,403	0	(4,951)	0	0	6.180	5.401	FA	31,051	82,194		07/21/2015	02/15/2036
33738M-AA-9	Wells Fargo Bank NA-SUBORDINATED				2.A FE	12,343,064	99.6366	12,534,283	12,580,000	12,343,064	0	11,053	0	0	6.180	6.392	FA	293,701	777,444		01/13/1998	02/15/2036
053332-AZ-5	AutoZone Inc-SENIOR UNSECURED			1,2	2.B FE	8,995,465	92.6950	8,342,547	9,000,000	8,995,465	0	869	0	0	4.000	4.007	AO	76,000	615,111		03/26/2020	04/15/2030
14913R-2H-9	Caterpillar Financial Se-SENIOR UNSECURE				1.F FE	9,003,150	89.8321	8,983,207	10,000,000	9,003,150	0	27,050	0	0	0.800	4.548	MN	10,667	10,667		11/29/2022	11/

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
404119-B0-1	HCA Inc-FIRST LIEN				2.C FE	8,020,743	99.4239	7,456,793	7,500,000	8,020,743	0	(207,732)	0	0	5.250	2.125	AO	83,125	476,875	01/19/2022	04/15/2025
404119-BU-2	HCA Inc-FIRST LIEN		1,2		2.C FE	14,351,984	96.4039	14,460,585	15,000,000	14,351,984	0	18,434	0	0	4.500	5.686	FA	255,000	255,000	12/05/2022	02/15/2027
404119-BV-0	HCA Inc-FIRST LIEN		1,2		2.C FE	36,155,722	89.3560	25,019,669	28,000,000	36,155,722	0	(209,817)	0	0	5.500	3.663	JD	68,444	1,540,000	10/07/2021	06/15/2047
404119-CC-1	HCA Inc-FIRST LIEN		1,2		2.C FE	19,085,314	77.7160	15,543,202	20,000,000	19,085,314	0	87,714	0	0	2.375	2.986	JJ	219,028	456,528	01/19/2022	07/15/2031
404121-AJ-4	HCA Inc-SENIOR UNSECURED		1,2		2.C FE	1,924,582	99.1868	1,983,737	2,000,000	1,924,582	0	2,582	0	0	5.625	6.427	MS	37,500	37,500	09/30/2022	09/01/2028
460146-CH-4	International Paper Co-SENIOR UNSECURED		1,2		2.B FE	46,083,896	98.5078	32,101,725	32,588,000	46,083,896	0	(541,954)	0	0	6.000	3.040	MIN	249,841	9,775,752	08/02/2021	11/15/2041
460146-CK-7	International Paper Co-SR UNSECURED		1,2		2.B FE	14,644,505	86.9609	9,850,930	11,328,000	14,644,505	0	(113,676)	0	0	4.800	2.920	JD	24,166	543,744	08/02/2021	06/15/2044
723460-AC-8	Pinnacle Financial Partn-SUBORDINATED		1,2		2.A FE	37,000,000	96.5000	35,705,000	37,000,000	37,000,000	0	0	0	0	4.125	4.125	MS	449,396	1,356,667	03/28/2022	09/15/2029
91529Y-AL-0	UNUM GROUP SR NT				2.C FE	16,502,513	95.7842	15,871,442	16,570,000	16,502,513	0	23,544	0	0	3.875	4.026	MIN	99,880	745,421	02/11/2016	11/05/2025
91529Y-AP-1	Unum Group-SENIOR UNSECURED		1,2		2.C FE	19,651,531	71.1327	13,009,452	18,289,000	19,651,531	0	(28,412)	0	0	4.500	4.039	JD	36,578	823,005	10/04/2021	12/15/2049
921814-AA-7	Vanderbilt University Me-UNSECURED		1,2		1.F FE	3,500,101	83.4983	2,922,439	3,500,000	3,500,101	0	(5)	0	0	4.172	4.172	JJ	73,010	146,020	07/12/2017	07/01/2037
00206R-GQ-9	AT&T Inc-SENIOR UNSECURED		1,2		2.B FE	1,008,946	94.2039	947,691	1,006,000	1,008,946	0	(6,370)	0	0	4.300	4.250	FA	16,342	730,258	12/01/2017	02/15/2030
00206R-JC-7	AT&T Inc-SENIOR UNSECURED				2.B FE	33,971,244	103.6453	26,947,778	26,000,000	33,971,244	0	(411,416)	0	0	6.500	3.661	MIN	215,944	9,726,416	01/18/2022	11/15/2036
00206R-KF-8	AT&T Inc-SENIOR UNSECURED		1,2		2.B FE	14,500,160	66.0614	11,560,749	17,500,000	14,500,160	0	23,730	0	0	3.500	4.436	FA	255,208	561,458	03/16/2022	02/01/2061
00206R-KJ-0	AT&T Inc-SENIOR UNSECURED		1,2		2.B FE	13,072,815	68.1208	10,218,126	15,000,000	13,072,815	0	23,115	0	0	3.500	4.253	MS	154,583	417,083	03/16/2022	09/15/2053
00206R-MM-1	AT&T Inc-SENIOR UNSECURED		1,2		2.B FE	75,317,299	76.5882	57,672,424	75,302,000	75,317,299	0	(9,939)	0	0	2.550	2.318	JD	160,017	9,772,633	12/07/2020	12/01/2033
009098-A*-5	Air Cargo Logistics Ft W Lease-Collatera				1.E	3,992,725	93.0400	3,714,830	3,992,723	3,992,725	0	0	0	0	4.494	4.494	MON	40,466	181,508	05/10/2019	11/10/2039
01748D-AZ-9	Allegiance Bank/Texas-SUBORDINATED		2		2.B FE	8,000,000	99.7500	7,980,000	8,000,000	8,000,000	0	0	0	0	7.799	7.798	MJSD	455,296	436,630	12/11/2017	12/15/2027
023771-S5-8	American Airlines Inc-FIRST LIEN				4.B FE	2,311,380	107.3750	2,147,500	2,000,000	2,311,380	0	(96,120)	0	0	11.750	5.129	JJ	108,361	225,861	02/18/2022	07/15/2025
042498-AD-3	Army & Air Force Exchang Senior Note				1.D	330,882	99.5315	329,332	330,882	330,882	0	(1)	0	0	4.950	4.950	MON	6,777	20,554	10/06/2009	10/15/2024
118230-AN-1	Buckeye Partners LP-SENIOR UNSECURED		1,2		3.B FE	4,348,689	96.3225	4,258,418	4,421,000	4,348,689	0	36,772	0	0	4.350	5.309	AO	40,600	192,619	12/15/2015	10/15/2024
12008R-AP-2	Builders FirstSource Inc-SENIOR UNSECURE		1,2		3.C FE	4,700,506	81.0863	4,054,313	5,000,000	4,700,506	0	19,256	0	0	4.250	5.081	FA	88,542	194,792	03/29/2022	02/01/2032
12189L-AE-1	BURLINGTN NORTH SANTA FE-SR UNSECURED		1,2		1.D FE	3,958,282	100.9830	3,029,490	3,000,000	3,958,282	0	(39,611)	0	0	5.400	3.069	JD	13,500	162,000	02/26/2021	06/01/2041
12189L-AS-0	BURLINGTN NORTH SANTA FE-SENIOR UNSECURE		1,2		1.G FE	10,373,407	94.7611	7,727,769	8,155,000	10,373,407	0	(75,158)	0	0	4.900	3.111	AO	99,899	399,595	02/25/2021	04/01/2044
12189L-AU-5	BURLINGTN NORTH SANTA FE-SENIOR UNSECURE		1,2		1.D FE	5,530,970	90.8297	4,179,075	4,601,000	5,530,970	0	(30,246)	0	0	4.550	3.225	MS	69,782	209,346	04/29/2021	09/01/2044
12662P-AD-0	CVR Energy Inc-SENIOR UNSECURED		1,2		4.A FE	1,775,348	87.0167	1,740,333	2,000,000	1,775,348	0	15,348	0	0	5.750	8.498	FA	43,444	100,944	07/18/2022	02/15/2028
127097-AE-3	Coterra Energy Inc-SENIOR UNSECURED		1,2		2.B FE	9,499,505	93.3632	9,336,323	10,000,000	9,499,505	0	6,855	0	0	3.900	5.193	MIN	49,833	49,833	12/02/2022	05/15/2027
133131-AS-1	CAMDEN PROPERTY TRUST-SENIOR UNSECURED N		1,2		1.G FE	4,997,147	99.7138	4,985,692	5,000,000	4,997,147	0	5,786	0	0	4.875	4.998	JD	10,833	243,750	05/31/2011	06/15/2023
140501-AB-3	Capital Southwest Corp-SENIOR UNSECURED		1,2		1.G PL	10,134,484	90.0750	9,007,500	10,000,000	10,134,484	0	(43,943)	0	0	4.500	3.994	JD	188,750	450,000	02/22/2021	01/31/2026
150890-AB-6	Celanese US Holdings LLC-SENIOR UNSECURE		1,2		2.C FE	14,861,831	98.6260	15,040,460	15,250,000	14,861,831	0	11,876	0	0	6.165	6.820	JJ	436,131	621,081	12/05/2022	07/15/2027
150890-AN-4	Celanese US Holdings LLC-SENIOR UNSECURE		1,2		2.C FE	27,296,005	97.1437	26,228,810	27,000,000	27,296,005	0	(16,209)	0	0	6.330	6.047	JJ	792,833	792,833	07/22/2022	07/15/2029
205768-AT-1	Comstock Resources Inc-SENIOR UNSECURED		1,2		4.A FE	1,856,702	85.9150	1,585,991	1,846,000	1,856,702	0	(1,786)	0	0	5.875	5.740	JJ	50,009	108,453	06/16/2021	01/15/2030
20825C-AP-9	ConocoPhillips-SR UNSECURED				1.F FE	2,901,395	105.6454	2,916,803	2,193,000	2,901,395	0	(33,190)	0	0	5.900	3.219	MIN	16,533	145,920	01/19/2022	05/15/2038
20825C-AQ-7	ConocoPhillips-NOTE				1.F FE	14,665,012	112.3917	11,262,772	10,021,000	14,665,012	0	(224,227)	0	0	6.500	2.879	FA	271,402	651,365	07/14/2021	02/01/2039
20825V-AB-8	CONOCOPHILLIPS CANADA-SENIOR UNSECURED				1.F FE	13,594,776	102.5027	10,250,269	10,000,000	13,594,776	0	(211,140)	0	0	5.950	2.791	AO	125,611	595,000	10/04/2021	10/15/2036
20826F-AR-7	ConocoPhillips Co-SENIOR UNSECURED		1,2		1.F FE	28,455,899	107.0730	21,414,608	20,000,000	28,455,899	0	(231,901)	0	0	5.950	3.291	MS	350,389	1,540,389	01/20/2022	03/15/2046
22822R-BD-1	Crown Castle Towers LLC-CROCAS 3.663 05/		1,2		1.F FE	36,000,000	96.8750	34,875,011	36,000,000	36,000,000	0	(23)	0	0	3.663	3.663	MON	58,608	1,318,680	04/30/2015	05/15/2025
22822R-BH-2	Crown Castle Towers LLC-SECURED		1,2		1.F FE	14,989,326	91.3846	13,707,696	15,000,000	14,989,326	0	2,366	0	0	4.241	4.260	MON	28,273	636,150	06/26/2018	07/15/2028
28368E-AD-8	KINDER MORGAN INC/DE-SENIOR UNSECURED																				

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
29278N-AN-3	Energy Transfer Operatin-SENIOR UNSECURE	1,2			2.C FE	6,256,525	.99.3533	6,180,769	6,221,000	6,256,525	.0	(744)	.0	.0	5.500	5.346	JD	28,513	28,513	12/05/2022	06/01/2027
29336T-AA-8	EnLink Midstream LLC-SENIOR UNSECURED	1,2			3.A FE	1,491,931	.92.6550	1,389,825	1,500,000	1,491,931	.0	931	.0	.0	5.375	5.475	JD	6,719	87,344	02/18/2022	06/01/2029
29336U-AD-9	EnLink Midstream Partner-SENIOR UNSECURE	1,2			3.A FE	437,021	.76.1975	472,425	620,000	437,021	.0	1,471	.0	.0	5.050	7.882	AO	7,828	23,483	07/01/2022	04/01/2045
29336U-AE-7	EnLink Midstream Partner-SENIOR UNSECURE	1,2			3.A FE	1,694,639	.94.7333	1,641,729	1,733,000	1,694,639	.0	28,567	.0	.0	4.150	5.134	JD	5,993	144,600	09/02/2015	06/01/2025
29336U-AG-2	EnLink Midstream Partner-SENIOR UNSECURE	1,2			3.A FE	2,542,936	.80.3036	2,312,743	2,880,000	2,542,936	.0	5,623	.0	.0	5.450	6.404	JD	13,080	156,960	06/22/2021	06/01/2047
293791-AF-6	Enterprise Products Oper-SENIOR UNSECURE				2.A FE	12,993,326	108.5585	10,855,846	10,000,000	12,993,326	.0	(230,674)	.0	.0	6.875	3.372	MS	229,167	916,667	01/18/2022	03/01/2033
29379V-AV-5	ENTERPRISE PRODUCTS OPER-SENIOR UNSECURE				2.A FE	1,417,978	.97.3767	1,015,639	1,043,000	1,417,978	.0	(14,069)	.0	.0	5.700	3.177	FA	22,459	59,451	07/16/2021	02/15/2042
29379V-BA-0	ENTERPRISE PRODUCTS OPER-SR UNSECURED	1,2			2.A FE	35,756,866	.88.1492	25,915,853	29,400,000	35,756,866	.0	(209,437)	.0	.0	4.850	3.387	MS	419,848	1,425,900	10/07/2021	03/15/2044
30231G-BF-8	Exxon Mobil Corp-SENIOR UNSECURED	1,2			1.D FE	5,036,649	.90.1518	4,017,166	4,456,000	5,036,649	.0	(24,565)	.0	.0	4.227	3.213	MS	53,367	241,722	01/18/2022	03/19/2040
33972P-AA-7	FLNG LIQUEFACTION 2 LLC-FIRST LIEN				2.B FE	4,419,091	.86.4987	3,822,811	4,419,500	4,419,091	.0	25	.0	.0	4.125	4.125	MS	46,082	186,115	07/12/2016	03/31/2038
37045X-CR-5	General Motors Financial-SENIOR UNSECURE	1,2			2.C FE	6,996,470	.99.7787	6,984,511	7,000,000	6,996,470	.0	3,041	.0	.0	5.100	5.148	JJ	162,633	357,000	01/14/2019	01/17/2024
37045X-DS-2	General Motors Financial-SENIOR UNSECURE	1,2			2.C FE	50,958,603	.78.4176	40,842,239	52,083,000	50,958,603	.0	86,678	.0	.0	3.100	3.375	JJ	757,952	1,569,724	03/10/2022	01/12/2032
406216-AW-1	HALLIBURTON CO-SENIOR UNSECURED NOTE	1			2.A FE	5,242,566	105.9548	4,053,832	3,826,000	5,242,566	.0	(66,135)	.0	.0	6.700	3.594	MS	75,478	256,342	07/16/2021	09/15/2038
406216-BA-8	HALLIBURTON CO-SENIOR UNSECURED NOTE	1,2			2.A FE	2,618,492	.83.7991	1,927,380	2,300,000	2,618,492	.0	(12,217)	.0	.0	4.500	3.474	MN	13,225	103,500	07/16/2021	11/15/2041
406216-BG-5	HALLIBURTON COMPANY-SR UNSECURED	1,2			2.A FE	7,258,995	.97.0258	6,979,065	7,193,000	7,258,995	.0	(16,215)	.0	.0	3.800	3.431	MN	34,926	309,746	04/25/2022	11/15/2025
406216-BJ-9	HALLIBURTON CO-SR UNSECURED	1,2			2.A FE	19,616,827	.92.2954	15,808,353	17,128,000	19,616,827	.0	(149,423)	.0	.0	4.850	3.401	MN	106,146	936,854	01/20/2022	11/15/2035
406216-BK-6	HALLIBURTON CO-SR UNSECURED	1,2			2.A FE	39,003,875	.88.7000	28,958,779	32,648,000	39,003,875	.0	(179,550)	.0	.0	5.000	3.709	MN	208,584	1,649,318	02/25/2022	11/15/2045
406216-BL-4	Halliburton Co-SENIOR UNSECURED	1,2			2.A FE	7,283,584	.85.6927	7,712,340	9,000,000	8,998,311	.0	217	.0	.0	2.920	2.923	MS	87,600	329,311	02/19/2020	03/01/2030
40621P-AA-7	Halliburton Co-SENIOR UNSECURED				2.A FE	3,247,487	103.2880	3,220,521	3,118,000	3,247,487	.0	(1,781)	.0	.0	6.750	5.596	FA	87,694	87,694	12/05/2022	02/01/2027
42824C-AW-9	HP ENTERPRISE CO-SENIOR UNSECURED	1,2			2.B FE	4,863,090	.98.9524	4,947,622	5,000,000	4,863,090	.0	43,634	.0	.0	4.900	5.977	AO	51,722	343,597	02/11/2016	10/15/2025
431318-AS-3	Hilcorp Energy I LP / HI-SENIOR UNSECURE	1,2			3.C FE	6,530,930	.90.3060	6,530,930	7,232,000	7,283,584	.0	(11,800)	.0	.0	6.250	6.036	MN	75,333	452,000	10/15/2021	11/01/2028
432748-AB-7	Hilltop Holdings Inc-SENIOR UNSECURED	2			2.A FE	13,000,141	.96.0000	12,480,000	13,000,000	13,000,141	.0	(450)	.0	.0	5.000	4.996	AO	137,222	650,000	04/06/2015	04/15/2025
432748-AE-1	Hilltop Holdings Inc-SUBORDINATED	2			2.A FE	9,000,000	.94.5000	8,505,000	9,000,000	9,000,000	.0	.0	.0	.0	6.125	6.125	MN	70,438	551,250	05/07/2020	05/15/2035
436106-AA-6	HollyFrontier Corp-SENIOR UNSECURED	1,2			2.C FE	6,002,798	100.7628	6,045,770	6,000,000	6,002,798	.0	(933)	.0	.0	5.875	5.855	AO	88,125	352,500	11/16/2016	04/01/2026
436106-AC-2	HollyFrontier Corp-SENIOR UNSECURED	1,2			2.C FE	12,981,395	.87.4772	11,372,036	13,000,000	12,981,395	.0	1,878	.0	.0	4.500	4.521	AO	146,250	585,000	09/14/2020	10/01/2030
44329H-AG-9	HP Communities LLC-FIRST LIEN				1.C FE	348,152	100.0000	348,311	348,311	348,152	.0	2,181	.0	.0	5.020	5.212	MS	5,148	32,975	01/08/2009	03/15/2023
44329H-AS-3	HP Communities LLC-SECURED				1.D FE	58,538	100.0000	58,559	58,559	58,538	.0	248	.0	.0	5.320	5.448	MS	917	5,865	11/13/2008	03/15/2023
45384B-AA-4	Independent Bank Group I-SUBORDINATED				2.B FE	12,979,414	.99.4400	12,927,200	13,000,000	12,979,414	.0	11,840	.0	.0	5.875	5.978	FA	318,229	763,750	06/22/2016	08/01/2024
45384B-AB-2	Independent Bank Group I-SUBORDINATED	2			2.B FE	3,599,959	100.0000	3,600,000	3,600,000	3,599,959	.0	68	.0	.0	5.000	5.002	JD	90,500	180,000	12/14/2017	12/31/2027
46188B-AJ-2	Invitation Homes Operati-SENIOR UNSECURE	1,2			2.C FE	5,596,013	.87.3685	4,901,373	5,610,000	5,596,013	.0	655	.0	.0	4.150	4.182	AO	49,150	172,024	03/25/2022	05/15/2032
494550-AV-8	KINDER MORGAN ENER PART-SENIOR UNSECURED				2.B FE	3,961,329	100.7779	3,023,338	3,000,000	3,961,329	.0	(51,693)	.0	.0	6.500	3.582	FA	81,250	195,000	06/08/2021	02/01/2037
494550-AW-6	KINDER MORGAN ENER PART-BOND				2.B FE	1,926,163	106.5159	1,485,897	1,395,000	1,926,163	.0	(26,129)	.0	.0	6.950	3.640	JJ	44,706	96,953	06/07/2021	01/15/2038
494550-BF-2	KINDER MORGAN ENER PART-SR UNSECURED				2.B FE	6,490,385	.99.9136	6,490,385	6,496,000	6,244,193	.0	(112,048)	.0	.0	6.550	3.360	MS	125,283	425,488	08/03/2021	09/15/2040
49456B-AG-6	KINDER MORGAN INC/DELAWA-SENIOR UNSECURE	1,2			2.B FE	11,964,410	.93.4227	9,342,274	10,000,000	11,964,410	.0	(140,281)	.0	.0	5.300	3.229	JD	44,167	530,000	06/03/2021	12/01/2034
55903V-AG-8	Magallanes Inc-SENIOR UNSECURED	1,2			2.C FE	28,262,721	.90.2312	27,069,366	30,000,000	28,262,721	.0	94,966	.0	.0	3.755	5.304	MS	331,692	946,051	12/05/2022	03/15/2027
55903V-AJ-2	Warnermedia Holdings Inc-SENIOR UNSECURE	1,2			2.C FE	9,839,828	.86.7396	9,975,057	11,500,000	9,839,828	.0	39,818	.0	.0	4.054	6.956	MS	137,273	137,273	11/04/2022	03/15/2029
55903V-AL-7	Magallanes Inc-SENIOR UNSECURED	1,2			2.C FE	15,103,591	.82.7786	12,416,796	15,000,000	15,103,591	.0	(8,009)	.0	.0	4.279	4.186	MS	188,989	509,914	03/17/2022	03/15/2032
55921Q-AA-0	Magna Imperio Systems Co-SECURED	2			1.F PL	12,017,231	.97.6800	11,843,702	12,125,000	12,017,231	.0	13,481	.0	.0	7.000	7.286	MJSD	221,618	440,878	06/23/2022	06/29/2026
56035L-AE-4	Main Street Capital Corp-SENIOR UNSECURE	1,2			2.C FE	15,894,639	.86.1545	13,784,722	16,000,000	15,894,639	.0	27,680	.0	.0	3.000	3.198	JJ	222,667	480,000	01/12/2021	07/14/2026
581557-BC-8	McKesson Corp-SENIOR UNSECURED NOTE	1,2			2.A FE	4,861,399	.87.6288	3,557,728	4,060,000	4,861,399	.0	(25,910)	.0	.0	4.883	3.531	MS	58,374	198,250	04/29/2021	03/15/2044
62957H-AH-8	Nabors Industries Inc-SENIOR UNSECURED	1,2			4.A FE	2,754,614	101.4833	2,857,771	2,816,000	2,754,614	.0	25,068	.0	.0	9.000	10.179	FA	105,600	253,440	12/01/2020	02/01/2025
637071-AK-7	National Oilwell Varco I-SR UNSECURED	1,2			2.B FE	19,889,595	.70.0634	14,012,676	20,000,000	19,889,595	.0	3,557	.0	.0	3.950	3.990	JD	65,833	790,000	10/05/2021	12/01/2042
637071-AM-3	National Oilwell Varco I-SENIOR UNSECURE	1,2			2.B FE	10,285,778	.88.0872	8,808,718	10,000,000	10,285,778	.0	(35,922)	.0	.0	3.600	3.122	JD	30,000	390,000	01/18/2022	12/01/2029
674599-CG-8	OCCIDENTAL PETROLEUM COR-SR UNSECURED	1,2			3.A FE	6,994,946	.95.8813	6,711,688	7,000,000	6,994,946	.0	1,904	.0	.0	3.500	3.530	JD	10,889	245,000	06/18/2015	06/15/2025
674599-CH-6	Occidental Petroleum Cor-SENIOR UNSECURE	1,2			3.A FE	12,989,314	.93.2670	12,124,710	13,000,000	12,989,314	.0	2,890	.0	.0	3.400	3.425	AO	93,311	442,000	03/28/2016	04/15/2026

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
		C	F	B			R	F			U	C	C	T	R	E	W	A	A	A	S
CUSIP Identification	Description	ode	oign	ond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
674599-DF-9	Occidental Petroleum Cor-SENIOR UNSECURE				3.A FE	4,650,986	102.0000	4,080,000	4,000,000	4,650,986	0	(29,014)	0	0	6.450	4.813	MS	75,967	333,967	02/17/2022	09/15/2036
68389X-BW-4	Oracle Corp-SENIOR UNSECURED				2.B FE	21,227,827	74.0408	14,808,160	20,000,000	21,227,827	0	(55,133)	0	0	3.600	3.126	AO	180,000	720,000	02/25/2021	04/01/2040
68389X-BZ-7	Oracle Corp-SENIOR UNSECURED				2.B FE	23,485,748	73.9541	17,009,438	23,000,000	23,485,748	0	(19,549)	0	0	3.650	3.489	MS	223,867	839,500	06/03/2021	03/25/2041
70337U-10-0	Patrons' Legacy-PATRL 5.775 12/23/22				3.C FE	2,638,316	79.7500	2,104,057	2,638,316	2,638,316	0	0	0	0	5.775	5.775	MON	21,543	198,234	09/17/2010	01/23/2024
70337Y-10-2	Patrons' Legacy-PATRL 5.8594 07/10/58				1.F FE	943,941	90.1000	850,491	943,941	943,941	0	0	0	0	5.859	5.859	MON	7,835	55,309	09/17/2010	07/10/2058
70338A-10-3	Patrons' Legacy-PATRL 5.646 05/17/22				1.F FE	536,965	88.4700	475,053	536,965	536,965	0	0	0	0	5.646	5.646	MON	17,768	58,510	12/12/2003	11/17/2023
70338C-10-9	Patrons' Legacy-PATRL 6.673 12/04/23				2.A FE	2	91.4800	2	2	2	0	0	0	0	6.673	6.673	MON	0	0	04/30/2004	01/04/2024
703481-AC-5	Patterson-UTI Energy Inc-SENIOR UNSECURE				3.A FE	4,991,965	89.9690	4,498,450	5,000,000	4,991,965	0	914	0	0	5.150	5.177	MM	32,903	257,500	11/07/2019	11/15/2029
718546-AW-4	Phillips 66-SENIOR UNSECURED				2.A FE	2,911,130	80.0400	2,533,267	3,165,000	2,911,130	0	23,004	0	0	2.150	3.305	JD	3,024	71,072	02/25/2022	12/15/2030
72650R-BN-1	Plains All American Pipe-SENIOR UNSECURE				2.C FE	18,487,705	87.0626	15,585,952	17,902,000	18,487,705	0	(70,909)	0	0	3.800	3.876	MS	200,303	768,691	02/25/2022	09/15/2030
75086F-AA-3	Rainier Gsa Portfolio I US Govt Lease Ba				1.F	4,372,839	97.2573	4,252,898	4,372,831	4,372,839	0	(6)	0	0	4.820	4.820	JJ	99,919	158,350	07/01/2015	07/15/2036
78396*-AE-8	SCF Funding LLC Senior Note Series E				2.C PL	10,000,000	95.2000	9,520,000	10,000,000	10,000,000	0	0	0	0	6.600	6.605	JD	333,667	333,667	06/29/2022	06/30/2027
78396*-AF-5	SCF Funding LLC Senior Note Series F				2.C PL	50,000,000	93.6600	46,830,000	50,000,000	50,000,000	0	0	0	0	6.690	6.694	JD	1,691,083	1,691,083	06/29/2022	06/30/2029
78396*-AK-4	SCF Funding LLC Senior Unsecured Notes				2.C PL	10,000,000	100.7546	10,075,460	10,000,000	10,000,000	0	0	0	0	8.320	8.324	MM	122,489	122,489	11/08/2022	11/08/2027
78573N-AC-6	Sabre GLBL Inc-SECURED				4.B FE	493,804	99.3820	496,910	500,000	493,804	0	679	0	0	9.250	9.854	AO	9,764	32,889	09/07/2022	04/15/2025
78573N-AH-5	Sabre GLBL Inc-SECURED				4.B FE	779,184	103.4460	821,361	794,000	779,184	0	0	0	0	11.250	11.750	JD	6,203	6,203	11/21/2022	12/15/2027
79588T-AC-4	Sammons Financial Group -SENIOR UNSECURE				2.A FE	6,830,561	93.2573	6,528,012	7,000,000	6,830,561	0	14,477	0	0	4.450	5.074	MM	42,399	268,607	07/26/2022	05/12/2027
79588T-AD-2	Sammons Financial Group -SENIOR UNSECURE				2.A FE	29,670,353	75.5680	22,647,727	29,970,000	29,670,353	0	(19,840)	0	0	3.350	2.979	AO	209,166	1,037,341	07/14/2021	04/16/2031
79588T-AE-0	Sammons Financial Group -SENIOR UNSECURE				2.A FE	59,094,724	82.7664	50,733,290	61,297,000	59,094,724	0	62,518	0	0	4.750	5.232	AO	671,287	9,947,563	08/18/2022	04/08/2032
808513-AQ-8	Charles Schwab Corp/The-SENIOR UNSECURED				1.F FE	4,945,073	94.0791	4,703,957	5,000,000	4,945,073	0	8,173	0	0	3.200	3.485	MS	52,889	132,889	04/25/2022	03/02/2027
83012A-AA-7	Sixth Street Specialty L-SENIOR UNSECURE				2.C FE	12,438,889	87.5053	10,938,161	12,500,000	12,438,889	0	16,015	0	0	2.500	2.644	FA	130,208	312,500	01/27/2021	08/01/2026
841504-AB-9	Southeast Supply Header -SENIOR UNSECURE				4.C FE	4,998,940	92.3690	4,618,450	5,000,000	4,998,940	0	633	0	0	4.250	4.264	JD	9,444	212,500	06/04/2014	06/15/2024
84470P-AF-6	Southside Bancshares Inc-SUBORDINATED				2.B FE	7,500,000	101.5000	7,612,500	7,500,000	7,500,000	0	0	0	0	3.875	3.875	MM	37,135	290,625	11/06/2020	11/15/2030
844741-BF-4	Southwest Airlines Co-SENIOR UNSECURED				2.A FE	14,941,261	83.0653	12,459,797	15,000,000	14,941,261	0	7,377	0	0	2.625	2.686	FA	154,219	393,750	02/05/2020	02/10/2030
84861T-AC-2	Spirit Realty LP-SENIOR UNSECURED				2.B FE	1,212,809	95.4377	1,207,287	1,265,000	1,212,809	0	1,534	0	0	4.450	5.699	MS	16,575	16,575	11/15/2022	09/15/2026
84861T-AD-0	Spirit Realty LP-SENIOR UNSECURED				2.B FE	12,084,619	86.8286	10,350,831	11,921,000	12,084,619	0	(46,789)	0	0	4.000	3.204	JJ	219,876	420,296	03/03/2022	07/15/2029
84861T-AH-1	Spirit Realty LP-SENIOR UNSECURED				2.B FE	4,298,341	81.4653	4,073,266	5,000,000	4,298,341	0	49,691	0	0	2.100	5.212	MS	30,917	83,417	07/25/2022	03/15/2028
84861T-AJ-7	Spirit Realty LP-SENIOR UNSECURED				2.B FE	28,258,685	74.0433	23,393,965	31,595,000	28,258,685	0	191,644	0	0	2.700	4.089	FA	322,269	670,097	08/16/2022	02/15/2032
86765B-AS-8	Energy Transfer LP-SENIOR UNSECURED				2.C FE	6,993,612	101.1055	7,077,382	7,000,000	6,993,612	0	1,820	0	0	5.950	5.982	JD	34,708	416,500	11/12/2015	12/01/2025
87265K-AA-2	Sixth Street Specialty L-SENIOR UNSECURE				1.C FE	29,999,162	99.7613	29,928,402	30,000,000	29,999,162	0	1,032	0	0	4.500	4.504	JJ	596,250	1,350,000	01/17/2018	02/22/2023
87265K-AF-9	TPG Specialty Lending In-SENIOR UNSECURE				2.C FE	4,981,031	95.7473	4,787,364	5,000,000	4,981,031	0	9,656	0	0	3.875	4.089	MM	32,292	193,750	10/25/2019	11/01/2024
87612B-BS-0	Targa Resources Partners-SENIOR UNSECURE				2.C FE	9,263,732	90.1800	9,018,000	10,000,000	9,263,732	0	4,974	0	0	4.875	6.039	FA	203,125	203,125	12/05/2022	02/01/2031
87612K-AA-0	Targa Resources Corp-SENIOR UNSECURED				2.C FE	7,905,614	97.9525	7,836,200	8,000,000	7,905,614	0	1,534	0	0	5.200	5.500	JJ	201,067	201,067	12/05/2022	07/01/2027
88033G-DP-2	Tenet Healthcare Corp-FIRST LIEN				3.C FE	2,403,000	95.1239	2,285,828	2,403,000	2,403,000	0	0	0	0	6.125	6.125	JD	6,542	80,133	06/01/2022	06/15/2030
880451-AZ-2	Tennessee Gas Pipeline C-SENIOR UNSECURE				2.B FE	18,778,279	83.6091	15,885,721	19,000,000	18,778,279	0	22,623	0	0	2.900	3.080	MS	183,667	526,833	02/25/2022	03/01/2030
88224P-AE-2	Texas Capital Bank NA-SUBORDINATED				2.C PL	18,000,000	96.8850	17,439,300	18,000,000	18,000,000	0	0	0	0	5.250	5.249	JJ	396,375	945,000	01/28/2014	01/31/2026
882384-AH-7	Texas Eastern Transmissi Senior Unsecure				1.F Z	20,000,000	100.8676	20,173,520	20,000,000	20,000,000	0	0	0	0	6.200	6.200	JD	86,111	86,111	12/06/2022	12/06/2032
89236T-KK-0	Toyota Motor Credit Corp-SENIOR UNSECURE				1.E FE	5,051,165	101.6878	5,084,389	5,000,000	5,051,165	0	(1,885)	0	0	5.400	5.009	MM	38,250	38,250	11/22/2022	11/10/2025
89679E-AE-2	Triumph Bancorp Inc-SUBORDINATED				1.G PL	6,000,000	86.5378	5,192,268	6,000,000	6,000,000	0	0	0	0	3.500	3.500	MS	141,750	354,667	02/01/2022	09/01/2031
91913Y-BC-3	Valero Energy Corp-SENIOR UNSECURED				2.B FE	8,687,718	81.5617	8,156,169	10,000,000	8,687,718	0	87,865	0	0	2.800	4.611	JD	23,333	445,356	05/23/2022	12/01/2031
05279B-AA-9	Autoliv ASP, Inc. Trust Certificate Tran				2.B	4,253,560	95.1248	4,046,190	4,253,560	4,253,560	0	0	0	0	4.101	4.101	MM	36,403	179,463	11/15/2018	05/15/2034
06849R-AG-7	BARRICK NA FINANCE LLC-SENIOR UNSECURED				2.A FE	6,663,380	100.9323	5,046,617	5,000,000	6,663,380	0	(64,913)	0	0	5.700	3.279	MM	24,542	285,000	06/09/2021	05/30/2041
06849R-AK-8	BARRICK NA FINANCE LLC-SR UNSECURED				2.A FE	9,760,317	101.0693	7,074,848	7,000,000	9,760,317	0	(96,033)	0	0	5.750	3.117	MM	67,083	402,500	07/13/2021	05/01/2043
24023F-AA-7	DC Department of Correct Pass-Thru Certi				1.B PL	8,626,882	95.7932	8,251,931	8,614,318	8,626,882	0	(1,425)	0	0	4.570	4.552	MM	85,066	400,856	04/19/2018	03/15/2033
30225V-AF-4	Extra Space Storage LP-SENIOR UNSECURED				2.B FE	11,808,576	78.1734	10,162,542	13,000,000	11,808,576	0	88,946	0	0	2.550	3.834	JD	27,625	359,125	03/30/2022	06/01/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
30225V-AG-2	Extra Space Storage LP-SENIOR UNSECURED	1,2			2.B FE	20,098,799	75.8399	16,046,212	21,158,000	20,098,799	0	87,758	0	0	2.350	2.973	MS	146,402	611,360	03/30/2022	03/15/2032
30225V-AH-0	Extra Space Storage LP-SENIOR UNSECURED	1,2			2.B FE	36,179,569	89.6519	32,825,150	36,614,000	36,179,569	0	764	0	0	3.900	4.153	AO	356,987	981,120	12/05/2022	04/01/2029
74319R-AA-9	PROG Holdings Inc-SENIOR UNSECURED	1,2			4.A FE	1,511,371	83.5813	1,350,673	1,616,000	1,511,371	0	8,491	0	0	6.000	7.209	MN	12,389	106,387	03/31/2022	11/15/2029
00751Y-AE-6	Advance Auto Parts Inc-SENIOR UNSECURED	1,2			2.B FE	14,698,506	88.0063	13,200,945	15,000,000	14,698,506	0	14,156	0	0	3.900	4.217	AO	123,500	611,000	07/26/2022	04/15/2030
00751Y-AG-1	Advance Auto Parts Inc-SENIOR UNSECURED	1,2			2.B FE	14,957,229	82.1449	12,732,461	15,500,000	14,957,229	0	36,814	0	0	3.500	3.957	MS	159,736	447,563	03/23/2022	03/15/2032
041242-AA-6	Arko Corp-SENIOR UNSECURED	1,2			4.C FE	4,441,552	78.5200	3,529,474	4,495,000	4,441,552	0	6,551	0	0	5.125	5.333	MN	29,436	230,369	10/27/2021	11/15/2029
04911A-AA-5	Atlantic Union Bankshare-SUBORDINATED	2			2.B FE	15,000,000	84.0000	12,600,000	15,000,000	15,000,000	0	0	0	0	2.875	2.875	JD	19,167	431,250	12/01/2021	12/15/2031
097023-BL-8	Boeing Co/The-SENIOR UNSECURED	1,2			2.C FE	9,792,622	66.0548	6,605,484	10,000,000	9,792,622	0	5,992	0	0	3.500	3.637	MS	116,667	350,000	10/05/2021	03/01/2045
097023-CV-5	Boeing Co/The-SENIOR UNSECURED	1,2			2.C FE	6,342,695	95.3536	4,767,679	5,000,000	6,342,695	0	(57,352)	0	0	5.705	3.569	MN	47,542	285,250	10/05/2021	05/01/2040
097023-CY-9	Boeing Co/The-SENIOR UNSECURED	1,2			2.C FE	16,890,240	97.5081	14,626,209	15,000,000	16,890,240	0	(222,210)	0	0	5.150	3.151	MN	128,750	901,250	01/19/2022	05/01/2030
14040H-BG-9	Capital One Financial Co-SENIOR UNSECURE	2			2.A FE	7,701,071	96.2171	7,216,284	7,500,000	7,701,071	0	(91,954)	0	0	3.200	1.836	FA	97,333	337,333	01/19/2022	02/05/2025
14040H-BK-0	Capital One Financial Co-SUBORDINATED	2			2.B FE	4,763,272	94.3343	4,716,714	5,000,000	4,763,272	0	7,960	0	0	3.750	5.218	JJ	79,688	137,083	12/02/2022	07/28/2026
14040H-CG-8	Capital One Financial Co-SUBORDINATED	2			2.B FE	9,320,680	72.0220	7,202,198	10,000,000	9,320,680	0	56,580	0	0	2.359	3.187	JJ	99,602	335,502	01/18/2022	07/29/2032
14040H-CM-5	Capital One Financial Co-SENIOR UNSECURE	2			2.A FE	14,580,475	93.5989	14,039,831	15,000,000	14,580,475	0	83,575	0	0	2.636	3.576	MS	129,603	327,303	04/25/2022	03/03/2026
14040H-CU-7	Capital One Financial Co-SENIOR UNSECURE	2			2.A FE	5,004,285	98.0300	4,901,502	5,000,000	5,004,285	0	(865)	0	0	4.986	4.949	JJ	106,645	190,821	07/26/2022	07/24/2026
256746-AJ-7	Dollar Tree Inc-SENIOR UNSECURED	1,2			2.B FE	38,506,677	81.1666	32,017,797	39,447,000	38,506,677	0	85,563	0	0	2.650	2.956	JD	87,112	1,132,458	01/25/2022	12/01/2031
257469-AJ-5	Dominion Resources Inc/V-SENIOR NOTE				2.B FE	4,981,752	97.7980	4,889,899	5,000,000	4,981,752	0	14,008	0	0	5.250	5.295	FA	109,375	716,524	11/28/2006	08/01/2033
347466-AE-4	Fort Irwin Land LLC-UNSECURED				1.F FE	7,646,311	97.8582	7,766,485	7,936,472	7,646,311	0	30,736	0	0	5.300	5.703	JD	18,695	436,230	12/20/2010	12/15/2035
446413-AT-3	Huntington Ingalls Indus-SENIOR UNSECURE	1,2			2.C FE	3,000,113	90.7498	2,722,493	3,000,000	3,000,113	0	(93)	0	0	4.200	4.199	MN	21,000	248,500	03/26/2020	05/01/2030
52532X-AF-2	Leidos Inc-SENIOR UNSECURED	1,2			2.C FE	14,761,516	90.3418	12,647,856	14,000,000	14,761,516	0	(89,387)	0	0	4.375	3.112	MN	78,264	668,403	01/18/2022	05/15/2030
570535-AQ-7	Markel Corp-SENIOR UNSECURED				2.B FE	7,938,270	87.4150	7,938,270	6,000,000	7,938,270	0	(56,551)	0	0	5.000	3.050	AO	71,667	300,000	08/03/2021	04/05/2046
570535-AR-5	Markel Corp-SENIOR UNSECURED	1,2			2.B FE	2,006,158	92.1736	2,007,540	2,178,000	2,006,158	0	3,726	0	0	3.500	5.374	MN	12,705	12,705	11/15/2022	11/01/2027
570535-AU-8	Markel Corp-SENIOR UNSECURED	1,2			2.B FE	7,948,326	87.1192	7,036,618	8,077,000	7,948,326	0	5,621	0	0	3.350	3.612	MS	78,167	201,632	12/02/2022	09/17/2029
571676-AF-2	Mars Inc-SENIOR UNSECURED	1,2			1.F FE	21,810,692	82.0153	15,562,403	18,975,000	21,810,692	0	(67,239)	0	0	3.950	3.103	AO	187,378	936,891	01/19/2022	04/01/2049
63902H-BF-5	Nature Conservancy/The-SENIOR UNSECURED	1,2			1.C FE	17,633,952	80.0644	13,410,787	16,750,000	17,633,952	0	(14,923)	0	0	3.957	3.658	MS	220,933	548,649	03/07/2022	03/01/2052
651587-AG-2	NewMarket Corp-SENIOR UNSECURED	1,2			2.B FE	9,895,967	78.1915	7,819,147	10,000,000	9,895,967	0	11,072	0	0	2.700	2.843	MS	77,250	270,000	03/04/2021	03/18/2031
655844-BM-9	NORFOLK SOUTHERN CORP-SENIOR UNSECURED N	1,2			2.A FE	3,397,942	82.5281	2,475,844	3,000,000	3,397,942	0	(15,032)	0	0	3.950	3.035	AO	29,625	118,500	02/23/2021	10/01/2042
666807-BT-8	Northrop Grumman Corp-SENIOR UNSECURED	1,2			2.A FE	12,552,538	97.3324	9,733,238	10,000,000	12,552,538	0	(113,147)	0	0	5.150	3.180	MN	85,833	515,000	02/25/2021	05/01/2040
679574-AG-8	Old Dominion Electric Co-FIRST LIEN				1.E FE	3,729,772	99.5924	3,610,226	3,625,000	3,729,772	0	(57,398)	0	0	6.210	5.090	JD	18,759	259,505	08/31/2021	12/01/2028
679574-AH-6	Old Dominion Electric Co-FIRST LIEN				1.E FE	1,016,281	98.6483	986,420	999,936	1,016,281	0	(9,031)	0	0	5.676	5.040	JD	65,427	65,427	01/20/2012	12/01/2028
69354N-AC-0	PRA Group Inc-SENIOR UNSECURED	1,2			3.B FE	4,114,026	96.8781	3,865,437	3,990,000	4,114,026	0	(55,524)	0	0	7.375	5.305	MS	98,088	245,219	03/28/2022	09/01/2025
832248-BC-1	Smithfield Foods Inc-SENIOR UNSECURED	1,2			2.C FE	9,778,895	76.1128	7,611,278	10,000,000	9,778,895	0	23,195	0	0	3.000	3.324	AO	63,333	363,333	01/18/2022	10/15/2030
843395-AA-2	Primis Financial Corp-SUBORDINATED				2.C FE	4,999,378	102.5000	5,125,000	5,000,000	4,999,378	0	(48)	0	0	8.365	8.366	JAJO	160,231	302,568	10/28/2021	01/31/2027
843395-AB-0	Primis Financial Corp-SUBORDINATED	2			2.C FE	4,000,000	96.1500	3,846,000	4,000,000	4,000,000	0	0	0	0	5.400	5.400	MS	72,000	216,000	08/20/2020	09/01/2030
90539J-A*-0	Atlantic Union Bankshare-UNION BKSHRS ST				1.F FE	7,504,894	0.9859	73,943	7,500,000	7,504,894	0	(428)	0	0	7.496	6.306	MJSD	234,618	351,255	02/08/2018	06/17/2034
927804-GF-5	Virginia Electric and Po-SENIOR UNSECURE	1,2			1.F FE	11,618,075	66.2955	8,025,069	12,105,000	11,618,075	0	9,583	0	0	2.950	3.453	MN	45,629	395,783	01/20/2022	11/15/2051
928668-AR-3	Volkswagen Group of Amer-SENIOR UNSECURE				2.A FE	11,969,498	99.0275	11,883,305	12,000,000	11,969,498	0	33,127	0	0	4.250	4.547	MN	68,000	510,000	12/07/2018	11/13/2023
928668-AU-6	Volkswagen Group of Amer-SENIOR UNSECURE				2.A FE	15,611,106	97.4020	15,976,842	16,403,000	15,611,106	0	92,536	0	0	4.750	5.724	MN	103,886	1,819,929	12/05/2022	11/13/2028
928668-BS-0	Volkswagen Group of Amer-SENIOR UNSECURE	1,2			2.A FE	4,668,742	96.0363	4,801,813	5,000,000	4,668,742	0	10,892	0	0	4.350	6.075	JD	13,896	122,646	10/28/2022	06/08/2027
928668-BT-8	Volkswagen Group of Amer-SENIOR UNSECURE	1,2			2.A FE	10,018,507	94.3178	10,113,692	10,723,000	10,018,507	0	12,492	0	0	4.600	5.835	JD	31,514	278,143	12/05/2022	06/08/2047
023135-BJ-4	Amazon.com Inc-SENIOR UNSECURED	1,2			1.E FE	18,682,615	86.1823	12,927,339	15,000,000	18,682,615	0	(107,545)	0	0	4.050	2.664	FA	217,688	607,500	08/02/2021	08/22/2047
023135-BT-2	Amazon.com Inc-SENIOR UNSECURED	1,2			1.D FE	9,005,570	63.4846	6,348,456	10,000,000	9,005,570	0	21,770	0	0	2.500	3.037	JD	19,444	269,444	01/19/2022	06/03/2050
023135-BX-3	Amazon.com Inc-SENIOR UNSECURED	1,2			1.D FE	4,457,038	88.6542	4,432,709	5,000,000	4,457,038	0	14,888	0	0	1.000	4.515	MN	6,806	6,806	11/22/2022	05/12/2026
023135-CA-2	Amazon.com Inc-SENIOR UNSECURED	1,2			1.D FE	29,985,948	74.7386	22,421,583	30,000,000	29,985,948	0	(58)	0	0	2.875	2.978	MN	117,396	901,632	01/20/2022	05/12/2041
023135-CN-4	Amazon.com Inc-SENIOR UNSECURED				1.D FE	9,999,053	99.8642	9,986,423	10,000,000	9,999,053	0	(347)	0	0	4.600	4.602	JD	38,333	38,333	11/29/2022	12/01/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
242247-AA-2	Deako Inc-SECURED				1.E PL	25,000,000	100.0000	25,000,000	25,000,000	25,000,000	0	0	0	0	8.250	8.255	JD	17,188	17,188	12/27/2022	12/15/2026
30212P-AM-7	Expedia Group Inc-SENIOR UNSECURED			1,2	2.C FE	12,979,049	98.7337	12,835,375	13,000,000	12,979,049	0	5.832	0	0	5.000	5.054	FA	245,556	650,000	12/01/2015	02/15/2026
30212P-AR-6	Expedia Group Inc-SENIOR UNSECURED			1,2	2.C FE	10,004,735	84.7083	8,470,826	10,000,000	10,004,735	0	665	0	0	3.250	3.242	FA	122,778	447,778	01/18/2022	02/15/2030
30212P-BK-0	Expedia Group Inc-SENIOR UNSECURED			1,2	2.C FE	1,892,785	96.0884	1,921,768	2,000,000	1,892,785	0	4,945	0	0	4.625	5.978	FA	38,542	38,542	09/30/2022	08/01/2027
43785V-AD-4	HomeStreet Inc-SENIOR UNSECURED			1,2	2.B FE	13,000,000	98.6170	12,820,207	13,000,000	13,000,000	0	0	0	0	6.500	6.498	JD	70,417	845,000	05/17/2016	06/01/2026
655664-AS-9	Nordstrom Inc-SENIOR UNSECURED			1,2	3.A FE	5,989,554	83.1742	4,990,450	6,000,000	5,989,554	0	2,173	0	0	4.000	4.044	MS	70,667	240,000	03/06/2017	03/15/2027
655664-AT-7	Nordstrom Inc-SENIOR UNSECURED			1,2	3.A FE	9,991,345	75.1780	7,517,800	10,000,000	9,991,345	0	926	0	0	4.375	4.388	AO	109,375	437,500	11/04/2019	04/01/2030
745332-CB-0	PUGET SOUND ENERGY INC-SENIOR SECURED BO			1	1.F FE	23,641,337	99.8523	16,673,335	16,698,000	23,641,337	0	(312,011)	0	0	5.795	2.746	MS	284,919	967,649	08/02/2021	03/15/2040
745332-CC-8	PUGET SOUND ENERGY INC-SECURED			1	1.F FE	18,862,677	98.3018	13,654,114	13,890,000	18,862,677	0	(209,283)	0	0	5.764	3.101	JJ	369,175	796,383	01/20/2022	07/15/2040
855244-BG-2	Starbucks Corp-SENIOR UNSECURED			1,2	2.A FE	19,674,069	85.6512	17,130,242	20,000,000	19,674,069	0	25,069	0	0	3.000	3.207	FA	228,333	528,333	02/25/2022	02/14/2032
87151Q-AC-0	Symetra Financial Corp-SENIOR UNSECURED				2.A FE	10,015,943	97.9429	9,794,294	10,000,000	10,015,943	0	(9,930)	0	0	4.250	4.141	JJ	195,972	425,000	03/04/2016	07/15/2024
87264A-BF-1	T-Mobile USA Inc-FIRST LIEN			1,2	2.C FE	33,004,294	90.9139	27,274,167	30,000,000	33,004,294	0	(388,530)	0	0	3.875	2.324	AO	245,417	1,162,500	02/12/2021	04/15/2030
87264A-BL-8	T-Mobile USA Inc-FIRST LIEN			1,2	2.C FE	19,221,254	70.6563	14,131,262	20,000,000	19,221,254	0	30,995	0	0	3.000	3.287	FA	226,667	600,000	02/19/2021	02/15/2041
87264A-BV-6	T-Mobile USA Inc-SENIOR UNSECURED			1,2	2.C FE	5,955,331	88.1940	5,818,158	6,597,000	5,955,331	0	5,749	0	0	3.375	5.208	AO	47,004	47,004	12/05/2022	04/15/2029
87264A-CG-6	T-Mobile USA Inc-FIRST LIEN			1,2	2.C FE	19,413,529	80.9480	16,189,590	20,000,000	19,413,529	0	28,293	0	0	2.700	3.068	MS	159,000	577,500	07/01/2022	03/15/2032
02344A-AA-6	Amcort Flexibles North Am-SENIOR UNSECURE			1,2	2.B FE	14,728,258	81.1029	12,669,090	15,621,000	14,728,258	0	72,167	0	0	2.690	3.480	MN	42,020	462,225	03/10/2022	05/25/2031
045487-AB-1	ASSOC BANC-CORP-SUBORDINATED NOTE			2	2.A FE	18,485,042	97.4717	18,032,268	18,500,000	18,485,042	0	6,845	0	0	4.250	4.291	JJ	362,549	800,063	11/05/2014	01/15/2025
186856-AA-0	Cliffwater Corporate Len Senior Secured				1.C PL	109,000,000	94.1999	102,677,891	109,000,000	109,000,000	0	0	0	0	4.100	4.099	MS	2,459,203	11,197,050	06/07/2022	03/28/2027
28932M-AA-3	Elm Road Generating Stat-SECURED NOTE				1.F FE	3,594,755	97.4314	3,502,292	3,594,624	3,594,755	0	(57)	0	0	5.209	5.207	FA	72,817	194,510	02/03/2010	02/11/2030
337738-BG-1	Fiserv Inc-SENIOR UNSECURED			1,2	2.B FE	19,738,244	83.7978	16,759,566	20,000,000	19,738,244	0	29,544	0	0	2.650	2.847	JD	44,167	574,167	01/20/2022	06/01/2030
743516-AA-6	Project Arrow Oak Creek Trust Certificate				1.D	16,001,301	88.0296	14,085,879	16,001,298	16,001,301	0	(1)	0	0	4.067	4.067	MON	37,962	377,319	03/11/2019	07/10/2040
976656-CJ-5	WISCONSIN ELECTRIC POWER-SR UNSECURED			1,2	1.G FE	6,679,952	80.1033	4,637,982	5,790,000	6,679,952	0	(24,578)	0	0	4.300	3.323	JD	11,065	260,035	01/20/2022	12/15/2045
950810-A*-2	Wesbanco, Inc - Junior Sub Note				1.F FE	4,630,147	0.9801	46,555	4,750,000	4,630,147	0	7,626	0	0	7.396	7.725	MJSD	87,313	218,137	02/01/2018	06/17/2034
136385-AV-3	Canadian Natural Resourc-SENIOR UNSECURE			1,2	2.A FE	3,566,214	97.2019	3,518,708	3,620,000	3,566,214	0	25,301	0	0	3.900	4.655	FA	58,825	149,901	08/21/2015	02/01/2025
13645R-AK-0	Canadian Pacific Railway-SENIOR UNSECURE			1	2.B FE	7,999,315	99.8905	7,991,242	8,000,000	7,999,315	0	535	0	0	4.450	4.456	MS	104,822	356,000	09/21/2010	03/15/2023
15135U-AR-0	Cenovus Energy Inc-SENIOR UNSECURED			1,2	2.C FE	12,319,574	90.3538	9,035,382	10,000,000	12,319,574	0	(57,719)	0	0	5.400	3.901	JD	24,000	540,000	10/04/2021	06/15/2047
29250N-BG-9	Enbridge Inc-SENIOR UNSECURED			1,2	2.A FE	10,429,351	98.9486	10,378,723	10,489,000	10,429,351	0	75,528	0	0	4.000	4.773	AO	104,890	419,560	09/11/2015	10/01/2023
58518N-ZB-7	MEGlobal Canada ULC-SENIOR UNSECURED				2.B FE	1,021,534	98.0905	976,000	995,000	1,021,534	0	(7,774)	0	0	5.000	3.816	MN	5,942	55,692	04/01/2022	05/18/2025
70137W-AG-3	Parkland Corp-SENIOR UNSECURED			1,2	3.B FE	3,828,408	83.4668	3,544,834	4,247,000	3,828,408	0	27,343	0	0	4.500	6.314	AO	47,779	143,336	06/08/2022	10/01/2029
335934-AB-9	First Quantum Minerals L-SENIOR UNSECURE			1,2	4.A FE	6,032,926	97.9800	5,878,800	6,000,000	6,032,926	0	(129,932)	0	0	7.500	5.213	AO	112,500	450,000	02/28/2021	04/01/2025
59151K-AK-4	Methanex Corp-SENIOR UNSECURED			1,2	3.A FE	998,870	95.8328	958,328	1,000,000	998,870	0	713	0	0	4.250	4.310	JD	3,542	64,104	11/13/2014	12/01/2024
59151K-AL-2	Methanex Corp-SENIOR UNSECURED			1,2	3.A FE	9,997,052	88.6818	8,868,183	10,000,000	9,997,052	0	311	0	0	5.250	5.255	JD	23,333	525,000	09/09/2019	12/15/2029
878742-AS-4	TECK RESOURCES LTD-NOTE			1,2	2.C FE	13,028,109	96.1035	9,610,348	10,000,000	13,028,109	0	(125,902)	0	0	6.000	3.613	FA	226,667	600,000	08/04/2021	08/15/2040
878742-AW-5	TECK RESOURCES LTD-SENIOR UNSECURED NOTE			1,2	2.C FE	19,282,979	98.4845	14,772,680	15,000,000	19,282,979	0	(159,287)	0	0	6.250	4.011	JJ	432,292	937,500	06/07/2021	07/15/2041
878742-AZ-8	Teck Resources Ltd-SENIOR UNSECURED			1,2	2.C FE	12,246,112	89.6248	8,962,483	10,000,000	12,246,112	0	(76,414)	0	0	5.400	3.768	FA	225,000	540,000	10/06/2021	02/01/2043
878742-BG-9	Teck Resources Ltd-SENIOR UNSECURED			1,2	2.C FE	10,450,688	89.6337	8,963,368	10,000,000	10,450,688	0	(51,312)	0	0	3.900	3.202	JJ	179,833	374,833	01/18/2022	07/15/2030
071734-AK-3	Bausch Health Cos Inc-SENIOR UNSECURED			1,2	6.FE	3,462,300	48.1889	4,337,000	9,000,000	3,462,300	0	15,312	4,403,824	0	6.250	6.250	FA	212,500	562,500	11/02/2021	02/15/2029
06368B-GS-1	Bank of Montreal-SUBORDINATED			2	2.A FE	34,041,576	88.2149	30,434,127	34,500,000	34,041,576	0	11,411	0	0	3.803	3.400	JD	58,313	1,634,022	02/28/2022	12/15/2032
06368B-O6-8	Bank of Montreal-SUBORDINATED			2	2.A FE	17,000,000	98.0126	16,662,140	17,000,000	17,000,000	0	0	0	0	4.338	4.338	AO	176,171	737,460	10/02/2018	10/05/2028
06368F-AJ-8	Bank of Montreal-SENIOR UNSECURED				1.F FE	5,963,481	91.4277	5,727,031	6,264,000	5,963,481	0	44,189	0	0	2.650	3.903	MS	52,104	135,102	04/25/2022	03/08/2027
064159-HB-5	BANK OF NOVA SCOTIA-SUBORDINATED				2.A FE	7,616,355	97.9231	7,344,229	7,500,000	7,616,355	0	(25,981)	0	0	4.500	3.939	JD	14,063	426,563	04/25/2022	12/16/2025
067901-AH-1	Barrick Gold Corp-SENIOR UNSECURED				2.A FE	6,700,932	95.9144	4,795,721	5,000,000	6,700,932	0	(65,008)	0	0	5.250	2.926	AO	65,625	262,500	08/02/2021	04/01/2042
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED			1,2	1.G FE	5,948,390	91.8386	6,120,125	6,664,000	5,948,390	0	(3,956)	0	0	3.900	6.415	JJ	112,622	385,595	10/19/2022	01/25/2028
11271L-AF-9	Brookfield Finance Inc-SENIOR UNSECURED			1,2	1.G FE	19,460,196	63.9500	12,410,777	19,407,000	19,460,196	0	(1,116)	0	0	3.500	3.484	MS	171,698	850,943	01/18/2022	03/30/2051
11271R-AA-7	Brookfield Finance Inc-SENIOR UNSECURED			1,2	1.G FE	6,496,653	98.3269	6,391,250	6,500,000	6,496,653	0	2,311	0	0	4.000	4.039	AO	65,000	260,000	03/07/2017	04/01/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
CUSIP	Description	3	4	5	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	8	9	Par Value	Book/ Adjusted Carrying Value	12	13	14	15	16	17	18	19	20	21	22
Identification		C o d e	F o r e i g n	Bond Char			Rate Used to Obtain Fair Value	Fair Value			Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
125491-AN-0	CI Financial Corp-SENIOR UNSECURED	A	1,2		2.B FE	37,778,214	..75.9709	28,546,062	37,575,000	37,778,214	0	(23,075)	0	0	3.200	3.058	JD	46,760	1,202,400	01/13/2021	12/17/2030
56501R-AC-0	Manulife Financial Corp-SENIOR UNSECURED	A			1.G FE	4,417,249	..97.4382	4,237,588	4,349,000	4,417,249	0	(9,801)	0	0	4.150	3.621	MS	58,657	615,539	04/25/2022	03/04/2026
57701R-AM-4	Mattamy Group Corp-SENIOR UNSECURED	A	1,2		3.C FE	2,500,000	..80.9528	2,023,821	2,500,000	2,500,000	0		0	0	4.625	4.624	MS	38,542	115,625	06/22/2021	03/01/2030
655422-AV-5	Glencore Canada Corp-SENIOR UNSECURED	A			2.A FE	8,535,261	..96.7627	6,515,030	6,733,000	8,535,261	0	(113,492)	0	0	6.200	3.526	JD	18,553	417,446	06/04/2021	06/15/2035
78016E-Z5-9	Royal Bank of Canada-SENIOR UNSECURED	A			1.E FE	9,949,754	..96.1236	9,612,360	10,000,000	9,949,754	0	13,754	0	0	3.375	3.604	AO	72,188	240,938	04/25/2022	04/14/2025
884903-BQ-7	Thomson Reuters Corp-SENIOR UNSECURED	A	1,2		2.B FE	4,996,593	..99.4075	4,970,375	5,000,000	4,996,593	0	3,449	0	0	4.300	4.374	MIN	22,694	215,000	11/14/2013	11/23/2023
89115A-2A-9	Toronto-Dominion Bank/Th-SENIOR UNSECURE	A			1.E FE	5,830,299	..96.9836	5,819,017	6,000,000	5,830,299	0	6,459	0	0	3.766	5.015	JD	15,692	127,416	11/22/2022	06/06/2025
89115A-2H-4	Toronto-Dominion Bank/Th-SENIOR UNSECURE	A			1.E FE	19,590,677	..98.8353	19,767,068	20,000,000	19,590,677	0	11,977	0	0	4.693	5.184	MS	276,366	276,366	12/02/2022	09/15/2027
98417E-AC-4	GLENCORE FINANCE CANADA-SENIOR UNSECURED	A	1		2.A FE	2,864,210	..105.4453	2,217,516	2,103,000	2,864,210	0	(37,767)	0	0	6.900	3.711	MIN	18,541	145,107	06/07/2021	11/15/2037
67077M-AQ-1	Nutrien Ltd-SENIOR UNSECURED	A	1,2		2.B FE	3,531,069	..101.3007	2,526,440	2,494,000	3,531,069	0	(44,160)	0	0	6.125	3.047	JJ	70,438	152,758	07/13/2021	01/15/2041
134999-ZD-6	CRANEMERE UK HLDGS I 12.50 PIK 6/30/24	D			5.B GI	2,653,911	..114.1711	3,030,000	2,653,911	2,653,911	0	0	0	0	12.500	12.500	JUN	337,268	336,346	12/31/2021	06/30/2024
26746*-AA-2	Dyal Cap Partners III Is Senior Secured	C			1.G PL	4,087,742	..86.0400	3,516,657	4,087,235	4,087,742	0	(56)	0	0	4.400	4.398	JD	7,993	179,838	06/23/2020	06/15/2031
26746@-AA-0	Dyal Cap Partners III Is Senior Secured	C			1.G PL	7,112,765	..86.0400	6,119,823	7,112,765	7,112,765	0	0	0	0	4.400	4.400	JD	13,909	312,962	06/23/2020	06/15/2031
404201-AB-3	HSBC BANK USA-SUBORDINATED	C			1.F FE	12,599,582	..94.6807	9,468,073	10,000,000	12,599,582	0	(165,802)	0	0	5.625	3.118	FA	212,500	562,500	10/05/2021	08/15/2035
45082D-AA-5	Iberia, Lineas Aereas De Senior Secured	D			1.F PL	14,411,821	..87.8724	12,664,013	14,411,821	14,411,821	0	0	0	0	4.790	4.790	JAJO	451,393	474,780	06/21/2022	01/15/2036
45082E-AA-3	Iberia, Lineas Aereas De Senior Secured	D			2.B PL	4,876,830	..84.7748	4,134,323	4,876,830	4,876,830	0	0	0	0	5.880	5.880	JAJO	60,538	182,992	06/21/2022	07/15/2032
50177W-A*-2	LBC Tank Terminals Holdi Senior Secured	D			2.C PL	12,000,000	..87.4344	10,492,128	12,000,000	12,000,000	0	0	0	0	4.680	4.678	AO	372,840	572,520	10/25/2021	10/27/2029
92838*-AA-3	Vista Malta Finance P.L. Pass Through Ce	D			2.A PL	40,000,000	..92.1098	36,843,920	40,000,000	40,000,000	0	0	0	0	6.850	6.847	AO	1,012,278	1,012,278	08/18/2022	04/05/2032
92842@-AA-5	Vista Malta Finance P.L. Pass Through Ce	D			3.B PL	7,000,000	..97.4561	6,821,927	7,000,000	7,000,000	0	0	0	0	9.500	9.494	AO	245,681	245,681	08/18/2022	04/05/2031
D3003*-AA-5	EnBW Energie Baden-Wuert Senior Note Ser	D			2.A IF	25,000,000	..100.7928	25,198,200	25,000,000	25,000,000	0	0	0	0	6.420	6.420	MIN	231,833	231,833	11/09/2022	11/09/2025
D3003*-AC-1	EnBW Energie Baden-Wuert Senior Note Ser	D			2.A IF	5,000,000	..101.4748	5,073,740	5,000,000	5,000,000	0	0	0	0	6.640	6.640	MIN	47,956	47,956	11/09/2022	11/09/2031
F2004@-AA-2	Compagnie Daher Senior Note Series A (US	D			3.C	8,750,000	..98.0258	8,577,258	8,750,000	8,750,000	0	0	0	0	5.830	5.830	AO	345,751	345,751	04/27/2022	04/27/2030
F2977*-AC-9	Elis SA Senior Unsecured Notes	D			2.C PL	88,000,000	..90.6127	79,739,176	88,000,000	88,000,000	0	0	0	0	4.320	4.320	JD	316,800	10,038,072	06/01/2022	06/01/2032
G0369@-BH-8	Anglian Water Services F Senior Secured	B			1.G FE	18,206,400	..97.2929	18,832,792	16,000,000	19,356,800	0	0	0	1,150,400	6.070	6.070	MIN	169,102	169,102	11/09/2022	11/09/2037
G1001*-AB-2	Artis LoanCo 1 PLC Senior Secured Fixed	D			2.B Z	16,667,000	..100.9157	16,819,620	16,667,000	16,667,000	0	0	0	0	8.250	8.250	MON	42,015	42,015	12/20/2022	06/09/2026
G2283*-MM-2	Colombo BidCo Limited Senior Secured Not	B			2.B Z	5,692,000	..96.7381	5,851,688	5,000,000	6,049,000	0	0	0	357,000	3.518	3.518	MS	57,541	57,541	09/20/2022	09/20/2029
G2283*-NN-9	Colombo BidCo Limited Senior Secured Not	B			2.B Z	19,352,800	..96.6093	19,869,248	17,000,000	20,566,600	0	0	0	1,213,800	6.660	6.660	MS	370,361	370,361	09/20/2022	09/20/2032
G8655*-AA-2	TPG Partner Holdings, L. Senior Note Ser	C			1.D PL	6,000,000	..81.2900	4,877,400	6,000,000	6,000,000	0	0	0	0	2.970	2.970	MS	134,145	178,200	09/10/2020	09/30/2030
N7136*-ZZ-9	Pon Holdings BV Senior Unsecured Notes	D			2.B Z	30,000,000	..99.9338	29,980,140	30,000,000	30,000,000	0	0	0	0	5.630	5.630	FA	666,217	666,217	08/09/2022	08/04/2032
P4900*-AA-4	Gran Americas Usme Provi Senior Secured	D			2.B PL	8,665,496	..85.7014	7,426,451	8,665,496	8,665,496	0	0	0	0	4.220	4.220	MJSD	221,041	380,059	09/25/2021	03/31/2031
P4900*-AB-2	Gran Americas Usme Provi Senior Secured	D			2.B PL	770,624	..85.7014	660,436	770,624	770,624	0	0	0	0	4.220	4.220	MJSD	19,657	33,492	08/25/2021	03/31/2031
T0149@-AA-7	ASR Media and Sponsorshi Senior Secured	B			2.C PL	22,396,500	..107.3428	25,869,346	22,500,000	24,099,750	0	1,277,294	0	1,703,250	6.040	6.036	AO	254,417	254,417	10/26/2022	10/30/2027
V5000*-AB-1	Kalsoy Navigation, Inc. Gtd Senior Secur	D			2.C	1,250,000	..78.8847	986,059	1,250,000	1,250,000	0	0	0	0	3.740	3.740	MS	35,192	35,192	03/30/2022	03/30/2034
V5733@-AA-5	Luffield Navigation, Inc Gtd Senior Secu	D			2.C	13,750,000	..78.8847	10,846,646	13,750,000	13,750,000	0	0	0	0	3.740	3.740	MS	319,978	319,978	06/17/2022	03/30/2034
W8000*-AB-0	Samh?llsbyggnadsbolaget i Norden AB	D			2.C PL	20,000,000	..101.2386	20,247,720	20,000,000	20,000,000	0	0	0	0	6.420	6.420	JJ	570,667	570,667	07/21/2022	07/21/2032
Y5008*-AA-2	Knausen Holding LLC Senior Secured Notes	D			2.B PL	19,311,600	..97.3990	18,809,305	19,311,600	19,311,600	0	0	0	0	5.690	5.688	JAJO	615,694	615,694	06/14/2022	07/15/2027
Y7563*-AE-7	Seaspan Holdco III, Ltd. Senior Secured	D			2.B PL	25,000,000	..93.3871	23,346,775	25,000,000	25,000,000	0	0	0	0	5.150	5.150	MJSD	92,986	529,306	08/03/2022	09/05/2032
Y7563*-AF-4	Seaspan Holdco III, Ltd. Senior Secured	D			2.B PL	10,000,000	..93.6846	9,368,460	10,000,000	10,000,000	0	0	0	0	5.290	5.290	MJSD	38,206	217,478	08/03/2022	09/05/2034
Y7563*-AG-2	Seaspan Holdco III, Ltd. Senior Secured	D			2.B PL	45,000,000	..92.9271	41,817,195	45,000,000	45,000,000											

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
88033G-DN-7	TENET HEALTHCARE CORP		1,2		3.C FE	2,165,000	101.3600	1,875,042	2,165,000	2,165,000	.0	.0	.0	.0	4.375	4.374	JJ	43,676	94,719	11/16/2021	01/15/2030
40485#-AA-4	HC2 Station Group Inc		3		5.B GI	19,727,866	100.0000	19,727,866	19,727,866	19,727,866	.0	.0	.0	.0	10.500	10.293	MAT	2,514,481	2,100,196	11/30/2022	11/30/2023
87329#-AA-5	TTGA SBIC Pioneer Feeder Fund LP		3		2.B PL	3,023,578	100.0000	3,023,578	3,023,578	3,023,578	.0	.0	.0	.0	0.060	0.060	JD	124,226	124,057	09/13/2022	12/31/2035
92857W-AQ-3	Vodafone Group PLC	D	2		2.B FE	6,743,264	101.2081	5,265,855	5,203,000	6,743,264	.0	(78,494)	.0	.0	6.150	3.483	FA	110,217	430,201	01/19/2022	02/27/2037
03937L-AA-3	Arch Capital Group Ltd	D	2		2.A FE	14,456,937	110.9508	11,615,442	10,469,000	14,456,937	.0	(271,108)	.0	.0	7.350	3.294	MM	128,245	897,717	01/18/2022	05/01/2034
87124V-AD-1	Sydney Airport Finance Co Pty Ltd	D	2		2.A FE	8,000,368	99.6862	7,974,896	8,000,000	8,000,368	.0	(3,201)	.0	.0	3.900	3.858	MS	85,800	312,000	12/19/2022	03/22/2023
85325A-AJ-9	Standard Chartered PLC	D	2		2.B FE	8,999,703	99.9552	8,995,964	9,000,000	8,999,703	.0	7,187	.0	.0	3.950	4.032	JJ	167,875	355,500	12/31/2022	01/11/2023
69369E-AD-1	Pertamina Persero PT	D	2		2.B FE	728,178	95.4765	626,326	656,000	728,178	.0	(1,622)	.0	.0	6.000	5.098	MM	6,341	45,701	04/01/2022	05/03/2042
592838-AA-4	Mexico Generadora de Energia S de rl	D	2		2.B FE	728,128	96.3183	691,860	718,305	728,128	.0	(523)	.0	.0	5.500	5.320	JD	2,744	42,926	04/01/2022	12/06/2032
00185A-AB-0	Aon Global Ltd	D	2		2.A FE	3,636,252	78.4925	2,370,473	3,020,000	3,636,252	.0	(22,553)	.0	.0	4.250	2.896	JD	6,774	128,350	04/01/2022	12/12/2042
076311-AH-5	Rolls-Royce PLC	B	2		4.A FE	541,772	85.6666	518,197	500,000	544,715	.0	5,501	.0	2,943	3.375	6.677	JUN	10,647	10,647	07/25/2022	06/18/2026
50247V-AB-5	LYB International Finance BV	D	1		2.B FE	8,367,407	88.0081	5,671,241	6,444,000	8,367,407	.0	(65,012)	.0	.0	5.250	3.247	JJ	155,999	338,310	04/01/2022	07/15/2043
865622-BE-3	Sumitomo Mitsui Banking Corp	D	2		1.E FE	14,998,582	99.4236	14,913,537	15,000,000	14,998,582	.0	2,038	.0	.0	3.950	3.964	JJ	266,625	592,500	04/01/2022	07/19/2023
22546D-AA-4	Credit Suisse AG	D	2		3.A FE	6,000,000	96.5876	5,795,257	6,000,000	6,000,000	.0	.0	.0	.0	6.500	6.494	FA	154,917	390,000	04/01/2022	08/08/2023
89641U-AA-9	Trinity Acquisition PLC	D	2		2.B FE	2,998,642	99.7822	2,993,465	3,000,000	2,998,642	.0	1,872	.0	.0	4.625	4.691	FA	52,417	138,750	04/01/2022	08/15/2023
89641U-AB-7	Trinity Acquisition PLC	D	2		2.B FE	3,238,316	95.2888	2,177,348	2,285,000	3,238,316	.0	(31,789)	.0	.0	6.125	3.316	FA	52,872	139,956	04/01/2022	08/15/2043
225401-AF-5	Credit Suisse Group AG	D	1,2		2.B FE	16,008,094	80.4803	12,876,842	16,000,000	16,008,094	.0	(1,439)	.0	.0	3.869	3.858	JJ	290,605	619,040	04/01/2022	01/12/2029
22548Q-AC-6	Credit Suisse AG/Nassau	D	2		2.A FE	4,965,211	80.0000	4,000,000	5,000,000	4,965,211	.0	3,420	.0	.0	4.000	4.099	AO	35,000	200,000	04/01/2022	04/28/2031
71423M-AB-1	Perrigo Finance Unlimited Co	D	1,2		3.B FE	9,928,484	93.1000	9,310,000	10,000,000	9,928,484	.0	20,002	.0	.0	4.375	4.615	MS	128,819	437,500	04/01/2022	03/15/2026
83367T-BR-9	Societe Generale SA	D	2		2.C FE	19,974,480	95.6317	19,126,346	20,000,000	19,974,480	.0	7,737	.0	.0	4.750	4.796	MM	97,639	950,000	04/01/2022	11/24/2025
90390K-AB-0	US Capital Funding II Ltd/US Capital Funding II Corp	D	2		1.C FE	1,518,626	95.0602	1,475,175	1,551,832	1,518,626	.0	3,306	.0	.0	5.190	5.436	FMAN	27,654	52,244	07/21/2022	08/01/2034
064255-AR-3	MUFG Bank Ltd	D	2		1.E FE	18,993,477	99.4610	18,897,588	19,000,000	18,993,477	.0	7,829	.0	.0	4.100	4.144	MS	242,356	779,000	04/01/2022	09/09/2023
225401-AC-2	Credit Suisse Group AG	D	1,2		2.B FE	10,000,000	82.9225	8,292,248	10,000,000	10,000,000	.0	.0	.0	.0	4.282	4.282	JJ	204,584	428,200	04/01/2022	01/09/2028
903329-AC-4	US Capital Funding I Ltd/US Capital Funding I Corp	D	2		1.C FE	5,832,228	91.5621	5,463,969	5,967,500	5,832,228	.0	213,875	.0	.0	5.320	5.586	FMAN	55,633	228,132	07/27/2022	05/01/2034
404280-BK-4	HSBC Holdings PLC	D	2		1.G FE	2,999,243	92.2260	2,766,781	3,000,000	2,999,243	.0	2,298	.0	.0	4.041	4.045	MS	36,969	186,335	01/19/2022	03/13/2028
33938E-AU-1	Flex Ltd	D	1,2		2.C FE	4,988,568	97.6808	4,884,041	5,000,000	4,988,568	.0	4,241	.0	.0	4.750	4.849	JD	10,556	237,500	04/01/2022	06/15/2025
29135E-AA-4	Emirates Smb Corp Water & Power Co PJSC	D	2		1.G FE	1,852,367	95.5105	1,727,785	1,809,000	1,852,367	.0	(1,858)	.0	.0	4.450	4.202	FA	33,542	73,792	04/05/2022	08/01/2035
90352J-AC-7	UBS Group AG	D	2		1.G FE	3,015,625	93.3873	2,801,618	3,000,000	3,015,625	.0	(2,509)	.0	.0	4.253	4.116	MS	34,733	233,561	01/18/2022	03/23/2028
59284M-AC-8	Mexico City Airport Trust	D	1,2		2.C FE	4,799,810	91.9750	4,486,541	4,878,000	4,799,810	.0	12,793	.0	.0	3.875	4.213	AO	32,029	189,023	04/01/2022	04/30/2028
06203B-AB-0	MPT Operating Partnership LP / MPT Finance Corp	D	1,2		2.C FE	603,946	90.0769	578,888	600,000	632,914	.0	1,699	.0	28,968	3.325	4.046	MAR	15,737	15,737	07/26/2022	03/24/2025
780153-AH-2	Royal Caribbean Cruises Ltd	D	1,2		4.C FE	3,991,650	74.2500	2,970,000	4,000,000	3,991,650	.0	1,399	.0	.0	3.700	3.744	MS	43,578	148,000	12/19/2022	03/15/2028
85325A-AL-4	Standard Chartered PLC	D	2		2.B FE	23,061,820	99.0828	22,789,039	23,000,000	23,061,820	.0	(55,811)	.0	.0	5.200	4.935	JJ	514,944	1,196,000	12/19/2022	01/26/2024
456829-AA-8	Infraestructura Energetica Nova SAPI de CV	D	2		2.C FE	1,034,182	89.3040	936,799	1,049,000	1,034,182	.0	1,966	.0	.0	3.750	4.063	JJ	18,248	37,917	04/01/2022	01/14/2028
80281L-AG-0	Santander UK Group Holdings PLC	D	2		2.A FE	21,762,369	89.2850	19,642,709	22,000,000	21,762,369	.0	34,509	.0	.0	3.823	3.823	MM	135,504	841,060	12/19/2022	11/03/2028
L8984J-AA-6	Telenet Finance Luxembourg Notes Sarl	B	1,2		3.C FE	464,912	90.1936	483,032	500,000	487,019	.0	3,235	.0	22,106	3.500	5.542	MS	8,780	8,780	07/25/2022	03/01/2028
56608J-AN-8	Macquarie Group Ltd	D	2		1.G FE	3,593,357	94.0711	3,728,978	3,964,000	3,593,357	.0	6,967	.0	.0	4.654	6.499	MS	48,171	203,304	04/01/2022	03/27/2029
64073K-AA-1	Neptune Energy Bondco PLC	D	1,2		3.B FE	2,174,502	97.6000	2,147,200	2,200,000	2,174,502	.0	(448)	.0	.0	6.625	7.888	MM	18,624	131,249	02/23/2022	05/15/2025
063035-AF-5	ProGroup AG	B	1,2		3.C FE	724,089	87.6425	750,991	800,000	758,896	.0	10,663	.0	34,807	3.000	6.995	MS	6,191	18,377	07/26/2022	03/31/2026
404280-BP-3	HSBC Holdings PLC	D	2		2.C FE	5,000,000	93.1000	4,655,000	5,000,000	5,000,000	.0	.0	.0	.0	6.500	6.500	JJ	88,472	325,000	12/19/2022	09/23/2171
00774M-AE-5	AerCap Ireland Capital DAC / AerCap Global Aviation Trust	D	1,2		2.C FE	9,071,950	90.2040	9,020,401	10,000,000	9,071,950	.0	10,694	.0	.0	3.875	6.029	JJ	170,069	170,069	12/05/2022	01/23/2028
04686J-AA-9	Athene Holding Ltd	D	1,2		2.A FE	19,888,495	91.9684	18,237,328	19,830,000	19,888,495	.0	(138,463)	.0	.0	4.125	3.392	JJ	384,000	1,347,457	02/28/2022	01/12/2028
82650N-AA-0	Sigma Finance Netherlands BV	D	1,2		2.C FE	742,891	95.0108	685,028	721,000	742,891	.0	(2,912)	.0	.0	4.875	4.194	MS	9,178	26,752	04/01/2022	03/27/2028
465077-AL-9	Israel Electric Corp Ltd	D	2		2.A FE	4,661,077	94.1414	4,687,299	4,979,000	4,661,077	.0	6,565	.0	.0	4.250	5.575	FA	80,528	101,332	04/01/2022	08/14/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
78448T-AD-4	SMBC Aviation Capital Finance DAC	D.....	1,2	2.A	FE	14,997,436	98.9448	14,841,717	15,000,000	14,997,436	0	4,199	0	0	4.125	4.155	JJ	285,313	618,750	12/19/2022	07/15/2023
D1T1UJ-AA-1	Techem Verwaltungsgesellschaft 674 mbH	B.....	1,2	4.C	FE	168,276	93.5250	176,147	175,840	176,353	0	1,131	0	8,076	6.000	8.080	JJ	4,484	9,876	07/26/2022	07/30/2026
853254-BK-5	Standard Chartered PLC	D.....	2	2.B	FE	6,000,000	87.8647	5,271,882	6,000,000	6,000,000	0	0	0	0	4.866	4.866	MS	85,966	291,960	12/19/2022	03/15/2033
46132F-AB-6	Invesco Finance PLC	D.....	2	2.A	FE	9,991,052	98.6442	9,864,424	10,000,000	9,991,052	0	12,697	0	4,000	4.083	JJ	167,778	660,000	08/23/2022	01/30/2024	
67078A-AD-5	nVent Finance Sarl	D.....	1,2	2.C	FE	7,992,038	92.1695	7,373,560	8,000,000	7,992,038	0	1,221	0	0	4.550	4.570	AO	76,844	364,000	12/19/2022	04/15/2028
21684A-AA-4	Cooperative Rabobank UA	D.....	2	2.A	FE	8,991,666	99.2204	8,929,833	9,000,000	8,991,666	0	8,342	0	0	4.625	4.725	JD	34,688	416,250	12/19/2022	12/01/2023
210314-AB-6	Consorcio Transmuntaro SA	D.....	2	2.C	FE	1,018,819	91.3005	926,700	1,015,000	1,018,819	0	(241)	0	0	4.700	4.656	AO	9,939	57,644	04/01/2022	04/16/2034
7C980B-AC-2	Clarios Global LP / Clarios US Finance Co	D.....	1,2	4.B	FE	95,189	91.7549	98,279	100,000	100,837	0	651	0	5,647	4.375	6.329	MN	587	2,781	07/28/2022	05/15/2026
71654Q-CK-6	Petroleos Mexicanos	D.....	2	3.C	FE	4,997,177	84.0687	4,203,436	5,000,000	4,997,177	0	447	0	0	5.350	5.361	FA	103,285	267,500	12/19/2022	02/12/2028
09659W-2G-8	BNP Paribas SA	D.....	2	1.G	FE	5,000,000	99.0356	4,951,778	5,000,000	5,000,000	0	0	0	0	4.705	4.705	JJ	111,744	235,250	12/19/2022	01/10/2025
998324-AB-4	Trust Fibra Uno	D.....	1,2	2.B	FE	1,041,965	86.6775	841,639	971,000	1,041,965	0	(1,180)	0	0	6.950	6.310	JJ	28,306	62,048	04/01/2022	01/30/2044
69372G-AX-6	Virgin Media Secured Finance PLC	B.....	1,2	3.C	FE	265,210	85.7125	248,868	240,000	266,920	0	1,207	0	1,710	5.250	6.832	MN	1,948	9,345	07/25/2022	05/15/2029
92769X-AP-0	Virgin Media Secured Finance PLC	D.....	1,2	3.C	FE	2,477,169	89.6600	2,241,500	2,500,000	2,477,169	0	2,169	0	5,500	5.671	MN	17,569	155,069	03/30/2022	05/15/2029	
632525-AS-0	National Australia Bank Ltd	D.....	2	2.A	FE	14,000,000	83.8399	11,737,589	14,000,000	14,000,000	0	0	0	0	3.933	3.933	FA	227,896	550,620	12/19/2022	08/02/2034
36830B-AD-7	GC Treasury Center Co Ltd	D.....	1,2	2.B	FE	986,062	88.8219	871,343	981,000	986,062	0	(402)	0	0	4.400	4.328	MS	10,911	32,493	04/01/2022	03/30/2032
05401A-AG-6	Avolon Holdings Funding Ltd	D.....	1,2	2.C	FE	15,313,002	90.9066	13,635,990	15,000,000	15,313,002	0	(76,548)	0	0	4.375	3.671	MN	109,375	765,625	02/25/2022	05/01/2026
N8880B-AD-7	Trivium Packaging Finance BV	B.....	1,2	4.B	FE	191,568	91.0890	195,131	200,000	200,549	0	1,355	0	8,981	3.750	5.724	FA	2,868	6,705	07/25/2022	08/15/2026
U2214W-AB-0	Ardagh Packaging Finance PLC / Ardagh Holdings USA Inc	D.....	1,2	3.C	FE	526,890	83.3747	535,816	600,000	551,646	0	8,895	0	24,756	2.125	6.578	FA	1,711	8,136	07/25/2022	08/15/2026
853254-BP-4	Standard Chartered PLC	D.....	2	1.G	FE	9,000,000	88.9627	8,006,646	9,000,000	9,000,000	0	0	0	0	4.305	4.305	MN	43,050	387,450	12/19/2022	05/21/2030
26874R-AJ-7	Eni SpA	D.....	1,2	1.G	FE	4,991,250	92.6177	4,630,887	5,000,000	4,991,250	0	2,285	0	4,250	4.281	MN	243,194	420,278	12/21/2022	05/09/2029	
37960J-AA-6	Global Aircraft Leasing Co Ltd	D.....	1,2	4.B	FE	2,617,233	85.1470	2,554,410	3,000,000	2,617,233	0	67,233	0	0	7.250	15.257	MS	154,917	154,917	08/22/2022	09/15/2024
69372G-AZ-1	Virgin Media Secured Finance PLC	B.....	1,2	3.C	FE	272,234	77.6267	244,173	260,000	274,004	0	1,859	0	1,770	4.250	6.566	JJ	2,762	9,303	07/25/2022	01/15/2030
50201D-AA-1	LQPR Senior Secured Financing DAC	D.....	1,2	4.A	FE	6,554,176	93.7560	5,946,006	6,342,000	6,554,176	0	(128,584)	0	6,750	4.500	AO	90,374	428,085	12/19/2022	10/15/2027	
20752T-AA-2	Connect Finco SARL / Connect US Finco LLC	D.....	1,2	4.A	FE	2,825,747	92.9722	2,789,166	3,000,000	2,825,747	0	20,747	0	0	6.750	8.589	AO	50,625	151,875	06/16/2022	10/01/2026
G29529-AE-7	eircom Finance DAC	B.....	2	4.A	FE	361,402	84.0486	360,098	400,000	378,365	0	4,305	0	16,963	2.625	5.858	FA	1,409	6,701	07/25/2022	02/15/2027
L1591Y-AB-1	Cidron Aida Finco Sarl	B.....	1,2	4.C	FE	210,855	80.9422	195,848	200,000	212,234	0	1,792	0	1,380	6.250	9.253	AO	3,669	11,108	07/25/2022	04/01/2028
F71369-AC-0	Parts Europe SA	B.....	1,2	4.A	FE	197,070	96.6505	207,045	200,000	206,302	0	616	0	9,232	5.456	6.398	JAJO	2,253	4,292	07/25/2022	07/20/2027
69370P-AF-8	Pertamina Persero PT	D.....	2	2.B	FE	1,047,609	87.1819	953,770	1,094,000	1,047,609	0	4,206	0	0	3.100	3.790	JJ	15,073	32,030	04/01/2022	01/21/2030
052528-AH-9	Australia & New Zealand Banking Group Ltd	D.....	2	2.A	FE	8,998,104	98.4592	8,861,324	9,000,000	8,998,104	0	1,049	0	0	4.500	4.513	MS	114,750	405,000	12/19/2022	03/19/2024
10554T-AE-5	Braskem Netherlands Finance BV	D.....	2	2.C	FE	1,028,982	77.7006	808,087	1,040,000	1,028,982	0	162	0	0	5.875	5.954	JJ	25,628	56,178	04/01/2022	01/31/2050
L8869T-AA-4	Sumner BC Holdco B SARL	B.....	1,2	4.C	FE	190,979	84.8669	181,802	200,000	199,934	0	1,278	0	8,954	5.750	7.793	AO	2,025	7,829	07/25/2022	10/31/2026
60688U-AB-2	Mizuho Financial Group Cayman 3 Ltd	D.....	2	2.B	FE	6,997,338	98.2004	6,874,027	7,000,000	6,997,338	0	1,689	0	0	4.600	4.626	MS	84,078	322,000	12/19/2022	03/27/2024
43103Q-AA-6	Highlands Holdings Bond Issuer Ltd / Highlands Holdings Bond Co-Issuer Inc	D.....	1,2	3.B	FE	3,468,078	92.8875	3,235,272	3,483,000	3,468,078	0	2,493	0	0	7.625	7.792	AO	56,067	188,856	05/26/2022	10/15/2025
86562M-AA-8	Sumitomo Mitsui Financial Group Inc	D.....	2	2.B	FE	4,000,000	98.2796	3,931,183	4,000,000	4,000,000	0	0	0	0	4.436	4.433	AO	43,867	177,440	12/19/2022	04/02/2024
345397-ZY-2	Ford Motor Credit Co LLC	D.....	2	3.A	FE	783,368	92.0400	788,672	800,000	820,092	0	4,918	0	36,724	2.330	3.924	NOV	1,983	20,918	07/25/2022	11/25/2025
84859B-AB-7	Spirit Loyalty Cayman Ltd / Spirit IP Cayman Ltd	D.....	1,2	3.B	FE	2,204,210	100.2470	2,238,516	2,233,000	2,204,210	0	1,153	0	0	8.000	7.853	MJSD	35,232	35,232	11/10/2022	09/20/2025
G2553Z-AN-2	CPUK Finance Ltd	B.....	2	4.B	FE	435,810	82.7253	400,324	400,000	438,179	0	3,426	0	2,369	4.500	6.908	FA	7,156	17,986	07/25/2022	08/28/2027
F0265P-BY-3	Altice France SA/France	B.....	1,2	4.B	FE	190,852	88.0846	188,695	200,000	199,812	0	2,584	0	8,960	2.125	5.539	FA	1,625	3,799	07/25/2022	02/15/2025
30607F-AA-8	Falabella SA	D.....	1,2	2.B	FE	1,033,690	80.1707	881,076	1,099,000	1,033,690	0	4,476	0	0	3.375	4.171	JJ	17,103	44,922	04/01/2022	01/15/2032
780153-BJ-0	Royal Caribbean Cruises Ltd	D.....	1,2	4.C	FE	4,043,000	83.3750	3,370,851	4,043,000	4,043,000	0	0	0	0	5.500	5.497	FA	74,739	221,130	12/19/2022	08/31/2026
G8664B-AB-4	TalkTalk Telecom Group Ltd	B.....	1,2	4.B	FE	218,417	78.1325	189,049	200,000	219,897	0	3,824	0	1,479	3.875	8.637	FA	3,285	7,948	07/25/2022	02/20/2025
43812T-AA-0	Honda Motor Co Ltd	D.....	1,2	1.G	FE	4,747,454	94.7014	4,735,069	5,000,000	4,747,454	0	9,104	0	0	2.271	4.722	MS	35,011	35,011	11/29/2022	03/10/2025
36321P-AE-0	Galaxy Pipeline Assets Bidco Ltd	D.....	2	1.C	FE	1,012,171	80.5727	897,909	1,114,409	1,012,171	0	4,713	0	0	2.940	3.646	MS	8,282	24,936	04/01/2022	09/30/2040

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
92769V-AJ-8	Virgin Media Finance PLC	D	1,2		4.B FE	923,293	80.3948	803,948	1,000,000	923,293	0	6,203	0	0	5.000	6.293	JJ	23,056	48,056	03/15/2022	07/15/2030
69375M-AA-1	Hutama Karya Persero PT	D	2		2.B FE	737,704	90.2771	661,731	733,000	737,704	0	(427)	0	0	3.750	3.647	MN	3,818	31,305	04/01/2022	05/11/2030
47216F-AA-5	Jazz Securities DAC	D	1,2		3.B FE	1,013,471	89.6150	928,411	1,036,000	1,013,471	0	2,671	0	0	4.375	4.793	JJ	20,900	43,562	02/22/2022	01/15/2029
62886H-BE-0	NCL Corp Ltd	D	1,2		4.A FE	1,446,000	86.3800	1,249,055	1,446,000	1,446,000	0	0	0	0	5.875	5.875	FA	32,093	73,861	02/11/2022	02/15/2027
064227-AC-5	Bank of NT Butterfield & Son Ltd/The	D	2		1.G FE	7,719,824	96.0000	7,257,600	7,560,000	7,719,824	0	(38,626)	0	0	5.250	4.332	JD	17,640	414,540	05/10/2022	06/15/2030
E7650V-AG-9	NH Hotel Group SA	B	1,2		4.B FE	189,608	91.5993	196,224	200,000	198,711	0	1,580	0	9,103	4.000	6.337	JJ	4,036	4,036	07/26/2022	07/02/2026
L6527F-AB-0	Motion Finco Sarl	B	1,2		4.B FE	200,635	99.3546	212,838	200,000	210,036	0	641	0	9,401	7.000	7.913	MN	1,879	8,934	07/25/2022	05/15/2025
606822-CN-2	Mitsubishi UFJ Financial Group Inc	D	2		1.G FE	15,104,781	99.0894	15,358,862	15,500,000	15,104,781	0	9,021	0	0	5.354	5.884	MS	248,961	248,961	09/30/2022	09/13/2028
69371M-AF-4	PTTEP Treasury Center Co Ltd	D	1,2		2.A FE	3,457,719	88.4694	3,538,777	4,000,000	3,457,719	0	17,015	0	0	2.587	6.118	JD	6,036	57,776	11/01/2022	06/10/2027
G0457J-AR-0	Ardagh Packaging Finance PLC / Ardagh Holdings USA Inc	B	1,2		3.C FE	116,525	83.2500	133,754	150,000	127,174	0	1,772	0	10,649	2.125	8.995	FA	428	1,995	10/19/2022	08/15/2026
55608J-AX-6	Macquarie Group Ltd	D	2		1.G FE	24,740,389	84.2957	25,083,860	29,757,000	24,740,389	0	140,543	0	0	1.935	5.669	AO	123,157	123,157	10/19/2022	04/14/2028
M2853V-AB-6	Burgan Bank SAK	D	2		2.A FE	1,047,169	72.5009	857,686	1,183,000	1,047,169	0	9,086	0	0	2.750	4.309	JD	1,446	33,978	04/01/2022	12/15/2031
00185A-AG-9	Aon PLC	D	1,2		2.A FE	29,958,373	85.5728	19,922,204	23,281,000	29,958,373	0	(228,028)	0	0	4.600	2.798	JD	50,572	1,070,926	12/19/2022	06/14/2044
G0066R-AD-6	ABQ Finance Ltd	D	2		1.F FE	3,595,461	90.9153	3,636,610	4,000,000	3,595,461	0	22,261	0	0	1.875	6.007	MS	23,542	23,542	11/01/2022	09/08/2025
X0971F-AB-1	Canpack SA / Canpack US LLC	D	1,2		3.C FE	705,585	78.2125	670,187	800,000	741,272	0	8,269	0	35,687	2.375	5.599	MN	3,294	12,865	07/25/2022	11/01/2027
M0153A-AA-6	Abu Dhabi Ports Co PJSC	D	2		1.E FE	1,238,478	83.0929	1,238,478	1,330,000	1,238,478	0	6,898	0	0	2.500	3.456	MN	5,080	38,330	04/01/2022	05/06/2031
20914U-AF-3	Consolidated Energy Finance SA	D	1,2		4.C FE	2,770,051	84.7042	2,541,125	3,000,000	2,770,051	0	25,051	0	0	5.625	7.268	AO	35,625	208,125	03/08/2022	10/15/2028
71429M-AC-9	Perrigo Finance Unlimited Co	D	1,2		3.B FE	9,945,782	85.3120	8,531,200	10,000,000	9,945,782	0	5,974	0	0	4.400	4.486	JD	19,556	417,222	12/19/2022	06/15/2030
81254U-AK-2	Seaspan Corp	D	1,2		3.B FE	5,618,589	75.7800	4,450,559	5,873,000	5,618,589	0	22,975	0	0	5.500	6.306	FA	134,590	296,097	02/09/2022	08/01/2029
494386-AB-1	Kimberly-Clark de Mexico SAB de CV	D	2		1.G FE	2,998,762	97.5538	2,926,615	3,000,000	2,998,762	0	833	0	0	3.800	3.830	AO	26,283	114,000	12/19/2022	04/08/2024
F7163Q-AA-2	Chrome Bidco SASU	B	1,2		4.B FE	367,053	83.7631	358,875	400,000	384,265	0	2,794	0	17,212	3.500	5.742	MN	1,275	8,337	07/25/2022	05/31/2028
E7S1A4-AA-6	Lorca Telecom Bondco SA	B	1,2		4.B FE	510,264	89.3750	526,513	550,000	539,956	0	2,949	0	29,692	4.000	6.051	MS	6,577	14,732	07/25/2022	09/18/2027
05401A-AK-7	Avolon Holdings Funding Ltd	D	1,2		2.C FE	9,783,141	94.8577	9,485,770	10,000,000	9,783,141	0	27,141	0	0	5.500	6.294	JJ	253,611	253,611	07/26/2022	01/15/2026
R0000V-AB-8	Adevinta ASA	B	1,2		3.C FE	195,428	92.7780	198,749	200,000	204,808	0	1,229	0	9,380	2.625	4.266	MN	705	3,349	07/26/2022	11/15/2025
60687Y-QL-1	Mizuho Financial Group Inc	D	2		1.G FE	14,027,415	99.9131	14,320,537	14,333,000	14,027,415	0	7,021	0	0	5.414	5.857	MS	232,797	239,652	09/30/2022	09/13/2028
03969Y-AB-4	Ardagh Metal Packaging Finance USA LLC / Ardagh Metal Packaging Finance PLC	C	1,2		4.B FE	1,981,844	79.3875	1,583,781	1,995,000	1,981,844	0	1,685	0	0	4.000	4.114	MS	10,197	79,800	12/19/2022	09/01/2029
60687Y-BP-3	Mizuho Financial Group Inc	D	2		1.G FE	16,424,598	86.6217	16,537,821	19,092,000	16,424,598	0	73,064	0	0	1.234	4.797	MN	25,523	81,620	10/19/2022	05/22/2027
U2203C-AF-8	Coty Inc	D	1,2		3.C FE	490,314	92.7585	496,768	500,000	513,622	0	2,434	0	23,308	3.875	5.245	AO	4,208	14,013	07/25/2022	04/15/2026
Y0889V-AC-4	Bharti Airtel Ltd	D	1,2		2.C FE	1,032,762	84.5742	945,540	1,118,000	1,032,762	0	6,125	0	0	3.250	4.340	JD	2,826	39,161	04/01/2022	06/03/2031
36165R-AC-9	GCC SAB de CV	D	1,2		2.C FE	1,047,300	83.0645	927,000	1,116,000	1,047,300	0	4,510	0	0	3.614	4.428	AO	7,954	38,204	04/01/2022	04/20/2032
12661P-AA-7	CSL Finance PLC	D	1,2		1.G FE	14,774,590	95.7111	14,117,381	14,750,000	14,774,590	0	(4,228)	0	0	3.850	3.807	AO	100,956	384,893	04/25/2022	04/27/2027
D5S1LA-AE-7	Nidda Healthcare Holding GmbH	B	1,2		4.B FE	386,427	94.7503	405,948	400,000	404,585	0	796	0	18,159	7.500	9.339	FA	5,112	3,889	11/07/2022	08/21/2026
65557C-AN-3	Nordea Bank Abp	D	2		2.B FE	7,928,669	96.9881	7,759,050	8,000,000	7,928,669	0	1,644	0	0	6.125	6.189	JJ	133,389	490,000	12/19/2022	03/23/2171
53944Y-AA-1	Lloyds Banking Group PLC	D	2		2.A FE	2,999,210	97.6589	2,929,766	3,000,000	2,999,210	0	320	0	0	4.500	4.512	MN	21,375	135,000	12/19/2022	11/04/2024
06738E-AE-5	Barclays PLC	D	2		2.B FE	14,966,846	96.0090	14,401,350	15,000,000	14,966,846	0	13,857	0	0	3.650	3.753	MS	159,688	547,500	12/19/2022	03/16/2025
00205G-AB-3	APA Infrastructure Ltd	D	1,2		2.B FE	6,998,177	96.5258	6,756,807	7,000,000	6,998,177	0	605	0	0	4.200	4.210	MS	80,033	294,000	12/19/2022	03/23/2025
251525-AP-6	Deutsche Bank AG	D	2		2.C FE	2,483,269	95.0059	2,375,147	2,500,000	2,483,269	0	6,811	0	0	4.500	4.814	AO	28,125	112,500	12/19/2022	04/01/2025
00185A-AH-7	Aon PLC	D	1,2		2.A FE	6,049,174	87.2089	4,004,634	4,592,000	6,049,174	0	(47,743)	0	0	4.750	2.800	MN	27,871	218,120	12/19/2022	05/15/2045
40049J-BB-2	Grupo Televisa SAB	D	1,2		2.A FE	3,840,548	97.3922	3,895,687	4,000,000	3,840,548	0	7,535	0	0	4.625	6.061	JJ	77,597	113,056	11/01/2022	01/30/2026
92857W-BL-3	Vodafone Group PLC	D	2		2.B FE	55,891,322	92.2287	41,502,906	45,000,000	55,891,322	0	(548,324)	0	0	5.000	3.022	MN	193,750	2,250,000	12/19/2022	05/30/2038
55608X-AB-3	Macquarie Bank Ltd	D	2		2.B FE	9,991,379	97.6433	9,764,330	10,000,000	9,991,379	0	3,132	0	0	4.875	4.912	JD	28,438	487,500	12/19/2022	06/10/2025
63859W-AF-6	Nationwide Building Society	D	2		2.A FE	21,400,112	88.6585	19,504,868	22,000,000	21,400,112	0	46,846	0	0	4.125	4.467	AO	184,021	907,500	12/19/2022	10/18/2032
71568P-AC-3	Perusahaan Perseroan Persero PT Perusahaan Listrik Negara	D	2		2.B FE	736,223	96.0000	696,960	726,000	736,223	0	(1,575)	0	0	4.125	3.772	MN	3,827	33,774	04/01/2022	05/15/2027

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
71654Q-BW-1	Petroleos Mexicanos	D.....	2 .....	.....	3 C FE	5,996,493	90.5966	5,435,794	6,000,000	5,996,493	0	997	0	0	4.500	4.520	JJ	118,500	270,000	12/19/2022	01/23/2026
77578J-AB-4	Rolls-Royce PLC	D.....	1,2 .....	.....	3 C FE	11,958,681	92.0833	11,050,000	12,000,000	11,958,681	0	13,612	0	0	3.625	3.755	AO	93,042	435,000	12/19/2022	10/14/2025
62616F-BC-4	DOC Treasury 2014 Ltd	D.....	3 .....	.....	2 B Z	25,000,000	99.5841	24,896,025	25,000,000	25,000,000	0	0	0	0	6.120	6.120	JD	68,000	68,000	12/15/2022	12/15/2032
00182Y-AA-3	ANZ Bank New Zealand Ltd	D.....	2 .....	.....	1 G FE	7,874,000	96.7515	7,618,213	7,874,000	7,874,000	0	0	0	0	5.548	5.548	FA	169,886	218,425	08/02/2022	08/11/2032
00401M-AB-2	Abu Dhabi Crude Oil Pipeline LLC	D.....	2 .....	.....	1 C FE	886,741	91.9352	766,739	834,000	886,741	0	(835)	0	0	4.600	4.188	MN	19,289	38,471	04/01/2022	11/02/2047
00652M-AG-7	Adani Ports & Special Economic Zone Ltd	D.....	1,2 .....	.....	2 C FE	1,035,113	88.0118	929,404	1,056,000	1,035,113	0	2.979	0	0	4.200	4.683	FA	18,110	40,286	04/01/2022	08/04/2027
00652X-AB-4	Adani Transmission Step-One Ltd	D.....	2 .....	.....	2 C FE	859,780	75.7970	712,219	939,640	859,780	0	8,911	0	0	4.250	5.135	MN	4,437	46,499	04/01/2022	05/21/2036
00830Y-AC-5	Africa Finance Corp	D.....	2 .....	.....	1 G FE	3,791,876	94.1780	3,767,120	4,000,000	3,791,876	0	1,876	0	0	4.375	6.141	AO	35,972	35,972	12/15/2022	04/17/2026
00830Y-AD-3	Africa Finance Corp	D.....	2 .....	.....	1 G FE	1,199,564	84.4241	1,084,006	1,284,000	1,199,564	0	10,259	0	0	2.875	4.268	AO	6,460	43,382	04/01/2022	04/28/2028
00928Q-AR-2	Aircastle Ltd	D.....	1,2 .....	.....	2 C FE	5,998,229	99.9502	5,997,011	6,000,000	5,998,229	0	1,852	0	0	4.400	4.433	MS	70,400	264,000	12/19/2022	09/25/2033
03512T-AF-8	AngloGold Ashanti Holdings PLC	D.....	1,2 .....	.....	2 C FE	1,240,071	87.6659	1,149,299	1,311,000	1,240,071	0	7,731	0	0	3.375	4.437	MN	7,374	52,727	04/01/2022	11/01/2028
04342J-AB-5	ASB Bank Ltd	D.....	2 .....	.....	1 G FE	10,714,000	93.8870	10,059,053	10,714,000	10,714,000	0	0	0	0	5.284	5.284	JD	22,016	390,007	06/08/2022	06/17/2032
04686J-AB-7	Athene Holding Ltd	D.....	1,2 .....	.....	2 A FE	19,451,343	101.2666	17,663,940	17,443,000	19,451,343	0	(229,522)	0	0	6.150	4.194	AO	262,226	1,106,099	01/18/2022	04/03/2030
04686J-AC-5	Athene Holding Ltd	D.....	1,2 .....	.....	2 A FE	20,743,781	82.5486	16,798,638	20,350,000	20,743,781	0	(43,441)	0	0	3.500	3.909	JJ	328,426	684,551	01/19/2022	01/15/2031
05523R-AD-9	BAE Systems PLC	D.....	1,2 .....	.....	2 A FE	20,716,866	88.2909	17,658,186	20,000,000	20,716,866	0	(85,934)	0	0	3.400	2.835	AO	143,556	823,556	01/18/2022	04/15/2030
05969B-AD-5	Banco Santander Mexico SA Institucion de Banca Multiple Grupo Financiero Santand	D.....	2 .....	.....	2 A FE	3,926,960	99.3000	3,972,000	4,000,000	3,926,960	0	4,460	0	0	5.375	6.237	AO	44,194	44,194	11/01/2022	04/17/2025
12661P-AB-5	CSL Finance PLC	D.....	1,2 .....	.....	1 G FE	16,601,828	94.2762	16,026,959	17,000,000	16,601,828	0	4,398	0	0	4.050	4.476	AO	122,400	264,150	04/20/2022	04/27/2029
192714-AD-5	Colbun SA	D.....	1,2 .....	.....	2 B FE	1,048,482	86.4894	972,141	1,124,000	1,048,482	0	6,534	0	0	3.150	4.245	MS	11,310	29,013	04/01/2022	03/06/2030
20039F-AD-9	Cometa Energia SA de CV	D.....	1,2 .....	.....	2 C FE	877,736	95.9950	825,968	860,428	877,736	0	(1,647)	0	0	6.375	6.136	AO	10,209	67,013	04/01/2022	04/24/2035
29278Q-AW-8	Enel Finance International NV	D.....	1,2 .....	.....	2 A FE	11,693,902	94.5696	11,348,357	12,000,000	11,693,902	0	21,685	0	0	4.625	5.271	JD	24,667	302,167	07/25/2022	06/15/2027
29359J-AB-5	Enstar Group Ltd	D.....	1,2 .....	.....	2 B FE	11,296,763	91.2909	9,560,891	10,473,000	11,296,763	0	(111,057)	0	0	4.950	3.520	JD	43,201	561,615	01/19/2022	06/01/2029
29359J-AC-3	Enstar Group Ltd	D.....	1,2 .....	.....	2 C FE	37,325,218	73.0118	28,943,322	39,642,000	37,325,218	0	120,811	0	0	3.100	3.868	MS	409,634	1,291,494	01/18/2022	09/01/2031
30260L-AA-3	FEL Energy VI Sarl	D.....	1,2 .....	.....	2 C FE	944,347	85.7700	897,871	1,046,835	944,347	0	6,826	0	0	5.750	6.696	JD	5,016	67,125	04/01/2022	12/01/2040
316502-AA-1	Fidus Re Ltd	D.....	2 .....	.....	1 C FE	24,428,792	94.4014	23,600,350	25,000,000	24,428,792	0	53,792	0	0	4.521	4.892	MON	169,538	827,433	03/01/2022	03/31/2030
316502-AC-7	Fidus Re Ltd	D.....	2 .....	.....	1 C FE	20,000,000	99.4555	19,891,100	20,000,000	20,000,000	0	0	0	0	3.900	3.900	MON	114,833	114,833	10/31/2022	01/11/2035
456472-AB-5	Industrias Penoles SAB de CV	D.....	1,2 .....	.....	2 B FE	1,047,011	92.7125	963,283	1,039,000	1,047,011	0	(821)	0	0	4.150	4.013	MS	13,055	34,615	04/01/2022	09/12/2029
45853N-AA-0	Interconexion Electrica SA ESP	D.....	1,2 .....	.....	2 B FE	1,230,482	81.5725	1,080,836	1,325,000	1,230,482	0	4,857	0	0	3.825	4.667	MN	4,927	54,342	04/01/2022	11/26/2033
50201D-AD-5	LCPR Senior Secured Financing DAC	D.....	1,2 .....	.....	4 A FE	2,834,426	82.2435	2,319,267	2,820,000	2,834,426	0	(3,659)	0	0	5.125	4.965	JJ	66,642	144,525	12/19/2022	07/15/2029
60689H-AA-3	MlcapS Funding XVIII Ltd	D.....	2 .....	.....	1 B FE	4,072,070	85.4353	4,517,408	5,287,520	4,072,070	0	55,391	0	0	5.014	6.094	MJSD	56,679	113,064	08/18/2022	12/26/2039
62954H-AW-8	NXP BV / NXP Funding LLC / NXP USA Inc	D.....	1,2 .....	.....	2 B FE	16,584,003	93.4841	15,264,079	16,328,000	16,584,003	0	(69,300)	0	0	2.700	1.984	MN	73,476	293,904	05/23/2022	05/01/2025
74445P-AF-9	Indonesia Asahan Aluminium Persero PT	D.....	2 .....	.....	2 C FE	936,669	95.5785	980,000	980,000	936,669	0	(3,979)	0	0	5.450	4.665	MN	6,825	60,235	04/01/2022	05/15/2030
7846EL-AE-7	SPCM SA	D.....	1,2 .....	.....	3 A FE	4,000,000	81.2333	3,249,333	4,000,000	4,000,000	0	0	0	0	3.375	3.374	MS	39,750	135,000	12/19/2022	03/15/2030
83636E-AH-6	Sociedad Quimica y Minera de Chile SA	D.....	1,2 .....	.....	2 A FE	1,027,485	95.1988	946,276	994,000	1,027,485	0	(3,591)	0	0	4.250	3.629	MN	6,337	48,582	04/01/2022	05/07/2029
870674-AA-6	Sweihan PV Power Co PJSC	D.....	2 .....	.....	2 A FE	1,052,640	80.4096	1,052,640	1,096,504	1,052,640	0	2,173	0	0	3.625	4.017	JJ	16,672	37,683	04/01/2022	01/31/2049
89680Y-AA-3	Triton Container International Ltd	D.....	1,2 .....	.....	2 C FE	11,672,749	87.0946	11,628,866	13,352,000	11,672,749	0	206,045	0	0	2.050	6.345	AO	57,784	416,534	11/15/2022	04/15/2026
92852L-AB-5	Viterria Finance BV	D.....	1,2 .....	.....	2 C FE	39,514,894	75.4605	29,677,105	39,328,000	39,514,894	0	(21,116)	0	0	3.200	3.300	AO	244,708	1,258,496	12/19/2022	04/21/2031
92858R-AB-6	Vmed O2 UK Financing I PLC	D.....	1,2 .....	.....	3 C FE	1,667,000	81.4076	1,357,065	1,667,000	1,667,000	0	0	0	0	4.750	4.750	JJ	36,512	79,183	12/19/2022	07/15/2031
92943H-AB-5	WR Grace Holdings LLC	D.....	2 .....	.....	4 A FE	344,485	97.9380	338,228	345,349	344,485	0	0	0	0	8.500	8.500	MAT	11,887	19,826	01/31/2022	09/22/2028
984851-AF-2	Yara International ASA	D.....	1,2 .....	.....	2 B FE	12,926,376	92.0381	11,780,870	12,800,000	12,926,376	0	(30,070)	0	0	4.750	6.501	JD	50,667	634,257	03/24/2022	06/01/2028
984851-AG-0	Yara International ASA	D.....	1,2 .....	.....	2 B FE	26,780,357	80.3651	22,502,234	28,000,000	26,780,357	0	108,797	0	0	3.148	3.827	JD	66,108	947,548	03/15/2022	06/04/2030
62553Z-AH-5	CPUK Finance Ltd	B.....	1 .....	.....	4 B FE	226,994	91.9867	222,571	200,000	226,994	0	1,864	0	1,164	4.875	7.270	FA	3,887	9,754	07/28/2022	08/28/2025
V0055B-AK-1	Africa Finance Corp	D.....	2 .....	.....	1 G FE	1,042,323	85.8124	928,490	1,082,000	1,042,323	0	3,603	0	0	3.750	4.376	AO	6,875	47,450	04/01/2022	10/30/2029
Y7072Q-AA-1	PLDT Inc	D.....	2 .....	.....	2 A FE	1,038,385	67.8668	796,756	1,174,000	1,038,385	0	1,978	0	0	3.450	4.199	JD	900	41,403	04/01/2022	06/23/2050
U4327B-AA-8	Hikma Finance USA LLC	D.....	2 .....	.....	2 C FE	991,878	92.5345	942,001	1,018,000	991,878	0	7,167	0	0	3.250	4.335	JJ	15,807	32,350	04/01/2022	07/09/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
G2019U-AY-7	CBQ Finance Ltd	D.....	2 .....	.....	1.G FE	995,181	..91.4455	1,005,901	1,100,000	995,181	0	5,731	0	0	2.000	5.858	MS	6,478	6,478	11/01/2022	09/15/2025
W9821D-AQ-7	Verisure Holding AB	B.....	1,2 .....	.....	4.B FE	366,117	..86.5220	370,695	400,000	383,701	0	3,782	0	17,584	3.250	6.155	FA	4,972	11,615	07/28/2022	02/15/2027
G389AY-AA-2	Gatwick Airport Finance PLC	B.....	1,2 .....	.....	3.C FE	141,289	..89.8397	163,032	150,000	151,511	0	1,749	0	10,222	4.375	10.467	AO	1,803	5,503	10/19/2022	04/01/2026
N8965N-AB-6	Energizer Gamma Acquisition BV	B.....	1,2 .....	.....	4.B FE	158,321	..79.5041	170,314	200,000	165,754	0	2,283	0	7,434	3.500	8.038	JD	3,572	3,572	07/25/2022	06/30/2029
D03783-AB-9	APCOA Parking Holdings GmbH	B.....	2 .....	.....	4.B FE	86,148	..85.3959	91,468	100,000	91,257	0	1,264	0	5,109	4.625	9.083	JJ	2,161	2,161	07/28/2022	01/15/2027
G71132-AD-9	Pinewood Finance Co Ltd	B.....	1,2 .....	.....	3.B FE	2,218,284	..87.5500	2,277,237	2,150,000	2,234,869	0	30,612	0	16,584	3.625	7.088	MN	12,143	58,212	06/16/2022	11/15/2027
N9T19K-AB-5	VZ Secured Financing BV	B.....	1,2 .....	.....	4.A FE	346,041	..77.8175	333,401	400,000	362,262	0	2,245	0	16,221	3.500	5.711	JJ	6,547	6,547	07/25/2022	01/15/2032
1019999999. Obligations	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer					15,904,630,586	XXX	13,740,809,368	15,514,775,963	15,911,841,634	0	(15,500,552)	4,403,824	5,925,317	XXX	XXX	XXX	185,784,429	768,924,789	XXX	XXX
00192J-AA-4	APS Resecuritization Tru-APS 2016-1 1A		4 .....	.....	1.A FE	816,601	..99.0449	809,297	817,102	816,601	0	60,017	0	0	4.270	5.793	MON	5,818	19,958	03/18/2016	07/01/2057
007036-GS-9	Adjustable Rate Mortgage-ARMT 2005-2 2A1		4 .....	.....	1.A FM	156,687	..96.6619	158,166	163,628	156,687	0	23,051	0	0	4.780	7.586	MON	1,306	10,804	07/24/2013	06/01/2035
007036-SE-7	Adjustable Rate Mortgage-ARMT 2005-9 5A1		4 .....	.....	1.A FM	277,439	..97.0516	282,176	301,052	277,439	0	58,672	0	0	4.929	12.721	MON	1,201	7,835	08/17/2015	11/25/2035
00703Q-AD-4	Adjustable Rate Mortgage-ARMT 2006-3 4A1		4 .....	.....	1.A FM	3,587,425	..45.9946	3,011,533	6,547,586	3,587,425	0	455,600	0	0	4.749	5.370	MON	10,696	77,418	10/18/2016	08/25/2036
02146P-AF-2	Alternative Loan Trust 2-CWALT 2006-HY12		4 .....	.....	1.A FM	1,135,106	..93.6352	1,447,073	1,545,438	1,135,106	0	194,772	0	0	3.566	13.236	MON	4,593	56,047	01/19/2012	08/01/2036
02146T-AL-1	Alternative Loan Trust 2-CWALT 2006-24CB		4 .....	.....	1.A FM	367,311	..58.2814	367,311	659,518	367,311	0	46,431	0	0	5.750	9.816	MON	6,329	39,318	07/23/2008	08/01/2036
02147W-AT-6	Alternative Loan Trust 2-CWALT 2006-26CB		4 .....	.....	4.C FM	1,776,149	..58.3292	1,532,041	2,626,545	1,776,149	0	(59,271)	22,766	0	6.500	4.029	MON	20,716	149,859	12/29/2021	09/01/2036
02147X-AR-8	Alternative Loan Trust 2-CWALT 2006-32CB		4 .....	.....	4.B FM	643,751	..59.3861	528,126	889,310	643,751	0	2,139	41,967	0	5.500	3.368	MON	4,076	42,057	12/29/2021	11/01/2036
02150V-AA-3	Alternative Loan Trust 2-CWALT 2007-HY7C		4 .....	.....	1.A FM	538,985	..90.7568	550,903	607,010	538,985	0	47,222	0	0	4.669	8.495	MON	4,189	12,126	10/18/2016	08/25/2037
02152A-AS-8	Alternative Loan Trust 2-CWALT 2007-16CB		4 .....	.....	1.A FM	1,952,119	..71.8375	2,136,646	2,974,277	1,952,119	0	324,672	0	0	4.789	10.695	MON	2,374	65,209	04/06/2020	08/25/2037
02660L-AA-8	American Home Mortgage A-AHMA 2006-4 1A1		4 .....	.....	1.A FM	248,070	..55.2150	248,527	450,108	248,070	0	38,126	0	0	4.579	9.826	MON	3,461	8,747	05/20/2008	10/25/2046
02660T-AR-4	American Home Mortgage I-AHM 2004-1 4A		4 .....	.....	2.C FM	1,652,266	..88.3788	1,474,018	1,667,842	1,652,266	0	38,691	0	0	7.209	5.610	MON	14,636	62,454	11/15/2018	04/01/2044
02660T-DH-3	American Home Mortgage I-AHM 2005-1 6A		4 .....	.....	1.A FM	279,227	..96.3729	274,061	284,376	279,227	0	31,112	0	0	7.162	7.012	MON	3,384	11,765	02/28/2011	06/01/2045
02660T-EK-5	American Home Mortgage I-AHM 2005-2 1A1		4 .....	.....	1.A FM	2,223,384	..88.7464	2,050,624	2,310,655	2,223,384	0	75,803	0	0	4.989	5.888	MON	7,989	49,374	11/13/2019	09/25/2045
02660V-AE-8	American Home Mortgage A-AHMA 2005-1 3A1		4 .....	.....	1.A FM	51,345	..92.5363	50,465	54,535	51,346	0	4,179	0	0	4.929	6.951	MON	177	1,108	10/30/2013	11/25/2035
026929-AA-7	American Home Mortgage I-AHM 2008-3 11A1		4 .....	.....	1.A FM	1,592,703	..82.0219	1,705,416	2,079,221	1,592,703	0	147,235	168,138	0	4.749	11.714	MON	16,812	44,590	02/24/2016	12/25/2046
03215P-DM-8	Amresco Residential Secu-AMRES 1998-1 A5		4 .....	.....	1.A FM	125,211	..98.6234	123,552	125,276	125,211	0	1,385	0	0	7.481	8.161	MON	781	16,712	02/25/1999	10/01/2027
03464B-AA-6	Angel Oak Mortgage Trust-AOMT 2022-1 A1		4 .....	.....	1.A	6,109,164	..88.9490	5,434,037	6,109,164	6,109,164	0	107	0	0	2.881	3.510	MON	7,014	163,033	02/08/2022	12/01/2066
03464B-AB-4	Angel Oak Mortgage Trust-AOMT 2022-1 A2		4 .....	.....	1.A	17,454,595	..84.7186	14,787,415	17,454,753	17,454,595	0	36	0	0	3.137	3.137	MON	21,821	507,199	02/08/2022	12/01/2066
03464B-AC-2	Angel Oak Mortgage Trust-AOMT 2022-1 A3		4 .....	.....	1.B	17,454,477	..84.0275	14,666,794	17,454,753	17,454,477	0	52	0	0	3.290	3.290	MON	22,886	531,936	02/08/2022	12/01/2066
03464P-AA-5	Angel Oak Mortgage Trust-AOMT 2022-2 A1		4 .....	.....	1.A FE	22,277,321	..89.9544	20,073,507	22,315,194	22,277,321	0	50,057	0	0	3.353	3.622	MON	139,220	736,173	03/10/2022	01/01/2067
03464P-AB-3	Angel Oak Mortgage Trust-AOMT 2022-2 A2		4 .....	.....	1.C FE	13,368,267	..86.2970	11,554,410	13,389,116	13,368,267	0	2,319	0	0	3.762	3.785	MON	15,414	417,275	03/10/2022	01/01/2067
03464P-AC-1	Angel Oak Mortgage Trust-AOMT 2022-2 A3		4 .....	.....	1.F FE	13,355,161	..85.2298	11,411,513	13,389,116	13,355,161	0	3,760	0	0	3.864	3.902	MON	15,831	428,589	03/10/2022	01/01/2067
03464T-AA-7	Angel Oak Mortgage Trust-AOMT 2022-3 A1		4 .....	.....	1.A FE	11,224,035	..93.4693	10,592,306	11,224,035	11,224,035	0	19,880	(14,225)	0	4.000	4.286	MON	296,358	258,358	05/05/2022	01/01/2067
03464T-AB-5	Angel Oak Mortgage Trust-AOMT 2022-3 A2		4 .....	.....	1.C FE	7,412,434	..89.4306	6,756,545	7,555,073	7,412,434	0	28,043	0	0	4.167	4.389	MON	(10,233)	206,151	05/05/2022	01/01/2067
042855-AB-2	Arroyo Mortgage Trust 20-ARRW 2022-1 A2		4 .....	.....	1.C FE	14,999,961	..80.9613	12,144,200	15,000,000	14,999,961	0	25	0	0	3.625	3.625	MON	0	498,438	02/09/2022	12/01/2056
042855-AC-0	Arroyo Mortgage Trust 20-ARRW 2022-1 A3		4 .....	.....	1.F FE	4,946,281	..75.6454	3,782,272	5,000,000	4,946,281	0	13,900	0	0	3.650	4.012	MON	0	167,292	02/09/2022	12/01/2056
04285E-AC-1	Arroyo Mortgage Trust 20-ARRW 2022-2 A2		4 .....	.....	1.C FE	4,804,781	..95.7195	4,737,126	4,948,968	4,804,781	0	21,338	0	0	4.950	5.962	MON	20,414	176,765	07/07/2022	07/01/2057
04285E-AD-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A3		4 .....	.....	1.F FE	4,761,096	..92.9811	4,601,603	4,948,968	4,761,096	0	27,694	0	0	4.950	6.277	MON	20,414	146,467	07/07/2022	07/01/2057
04285E-AA-7	Arroyo Mortgage Trust 20-ARRW 2022-2 M1		4 .....	.....	2.B FE	1,512,584	..84.9016	1,438,233	1,694,000	1,512,584	0	11,557	0	0	4.950	7.213	MON	6,988	48,914	07/08/2022	07/01/2057
04285E-AM-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A1		4 .....	.....	1.A FE	4,709,736	..98.2630	4,675,954	4,758,610	4,709,736	0	11,589	0	0	4.950	5.496	MON	19,629	170,559	07/07/2022	07/01/2057
04544P-AD-1	Asset Backed Securities -ABSHE 2008-HE5		4 .....	.....	1.A FM	1,268,843	..98.2205	1,275,795	1,298,909	1,268,843	0	477,510	0	0	4.669	9.168	MON	6,304	34,293	07/12/2011	07/25/2036
05532E-CE-3	BCAP LLC 2009-RR10 Trust-BCAP 2009-RR10		4 .....	.....	1.A FM	232,264	..88.0881	335,846	381,261	232,264	0	45,754	0	0	6.000	26.159	MON	3,828	25,109	09/09/2009	06/01/2037
05532M-AG-2	BCAP LLC 2009-RR15 Trust-BCAP 2009-RR15		4 .....	.....	1.A FM	2,148,238	..43.9555	2,614,979	5,949,156	2,148,238	0	(75,548)	0	0	6.000	12.725	MON	29,746	200,943	10/01/2010	05/01/2036
05532T-AF-9	BCAP LLC 2010-RR1 Trust-BCAP 2010-RR1 2A		4 .....	.....	1.A FM	2,362,546	..99.6391	2,558,267	2,567,535	2,362,546	0	0	0	0	3.431	11.684	MON	14,875	90,104	03/16/2012	06/01/2045
05533N-AJ-3	BCAP LLC 2010-RR12 Trust-BCAP 2010-RR12		4 .....	.....	2.B FM	1,593,238	..89.3802	1,450,610	1,622,967	1,593,238	0	57,963	0	0	3.226	6.051	MON	8,738	53,055	06/07/2016	06/01/2037

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
058927-AG-9	Banc of America Funding -BAFC 2006-A 3A2			4	1.B FM	335,487	90.7905	323,481	356,294	335,487	0	17,900	0	0	3.733	7.394	MON	3,002	12,258	01/09/2017	02/01/2036
058931-AD-8	Banc of America Funding -BAFC 2006-3 2A1			4	1.A FM	1,112,309	89.2045	1,254,256	1,406,046	1,112,309	0	70,698	0	0	6.000	13.781	MON	21,560	86,959	03/29/2012	03/01/2036
058931-AT-3	Banc of America Funding -BAFC 2006-3 4A1			4	4.C FM	1,209,276	91.3141	1,154,041	1,263,816	1,209,276	0	(1,450)	19,751	0	5.750	5.212	MON	6,056	73,926	01/10/2022	03/01/2036
058931-BL-9	Banc of America Funding -BAFC 2006-3 5A8			4	1.A FM	63,777	90.1332	63,551	70,508	63,777	0	1,912	0	0	5.500	7.670	MON	1,128	4,405	08/16/2013	03/01/2036
058933-AN-2	Banc of America Funding -BAFC 2006-D 5A1			4	1.A FM	889,825	84.2692	821,517	974,873	889,825	0	29,417	29,529	0	3.010	7.083	MON	7,449	29,596	01/08/2019	05/01/2036
05946X-XP-3	Banc of America Funding -BAFC 2005-E 3A1			4	4.A FM	1,256,386	90.3675	1,116,716	1,235,750	1,256,386	0	27,128	0	0	3.471	6.211	MON	7,192	39,676	01/15/2019	05/01/2035
05946X-Y7-2	Banc of America Funding -BAFC 2005-8 2A8			4	3.B FM	1,046,371	96.4965	1,028,271	1,065,604	1,046,371	0	(13,154)	58,275	0	5.750	4.182	MON	20,631	62,054	08/07/2013	01/01/2036
05946X-YV-9	Banc of America Funding -BAFC 2005-F 2A1			4	3.A FM	868,729	87.3435	736,645	843,389	868,729	0	16,036	0	0	3.766	6.131	MON	7,744	31,064	01/04/2017	09/01/2035
05948X-T2-7	Banc of America Mortgage-BOAMS 2004-A 2A			4	1.A FM	381,491	95.0012	369,207	388,634	381,491	0	12,683	0	0	2.641	6.024	MON	1,716	11,021	09/08/2016	02/01/2034
05949A-H8-6	Banc of America Mortgage-BOAMS 2005-A 2A			4	1.A FM	527,256	96.5603	512,300	530,549	527,256	0	18,414	0	0	2.543	5.755	MON	2,255	14,639	05/06/2016	02/01/2035
05949A-H9-4	Banc of America Mortgage-BOAMS 2005-A 2A			4	1.A FM	662,562	96.5603	639,772	662,562	662,562	0	17,370	0	0	2.543	5.463	MON	2,822	18,288	05/06/2016	02/01/2035
05949C-GW-0	Banc of America Mortgage-BOAMS 2005-8 A9			4	2.B FM	632,226	89.8990	605,500	673,534	632,226	0	10,486	0	0	5.500	7.391	MON	3,100	39,250	08/31/2012	09/01/2035
05949C-HM-1	Banc of America Mortgage-BOAMS 2005-L 1A			4	3.B FM	770,080	88.7821	774,383	872,229	770,080	0	24,684	89,417	0	4.079	7.410	MON	5,941	26,329	07/22/2013	10/01/2035
05949C-KS-4	Banc of America Mortgage-BOAMS 2005-J 2A			4	3.B FM	16,889	88.6252	14,416	16,266	16,889	0	147	0	0	3.854	4.715	MON	214	505	09/10/2008	11/01/2035
05949C-KX-3	Banc of America Mortgage-BOAMS 2005-J 4A			4	1.A FM	1,203,570	86.0173	1,250,063	1,453,269	1,203,570	0	87,909	140,406	0	3.587	9.059	MON	18,875	53,288	06/04/2020	11/01/2035
05949C-PP-5	Banc of America Mortgage-BOAMS 2005-L 4A			4	1.A FM	1,794,217	93.5113	1,834,016	1,961,277	1,794,217	0	142,590	0	0	3.064	9.331	MON	10,050	59,425	06/02/2020	01/01/2036
05949T-AX-7	Banc of America Funding -BAFC 2006-1 1A2			4	1.A FM	1,392,889	96.6878	1,230,286	1,272,432	1,392,889	0	(49,147)	0	0	5.750	3.515	MON	13,125	94,786	01/10/2022	01/01/2036
05950M-AJ-9	Banc of America Funding -BAFC 2006-G 3A3			4	1.A FM	1,440,498	97.4196	1,467,189	1,506,051	1,440,498	0	207,771	0	0	7.303	8.929	MON	9,166	69,074	04/08/2016	07/01/2036
05950P-AF-0	Banc of America Funding -BAFC 2006-H 2A3			4	1.A FM	1,055,161	91.5788	1,193,192	1,302,913	1,055,161	0	125,737	0	0	3.893	10.887	MON	212	44,949	03/22/2016	09/01/2046
05950T-AC-9	Banc of America Mortgage-BOAMS 2006-B 2A			4	1.A FM	283,247	85.5369	292,905	342,431	283,247	0	0	0	0	3.873	3.873	MON	3,619	13,086	11/17/2010	11/01/2046
05951F-AB-0	Banc of America Funding -BAFC 2007-1 1A1			4	1.A FM	42,890	85.5992	46,646	54,493	42,890	0	2,221	0	0	5.846	12.404	MON	557	2,931	05/13/2008	01/01/2037
05951K-AN-3	Banc of America Funding -BAFC 2006-7 1A1			4	3.A FM	683,150	84.6803	647,406	764,530	683,150	0	607	52,124	0	6.000	6.425	MON	3,836	47,899	01/11/2017	09/01/2036
05951U-AC-5	Banc of America Funding -BAFC 2006-8T2 A			4	1.A FM	10,158	83.8186	11,635	13,881	10,158	0	756	0	0	5.791	15.090	MON	123	748	04/30/2008	10/01/2036
05951V-AV-1	Banc of America Funding -BAFC 2006-I 6A1			4	1.A FM	853,590	87.8084	859,685	979,047	853,590	0	84,145	0	0	4.733	10.430	MON	1,545	19,804	03/21/2016	12/20/2046
059522-AA-0	Banc of America Funding -BAFC 2007-C 6A1			4	1.A FM	633,056	96.2387	616,036	640,113	633,056	0	55,991	0	0	4.773	6.140	MON	1,018	16,735	02/25/2016	05/20/2047
059522-AU-6	Banc of America Funding -BAFC 2007-C 1A2			4	1.A FM	2,310,903	91.5647	2,221,846	2,426,531	2,310,903	0	136,633	0	0	3.473	7.588	MON	20,195	81,337	02/12/2016	05/01/2036
059523-AN-0	Banc of America Funding -BAFC 2007-5 4A3			4	6. *	1,200,235	10.4036	1,340,425	12,884,226	1,200,235	0	0	0	0	2.161	10.508	MON	4,641	478,015	12/06/2013	07/25/2037
059523-AX-8	Banc of America Funding -BAFC 2007-5 7A1			4	1.A FM	3,330,630	76.4602	3,835,943	5,016,914	3,330,630	0	173,701	0	0	4.520	10.281	MON	40,028	96,787	09/26/2017	07/01/2047
05952G-AT-8	Banc of America Funding -BAFC 2007-D 3A1			4	1.F FM	362,612	91.7186	342,701	373,645	362,612	0	8,030	0	0	3.714	6.991	MON	1,156	12,265	03/07/2019	06/01/2037
05952G-AV-3	Banc of America Funding -BAFC 2007-D 3A3			4	1.E FM	521,452	91.7186	493,129	537,654	521,452	0	11,728	3,678	0	3.714	7.023	MON	3,678	17,649	03/07/2019	06/01/2037
05954D-AL-0	Banc of America Funding -BAFC 2007-E 6A1			4	4.C FM	42,076	90.1156	41,092	45,599	42,076	0	22,923	0	0	3.936	17.709	MON	450	2,049	04/24/2008	09/01/2037
05956E-AB-8	Banc of America Funding -BAFC 2010-R6 1A			4	1.A FM	256,437	98.4328	253,032	257,061	256,437	0	2,155	0	0	5.500	6.125	MON	3,754	19,498	09/12/2013	02/01/2035
05990H-AH-6	Banc of America Funding -BAFC 2010-R2 1A			4	1.A FM	814,490	92.6992	1,282,510	1,383,518	814,490	0	143,426	21,295	0	6.000	22.676	MON	89,499	89,499	09/23/2010	08/01/2037
05990H-AQ-6	Banc of America Funding -BAFC 2010-R2 3A			4	1.A FM	1,168,710	97.5642	1,173,286	1,202,578	1,168,710	0	35,657	0	0	4.001	6.396	MON	8,036	39,913	08/24/2016	07/01/2035
05990H-AT-0	Banc of America Funding -BAFC 2010-R2 4A			4	1.A FM	936,609	85.5352	943,363	1,102,895	936,609	0	3,926	0	0	6.250	6.950	MON	17,440	69,290	11/12/2010	08/01/2036
06744D-AA-7	Barclays Mortgage Loan T-BARFC 2022-NQM1			4	1.A FE	1,404,800	96.6959	1,382,282	1,429,514	1,404,800	0	3,283	5,379	0	4.516	5.187	MON	29,253	27,633	08/29/2022	07/25/2052
06744D-AB-5	Barclays Mortgage Loan T-BARFC 2022-NQM1			4	1.C FE	1,377,112	93.9764	1,343,406	1,429,514	1,377,112	0	4,492	0	0	4.516	5.406	MON	5,379	27,633	08/29/2022	07/01/2052
06744D-AC-3	Barclays Mortgage Loan T-BARFC 2022-NQM1			4	1.F FE	3,819,349	93.1881	3,745,969	4,019,794	3,819,349	0	13,634	0	0	4.516	5.714	MON	30,375	61,978	08/29/2022	07/01/2052
06744D-AD-1	Barclays Mortgage Loan T-BARFC 2022-NQM1			4	2.B FE	3,225,051	97.2543	2,841,234	3,726,000	3,225,051	0										

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest				Dates			
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
07384Y-TL-0	Bear Stearns Asset Backe-BSABS 2004-SD2			4	1.A FM	318,896	.93.4809	291,990	312,353	318,896	.0	(2,047)	.0	.0	4.000	5.666	MON		2,091	16,756	01/27/2017	03/01/2044
07386H-PD-7	Bear Stearns ALT-A Trust-BALTA 2004-12 2			4	1.A FM	246,965	.94.2056	249,024	264,341	246,965	.0	12,638	.0	.0	4.044	7.078	MON		1,785	9,635	10/25/2016	01/01/2035
07386H-QZ-7	Bear Stearns ALT-A Trust-BALTA 2005-2 2A			4	1.A FM	1,262,581	.87.8557	1,381,394	1,572,345	1,262,581	.0	104,692	.0	.0	3.690	7.065	MON		9,777	45,720	02/11/2016	04/01/2035
07386H-UG-4	Bear Stearns ALT-A Trust-BALTA 2005-5 21			4	1.A FM	5,977	.95.9602	6,068	6,323	5,977	.0	199	.0	.0	3.881	6.885	MON		41	217	09/14/2016	07/01/2035
07386X-AH-9	Bear Stearns ALT-A Trust-BALTA 2007-1 21			4	1.A FM	911,593	.54.6991	863,150	1,577,999	911,593	.0	29,252	172,921	.0	3.234	8.103	MON		8,561	49,071	12/29/2021	01/01/2047
07386Y-AE-4	Bear Stearns ARM Trust 2-BSARM 2007-5 3A			4	1.A FM	1,895,938	.86.8836	1,823,359	2,098,623	1,895,938	.0	54,701	136,818	.0	3.689	8.637	MON		12,916	76,384	01/11/2019	08/01/2047
073870-AG-2	Bear Stearns ALT-A Trust-BALTA 2007-2 2A			4	1.A FM	62,564	.71.1586	87,795	123,379	62,564	.0	13,375	.0	.0	3.367	22.009	MON		979	3,874	09/15/2008	04/01/2037
073877-CS-9	Bear Stearns Asset Backe-BSABS 2005-SD3			4	1.A FM	543,557	.99.7931	542,433	543,557	543,557	.0	13,983	.0	.0	5.364	5.497	MON		3,560	35,902	12/05/2013	07/25/2035
073879-GN-2	Bear Stearns Asset Backe-BSABS 2004-AC5			4	1.A FM	444,234	.96.3709	506,175	525,237	444,234	.0	49,263	.0	.0	4.789	7.440	MON		988	4,865	12/05/2011	10/25/2034
073880-AD-8	Bear Stearns ARM Trust 2-BSARM 2007-1 2A			4	3.A FM	1,127,532	.88.4041	1,051,875	1,189,850	1,127,532	.0	27,863	84,108	.0	3.152	7.020	MON		6,264	28,769	12/29/2021	02/01/2047
073880-AG-1	Bear Stearns ARM Trust 2-BSARM 2007-1 3A			4	1.A FM	591,912	.92.1636	632,052	685,794	591,912	.0	132,484	.0	.0	3.309	14.983	MON		5,651	21,943	03/03/2016	02/01/2047
07389N-AC-9	Bear Stearns Asset Backe-BSABS 2006-SD4			4	1.A FM	373,038	.81.5322	379,888	465,936	373,038	.0	39,476	.0	.0	3.745	6.547	MON		2,908	15,625	08/17/2016	10/01/2036
07401C-AS-2	Bear Stearns ARM Trust 2-BSARM 2007-4 21			4	1.A FM	3,262,743	.89.5335	3,195,561	3,569,123	3,262,743	.0	53,466	246,621	.0	4.266	8.505	MON		38,657	169,663	01/16/2019	06/01/2047
10568K-AA-6	BRAVO Residential Fundin-BRAVO 2022-NQM2			4	1.A FE	3,665,476	.95.1804	3,488,857	3,665,520	3,665,476	.0	21	.0	.0	4.272	4.273	MON		13,049	110,116	05/25/2022	11/01/2061
10568K-AB-4	BRAVO Residential Fundin-BRAVO 2022-NQM2			4	1.C FE	1,638,683	.94.1023	1,542,058	1,638,703	1,638,683	.0	10	.0	.0	4.883	4.884	MON		6,668	56,269	05/25/2022	11/01/2061
10569F-AC-2	BRAVO Residential Fundin-BRAVO 2022-NQM1			4	1.F FE	10,530,406	.89.7178	9,453,114	10,536,497	10,530,406	.0	3,862	.0	.0	4.086	4.126	MON		(32,748)	363,462	03/15/2022	09/01/2061
10569J-AB-6	BRAVO Residential Fundin-BRAVO 2022-NQM3			4	1.C FE	957,620	.96.8279	930,296	960,772	957,620	.0	801	.0	.0	5.500	5.747	MON		4,404	19,693	08/29/2022	07/01/2062
10569J-AD-2	BRAVO Residential Fundin-BRAVO 2022-NQM3			4	2.B FE	3,767,628	.87.5920	3,503,678	4,000,000	3,767,628	.0	10,355	.0	.0	5.554	6.843	MON		37,027	92,414	08/29/2022	07/01/2062
12527Q-AD-3	CFMT 2022-EB02 LLC-CFMT 2022-EB02 M2			4	1.F FE	12,601,000	.95.1943	11,995,436	12,601,000	12,601,000	.0	10	.0	.0	4.544	4.544	MON		57,256	399,205	04/12/2022	07/25/2054
12529L-AA-8	CFMT 2020-HB4 LLC-CFMT 2020-HB4 A			4	1.A FE	16,365,976	.96.9505	15,953,904	16,455,714	16,365,976	.0	140,680	.0	.0	0.946	1.144	MON		16,206	222,110	12/11/2020	12/26/2030
125431-AH-9	CHL Mortgage Pass-Through-CIHL 2006-HYB4			4	1.A FM	308,262	.90.0640	443,975	492,955	308,262	.0	99,970	.0	.0	3.423	17.832	MON		1,406	18,159	08/29/2007	06/01/2036
12543X-AD-8	CHL Mortgage Pass-Through-CIHL 2006-19 1A			4	4.B FM	1,172,978	.61.7054	1,091,000	1,768,078	1,172,978	.0	64,087	3,321	.0	6.000	6.713	MON		16,303	103,606	08/19/2011	01/01/2037
12544B-AE-3	CHL Mortgage Pass-Through-CIHL 2007-HY5 3			4	1.A FM	395,182	.91.6374	430,533	469,823	395,182	.0	48,385	.0	.0	4.029	10.624	MON		1,577	18,592	05/23/2017	09/01/2037
12544D-AG-4	CHL Mortgage Pass-Through-CIHL 2007-14 A7			4	3.C FM	86,031	.57.2630	74,080	129,368	86,031	.0	(1,008)	5,451	.0	6.000	4.925	MON		1,845	7,169	01/10/2022	09/01/2037
12544H-BF-6	CHL Mortgage Pass-Through-CIHL 2007-HY7 A			4	1.A FM	6,405	.116.0000	4,388	3,783	6,405	.0	17,098	.0	.0	3.724	88.318	MON		69	(13,433)	12/29/2021	11/01/2037
12545E-AK-2	CHL Mortgage Pass-Through-CIHL 2007-J2 2A			4	3.A FM	1,391,454	.42.0778	1,221,449	2,902,833	1,391,454	.0	(97,226)	91,992	.0	6.000	6.101	MON		35,207	66,823	01/10/2022	07/01/2037
12546Y-AA-9	CHNGE Mortgage Trust-CHNGE 2022-2 A1			4	1.F FE	46,438,636	.93.8456	43,580,870	46,438,636	46,438,636	.0	193	145,392	.0	3.757	3.757	MON		145,392	1,701,002	02/22/2022	03/01/2067
12551S-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-4 A1			4	1.F FE	15,361,785	.97.4200	15,238,174	15,641,725	15,361,785	.0	41,501	.0	.0	6.000	7.065	MON		156,833	315,718	09/20/2022	10/01/2057
12551S-AB-2	CHNGE Mortgage Trust 202-CHNGE 2022-4 M1			4	2.B FE	7,135,301	.94.4747	7,085,602	7,500,000	7,135,301	.0	15,922	.0	.0	7.012	8.201	MON		87,651	175,323	09/20/2022	10/01/2057
12558M-AG-7	CIT Home Equity Loan Tru-CITHE 2002-1 AF			4	1.A FM	52,088	.96.5120	50,743	52,577	52,088	.0	1,059	.0	.0	6.200	7.645	MON		871	4,730	02/27/2011	02/01/2030
12564E-AA-0	CIM Trust 2021-J2-CIM 2021-J2 A1			4	1.A	31,783,016	.81.4889	25,618,435	31,437,936	31,783,016	.0	(36,084)	.0	.0	2.500	2.368	MON		131,362	807,351	03/29/2021	04/01/2051
12564K-AA-6	CIM Trust 2021-J1-CIM 2021-J1 A1			4	1.A	14,701,450	.80.6325	11,558,036	14,334,224	14,701,450	.0	(38,391)	.0	.0	2.500	2.194	MON		59,889	367,567	03/01/2021	03/01/2051
12566U-AC-4	CitiMortgage Alternative-CMALT 2007-A2 1			4	3.A FM	429,943	.90.0804	404,942	449,534	429,943	.0	(2,259)	36,081	.0	6.000	6.585	MON		4,563	26,052	12/29/2021	02/01/2037
12566U-AN-4	CitiMortgage Alternative-CMALT 2007-A2 1			4	1.A FM	576,010	.89.1586	628,281	704,679	576,010	.0	11,883	130,593	.0	5.750	13.067	MON		3,414	40,800	01/03/2012	02/01/2037
12566V-AE-2	CitiMortgage Alternative-CMALT 2007-A4 1			4	1.A FM	484,102	.88.5826	491,565	554,923	484,102	.0	13,409	.0	.0	5.750	10.129	MON		8,165	33,755	08/31/2012	04/01/2037
12566X-AM-0	CitiMortgage Alternative-CMALT 2007-A7 2			4	4.B FM	699,339	.91.4567	655,865	717,132	699,339	.0	1,166	30,083	.0	6.250	6.742	MON		7,982	48,304	12/29/2021	07/01/2037
12569C-AB-7	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1			4	1.C FE	4,676,101	.97.2661	4,557,359	4,685,454	4,676,101	.0	1,578	.0	.0	5.820	5.924	MON		45,556	115,219	08/19/2022	06/01/2067
12569C-AC-5	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1			4	1.F FE	9,639,481	.96.5538	9,424,968	9,761,363	9,639,481	.0	20,342	.0	.0	5.820	6.474	MON		94,907	240,039	08/19/2022	06/01/2067
12598R-AA-1	COLT 2021-5 Mortgage Loa-COLT 2021-5 A1			4	1.A FE	5,220,925	.85.2633	4,847,434	5,685,250	5,220,925	.0	88,474	.0	.0	1.726	4.967	MON		8,177	57,796	06/24/2022	11/01/2066
12628L-AD-2	CSAB Mortgage-Backed Tru-CSAB 2006-4 A2A			4	1.A FM	776,091	.21.6118	675,639	3,126,244	776,091	.0	116,163	184,638	.0	5.611	4.808	MON		14,617	51,277	12/29/2021	12/01/2036
12638P-AB-5	CSMC Mortgage-Backed Tru-CSMC 2007-3 1A1			4	1.A FM	711,902	.27.0368	552,531	2,043,630	711,902	.0	87,070	27,155	.0	5.837	5.150	MON		11,920	40,721	12/29/2021	04/01/2037
12640W-AC-4	CSMC Series 2008-3R-CSMC 2008-3R 1A2			4	1.A FM	1,250,531	.101.6614	1,345,486	1,250,531	1,345,486	.0	83,399	.0	.0	3.864	8.183	MON		8,673	58,298	12/01/2016	07/01/2037
1264																						

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
12646U-AK-4	CSMC Trust 2013-1VR1-CSMC 2013-1VR1 A2			4	1.A	1,400,000	90.9522	1,351,454	1,485,896	1,400,000	0	13,491	0	0	3.000	4.056	MON	7,444	48,005		01/28/2014	03/01/2043
12646W-AH-7	CSMC Trust 2013-1VR2-CSMC 2013-1VR2 A2			4	1.A	1,292,148	90.8018	1,248,812	1,375,316	1,292,148	0	12,229	0	0	3.000	4.069	MON	6,888	43,745		02/12/2014	04/01/2043
12646X-AJ-1	CSMC Trust 2013-1VR3-CSMC 2013-1VR3 A2			4	1.A	2,716,884	86.8590	2,468,550	2,842,021	2,716,884	0	17,966	0	0	3.000	3.773	MON	14,235	87,700		04/17/2014	05/01/2043
12647G-BZ-0	CSMC Trust 2013-1VR4-CSMC 2013-1VR4 A20			4	1.A	337,840	93.5717	322,888	345,070	337,840	0	1,352	0	0	3.484	3.862	MON	2,033	13,061		03/06/2014	07/01/2043
12647H-BC-9	CSMC Trust 2013-8R-CSMC 2013-8R 4A2			4	1.A FM	10,508,177	95.2039	10,919,184	11,469,263	10,508,177	0	739,277	0	0	3.524	7.633	MON	157,071	225,452		06/01/2016	12/27/2036
12647P-AK-4	CSMC Trust 2013-7-CSMC 2013-7 A6			4	1.A	2,358,765	91.4583	2,233,977	2,442,618	2,358,765	0	12,126	0	0	3.500	4.089	MON	14,271	92,247		01/09/2014	08/01/2043
12648H-BB-0	CSMC Trust 2014-1VR2-CSMC 2014-1VR2 B1			4	1.A	1,125,014	96.4208	1,107,124	1,148,221	1,125,014	0	7,864	0	0	3.782	4.483	MON	7,258	50,978		03/31/2020	04/01/2044
12648T-AQ-2	CSMC Trust 2014-1VR3-CSMC 2014-1VR3 B1			4	1.A	2,069,221	93.2480	1,941,727	2,082,326	2,069,221	0	669	0	0	4.050	4.090	MON	14,084	91,771		03/31/2020	07/01/2044
12659Y-AB-0	COLT 2022-3 Mortgage Loa-COLT 2022-3 A2			4	1.C FE	13,740,245	88.2930	12,131,794	13,740,382	13,740,245	0	72	0	0	4.156	4.157	MON	95,628	496,086		03/17/2022	06/01/2028
12659Y-AC-8	COLT 2022-3 Mortgage Loa-COLT 2022-3 A3			4	1.F FE	10,987,503	87.4986	9,618,112	10,992,306	10,987,503	0	1,448	0	0	4.213	4.240	MON	116,864	403,480		03/17/2022	06/01/2028
12660B-AB-7	Credit Suisse Mortgage C-CSMC 2022-ATH1			4	1.C FE	15,935,608	88.4699	14,098,371	15,935,786	15,935,608	0	89	0	0	3.405	3.406	MON	90,555	519,281		02/17/2022	01/01/2067
12660B-AC-5	Credit Suisse Mortgage C-CSMC 2022-ATH1			4	1.F FE	23,688,643	88.3696	20,933,682	23,688,792	23,688,643	0	87	0	0	3.559	3.559	MON	140,700	806,832		02/17/2022	01/01/2067
12661N-AB-0	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3			4	1.A FE	13,218,039	91.7309	12,281,027	13,388,100	13,218,039	0	45,618	0	0	4.260	4.842	MON	95,059	428,063		04/27/2022	03/01/2067
12661N-AD-6	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3			4	1.C FE	4,845,567	83.8126	4,190,631	5,000,000	4,845,567	0	40,862	0	0	4.260	5.681	MON	35,501	159,867		04/27/2022	03/01/2067
12661N-AE-4	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3			4	1.F FE	4,798,403	77.8664	3,893,321	5,000,000	4,798,403	0	19,438	0	0	4.260	5.058	MON	35,501	159,867		04/27/2022	03/01/2067
12662Q-AD-8	CSMC 2021-NQM7-CSMC 2021-NQM7 M1			4	1.A	2,999,958	63.6725	1,910,175	3,000,000	2,999,958	0	15	0	0	3.045	3.046	MON	15,225	91,350		11/01/2021	10/01/2066
12663G-AA-5	COLT 2022-7 Mortgage Loa-COLT 2022-7 A1			4	1.A FE	4,744,849	97.1644	4,610,303	4,744,849	4,744,849	0	45	0	0	5.162	5.235	MON	20,411	125,390		07/25/2022	04/01/2067
12663G-AB-3	COLT 2022-7 Mortgage Loa-COLT 2022-7 A2			4	1.C FE	4,507,606	97.7375	4,405,620	4,507,606	4,507,606	0	9	0	0	6.027	6.100	MON	22,639	139,081		07/25/2022	04/01/2067
12663G-AC-1	COLT 2022-7 Mortgage Loa-COLT 2022-7 A3			4	1.F FE	2,358,520	97.8516	2,321,455	2,372,424	2,358,520	0	3,113	0	0	6.250	6.577	MON	24,890	75,909		07/25/2022	04/01/2067
12663G-AD-9	COLT 2022-7 Mortgage Loa-COLT 2022-7 M1			4	2.B FE	3,215,095	89.5055	3,043,186	3,400,000	3,215,095	0	5,511	0	0	6.295	7.388	MON	35,672	107,082		07/25/2022	04/01/2067
12664A-AE-9	CSMC 2022-ATH3-CSMC 2022-ATH3 A2			4	1.C FE	6,349,827	97.1678	6,169,987	6,349,827	6,349,827	0	67	0	0	5.830	5.830	MON	38,480	157,990		08/23/2022	08/01/2067
12664A-AF-6	CSMC 2022-ATH3-CSMC 2022-ATH3 A3			4	1.F FE	6,617,927	97.3574	6,443,041	6,617,927	6,617,927	0	19	0	0	6.392	6.392	MON	70,872	180,533		08/23/2022	08/01/2067
12664V-AE-3	CSMC 2022-NQM2 Trust-CSMC 2022-NQM2 A3			4	1.F FE	3,852,514	72.5935	2,855,573	3,933,650	3,852,514	0	26,196	0	0	4.000	5.007	MON	26,224	131,122		03/24/2022	02/01/2067
12665E-AD-2	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 A2			4	1.C FE	4,729,688	95.2147	4,616,866	4,848,900	4,729,688	0	15,163	0	0	4.819	5.549	MON	19,472	138,908		07/06/2022	06/01/2067
12665E-AF-7	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 M1			4	2.B FE	16,680,226	80.0933	15,026,510	18,761,250	16,680,226	0	114,650	0	0	4.819	6.879	MON	75,342	527,394		07/07/2022	06/01/2067
126670-JP-4	CHL Mortgage Pass-Through-CIHL 2005-HYB9			4	1.A FM	722,674	82.5714	725,258	878,342	722,674	0	53,738	67,292	0	5.512	9.136	MON	6,778	26,287		11/08/2016	02/01/2036
126670-NY-0	CIABS Asset-Backed Certi-CIHL 2005-16 2AF			4	1.A FM	82,060	98.8388	63,474	64,219	82,060	0	131,588	0	0	4.341	339.380	MON	476	3,934		12/08/2005	05/01/2036
126673-DR-0	CIABS Asset-Backed Certi-CIHL 2004-7 MF2			4	1.A FM	4,789,545	91.9237	4,430,294	4,819,534	4,789,545	0	3,724	0	0	4.235	4.389	MON	34,015	205,798		06/17/2020	10/01/2034
12667F-4N-2	Alternative Loan Trust 2-CWALT 2005-7CB			4	1.A FM	2,246,591	84.6791	2,214,064	2,614,653	2,246,591	0	80,615	60,462	0	5.500	6.886	MON	11,984	152,126		09/14/2011	03/01/2038
12667F-5E-1	Alternative Loan Trust 2-CWALT 2005-6CB			4	1.A FM	1,080,034	84.8238	1,021,487	1,204,246	1,080,034	0	33,222	5,269	0	5.250	6.379	MON	68,113	3,934		03/30/2012	04/01/2035
12667F-E6-6	Alternative Loan Trust 2-CWALT 2004-J2 3			4	1.A FM	457,612	96.8005	444,365	459,052	457,612	0	794	0	0	5.500	5.678	MON	2,141	23,455		08/31/2012	04/01/2034
12667F-RE-7	Alternative Loan Trust 2-CWALT 2004-J6 1			4	1.A FM	238,998	97.3828	232,534	238,784	238,998	0	(320)	0	0	5.500	5.401	MON	1,094	17,942		09/10/2013	08/01/2024
12667F-R6-2	Alternative Loan Trust 2-CWALT 2004-J6 2			4	1.A FM	16,323	97.1453	15,846	16,312	16,323	0	(3)	0	0	6.500	6.475	MON	88	1,101		01/19/2017	11/01/2031
12667F-VN-2	COUNTRYWIDE ALTERNATIVE -SERIES 2004-24C			4	1.A FM	9,061,906	97.4828	8,919,879	9,150,211	9,061,906	0	45,567	0	0	6.000	6.295	MON	45,751	583,949		04/03/2020	11/01/2034
12667G-AA-1	Alternative Loan Trust 2-CWALT 2005-13CB			4	1.A FM	4,583,406	83.2796	4,674,323	5,612,811	4,583,406	0	466,763	0	0	4.889	8.372	MON	4,573	129,545		09/08/2016	05/25/2035
12667G-AC-7	Alternative Loan Trust 2-CWALT 2005-13CB			4	1.A FM	685,397	85.1051	654,562	769,122	685,397	0	18,720	7,976	0	5.500	6.860	MON	3,525	45,292		09/01/2017	05/01/2035
12668A-4C-6	Alternative Loan Trust 2-CWALT 2005-1M1			4	4.C FM	251,572	69.8649	338,881	485,051	251,572	0	153,101	0	0	5.089							

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date	
126694-D7-0	CHL Mortgage Pass-Through-CIHL 2006-HYB2			4	.. 2.C FM	682,736	..90.1209	602,206	668,220	682,736	..0	36,378	..0	..0	3.391	8.587	MON	1,888	22,322	11/03/2016	04/01/2036	
126694-HP-6	CHL Mortgage Pass-Through-CIHL 2005-25 A1			4	.. 1.A FM	469,133	..52.1366	458,573	879,561	469,133	..0	35,471	159,724	..0	5.500	7.616	MON	7,670	49,376	01/10/2022	11/01/2035	
126694-LC-0	CHL Mortgage Pass-Through-CIHL 2005-24 A3			4	.. 5.A FM	1,467,569	..63.5999	1,202,277	1,890,375	1,467,569	..0	81,580	..0	..0	5.500	2.196	MON	19,708	107,385	01/10/2022	11/01/2035	
126694-QJ-0	CHL Mortgage Pass-Through-CIHL 2005-HYB8			4	.. 1.A FM	3,148,154	..90.9802	2,955,527	3,248,539	3,148,154	..0	92,058	..0	..0	3.869	6.536	MON	20,735	118,511	02/01/2017	12/01/2035	
126694-UJ-5	CHL Mortgage Pass-Through-CIHL 2005-31 1A			4	.. 1.A FM	1,033,719	..92.5044	1,173,798	1,268,911	1,033,719	..0	57,198	149,276	..0	2.710	9.422	MON	6,124	35,311	07/15/2016	01/01/2036	
126694-UM-8	CHL Mortgage Pass-Through-CIHL 2005-31 2A			4	.. 1.A FM	984,168	..90.8469	936,070	1,030,383	984,168	..0	29,254	..0	..0	2.842	5.272	MON	2,440	27,248	07/10/2019	01/01/2036	
126694-UN-6	CHL Mortgage Pass-Through-CIHL 2005-31 2A			4	.. 1.A FM	1,520,107	..90.8469	1,445,817	1,591,488	1,520,107	..0	45,185	..0	..0	2.842	5.272	MON	3,769	42,086	07/10/2019	01/01/2036	
12669D-US-5	CHL Mortgage Pass-Through-CIHL 2002-39 A1			4	.. 1.A FM	753,847	..93.7966	726,499	774,547	753,847	..0	..0	1,735	..0	5.750	5.750	MON	3,711	47,412	08/31/2012	02/01/2033	
12669F-A8-6	CHL Mortgage Pass-Through-CIHL 2004-11 2A			4	.. 1.A FM	2,579,107	..95.1371	2,824,171	2,968,528	2,579,107	..0	287,762	..0	..0	3.402	8.337	MON	8,415	100,456	03/23/2020	07/01/2034	
12669F-V8-3	CHL Mortgage Pass-Through-CIHL 2004-HYB4			4	.. 1.A FM	779	..99.0092	772	779	779	..0	150	..0	..0	3.898	3.777	MON	3	1,247	01/27/2017	09/01/2034	
12669F-VH-3	CHL Mortgage Pass-Through-CIHL 2004-6 2A1			4	.. 1.A FM	369,794	..95.2081	355,058	372,928	369,794	..0	4,467	..0	..0	3.311	6.310	MON	1,029	12,195	01/27/2017	05/01/2034	
12669G-3S-8	CHL Mortgage Pass-Through-CIHL 2005-16 A2			4	.. 3.C FM	1,267,299	..70.6496	1,123,086	1,589,656	1,267,299	..0	(3,832)	34,621	..0	5.500	4.274	MON	7,286	93,424	01/10/2022	09/01/2035	
12669G-4K-4	CHL Mortgage Pass-Through-CIHL 2005-J3 1A			4	.. 1.A FM	2,679,394	..76.1589	2,508,614	3,293,922	2,679,394	..0	49,616	89,453	..0	5.500	5.652	MON	15,097	187,144	01/10/2022	09/01/2035	
12669G-A5-0	CHL Mortgage Pass-Through-CIHL 2005-HYB3			4	.. 1.A FM	154,179	..96.9454	153,500	158,337	154,179	..0	15,541	..0	..0	3.018	7.702	MON	398	4,614	04/11/2016	06/01/2035	
12669G-BY-6	CHL Mortgage Pass-Through-CIHL 2004-HYB7			4	.. 1.A FM	373,186	..95.8152	369,973	386,132	373,186	..0	19,737	..0	..0	3.614	7.026	MON	1,163	13,882	01/27/2017	11/01/2034	
12669G-BZ-3	CHL Mortgage Pass-Through-CIHL 2004-HYB7			4	.. 1.A FM	1,086,299	..95.8152	1,077,591	1,124,656	1,086,299	..0	58,183	..0	..0	3.614	7.060	MON	3,387	40,632	01/27/2017	11/01/2034	
12669G-GH-8	CHL Mortgage Pass-Through-CIHL 2004-HYB8			4	.. 1.A FM	2,192,206	..90.9993	2,306,980	2,535,162	2,192,206	..0	205,446	..0	..0	3.628	9.891	MON	14,814	89,879	03/23/2020	01/01/2035	
12669G-PA-5	CHL Mortgage Pass-Through-CIHL 2005-15 A8			4	.. 1.A FM	499,857	..59.3735	477,045	803,464	499,857	..0	12,600	31,247	..0	5.500	6.005	MON	7,290	47,070	07/19/2013	08/01/2035	
152314-KJ-8	Centex Home Equity Loan -CXHE 2004-C AF5			4	.. 1.A FM	2,444,629	..91.3066	2,240,690	2,454,027	2,444,629	..0	(2,959)	..0	..0	4.976	4.930	MON	20,432	130,333	08/11/2010	06/01/2034	
161546-CW-4	Chase Funding Trust Seri-CFAB 2002-3 1A5			4	.. 1.A FM	910,224	..96.0879	879,615	915,428	910,224	..0	2,522	..0	..0	5.907	6.202	MON	9,052	57,822	01/03/2012	06/01/2032	
16159W-AC-8	Chase Home Lending Mortg-CHASE 2019-1 A3			4	.. 1.A	1,624,861	..87.9556	1,393,553	1,584,383	1,624,861	..0	(5,018)	9,253	..0	3.500	3.136	MON	9,253	60,308	01/14/2020	03/01/2050	
16162W-PV-5	Chase Mortgage Finance T-CHASE 2005-A2 1			4	.. 1.A FM	82,756	..85.7898	95,839	111,714	82,756	..0	15,001	..0	..0	3.643	14.387	MON	975	3,729	09/05/2008	01/01/2036	
16162X-AD-9	Chase Mortgage Finance T-CHASE 2006-S3 1			4	.. 2.C FM	384,773	..46.2556	333,590	721,189	384,773	..0	4,749	..0	..0	6.000	4.859	MON	7,453	43,996	08/31/2012	11/25/2036	
16162Y-TL-9	Chase Mortgage Finance T-CHASE 2006-S4 A			4	.. 4.A FM	351,895	..50.1773	327,680	653,043	351,895	..0	(15,207)	39,822	..0	6.000	5.463	MON	5,392	7,843	12/29/2021	12/25/2036	
161630-BA-5	Chase Mortgage Finance T-CHASE 2007-A1 1			4	.. 1.A FM	209,635	..93.2537	200,394	214,891	209,635	..0	7,061	..0	..0	3.557	6.412	MON	1,326	7,653	05/28/2020	02/01/2037	
16165M-AG-3	ChaseFlex Trust Series 2-CFKX 2006-2 A5			4	.. 1.A FM	1,872,274	..81.0976	1,610,464	1,985,835	1,872,274	..0	12,616	65,181	..0	4.450	5.013	MON	11,561	93,937	12/29/2021	09/01/2036	
170257-AE-9	CHL Mortgage Pass-Through-CIHL 2006-16 3A			4	.. 2.C FM	2,557,671	..33.3650	2,070,574	6,205,829	2,557,671	..0	172,504	390,046	..0	6.500	4.193	MON	74,413	368,698	12/29/2021	11/01/2036	
17025A-AH-5	CHL Mortgage Pass-Through-CIHL 2006-17 A8			4	.. 1.A FM	899,184	..49.0290	873,057	1,780,695	899,184	..0	(6,033)	151,564	..0	6.000	5.258	MON	7,621	97,304	01/10/2022	12/25/2036	
17025R-AA-3	COUNTRYWIDE HOME LOANS-SERIES 2007-HY4 C			4	.. 1.A FM	1,306,829	..86.0886	1,552,445	1,803,310	1,306,829	..0	104,646	243,495	..0	3.632	13.727	MON	16,346	66,144	04/15/2020	09/01/2047	
17030J-AA-4	CHNGE Mortgage Trust 2002-CH45 2022-1 A1			4	.. 1.F FE	12,073,453	..91.9085	11,096,525	12,073,453	12,073,453	..0	111	..0	..0	3.007	3.073	MON	30,254	397,344	01/21/2022	01/01/2067	
17307G-E8-7	Citigroup Mortgage Loan -CMLTI 2005-8 1A			4	.. 1.A FM	2,757,424	..89.5542	2,881,006	3,217,053	2,757,424	..0	340,527	..0	..0	3.859	12.692	MON	18,704	91,829	03/23/2016	10/01/2035	
17307G-ED-6	Citigroup Mortgage Loan -CMLTI 2004-HYB2			4	.. 1.A FM	1,417,702	..93.3211	1,463,475	1,568,215	1,417,702	..0	93,960	96,795	..0	3.232	8.665	MON	8,468	48,785	01/10/2020	03/01/2034	
17307G-TY-4	Citigroup Mortgage Loan -CMLTI 2005-3 2A			4	.. 1.A FM	1,709,862	..83.1155	1,687,602	2,030,431	1,709,862	..0	105,035	19,728	..0	3.825	7.517	MON	19,728	70,310	02/13/2019	08/01/2035	
17309A-AD-1	CitiMortgage Alternative-CMALT 2006-A1 1			4	.. 2.B FM	1,035,695	..89.6029	950,235	1,060,495	1,035,695	..0	11,739	17,938	..0	5.750	6.631	MON	5,082	66,070	07/17/2013	04/01/2036	
17309A-AF-6	CitiMortgage Alternative-CMALT 2006-A1 1			4	.. 1.A FM	1,366,488	..90.3950	1,322,542	1,463,070	1,366,488	..0	23,848	..0	..0	6.000	8.204	MON	7,174	94,976	09/13/2012	04/01/2036	
17309B-AB-3	Citigroup Mortgage Loan -CMLTI 2006-WF2			4	.. 1.A FM	220,151	..41.2078	198,606	481,962	220,151	..0	8,607	2,625	8,440	..0	4.342	4.896	MON	2,625	12,073	01/10/2022	05/01/2036
17309N-AG-6	Citicorp Residential Mor-CRMSI 2006-1 M1			4	.. 1.A FM	2,422,159	..95.2329	2,344,998	2,462,382	2,422,159	..0	54,939	..0	..0	4.669	6.717	MON	19,450	136,399	01/11/2016	07/01/2036	
17309V-AH-6	CitiMortgage Alternative-CMALT 2006-A4 1			4	.. 4.A FM	803,877	..92.3117	758,730	821,921	803,877	..0	(5,368)	10,533	..0	6.000	5.209	MON	4,110	46,523	12/29/2021	09/01/2036	
17312H-AF-6	Citicorp Residential Mor-CRMSI 2007-2 A6			4	.. 1.A FM	2,660	..98.0988	2,655	2,707	2,660	..0	544	..0	..0	4.730	11.526	MON	23	401	04/12/2011	06/01/2037	
17312V-AA-6	Citigroup Mortgage Loan -CMLTI 2007-6 1A			4	.. 1.A FM	51,491	..82.3018	86,618	105,244	51,491	..0	16,616	..0	..0	2.524	32.351	MON	221	2,580	11/18/2008	03/01/2037	
17314QAD																						

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
19685G-AC-0	COLT Funding LLC-COLT 2022-4 A3	4			1.F FE	6,960,365		6,411,177	7,013,848	6,960,365	0	10,191	0	0	4.500	4.734	MON	52,781	244,108	04/14/2022	03/01/2067
19687Y-AA-3	COLT 2020-RPL1 Trust-COLT 2020-RPL1 A1	4			1.A FE	24,476,630	85.8547	21,014,619	24,476,967	24,476,630	0	149	0	0	1.390	1.390	MON	28,346	360,555	10/06/2020	01/01/2065
19688E-AA-6	COLT 2021-1 Mortgage Loa-COLT 2021-1 A1	4			1.A FE	9,846,892	83.2497	9,198,826	11,049,680	9,846,892	0	240,890	0	0	0.910	5.914	MON	16,774	52,452	07/06/2022	06/01/2066
19688F-AA-3	COLT 2021-3 Mortgage Loa-COLT 2021-3 A1	4			1.A FE	6,216,654	81.2801	5,801,362	7,137,497	6,216,654	0	114,647	0	0	0.956	4.598	MON	5,686	34,698	07/12/2022	09/01/2066
19688H-AA-9	COLT 2022-1 Mortgage Loa-COLT 2022-1 A1	4			1.A FE	34,486,833	87.7965	30,278,454	34,487,081	34,486,833	0	148	0	0	2.284	2.284	MON	133,358	853,928	01/25/2022	12/01/2066
19688L-AA-0	COLT 2022-5 Mortgage Loa-COLT 2022-5 A1	4			1.A FE	8,298,672	96.8480	8,037,094	8,298,672	8,298,672	0	2,790	0	0	4.550	4.625	MON	31,466	292,738	05/03/2022	04/01/2067
19688L-AB-8	COLT 2022-5 Mortgage Loa-COLT 2022-5 A2	4			1.C FE	13,670,164	92.5144	12,800,808	13,836,559	13,670,164	0	52,116	0	0	4.550	5.129	MON	(21,474)	414,022	05/03/2022	03/01/2067
19688M-AB-6	COLT 2022-8 Mortgage Loa-COLT 2022-8 A2	4			1.C FE	4,987,637	98.1556	4,934,675	5,027,403	4,987,637	0	3,730	0	0	6.500	6.760	MON	55,257	82,557	09/28/2022	08/01/2067
19688M-AC-4	COLT 2022-8 Mortgage Loa-COLT 2022-8 A3	4			1.F FE	5,130,267	97.4320	5,072,530	5,206,228	5,130,267	0	7,033	0	0	6.500	6.976	MON	57,223	85,494	09/28/2022	08/01/2067
20753Y-CH-3	Connecticut Avenue Secur-CAS 2022-R04 1M	4			1.E	6,008,733	99.5616	5,982,391	6,008,733	6,008,733	0	3,063	0	0	5.928	6.278	MON	4,947	108,229	08/31/2022	03/25/2042
20755D-AA-4	Connecticut Avenue Secur-CAS 2022-R08 1M	4			2.A	20,287,882	100.1862	20,227,759	20,190,161	20,287,882	0	(14,792)	0	0	6.478	5.547	MON	18,165	429,896	08/01/2022	07/25/2042
21075W-CJ-2	ContiMortgage Home Equit-CONHE 1996-1 A7	4			1.A FM	44,500	76.7388	183,879	239,616	44,500	0	15,971	0	0	7.000	43.450	MON	2,839	16,347	02/02/1996	03/01/2027
22541Q-FV-9	CSFB MORTGAGE-BACKED PAS-CSFB 2003-17 1A	4			3.C FM	658,312	98.0426	646,567	659,475	658,312	0	250	0	0	5.500	5.547	MON	3,023	37,346	08/31/2012	06/01/2033
22541S-PJ-1	CSFB Mortgage-Backed Tru-CSFB 2004-AR6 C	4			1.A FM	3,821,996	93.1303	4,001,261	4,296,413	3,821,996	0	204,801	0	0	5.589	8.646	MON	16,755	117,202	11/04/2016	10/25/2034
225458-LD-8	CSFB MORTGAGE-BACKED PAS-CSFB 2005-3 6A1	4			1.A FM	1,586,609	96.0281	1,608,601	1,675,136	1,586,609	0	76,023	0	0	5.750	10.691	MON	8,027	104,174	05/17/2012	07/01/2035
225470-Q8-9	CSMC Mortgage-Backed Tru-CSMC 2006-3 5A5	4			5.A FM	522,356	31.1063	415,017	1,334,189	522,356	0	21,232	91,980	0	6.000	6.000	MON	13,120	67,379	12/29/2021	04/01/2036
225470-VF-7	CSMC Mortgage-Backed Tru-CSMC 2006-1 3A1	4			1.A FM	1,540,100	60.4403	1,484,306	2,455,822	1,540,100	0	62,534	24,651	0	5.750	6.820	MON	11,767	158,400	12/29/2021	02/01/2036
22542M-BF-2	CSMC Mortgage-Backed Tru-CSMC 2006-8 5A1	4			4.B FM	651,107	98.2602	626,886	637,986	651,107	0	3,436	5,905	0	5.530	6.328	MON	5,905	36,585	01/03/2019	10/01/2026
22944P-AA-5	CSMC Trust 2013-TH1-CSMC 2013-TH1 A1	4			1.A	841,200	89.1492	841,071	943,442	841,200	0	15,812	0	0	2.130	4.132	MON	3,355	21,262	02/25/2014	02/01/2043
23242L-AB-9	CIHEQ Revolving Home Equ-CIHEL 2006-F 2A	4			1.A FM	207,873	90.8452	200,066	220,227	207,873	0	8,367	0	0	4.458	5.537	MON	464	4,364	03/13/2008	07/15/2036
23332U-AD-6	DSLA Mortgage Loan Trust-DSLA 2004-AR1 A	4			1.A FM	1,021,049	100.5467	1,109,090	1,103,060	1,021,049	0	69,900	0	0	5.179	7.977	MON	2,063	27,956	08/11/2016	09/19/2044
24381J-AD-9	Deephaven Residential Mortgag	4			2.B FE	6,755,880	67.8939	4,586,914	6,756,000	6,755,880	0	27	0	0	3.257	3.257	MON	36,674	220,043	11/19/2021	11/01/2066
24382J-AB-2	Deephaven Residential Mo-DRMT 2022-1 A2	4			1.C FE	10,296,751	75.8649	7,811,813	10,297,000	10,296,751	0	45	0	0	2.961	2.962	MON	50,816	304,894	01/24/2022	01/01/2067
24763L-FN-4	Delta Funding Home Equit-DELHE 1999-2 A7	4			1.A FM	106	95.8299	102	106	106	0	19,531	0	0	7.030	227.686	MON	1	169	08/31/2012	08/01/2030
25150M-AC-0	Deutsche Alt-A Securitie-DBALT 2007-RMP1	4			1.A FM	1,386,889	89.5146	1,347,870	1,505,755	1,386,889	0	115,033	0	0	4.689	6.664	MON	2,817	41,337	09/23/2013	12/25/2036
25150N-AB-0	Deutsche Alt-A Securitie-DBALT 2006-AR5	4			1.A FM	1,499,680	33.2507	1,397,183	4,201,969	1,499,680	0	220,747	0	0	4.769	7.418	MON	6,821	51,866	03/18/2016	10/25/2036
251510-CV-3	Deutsche Alt-A Securitie-DBALT 2005-1 1A	4			1.A FM	633,478	94.5926	753,068	796,118	633,478	0	105,865	649	0	4.889	13.070	MON	18,845	18,845	09/16/2011	02/25/2035
251510-EP-4	DEUTSCHE ALT-A SECURITIE-DBALT 2005-3 5A	4			1.A FM	1,315,541	89.4839	1,372,133	1,533,385	1,315,541	0	228,696	0	0	4.689	9.176	MON	6,633	33,896	01/06/2011	06/25/2035
251510-LM-3	Deutsche Alt-A Securitie-DBALT 2006-AR1	4			3.A FM	78,442	103.0064	78,795	76,495	78,442	0	2,237	0	0	2.852	4.548	MON	372	2,725	03/04/2016	02/01/2036
251510-MD-2	Deutsche Alt-B Securitie-DBALT 2006-AB1	4			1.A FM	311,893	86.3469	398,748	461,798	311,893	0	27,945	0	0	5.431	15.873	MON	7,151	14,807	01/25/2006	02/01/2036
251563-FP-2	Deutsche Mortgage Securi-DMSI 2004-4 7AR	4			6. *	894	2.0522	8,407	409,631	894	0	0	0	0	0.000	111.973	MON	60	5,507	04/25/2008	06/25/2034
30259R-AE-5	FMC GMSR Issuer Trust-FMMSR 2020-GT1 A	4			2.C FE	3,499,172	88.7995	3,107,981	3,500,000	3,499,172	0	244	0	0	4.450	4.458	MON	15,575	155,750	12/10/2020	01/25/2026
31572Y-AB-4	Ellington Financial Mort-EFMT 2022-2 A2	4			1.C FE	4,674,979	91.0674	4,318,537	4,742,134	4,674,979	0	8,684	34,095	0	4.299	4.608	MON	34,095	156,191	04/14/2022	04/01/2067
31572Y-AC-2	Ellington Financial Mort-EFMT 2022-2 A3	4			1.G FE	17,758,468	88.8937	16,062,587	18,069,428	17,758,468	0	40,208	0	0	4.299	4.676	MON	129,914	595,219	04/14/2022	04/01/2067
31572Y-AD-0	Ellington Financial Mort-EFMT 2022-2 M1	4			2.C FE	6,034,347	75.2049	4,803,338	6,387,000	6,034,347	0	17,049	0	0	4.299	4.961	MON	22,883	205,884	04/14/2022	04/01/2067
31573E-AA-9	Ellington Financial Mort-EFMT 2022-3 A1	4			1.A FE	21,613,711	98.2239	21,433,986	21,821,568	21,613,711	0	39,060	175,650	0	5.000	5.315	MON	175,650	484,230	07/22/2022	08/01/2067
31573E-AB-7	Ellington Financial Mort-EFMT 2022-3 A2	4			1.C FE	9,791,540	95.8949	9,642,593	10,055,379	9,791,540	0	27,214	0	0	5.000	5.591	MON	81,826	232,089	07/22/2022	08/01/2067
31573E-AC-5	Ellington Financial Mort-EFMT 2022-3 A3	4			1.F FE	4,649,325	94.9149	4,602,647	4,849,237	4,649,325	0	18,891	0	0	5.000	5.937	MON	40,579	123,220	07/22/2022	08/01/2067
31573J-AD-2	Ellington Financial Mort-EFMT 2021-3 M1	4			2.B FE	4,281,882	55.3150	2,368,589	4,282,000	4,281,882	0	13	13,056	0	2.530	2.530	MON	18,056	108,335	12/29/2021	09/01/2066
31573J-AE-0	Ellington Financial Mort-EFMT 2021-3 B1	4			3.B FE	2,883,914	57.5673	1,660,241	2,884,000	2,883,914	0	8	0	0	3.235	3.235	MON	15,550	93,297	10/01/2021	09/01/2066
32027L-AE-5	First Franklin Mortgage -FFML 2006-FF14	4			1.A FM	375,886	96.9364	367,841	379,467	375,886	0	28,984	0	0	4.549	4.962	MON	1,363	7,742	11/06/2015	10/25/2036
32051G-SQ-9	First Horizon Alternativ-FHAMS 2005-AA7	4			1.A FM	1,882,223	90.5160	1,908,219	2,108,156	1,882,223	0	103,347	80,005	0	3.740	8.048	MON	6,570	66,621	12/29/2021	09/01/2035
32051G-T7-0	First Horizon Alternativ-FHAMS 2006-FA1	4			4.A FM	675,158	50.2746	601,220	1,195,872	675,158	0	28,605	60,728	0	6.000	5.906	MON	10,720	77,737	12/29/2021	04/01/2036
32051G-XQ-3	First Horizon Mortgage P-FHASI 2005-AR5	4			1.A FM	1,279,943	84.5408	1,285,425	1,520,480	1,279,943	0	65,470	83,036	0	4.310	6.340	MON	1,229	51,367	04/23/2019	11/01/2035
32051G-XV-2	First Horizon Mortgage P-FHASI 2005-AR5	4			1.A FM	769,248	93.7151	772,650	824,467	769,248	0	53,460	0	0	4.166	8.080	MON	6,247	33,329	02/06/2014	11/01/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
32052E-AA-7	First Horizon Mortgage P-FHASI 2006-AR3			4	1.A FM	53,377	.63.2175	49,614	78,482	53,377	.0	8,206	.0	.0	3.390	8.948	MON	222	2,273	08/15/2017	11/01/2036
32056J-AA-2	First Horizon Mortgage P-FHASI 2007-AR3			4	1.A FM	1,159,363	.55.7648	1,445,222	2,591,636	1,159,363	.0	674,325	.0	.0	3.870	16.204	MON	17,049	93,335	03/01/2012	11/01/2037
35564K-B2-4	Freddie Mac Structured A-STACR 2022-HQA2			4	1.B	11,714,837	.100.3971	11,750,536	11,704,061	11,714,837	.0	620	.0	.0	6.578	5.647	MON	10,692	273,221	07/25/2022	07/25/2042
35564K-E3-9	Freddie Mac STACR REMIC -STACR 2022-HQA3			4	1.B	7,922,778	.99.7734	7,904,826	7,922,778	7,922,778	.0	.0	.0	.0	6.228	6.227	MON	6,853	157,031	08/08/2022	08/25/2042
36167K-AA-6	GCAT 2021-NQM6 Trust-GCAT 2021-NQM6 A1			4	1.A	3,472,566	.85.5075	3,267,359	3,821,137	3,472,566	.0	59,664	.0	.0	1.855	5.344	MON	11,841	36,274	06/29/2022	08/01/2066
36168M-AD-5	GCAT 2022-NQM3 Trust-GCAT 2022-NQM3 M1			4	2.C FE	7,526,686	.72.2023	6,031,060	8,353,000	7,526,686	.0	43,966	.0	.0	4.344	5.922	MON	60,472	211,820	06/03/2022	04/01/2067
36168V-AE-3	GCAT 2022-NQM1 Trust-GCAT 2022-NQM1 A2			4	1.C FE	19,533,871	.81.5048	15,921,153	19,534,000	19,533,871	.0	53	.0	.0	3.889	3.889	MON	63,306	696,371	03/09/2022	02/01/2067
36168V-AF-0	GCAT 2022-NQM1 Trust-GCAT 2022-NQM1 A3			4	1.G FE	23,536,200	.75.4206	17,796,235	23,596,000	23,536,200	.0	16,306	.0	.0	3.971	4.084	MON	234,145	863,372	03/09/2022	02/01/2067
36168X-AE-9	GCAT 2022-HX1 Trust-GCAT 2022-HX1 A2			4	1.C FE	9,999,826	.75.5662	7,556,623	10,000,000	9,999,826	.0	41	.0	.0	3.478	3.478	MON	28,983	318,817	02/09/2022	12/01/2066
36169K-AA-4	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A1			4	1.A FE	2,741,521	.95.1844	2,619,441	2,751,964	2,741,521	.0	3,514	.0	.0	4.210	4.375	MON	9,655	89,722	04/28/2022	02/01/2067
36169K-AB-2	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A2			4	1.E FE	9,918,156	.89.6381	9,045,028	10,090,602	9,918,156	.0	43,874	.0	.0	4.210	4.888	MON	35,401	328,982	04/28/2022	02/01/2067
36185N-BN-5	GMACM Mortgage Loan Trus-GMACM 2005-AR2			4	1.A FM	4,658,176	.91.5558	4,581,801	5,004,379	4,658,176	.0	262,916	.0	.0	0.000	8.133	MON	.0	147,867	04/07/2020	05/01/2035
36228F-UJ-3	GSR Mortgage Loan Trust -GSR 2003-7F 4A1			4	1.A FM	456,883	.93.4736	438,222	468,819	456,883	.0	3,509	.0	.0	3.250	4.081	MON	2,577	16,956	05/02/2018	10/01/2032
3622EA-AA-8	GSAA TRUST-GSAA 2007-3 1A1A			4	1.A FM	3,761,791	.55.8234	3,650,746	6,539,815	3,761,791	.0	510,378	231,203	.0	4.529	7.324	MON	9,576	50,743	01/05/2016	03/25/2047
362341-AA-4	GSR Mortgage Loan Trust -GSR 2006-AR1 2A			4	1.A FM	271,228	.93.9187	257,622	274,304	271,228	.0	11,555	3,202	.0	3.796	7.589	MON	3,202	8,996	06/16/2016	01/01/2036
362341-4F-3	GSR Mortgage Loan Trust -GSR 2006-AR1 3A			4	1.A FM	120,422	.99.4452	122,964	123,650	120,422	.0	8,651	.0	.0	3.520	11.900	MON	725	3,881	06/05/2019	01/01/2036
362341-DP-1	GSR Mortgage Loan Trust -GSR 2005-6F 1A5			4	1.C FM	420,683	.96.1271	402,894	419,126	420,683	.0	(1,088)	.0	.0	5.250	5.022	MON	1,834	25,659	04/21/2020	07/01/2035
362341-FN-4	GSR Mortgage Loan Trust -GSR 2005-AR4 3A			4	1.A FM	781,444	.72.6490	708,505	975,243	781,444	.0	60,921	5,055	.0	3.110	5.358	MON	5,055	31,799	03/16/2016	07/01/2035
362341-SG-5	GSR MORTGAGE LOAN TRUST-SERIES 2005-AR6			4	1.A FM	10,482,122	.94.1058	10,866,870	11,547,509	10,482,122	.0	250,304	.0	.0	3.887	7.085	MON	37,404	374,161	12/03/2020	09/01/2035
362341-XC-8	GSR Mortgage Loan Trust -GSR 2005-AR7 4A			4	4.C FM	865,321	.60.0120	767,933	1,279,632	865,321	.0	21,774	58,037	.0	3.960	4.548	MON	7,751	40,971	02/26/2016	11/01/2035
362341-XE-4	GSR Mortgage Loan Trust -GSR 2005-AR7 5A			4	1.A FM	606,601	.90.1472	642,775	606,601	606,601	.0	103,825	7,386	.0	3.954	10.854	MON	7,386	30,716	04/27/2020	11/01/2035
362341-XG-9	GSR Mortgage Loan Trust -GSR 2005-AR7 6A			4	1.A FM	484,154	.93.0962	463,837	498,235	484,154	.0	21,999	.0	.0	3.719	6.094	MON	3,102	18,476	02/25/2016	11/01/2035
36242D-WI-0	GSR Mortgage Loan Trust -GSR 2005-AR3 6A			4	1.A FM	457,533	.80.8759	412,793	510,403	457,533	.0	23,046	.0	.0	3.171	5.750	MON	2,702	16,843	12/15/2016	05/01/2035
36242D-BZ-5	GS MORTGAGE LOAN TRUST-SERIES 2004-9 CL			4	1.A FM	1,131,555	.92.1886	1,050,526	1,139,540	1,131,555	.0	23,530	.0	.0	3.964	5.916	MON	7,709	41,259	01/19/2017	08/01/2034
36242D-FS-7	GSR Mortgage Loan Trust -GSR 2004-11 2A1			4	1.A FM	611,338	.95.1324	581,581	611,338	611,338	.0	1,434	.0	.0	3.936	5.472	MON	4,019	23,843	01/27/2017	09/01/2034
36242D-FX-6	GSR Mortgage Loan Trust -GSR 2004-11 3A1			4	1.A FM	45,395	.96.8749	43,976	45,395	45,395	.0	125	.0	.0	4.023	4.893	MON	305	1,592	01/27/2017	09/01/2034
36242D-H4-8	GSR Mortgage Loan Trust -GSR 2005-AR2 1A			4	1.A FM	798,149	.88.7925	747,549	841,905	798,149	.0	62,690	.0	.0	3.344	7.217	MON	3,445	26,681	02/18/2016	04/01/2035
36242D-H9-7	GSR Mortgage Loan Trust -GSR 2005-AR2 4A			4	1.A FM	2,156,305	.92.4044	2,006,270	2,171,186	2,156,305	.0	58,951	.0	.0	3.029	5.798	MON	10,981	70,317	12/09/2016	04/01/2035
36242D-QY-2	GSR Mortgage Loan Trust -GSR 2004-15F 2A			4	3.C FM	104,565	.87.0181	100,339	115,308	104,565	.0	936	5,625	.0	5.000	5.121	MON	480	6,320	10/19/2016	12/01/2034
36242D-VA-8	GSR Mortgage Loan Trust -GSR 2005-1F 1A6			4	1.G FM	1,615,765	.90.3934	1,504,751	1,664,669	1,615,765	.0	7,173	.0	.0	5.500	5.791	MON	7,630	70,543	01/10/2022	02/01/2035
36244S-AD-0	GSAA Home Equity Trust 2-GSAA 2006-13 AF			4	1.A FM	2,199,302	.34.2133	2,397,505	7,007,535	2,199,302	.0	226,540	177,620	.0	6.619	10.292	MON	48,969	131,791	09/14/2012	07/01/2036
362480-AD-7	GSC CAPITAL CORP MORTGAG-SERIES 2006-2 C			4	1.A FM	920,464	.95.7518	1,014,180	1,059,176	920,464	.0	82,405	.0	.0	4.749	9.362	MON	3,733	21,835	07/11/2016	05/25/2036
36264E-BD-5	GS Mortgage-Backed Secur-GSMBs 2022-NQM1			4	1.G	22,938,350	.97.4049	19,506,242	22,317,111	22,938,350	.0	(80,601)	169,380	.0	4.123	3.610	MON	169,380	870,670	03/03/2022	05/01/2062
39538W-BE-7	GreenPoint Mortgage Fund-GPMF 2005-HY1 M			4	1.A FM	6,739,881	.94.9287	6,875,881	7,243,207	6,739,881	.0	427,979	.0	.0	5.214	8.023	MON	5,245	178,700	04/26/2016	07/25/2035
39678W-AA-6	Greenwich Capital Struct-GCSP 2005-1 A1			4	1.A FM	369,436	.96.1408	349,535	363,565	369,436	.0	(800)	.0	.0	4.588	4.373	MON	2,780	18,049	01/28/2005	09/01/2034
41161P-CX-9	HarborView Mortgage Loan-HVMLT 2004-1 A1			4	1.A FM	213,863	.94.7732	212,984	213,863	213,863	.0	5,683	3,060	.0	4.939	6.649	MON	1,149	4,827	01/03/2019	04/19/2034
41161P-EX-7	HarborView Mortgage Loan-HVMLT 2004-5 2A			4	1.A FM	201,739	.93.8735	198,331	211,274	201,739	.0	7,325	.0	.0	3.239	6.815	MON	570	6,452	01/06/2012	06/01/2034
41161P-EZ-2	HarborView Mortgage Loan-HVMLT 2004-5 3A			4	1.A FM	666,325	.91.9059	612,392	666,325	666,325	.0	7,834	.0	.0	3.087	5.615	MON	3,460	30,531	01/27/2017	06/01/2034
41161P-FV-0	HarborView Mortgage Loan-HVMLT 2004-6 5A			4	2.C FM	478,567	.95.1615	446,480	478,567	478,567	.0	(1,520)	1,476	.0	3.774	4.529	MON	1,476	18,749	01/27/2017	08/01/2034
41161P-MV-2	HarborView Mortgage Loan-HVMLT 2005-4 1A			4	1.A FM	266,624	.91.1466	359,078	393,956	266,624	.0	36	79,388	.0	3.763	3.763	MON	1,235	13,482	11/29/2016	07/01/2035
41161P-TN-3	HARBORVIEW MORTGAGE LOAN-SERIES 2005-10			4	1.A FM	652,313	.72.5036	686,873	947,364	652,313	.0	103,155	.0	.0	4.959	8.591	MON	1,697	22,075	08/31/2012	11/19/2035
41161P-UK-7	HarborView Mortgage Loan-SERIES 05-11 CL			4	1.A FM	445,578	.91.4016	472,068	516,477	445,578	.0	56,328	.0	.0	4.959	11.179	MON	925	11,846	08/31/2012	08/19/2045
41161V-AC-4	HarborView Mortgage Loan-HVMLT 2006-7 2A			4	1.A FM	152,491	.84.6798	152,047	179,555	152,491	.0	22,460	.0	.0	4.539	12.630	MON	881	4,453	04/02/2008	09/19/2046
41162G-AA-0	HarborView Mortgage Loan-HVMLT 2006-11 A			4	1.G FM	1,271,525	.87.4998	1,117,478	1,277,120	1,271,525	.0	23,809	.0	.0	4.679	5.194	MON	2,158	30,523	01/03/2019	12/19/2036
43739E-AP-2	HOMEBANC MORTGAGE TRUST-SERIES 2005-1 CL			4	1.A FM	689,473	.83.7487	669,168	799,019	689,473	.0	62,429	16,033	.0	4.889	7.079	MON	2,996	17,603	02/15/2017	03/25/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
43739E-CL-9	HomeBanc Mortgage Trust -HMBT 2006-1 1A1			4	1.A FM	241,458	.87.4764	249,244	284,927	241,458	.0	26,431	.0	.0	2.706	11.858	MON	1,662	5,640	03/15/2017	04/01/2037
43739H-AA-8	HomeBanc Mortgage Trust -HMBT 2006-2 A1			4	1.A FM	908,478	.98.3063	904,518	920,102	908,478	.0	181,498	.0	.0	4.749	7.278	MON	3,735	21,859	02/12/2016	12/25/2036
43741B-AA-7	HomeBanc Mortgage Trust -HMBT 2007-1 11A			4	1.A FM	644,906	.86.8113	592,151	682,113	644,906	.0	24,269	.0	.0	3.341	8.020	MON	5,687	24,561	12/29/2021	04/01/2047
45254N-JB-4	IMPAC CMB TRUST-SERIES 2004-4 CLASS 2A1			4	1.A FM	725,662	.97.7692	747,854	764,918	725,662	.0	27,093	.0	.0	5.287	7.291	MON	6,804	43,598	02/06/2013	09/01/2034
45254N-KX-4	IMPAC CMB TRUST-SERIES 2004-9 CLASS 1A1			4	1.A FM	114,710	.93.7566	113,216	120,755	114,710	.0	6,632	.0	.0	5.149	7.120	MON	86	3,357	01/24/2017	01/25/2035
45254N-MZ-7	Impac CMB Trust Series 2-1MM 2005-2 1A2			4	1.A FM	1,032,739	.97.1964	1,092,866	1,124,390	1,032,739	.0	72,752	.0	.0	5.009	7.791	MON	5,150	28,732	08/31/2012	04/25/2035
45254N-NT-0	Impac CMB Trust Series 2-1MM 2005-3 M1			4	5.A FM	93,085	.53.2600	64,371	120,862	93,085	.0	14,680	.0	.0	5.019	14.200	MON	544	2,906	05/20/2008	08/25/2035
45254T-TN-4	Impac Secured Assets Tru-IMSA 2006-1 2A1			4	1.A FM	9,248	.88.2724	8,853	10,029	9,248	.0	510	.0	.0	5.089	6.772	MON	49	251	12/01/2009	05/25/2036
45276Q-AA-2	Imperial Fund Mortgage T-IMPRL 2022-NQM5			4	1.A FE	14,357,471	.97.5446	14,004,932	14,357,471	14,357,471	.0	183	.0	.0	5.390	5.514	MON	68,981	267,244	08/02/2022	08/01/2067
45276Q-AB-0	Imperial Fund Mortgage T-IMPRL 2022-NQM5			4	1.D FE	12,909,280	.98.4012	12,702,887	12,909,280	12,909,280	.0	175	.0	.0	6.122	6.246	MON	72,739	309,685	08/02/2022	08/01/2067
45276Q-AC-8	Imperial Fund Mortgage T-IMPRL 2022-NQM5			4	1.G FE	3,542,636	.96.4480	3,427,254	3,553,474	3,542,636	.0	20,628	.0	.0	6.250	6.481	MON	20,441	113,789	08/02/2022	08/01/2067
45660K-AA-9	IndyMac INDX Mortgage Lo-INDX 2006-AR39			4	1.A FM	2,492,868	.86.5934	2,429,261	2,805,365	2,492,868	.0	192,767	.0	.0	4.749	8.383	MON	15,191	47,266	09/22/2015	02/25/2037
45660L-CK-3	IndyMac INDX Mortgage Lo-INDX 2005-AR2 1			4	1.A FM	2,656,466	.71.9630	2,796,920	3,886,608	2,656,466	.0	281,458	330,675	.0	5.069	12.470	MON	28,423	92,276	02/16/2016	02/25/2035
45660L-DB-2	IndyMac INDX Mortgage Lo-INDX 2005-AR1 1			4	1.A FM	99,769	.94.8299	94,611	99,769	99,769	.0	490	.0	.0	3.401	5.602	MON	567	3,103	01/30/2017	03/01/2035
45660L-V9-7	IndyMac INDX Mortgage Lo-INDX 2005-AR31			4	1.A FM	399,280	.91.3622	371,899	407,060	399,280	.0	14,934	.0	.0	3.212	5.583	MON	2,215	13,349	11/03/2016	01/01/2036
45660N-X9-1	IndyMac INDX Mortgage Lo-INDX 2004-AR6 5			4	1.A FM	212,740	.97.7783	230,288	235,521	212,740	.0	14,512	.0	.0	3.833	8.849	MON	752	8,178	05/30/2008	10/01/2034
456618-AF-4	IndyMac INDX Mortgage Lo-INDX 2006-AR8 A			4	1.A FM	102,770	.113.7954	115,747	101,715	102,770	.0	(26,867)	.0	.0	4.849	1.347	MON	376	3,136	11/09/2016	07/25/2046
45661X-AB-8	IndyMac INDX Mortgage Lo-INDX 2006-AR13			4	1.A FM	1,305,397	.70.6445	1,485,575	2,102,889	1,305,397	.0	234,253	.0	.0	4.989	10.007	MON	15,145	48,135	06/01/2012	07/25/2036
45669A-AD-6	IndyMac INDX Mortgage Lo-INDA 2007-AR1 2			4	3.A FM	3,394,383	.82.8974	3,227,878	3,893,823	3,394,383	.0	118,946	.0	.0	3.387	7.322	MON	21,925	131,246	10/25/2017	03/01/2037
46591K-AC-7	JP Morgan Mortgage Trust-JPMIT 2019-8 A3			4	1.A	1,692,945	.89.3895	1,460,325	1,633,664	1,692,945	.0	(8,457)	.0	.0	3.500	2.951	MON	9,542	64,703	10/22/2019	03/01/2050
466247-J4-6	JP Morgan Mortgage Trust-JPMIT 2006-A2 2			4	1.A FM	74,449	.90.0010	74,585	82,871	74,449	.0	2,938	5,922	.0	3.051	8.875	MON	866	2,632	01/10/2022	04/01/2036
466247-L6-8	JP Morgan Mortgage Trust-JPMIT 2006-A2 1			4	1.A FM	1,223,697	.97.6776	1,208,377	1,237,108	1,223,697	.0	47,232	.0	.0	3.941	6.002	MON	8,789	47,542	07/08/2014	08/01/2034
466247-PW-7	JP Morgan Mortgage Trust-JPMIT 2005-A3 2			4	1.A FM	83,622	.98.0809	85,695	87,372	83,622	.0	104,698	.0	.0	2.861	13.074	MON	545	5,273	03/23/2020	06/01/2035
466247-OP-1	JP Morgan Mortgage Trust-JPMIT 2005-A3 7			4	1.A FM	305,311	.85.8812	327,503	381,344	305,311	.0	35,315	.0	.0	2.843	10.679	MON	3,740	10,645	04/15/2016	06/01/2035
466247-RP-0	JP Morgan Mortgage Trust-JPMIT 2005-A4 2			4	1.A FM	255,639	.94.4844	253,528	268,328	255,639	.0	23,309	.0	.0	3.463	7.764	MON	1,553	10,569	06/05/2012	07/01/2035
466247-UG-6	JP MORGAN MORTGAGE TRUST-SERIES 2005-A6			4	1.A FM	527,981	.89.1086	520,360	583,962	527,981	.0	29,048	15,795	.0	3.960	9.594	MON	5,415	7,383	03/21/2017	08/01/2035
466247-ZP-1	JP Morgan Mortgage Trust-JPMIT 2005-S3 1			4	4.A FM	565,679	.57.7799	545,586	944,250	565,679	.0	(9,679)	24,479	.0	5.750	5.032	MON	12,468	49,519	01/10/2022	01/01/2036
46627M-AD-9	JP Morgan Alternative Lo-JPALT 2005-S1 1			4	1.A FM	593,543	.37.5840	524,404	1,395,287	593,543	.0	19,486	31,861	.0	6.000	6.509	MON	26,052	83,339	02/07/2008	12/01/2035
46627M-CU-9	JP Morgan Alternative Lo-JPALT 2006-A1 2			4	1.A FM	169,660	.91.6660	198,975	217,065	169,660	.0	22,018	.0	.0	3.302	9.970	MON	1,841	6,915	02/07/2006	03/01/2036
46627M-CY-1	JP Morgan Alternative Lo-JPALT 2008-A1 3			4	1.A FM	4,953,702	.80.9575	5,130,647	6,337,456	4,953,702	.0	502,937	241,186	.0	2.777	8.625	MON	29,406	196,346	04/06/2017	05/01/2036
46627M-EC-7	JP Morgan Alternative Lo-JPALT 2006-S1 1			4	1.B FM	388,274	.57.1901	365,870	639,744	388,274	.0	16,427	.0	.0	5.750	6.956	MON	3,065	37,903	01/31/2008	03/01/2036
46627M-EJ-2	JP Morgan Alternative Lo-JPALT 2006-S1 1			4	4.B FM	1,170,943	.57.4378	982,410	1,710,389	1,170,943	.0	24,218	98,338	.0	6.000	3.813	MON	8,552	107,874	12/29/2021	03/01/2036
46628K-OP-4	JP Morgan Mortgage Trust-JPMIT 2006-A3 2			4	1.A FM	158,596	.83.2364	171,124	158,596	158,596	.0	22,381	1,504	.0	2.885	12.655	MON	205	6,116	04/20/2016	05/01/2036
46628L-AB-4	JP Morgan Mortgage Trust-JPMIT 2006-A4 1			4	1.A FM	42,157	.75.6070	44,190	58,447	42,157	.0	2,005	9,719	.0	3.503	10.732	MON	510	1,978	08/31/2012	06/01/2036
46628V-AH-9	JP Morgan Alternative Lo-JPALT 2006-S3 A			4	1.A FM	7,425,981	.79.7465	8,578,351	10,757,032	7,425,981	.0	(27,005)	.0	.0	6.920	9.494	MON	62,032	491,045	08/09/2012	08/01/2036
46630B-AE-3	JP Morgan Alternative Lo-JPALT 2008-R3 3			4	1.A FM	717,711	.89.1814	785,586	880,886	717,711	.0	6,551	8,617	.0	5.843	7.085	MON	8,617	24,951	11/30/2017	05/01/2037
46630G-AN-5	JP Morgan Mortgage Trust-JPMIT 2007-A1 4			4	1.A FM	27,363	.97.2730	27,140	27,900	27,363	.0	1,285	.0	.0	3.939	6.668	MON	92	985	02/09/2012	07/01/2035
46630P-AP-0	JP Morgan Mortgage Trust-JPMIT 2007-A2 3			4	1.A FM	12,661	.79.9706	14,156	17,702	12,661	.0	2,495	.0	.0	3.230	12.279	MON	95	488	06/23/2008	04/01/2037
46630W-AB-6	JP Morgan Mortgage Trust-JPMIT 2007-S2 1			4	5.A FM	888,065	.50.9664	822,318	1,613,451	888,065	.0	(40,246)	33,974	.0	5.500	3.004	MON	12,224	76,469	12/29/2021	06/01/2037
46630W-AL-4	JP Morgan Mortgage Trust-JPMIT 2007-S2 1			4	5.A FM	517,582	.55.1014	489,602	888,547	517,582	.0	(11,718)	26,648	.0	6.000	3.150	MON	7,344	52,833	01/10/2022	06/01/2037
46631N-AA-7	JP Morgan Mortgage Trust-JPMIT 2007-S3 1			4	5.A FM	754,676	.53.5773	639,770	1,194,107	754,676	.0	(8,079)	31,559	.0	5.500	5.125	MON	10,520	53,228	12/29/2021	08/01/2037
46631N-DT-3	JP Morgan Mortgage Trust-JPMIT 2007-S3 1			4	1.A FM	6,374,664	.58.4089	6,427,560	11,004,419	6,374,664	.0	62,061	1,229,207	.0	7.000	9.051	MON	121,186	733,855	12/29/2021	08/01/2037
46632T-AA-3	JP Morgan Mortgage Trust-JPMIT 2008-R2 1			4	1.A FM	3,467,465	.94.5091	3,559,960	3,766,789	3,467,465	.0	336,084	.0	.0	3.196	8.315	MON	20,092	124,445	08/31/2012	07/01/2037
46632Y-AB-0	JP Morgan Mortgage Trust-JPMIT 2008-R3 1			4	1.A FM	(66,154)	.86.7844	1,755,333	2,022,636	(66,154)	.0	212,887	.0	.0	3.503	3.503	MON	17,386	68,754	11/19/2008	06/01/2036
46632Y-AC-8	JP Morgan Mortgage Trust-JPMIT 2008-R3 2			4	1.A FM	2,737,143	.35.6150	2,816,556	7,908,349	2,737,143	.0	(43,999)	.0	.0	6.250	9.512	MON	41,189	459,167	11/19/2008	08/01/2037

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
46632Y-AD-6	JP Morgan Mortgage Trust-JPMMT 2008-R3 2	4			1.A FM	3,115	.30.9697	292,218	943,561	3,115	.0	33,745	.0	.0	6.250	6.250	MON	14,542	55,150	11/19/2008	08/01/2037
46633M-AM-1	JP Morgan Resecuritizati-JPMRR 2009-6 2A	4			1.A FM	(12,123)	.84.9208	349,842	411,963	(12,123)	.0	153,119	.0	.0	3.001	3.001	MON	3,396	13,707	06/11/2009	04/01/2035
46634D-AX-6	JP Morgan Resecuritizati-JPMRR 2010-1 3A	4			1.A FM	1,300,751	.76.0242	1,847,327	2,429,921	1,300,751	.0	150,260	.0	.0	6.000	15.948	MON	12,150	151,171	02/17/2010	04/01/2037
46635B-AD-3	JP Morgan Resecuritizati-JPMRR 2010-7 1A	4			1.A FM	4,414,746	.92.6498	4,974,187	5,368,803	4,414,746	.0	237,560	.0	.0	5.159	10.285	MON	23,079	304,734	09/15/2010	03/01/2039
46651G-AC-3	JP Morgan Mortgage Trust-JPMMT 2019-7 A3	4			1.A	738,146	.88.5416	644,759	728,199	738,146	.0	(1,946)	.0	.0	3.500	3.233	MON	4,280	28,250	09/13/2019	02/01/2050
472320-AA-8	Jefferies Resecuritizati-JMAC 2008-R1 A	4			1.A FM	2,218,245	.87.5350	2,089,648	2,387,215	2,218,245	.0	109,631	.0	.0	7.423	10.247	MON	18,259	165,838	07/24/2008	06/25/2047
472321-AA-6	Jefferies Resecuritizati-JMAC 2008-R2 1A	4			1.A FM	1,619,911	.98.0834	1,664,478	1,697,002	1,619,911	.0	177,954	.0	.0	6.000	15.787	MON	17,015	124,018	08/26/2008	10/01/2035
472321-AB-4	Jefferies Resecuritizati-JMAC 2008-R2 1A	4			1.A FM	685,604	.97.3514	2,095,541	2,152,554	685,604	.0	112,285	.0	.0	6.000	38.970	MON	21,526	129,153	08/26/2008	10/01/2035
472321-AD-0	Jefferies Resecuritizati-JMAC 2008-R2 2A	4			1.A FM	215,198	.95.8411	283,787	296,101	215,198	.0	220,378	.0	.0	3.812	34.954	MON	2,813	11,574	08/26/2008	01/01/2037
472321-AG-3	Jefferies Resecuritizati-JMAC 2008-R2 1A	4			1.A FM	286,976	.32.3255	313,192	968,872	286,976	.0	286,976	.0	.0	6.000	6.000	MON	15,195	61,471	08/26/2008	10/01/2035
472321-AH-1	Jefferies Resecuritizati-JMAC 2008-R2 2A	4			1.A FM	127,341	.65.4165	543,723	831,171	127,341	.0	17,726	.0	.0	3.812	42.622	MON	7,854	25,798	08/26/2008	01/01/2037
472321-AJ-7	Jefferies Resecuritizati-JMAC 2008-R2 3A	4			1.A FM	133,571	.98.6834	131,813	133,571	133,571	.0	19,605	.0	.0	2.839	3.453	MON	640	6,799	08/31/2012	01/01/2039
472321-AK-4	Jefferies Resecuritizati-JMAC 2008-R2 3A	4			1.A FM	1,621,224	.85.2684	2,426,033	2,845,173	1,621,224	.0	285,519	.0	.0	2.839	21.776	MON	13,461	79,179	08/31/2012	01/01/2039
47232A-AB-4	Jefferies Resecuritizati-JMAC 2008-R3 1A	4			1.A FM	98,265	.98.8973	97,239	98,323	98,265	.0	76,553	.0	.0	3.046	6.916	MON	250	6,077	09/30/2008	03/01/2036
47232A-AC-2	Jefferies Resecuritizati-JMAC 2008-R3 1A	4			1.A FM	556,458	.95.5313	1,189,924	1,245,586	556,458	.0	146,805	.0	.0	3.046	38.688	MON	12,010	35,689	09/30/2008	03/01/2036
47232A-AE-8	Jefferies Resecuritizati-JMAC 2008-R3 2A	4			1.A FM	725,020	.98.5419	714,449	725,020	725,020	.0	.0	.0	.0	3.122	3.122	MON	3,795	28,025	09/30/2008	06/01/2036
47232A-AF-5	Jefferies Resecuritizati-JMAC 2008-R3 2A	4			1.A FM	2,180,879	.99.8502	2,149,646	2,152,872	2,180,879	.0	27,014	.0	.0	3.122	5.166	MON	11,201	65,832	09/30/2008	06/01/2036
47232A-AG-7	Jefferies Resecuritizati-JMAC 2008-R3 3A	4			1.A FM	508,175	.91.2882	1,459,831	1,599,146	508,175	.0	417,957	.0	.0	3.255	44.045	MON	8,820	49,672	09/30/2008	05/01/2037
47232C-AH-7	Jefferies Resecuritizati-JMAC 2009-R1 4A	4			1.A FM	1,890,225	.91.6929	2,006,775	2,188,582	1,890,225	.0	.0	10,026	.0	3.714	3.714	MON	25,712	67,592	02/23/2016	06/01/2037
47232T-AB-3	Jefferies Resecuritizati-JMAC 2009-R3 1A	4			1.A FM	1,461,090	.91.1994	1,428,277	1,566,103	1,461,090	.0	90,088	.0	.0	3.770	6.292	MON	9,870	54,910	06/02/2016	12/01/2035
47233D-AB-7	Jefferies Resecuritizati-JMAC 2009-R11 1	4			1.A FM	587,945	.84.8664	781,741	921,143	587,945	.0	229,868	.0	.0	6.000	18.528	MON	4,606	(248,575)	08/10/2009	09/01/2036
51236J-AB-3	Lakeview Trust 2022-EB03-BVEBO 2022-3 M1	4			1.C FE	13,876,032	.91.7800	12,790,461	13,936,000	13,876,032	.0	11,521	.0	.0	4.408	4.578	MON	3,413	344,698	06/06/2022	05/29/2052
51236L-AC-6	BVEBO-BVEBO 2022-1 M2	4			1.F FE	6,776,985	.93.3832	6,328,576	6,777,000	6,776,985	.0	(7)	.0	.0	3.749	3.749	MON	22,586	200,454	03/14/2022	04/25/2052
52520M-CE-1	Lehman Mortgage Trust 20-LMT 2005-2 3A7	4			1.A FM	218,101	.61.9377	246,909	398,641	218,101	.0	27,794	.0	.0	5.500	12.802	MON	1,827	22,595	07/23/2008	12/01/2035
525221-EM-5	Lehman XS Trust Series 2-LXS 2005-7N 1A1	4			1.A FM	1,389,430	.90.1799	1,479,109	1,640,177	1,389,430	.0	131,735	.0	.0	4.929	8.194	MON	5,908	35,869	08/31/2012	12/25/2035
525221-GM-3	LEHMAN XS TRUST-SERIES 2005-9N CLASS 1A1	4			1.A FM	6,540,253	.90.3289	6,486,085	7,180,518	6,540,253	.0	346,539	.0	.0	4.659	5.969	MON	49,213	153,260	08/03/2016	02/25/2036
52523M-AD-2	Lehman XS Trust 2006-15-LXS 2006-15 A4	4			1.A FM	890,931	.86.9054	1,087,668	1,251,554	890,931	.0	181,877	.0	.0	4.729	11.842	MON	2,115	26,042	10/03/2012	10/25/2036
525241-AL-9	Lehman XS Trust 2007-1-LXS 2007-1 WF1	4			1.A FM	400,667	.89.1701	530,193	594,586	400,667	.0	30,424	.0	.0	4.491	17.757	MON	4,260	20,488	08/11/2008	01/01/2037
55274Q-AK-1	MASTR Asset Securitizati-MASTR 2006-2 1A	4			3.A FM	864,234	.71.3401	864,391	1,211,649	864,234	.0	78,388	.0	.0	6.000	8.636	MON	6,058	76,425	08/12/2011	06/01/2036
552758-AA-5	MFRA Trust-MFRA 2022-CHM1 A1	4			1.F FE	19,692,647	.94.6152	18,632,235	19,692,647	19,692,647	.0	38	.0	.0	3.875	3.891	MON	28,992	662,903	07/03/2022	09/01/2056
55286E-AC-2	MFA 2022-NQM3 Trust-MFRA 2022-NQM3 A3	4			1.F FE	6,720,156	.96.2564	6,623,362	6,880,957	6,720,156	.0	19,584	.0	.0	5.570	6.711	MON	96,561	128,919	09/16/2022	09/01/2067
576431-AJ-9	MASTR Adjustable Rate Mo-MARM 2007-1 2A1	4			1.A FM	(6,487)	.60.5372	127,683	210,916	(6,487)	.0	3,215	.0	.0	3.784	3.784	MON	1,841	6,642	07/22/2008	11/01/2036
576433-CS-3	MASTR Adjustable Rate Mo-MARM 2005-6 5A2	4			1.A FM	453,037	.87.8698	513,969	584,922	453,037	.0	47,211	52,269	.0	5.012	14.566	MON	3,901	15,476	03/29/2016	09/01/2035
576433-D5-2	MASTR Adjustable Rate Mo-MARM 2005-7 3A1	4			1.A FM	502,735	.60.8271	444,494	730,751	502,735	.0	10,631	31,523	.0	3.018	5.980	MON	5,266	21,100	11/08/2016	09/01/2035
576433-GM-2	MASTR Adjustable Rate Mo-MARM 2003-6 6A1	4			1.A FM	801,277	.92.8918	778,358	837,919	801,277	.0	32,394	.0	.0	3.257	4.675	MON	4,557	26,493	02/26/2016	12/01/2033
576433-HM-1	MASTR Adjustable Rate Mo-MARM 2003-7 4A1	4			1.A FM	354,943	.95.3828	344,428	361,101	354,943	.0	9,284	.0	.0	3.500	5.839	MON	2,115	9,737	03/29/2017	01/01/2034
576433-QD-1	MASTR Adjustable Rate Mo-MARM 2004-7 5A1	4			1.A FM	203,092	.98.0890	207,836	211,886	203,092	.0	8,975	.0	.0	4.125	7.543	MON	1,457	7,354	08/29/2016	07/01/2034
576433-XA-9	MASTR Adjustable Rate Mo-MARM 2005-1 3A1	4			1.A FM	284,867	.85.1194	256,868	301,774	284,867	.0	2,604	.0	.0	3.241	4.378	MON	1,632	9,914	02/07/2017	02/01/2035
576433-XW-1	MASTR Adjustable Rate Mo-MARM 2005-2 3A1	4			1.A FM	473,943	.89.4757	437,649	473,943	473,943	.0	14,260	.0	.0	2.983	4.915	MON	2,437	14,931	03/15/2019	03/01/2035
576434-W5-9	MASTR Alternative Loan T-MALT 2005-6 3A1	4			4.A FM	178,991	.71.6144	131,872	184,142	178,991	.0	(12,077)	50,395	.0	5.500	5.526	MON	844	23,289	08/06/2013	12/01/2035
57643M-LZ-5	MASTR Asset Securitizati-MASTR 2006-1 1A	4			1.G FM	286,800	.70.1036	270,858	386,368	286,800	.0	15,453	25,587	.0	5.750	5.335	MON	2,009	25,320	08/31/2012	05/01/2036
57645T-AA-5	MASTR Adjustable Rate Mo-MARM 2007-HF2 A	4			1.A FM	1,967,182	.96.2156	1,911,678	1,986,868	1,967,182	.0	83,023	.0	.0	5.009	3.245	MON	4,268	34,487	06/13/2016	09/25/2037
585495-AA-2	Mello Mortgage Capital A-MELLO 2021-MTG1	4			1.A	37,453,855	.80.6282	29,828,826	36,995,549	37,453,855	.0	(45,160)	.0	.0	2.500	2.355	MON	154,311	958,324	03/17/2021	04/01/2051
589929-PL-6	Merrill Lynch Mor Inv Go-GNABS 1998-GN1	4			1.A FM	31,547	.98.5335	31,040	31,502	31,547	.0	45	.0	.0	6.687	7.039	MON	.0	387	03/05/1998	02/01/2027
59020U-V7-7	Merrill Lynch Mortgage I-MLMI 2005-A9 1A	4			2.C FM	33,720	.95.0425	33,150	34,879	33,720	.0	9,398	1,726	.0	3.718	10.160	MON	217	1,221	07/26/2016	12/01/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
59020U-IV-3	MERRILL LYNCH MORTGAGE I-SERIES 2005-A9C	4			1.A FM	237,303	..37.9097	..284,957	..751,672	..237,303	0	7,367	216,327	0	..3.856	..14.591	MON	6,548	23,052	..07/19/2013	..12/01/2035
59023P-AW-8	Merrill Lynch Mortgage I-MLMI 2006-AF2 P	..0.	4		1.A FM	10,127	..15.4683	10,097	65,274	10,127	0	(55,147)	0	0	..0.000	..0.000	N/A	0	0	..09/21/2007	..10/01/2036
59023P-AB-9	Merrill Lynch Mortgage I-MLCC 2006-3 2A1	4			1.A FM	509,687	..90.2506	530,373	587,667	509,687	0	41,460	22,628	0	..3.373	..8.645	MON	3,317	17,301	..09/09/2011	..10/01/2036
61748H-AW-1	Morgan Stanley Mortgage -MSM 2004-SAR 4A	4			1.A FM	904,784	..95.0961	846,264	889,904	904,784	0	9,012	0	0	..3.839	..5.387	MON	5,709	31,725	..01/27/2017	..07/01/2034
61748H-FK-2	MORGAN STANLEY MORTGAGE -SERIES 2004-10A	4			1.A FM	2,918,543	..92.0694	2,753,539	2,990,722	2,918,543	0	72,547	0	0	..4.082	..6.435	MON	20,465	100,759	..09/13/2016	..11/01/2034
61748H-UF-6	Morgan Stanley Mortgage -MSM 2006-1AR 1A	4			1.A FM	487,285	..65.1620	477,731	733,144	487,285	0	63,847	0	0	..4.669	..7.653	MON	2,990	14,870	..10/21/2016	..02/25/2036
61749L-AP-6	Morgan Stanley Mortgage -MSM 2006-BAR 5A	4			1.A FM	1,413,840	..94.6743	1,617,022	1,707,985	1,413,840	0	149,812	0	0	..4.386	..10.712	MON	12,509	52,096	..11/22/2011	..06/01/2036
61749L-BM-2	Morgan Stanley Mortgage -MSM 2006-BAR 6A	4			1.A FM	44,172	..96.1236	67,210	69,920	44,172	0	10,645	0	0	..3.736	..24.398	MON	2,019	2,085	..05/27/2008	..06/01/2036
61751D-AE-4	Morgan Stanley Mortgage -MSM 2006-17XS A	4			1.A FM	1,602,771	..38.9341	1,949,256	5,006,559	1,602,771	0	83,640	137,564	0	..6.151	..9.593	MON	31,429	67,297	..01/11/2013	..10/01/2046
61751M-AU-8	Morgan Stanley Mortgage -MSM 2007-10XS A	4			1.A FM	2,522,418	..87.4255	2,424,754	2,773,509	2,522,418	0	135,422	0	0	..6.000	..6.983	MON	17,580	43,621	..01/08/2014	..02/01/2037
61751Q-AB-1	Morgan Stanley Home Equi-MSHEL 2007-1 A2	4			1.A FM	1,316,339	..49.1594	1,815,038	3,692,151	1,316,339	0	341,378	0	0	..4.489	..18.764	MON	9,334	51,178	..05/16/2011	..12/25/2036
617526-AD-0	Morgan Stanley ABS Capit-MSAC 2007-HE1 A	4			1.A FM	2,329,055	..57.2242	4,203,759	2,329,055	2,329,055	0	390,873	397,693	0	..4.489	..13.771	MON	8,241	55,492	..01/04/2012	..11/25/2036
61758V-AO-0	Morgan Stanley Re-REMIC -MSRR 2010-R2 3B	4			4.B FM	2,555,796	..60.6820	2,352,822	3,877,295	2,555,796	0	181,526	0	0	..6.500	..5.256	MON	63,006	290,661	..02/09/2010	..10/01/2037
61759X-AC-6	Morgan Stanley Re-REMIC -MSRR 2010-R8 1C	4			3.C FM	1,867,333	..66.0195	1,892,797	2,867,028	1,867,333	0	179,553	0	0	..6.000	..5.798	MON	21,940	144,716	..08/12/2010	..01/01/2037
61915R-AK-2	MortgageIT Trust 2005-3-MHL 2005-3 A1	4			1.A FM	9,586	..97.2902	11,135	9,586	9,586	0	1,956	0	0	..4.989	..12.641	MON	54	294	..09/15/2008	..08/25/2035
61915R-AU-0	MortgageIT Trust 2005-5-MHL 2005-5 A1	4			1.A FM	542,275	..95.4810	597,484	625,762	542,275	0	86,704	0	0	..4.909	..11.301	MON	2,973	14,999	..10/29/2008	..12/25/2035
62942K-AA-4	NRP Mortgage Trust 2013--NRPMT 2013-1 A1	4			1.A	8,075,092	..90.5152	7,590,789	8,386,208	8,075,092	0	41,761	0	0	..3.250	..3.873	MON	22,713	281,018	..03/11/2014	..07/01/2043
643529-AC-4	New Century Alternative -NCAMT 2006-ALT2	4			1.A FM	520,857	..23.7250	620,443	2,615,143	520,857	0	39,934	53,539	0	..4.640	..11.469	MON	10,111	36,775	..01/11/2013	..10/01/2036
643529-AD-2	New Century Alternative -NCAMT 2006-ALT2	4			1.A FM	250,039	..23.7250	283,068	1,193,120	250,039	0	6,364	0	0	..4.640	..9.631	MON	4,613	16,778	..01/11/2013	..10/01/2036
64352V-MIP-3	New Century Home Equity -NCHET 2005-A A5	4			1.A FM	3,320,076	..90.7854	3,145,835	3,465,131	3,320,076	0	29,509	0	0	..4.693	..5.736	MON	27,235	174,133	..02/03/2016	..08/01/2035
64831Q-AA-1	New Residential Mortgage-NRZT 2022-NQM3	4			1.A	38,346,972	..93.1002	36,134,919	38,812,921	38,346,972	0	115,013	0	0	..3.900	..4.393	MON	135,742	1,044,463	..04/27/2022	..04/01/2062
64831Q-AB-9	New Residential Mortgage-NRZT 2022-NQM3	4			2.A	9,556,442	..89.5916	8,703,069	9,714,159	9,556,442	0	54,784	0	0	..4.026	..4.719	MON	32,590	296,404	..04/27/2022	..04/01/2062
64831T-AA-5	New Residential Mortgage-NRZT 2021-NQM3	4			1.A	8,536,420	..84.6680	7,735,129	9,135,834	8,536,420	0	149,986	0	0	..1.156	..3.553	MON	17,630	74,617	..05/03/2022	..11/01/2056
64831V-AB-8	New Residential Mortgage-NRZT 2022-NQM5	4			1.D FE	4,735,838	..98.5503	4,723,432	4,792,916	4,735,838	0	8,153	0	0	..6.500	..7.118	MON	78,961	78,961	..10/04/2022	..11/01/2052
64831V-AC-6	New Residential Mortgage-NRZT 2022-NQM5	4			1.G FE	6,572,913	..96.7627	6,492,860	6,710,083	6,572,913	0	17,950	0	0	..6.500	..7.463	MON	110,545	110,545	..10/04/2022	..11/01/2052
65535V-KX-5	Nomura Asset Acceptance -NAA 2005-WF1 2A	4			1.A FM	8,916	..97.0908	8,630	8,889	8,916	0	(59)	0	0	..5.659	..5.078	MON	82	606	..02/28/2013	..03/01/2035
65535V-MJ-4	Nomura Asset Acceptance -NAA 2005-AR3 1A	4			1.A FM	589,888	..78.7097	587,930	746,960	589,888	0	46,715	48,655	0	..4.909	..8.186	MON	2,649	16,116	..10/21/2016	..07/25/2035
65535V-NL-8	Nomura Asset Acceptance -NAA 2005-AR4 5A	4			1.A FM	2,117,053	..56.2524	2,129,255	3,785,182	2,117,053	0	0	296,759	0	..4.969	..4.969	MON	8,397	25,404	..06/15/2016	..08/25/2035
65535V-SJ-8	Nomura Asset Acceptance -NAA 2006-AP2 A2	4			1.A FM	1,265,976	..33.6575	1,124,326	3,340,487	1,265,976	0	87,557	97,619	0	..5.515	..7.124	MON	21,470	83,336	..12/29/2021	..01/01/2036
65539C-AK-2	Nomura Resecuritization -NMR 2011-ARA 1	4			1.A FM	1,585,101	..91.9844	1,704,249	1,852,760	1,585,101	0	93,170	9,953	0	..2.768	..6.768	MON	9,953	63,192	..06/06/2016	..10/01/2036
65540E-BR-9	Nomura Resecuritization -NMR 2014-1R 3A	4			6. *	3,420,070	..99.4954	3,442,403	3,459,861	3,420,070	0	0	0	0	..2.795	..7.557	MON	20,734	82,070	..03/23/2020	..07/26/2036
67098A-AM-1	OBX 2019-INV1 Trust-OBX 2019-INV1 A12	4			1.A	6,753,616	..94.5073	6,872,345	7,271,758	6,753,616	0	0	0	0	..4.000	..8.227	MON	24,239	377,153	..03/24/2020	..11/01/2048
67113A-AB-5	OBX 2019-EXP3 Trust-OBX 2019-EXP3 1A8	4			1.A	260,312	245,889	259,645	260,312	260,312	0	(131)	1,526	0	..3.500	..3.456	MON	11,582	11,582	..03/27/2020	..01/01/2059
67113X-AB-6	OBX 2021-J1 Trust-OBX 2021-J1 A2	4			1.A	41,289,522	..78.8886	32,839,219	41,627,321	41,289,522	0	35,366	0	0	..2.000	..2.096	MON	139,063	864,780	..04/27/2021	..05/01/2051
67116X-AD-9	OBX 2022-NQM4 Trust-OBX 2022-NQM4 A2	4			1.C FE	14,367,284	..84.8783	12,731,745	15,000,000	14,367,284	0	66,714	0	0	..3.973	..5.022	MON	49,661	447,562	..04/29/2022	..04/01/2062
67117D-AB-8	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A	4			1.A FE	5,281,656	..96.8591	5,115,763	5,281,656	5,281,656	0	2	0	0	..5.110	..5.110	MON	22,491	114,846	..08/15/2022	..08/01/2062
67117D-AB-6	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A	4			1.C FE	2,491,973	..96.9782	2,421,334	2,496,783	2,491,973	0	1,132	0	0	..5.700	..5.828	MON	11,860	60,559	..08/15/2022	..08/01/2062
67117D-AC-4	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A	4			1.F FE	2,495,707	..96.6729	2,436,922	2,520,790	2,495,707	0	5,859	0	0	..5.700	..6.386	MON	11,974	61,142	..08/15/2022	..08/01/2062
67448Q-AC-5	OBX 2019-EXP1 Trust-OBX 2019-EXP1 1A3	4			1.A	569,986	569,986	556,291	573,881	569,986	0	2,378	3,849	0	..4.000	..4.310	MON	3,849	32,614	..03/27/2020	..01/01/2059
69337B-AH-7	PHH Alternative Mortgage-PHAM 2007-1 21	4			4.A FM	1,431,323	..83.7078	1,273,601	1,521,484	1,431,323	0	26,680	70,244	0	..6.000	..5.182	MON	8,052	109,605	..12/29/2021	..02/01/2037
693456-AA-3	PMT Loan Trust 2013-J1-PMTLT 2013-J1 A1	4			1.A	2,561,404	91.5756	2,405,456	2,626,743	2,561,404	0	9,941	0	0	..3.500	..3.956	MON	15,347	96,164	..02/12/2014	..09/01/2043
69354W-AC-0	PNMAC GMSR ISSUER TRUST -PNMSR 2018-GT1	4			2.B FE	15,600,000	99.0614	15,453,583	15,600,000	15,600,000	0	(1,367)	15,684	0	..7.239	..3.759	MON	720,798	720,798	..02/21/2018	..02/25/2023
693684-AA-0	PSMC 2020-1 Trust-PSMC 2020-1 A1	4			1.A	1,782,925	..97.6897	1,690,446	1,730,424	1,782,925	0	(12,025)	0	0	..3.500	..2.940	MON	10,291	72,706	..01/24/2020	..01/01/2050
69374X-AA-8	PSMC 2019-2 Trust-PSMC 2019-2 A1	4			1.A	493,652	..98.6878	470,941	477,203	493,652	0	(22,625)	0	0	..3.500	..0.226	MON	2,816	23,925	..10/08/2019	..10/01/2049
69375B-AA-5	PSMC 2019-3 Trust-PSMC 2019-3 A1	4			1.A	877,283	..98.0732	840,360	856,870	877,283	0	(8,295)	0	0	..3.500	..2.659	MON	5,032	35,840	..10/28/2019	..11/01/2049

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
743874-AC-3	Provident Funding Mortga-PFMT 2020-1 A2			4	1.A	1,358,341	82.3734	1,102,275	1,338,144	1,358,341	0	(1,410)	0	0	3.000	2.866	MON	6,710	42,460	02/14/2020	02/01/2050
74387L-AC-5	Provident Funding Mortga-PFMT 2019-1 A2			4	1.A	3,002,171	87.9252	2,601,953	2,959,281	3,002,171	0	(3,236)	0	0	3.000	2.860	MON	14,815	94,293	03/04/2020	12/01/2049
74387Y-AD-5	Provident Funding Mortga-PFMT 2021-1 A2A			4	1.A	60,501,325	78.6735	48,068,551	61,098,806	60,501,325	0	36,940	0	0	2.000	2.076	MON	307,657	1,256,174	04/09/2021	04/01/2051
74922M-AA-9	RALI Series 2006-QA6 Tru-RALI 2006-QA6 A			4	2.C FM	1,061,705	90.7030	1,001,136	1,103,752	1,061,705	0	51,087	0	0	4.769	6.815	MON	4,297	23,109	09/07/2016	07/25/2036
74922Q-AA-0	RALI Series 2006-QA8 Tru-RALI 2006-QA8 A			4	1.A FM	247,321	88.4353	236,054	266,923	247,321	0	18,745	0	0	4.769	7.994	MON	1,092	5,859	01/06/2016	09/25/2036
74923G-AC-7	RALI Series 2007-QA1 Tru-RALI 2007-QA1 A			4	1.A FM	1,490,490	80.9763	1,608,920	1,986,902	1,490,490	0	160,653	264,702	0	4.729	12.712	MON	7,253	39,213	10/18/2016	01/25/2037
74923H-AQ-4	RALI Series 2007-QS4 Tru-RALI 2007 QA 3A			4	4.B FM	550,690	82.4399	486,284	589,864	550,690	0	(649)	12,785	0	6.000	4.829	MON	2,949	26,515	12/29/2021	03/01/2037
74927B-AK-6	RBSSP Resecuritization T-RBSSP 2009-8 7A			4	1.A FM	142,705	210.1068	237,178	112,884	142,705	0		0	0	57.779	33.737	MON	16,306	64,575	03/25/2010	09/01/2037
74927T-AC-5	RBSSP Resecuritization T-RBSSP 2010-9 3A			4	1.A FM	3,852,228	85.2291	3,785,734	4,441,834	3,852,228	0	(81,979)	0	0	4.188	6.622	MON	32,719	208,742	08/20/2013	10/26/2034
74928D-AV-7	RBSSP Resecuritization T-RBSSP 2009-1 7A			4	1.A FM	1,084,338	93.0150	1,582,876	1,701,743	1,084,338	0		0	0	3.131	25.880	MON	8,892	54,363	07/08/2010	06/01/2037
74928F-AY-6	RBSSP Resecuritization T-RBSSP 2009-3 6A			4	1.A FM	523,092	44.8823	1,232,101	2,745,183	523,092	0	209,081	0	0	3.064	58.690	MON	33,692	120,299	07/08/2010	03/01/2036
74928R-AB-0	RBSSP Resecuritization T-RBSSP 2009-10 1			4	1.A FM	256,037	78.6119	280,614	356,961	256,037	0	16,330	42,501	0	8.182	9.534	MON	4,868	20,948	10/24/2011	08/01/2035
74928U-AM-9	RBSSP Resecuritization T-RBSSP 2009-12 5			4	1.A FM	1,347,150	95.7232	1,478,873	1,544,948	1,347,150	0	152,849	0	0	3.560	9.284	MON	9,180	55,299	03/21/2013	08/01/2036
74928U-AX-5	RBSSP Resecuritization T-RBSSP 2009-12 8			4	1.A FM	746,377	96.7038	1,381,335	1,428,420	746,377	0	284,276	0	0	1.766	23.391	MON	4,205	44,893	11/02/2009	06/01/2036
74928U-BV-8	RBSSP Resecuritization T-RBSSP 2009-12 1			4	1.A FM	10,933,458	95.7474	11,916,905	12,446,193	10,933,458	0	3,637	46,799	0	3.637	11.466	MON	46,799	407,283	03/23/2020	10/25/2035
74928X-BB-6	RBSSP Resecuritization T-RBSSP 2009-6 3A			4	1.A FM	4,550,384	89.3265	4,664,301	5,221,630	4,550,384	0	406,439	563,596	0	3.176	10.246	MON	32,270	168,063	01/24/2017	01/26/2036
74929F-AK-5	RBSSP Resecuritization T-RBSSP 2010-3 4A			4	1.A FM	526,232	103.7903	548,348	528,323	526,232	0	11,632	0	0	3.976	6.276	MON	3,513	19,366	12/01/2016	12/01/2035
74930X-BB-2	RBSSP Resecuritization T-RBSSP 2012-1 4B			4	1.A FM	1,239,827	102.9803	1,271,540	1,234,742	1,239,827	0	(17,849)	0	0	101.754	6.925	MON	104,700	1,031,072	08/15/2012	01/01/2029
749357-AA-7	RCKT Mortgage Trust 2019-RCKT 2019-1 A1			4	1.A	3,961,988	88.6636	3,428,773	3,867,170	3,961,988	0	(11,618)	0	0	3.500	3.149	MON	22,581	145,493	10/11/2019	09/01/2049
749389-AA-0	RCKT Mortgage Trust 2020-RCKT 2020-1 A1			4	1.A	4,041,732	88.2145	3,885,576	4,404,691	4,041,732	0	46,089	0	0	3.000	4.170	MON	22,168	147,222	03/27/2020	02/01/2050
749574-AC-3	RFMSI Series 2006-SA2 Tr-RFMSI 2006-SA2			4	1.A FM	194,532	70.0435	282,001	402,609	194,532	0	402,609	0	0	4.850	24.128	MON	4,995	19,998	10/24/2008	08/01/2036
74958T-AB-9	RFMSI Series 2007-SA3 Tr-RFMSI 2007-SA3			4	1.A FM	544,064	79.2451	540,970	682,654	544,064	0	38,576	0	0	4.545	9.471	MON	8,786	24,400	08/03/2016	07/01/2037
74958W-AC-0	RFMSI Series 2007-SA1 Tr-RFMSI 2007-SA1			4	1.A FM	232,889	65.7796	334,907	509,135	232,889	0	112,159	0	0	4.412	28.113	MON	3,646	22,087	11/13/2008	02/01/2037
74958X-AF-1	RFMSI Series 2007-SA2 Tr-RFMSI 2007-SA2			4	1.A FM	893,752	99.0674	909,623	918,186	893,752	0	64,531	0	0	3.873	10.881	MON	5,942	35,347	04/07/2020	04/01/2037
74958Y-AE-2	RFMSI Series 2007-S4 Tru-RFMSI 2007-S4 A			4	4.B FM	299,278	88.3140	304,434	344,718	299,278	0	4,105	28,720	0	6.000	8.715	MON	345	22,536	01/10/2022	04/25/2037
74968R-AA-3	RMF Proprietary Issuance-RPIT 2019-1 A			4	1.A FE	15,587,320	91.8200	14,395,907	15,678,402	15,587,320	0	67,161	0	0	2.750	2.820	MON	7,186	526,680	10/09/2019	10/25/2063
74969M-AA-6	RMF Proprietary Issuance-RPIT 2020-1 A			4	1.A FE	6,987,218	96.4567	6,739,642	6,987,218	6,987,218	0	0	0	0	3.250	3.250	MON	3,785	293,702	04/24/2020	04/26/2060
74970F-AA-5	RMF Proprietary Issuance-RPIT 2022-3 A			4	1.A FE	17,205,634	77.0000	14,206,500	18,450,000	17,205,634	0	40,113	0	0	4.000	4.886	MON	12,300	291,100	08/04/2022	08/25/2062
74970F-AC-1	RMF Proprietary Issuance-RPIT 2022-3 M2			4	1.G FE	11,562,501	63.3100	9,939,670	15,700,000	11,562,501	0	111,314	0	0	4.000	8.342	MON	10,467	247,711	08/25/2022	08/25/2062
75115B-AA-3	RALI Series 2006-QA5 Tru-RALI 2006-QA5 2			4	1.C FM	1,098,615	86.3478	1,195,478	1,384,491	1,098,615	0	83,467	167,105	0	5.868	12.891	MON	14,234	114,372	02/11/2016	07/01/2036
75115D-AA-3	RALI Series 2006-QS13 Tr-RALI 2006-QS13			4	1.A FM	200,413	73.0884	189,024	258,625	200,413	0	21,847	1,441	0	4.729	6.912	MON	1,156	(39,656)	12/29/2021	09/25/2036
75115L-AA-5	RALI Series 2007-QH7 Tru-RALI 2007-QH7 1			4	1.A FM	1,026,966	94.7887	1,012,965	1,068,656	1,026,966	0	59,866	0	0	4.889	6.914	MON	4,121	23,879	12/12/2018	08/25/2037
75116F-BH-1	RALI Series 2007-QS9 Tru-RALI 2007-QS9 A			4	5.A FM	1,573,796	81.9599	1,336,966	1,631,243	1,573,796	0	(13,144)	4,874	0	6.500	4.649	MON	8,836	84,701	12/29/2021	07/01/2037
75156V-AD-7	RAMP Series 2006-RS3 Tru-RAMP 2006-RS3 A			4	1.A FM	3,102,188	86.8675	3,139,757	3,614,422	3,102,188	0	236,745	0	0	4.989	8.178	MON	15,896	85,981	01/14/2016	05/25/2036
759950-DM-7	Renaissance Home Equity -RAINC 2004-3 AF5			4	1.A FM	5,054,632	88.0313	5,097,400	5,790,442	5,054,632	0	111,465	0	0	5.972	6.694	MON	28,817	233,026	04/10/2012	11/01/2034
759950-EM-6	Renaissance Home Equity -RAINC 2004-4 AF5			4	1.A FM	8,664,009	79.0328	7,563,872	9,570,544	8,664,009	0	(90,839)	0	0	5.993	5.090	MON	47,797	340,128	08/24/2010	02/01/2035
760985-S6-9	RFSC Series 2004-RP1 Tru-RFSC 2004-RP1A			4	1.A FM	1,036,379	87.9596	1,022,218	1,162,144	1,036,379	0	38,331	0	0	6.689	8.827	MON	8,014	61,473	07/23/2019	11/25/2042
76110H-HB-5	RALI Series 2004-QA6 Tru-RALI 2004-QA6 N			4	1.A FM	243,642	87.5243	261,417	298,679	243,642	0	12,662	27,169	0	4.131	12.229	MON	2,991	10,995	11/18/2016	12/01/2034
76110H-T9-0	RALI Series 2005-QA2 Tru-RALI 2005-QA2 N			4	1.A FM	862,327	84.5367	986,620	1,167,091	862,327	0	88,629	6,681	0	3.430	13.789	MON	6,881	40,244	11/13/2012	02/01/2035
76110V-RX-8	Home Equity Loan Trust 2-RFMS2 2005-HS1			4	1.A FM	77,493	31.4557	596,784	1,897,223	77,493	0	(7,276)	0	0	5.610	90.870	MON	44,083	66,708	09/13/2005	09/01/2035
761118-BU-1	RALI Series 2005-QA8 Tru-RALI 2005-QA8 N			4	1.A FM	855,567	88.4245	916,638	1,036,633	855,567	0	124,282	87,395	0	3.900	15.602	MON	6,752	44,967	12/03/2015	07/01/2035
761118-FL-7	RALI Series 2005-QA9 Tru-RALI 2005-QA9 C			4	1.A FM	1,343,450	91.0129	1,332,094	1,463,632	1,343,450	0	105,449	0	0	3.999	8.885	MON	10,007	59,366	04/28/2017	08/01/2035
761118-FM-5	RESIDENTIAL ACCREDIT LOA-SERIES 2005-QA9			4	2.A FM	2,083,463	85.1739	1,961,671	2,303,137	2,083,463	0	109,169	0	0	4.216	8.113	MON	17,969	95,803	02/24/2016	08/01/2035
761118-GS-1	RALI Series 2005-QS13 Tr-RALI 2005-QS13			4	2.B FM	1,156,524	81.1034	1,119,101	1,379,846	1,156,524	0	65,540	19,253	0	4.789	6.218	MON	1,101	22,560	12/29/2021	09/25/2035
761118-KH-0	RALI Series 2005-QS15 Tr-RALI 2005-QS15			4	1.A FM	405,899	81.7186	482,883	590,910	405,899	0	41,624	0	0	6.000	15.667	MON	2,955	37,470	08/31/2012	10/01/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
761118-SC-3	RALI Series 2006-QS1 Tru-RALI 2006-QS1 A	...	4	.....	.. 4.C FM	1,616,573	..81.6553	1,423,542	1,743,357	1,616,573	0	9,069	26,890	0	5.750	5.453	MON	8,354	112,009	12/29/2021	01/01/2036
761118-UG-1	RALI Series 2006-QS2 Tru-RALI 2006 QS2 1	...	4	.....	.. 4.C FM	522,750	..81.7755	437,178	534,607	522,750	0	.....	1,990	0	5.500	4.087	MON	2,512	30,805	12/29/2021	02/01/2036
761118-UQ-9	RALI Series 2006-QS2 Tru-RALI 2006-QS2 1	...	4	.....	.. 1.A FM	91,467	..81.7755	88,969	108,797	91,467	0	3,045	0	0	5.500	7.817	MON	1,064	6,479	02/22/2008	02/01/2036
76112B-NM-8	GMACM Mortgage Loan Trus-GMACM 2005-AA1	...	4	.....	.. 1.A FM	4,895,126	..93.2933	5,091,696	5,457,733	4,895,126	0	226,711	394,624	0	3.793	8.439	MON	106,986	167,600	07/05/2016	05/01/2035
76971E-AA-2	RMF Buyout Issuance Trus-RBIT 2020-HB1 A	...	4	.....	.. 1.A FE	29,220,871	..91.0418	26,511,233	29,119,844	29,220,871	0	(23,276)	0	0	1.719	1.671	MON	8,342	546,985	10/14/2020	10/25/2050
78473T-AJ-9	STARM Mortgage Loan Trus-STARM 2007-2 4A	...	4	.....	.. 2.C FM	239,180	..54.6149	203,909	373,357	239,180	0	26,093	29,924	0	2.414	1.577	MON	1,504	10,191	07/15/2016	04/01/2037
805564-EM-9	Saxon Asset Securities T-SAST 1999-3 BF1	...	4	.....	.. 1.A FM	397,621	106.3740	505,102	474,836	397,621	0	24,929	0	0	5.237	13.826	MON	6,207	18,600	07/29/1999	12/01/2032
81378E-AA-1	SECURITIZED ASSET BACKED-SERIES 2007-BR4	...	4	.....	.. 1.A FM	2,332,189	..59.4324	3,857,268	6,490,182	2,332,189	0	.....	.....0	0	4.479	27.342	MON	14,795	85,425	11/09/2011	05/25/2037
81743A-AA-7	SEQUOIA MORTGAGE TRUST 2-SEMT 2019-5 A1	...	4	.....	.. 1.A	4,259,319	..85.6865	3,579,351	4,177,262	4,259,319	0	(10,162)	0	0	3.500	3.232	MON	24,774	160,304	11/14/2019	12/01/2049
81745C-AA-1	Sequoia Mortgage Trust 2-SEMT 2013-7 A1	...	4	.....	.. 1.A	1,772,826	..89.5531	1,734,322	1,936,641	1,772,826	0	26,844	0	0	2.500	3.928	MON	4,035	52,935	04/17/2014	06/01/2043
81745M-AA-9	Sequoia Mortgage Trust 2-SEMT 2013-2 A	...	4	.....	.. 1.A	2,013,171	..90.1116	2,015,910	2,237,126	2,013,171	0	35,225	0	0	1.874	3.615	MON	7,000	46,386	07/11/2014	02/01/2043
81745R-AB-6	Sequoia Mortgage Trust 2-SEMT 2013-3 A2	...	4	.....	.. 1.A	2,941,367	..84.5441	2,677,120	3,166,538	2,941,367	0	34,069	13,257	0	3.500	3.714	MON	13,257	84,264	10/03/2014	03/01/2043
81748J-AA-3	Sequoia Mortgage Trust 2-SEMT 2019-4 A1	...	4	.....	.. 1.A	3,494,777	..88.5542	2,992,172	3,378,915	3,494,777	0	(13,347)	0	0	3.500	3.030	MON	19,748	123,622	10/08/2019	11/01/2049
81748K-AA-0	Sequoia Mortgage Trust 2-SEMT 2020-2 A1	...	4	.....	.. 1.A	5,689,143	..90.1989	4,932,006	5,467,923	5,689,143	0	(24,947)	0	0	3.500	2.969	MON	31,933	206,576	02/13/2020	03/01/2050
81748M-AA-6	Sequoia Mortgage Trust 2-SEMT 2020-1 A1	...	4	.....	.. 1.A	3,497,741	..90.4425	3,084,693	3,410,669	3,497,741	0	(12,289)	0	0	3.500	3.124	MON	20,020	131,361	01/08/2020	02/01/2050
83611M-HM-3	Soundview Home Loan Trus-SVHE 2005-B M2	...	4	.....	.. 1.A FM	417,316	..89.6951	441,703	492,450	417,316	0	13,099	0	0	6.072	10.108	MON	7,880	24,028	03/27/2008	05/01/2035
83611M-JX-7	Soundview Home Loan Trus-SVHE 2005-OPT4	...	4	.....	.. 1.A FM	1,649,312	..97.0931	1,606,924	1,655,034	1,649,312	0	54,235	0	0	5.089	6.016	MON	5,500	41,364	10/09/2013	12/25/2035
85571R-AA-8	Starwood Mortgage Reside-STAR 2022-3 A1	...	4	.....	.. 1.A FE	4,635,071	..95.1876	4,440,214	4,664,700	4,635,071	0	3,851	35,801	0	4.161	4.240	MON	35,801	137,107	04/28/2022	03/01/2067
85571R-AB-6	Starwood Mortgage Reside-STAR 2022-3 A2	...	4	.....	.. 1.C FE	11,945,494	..90.2997	10,998,077	12,179,531	11,945,494	0	64,240	42,233	0	4.161	4.990	MON	42,233	347,108	04/28/2022	03/01/2067
85571R-AC-4	Starwood Mortgage Reside-STAR 2022-3 A3	...	4	.....	.. 1.F FE	11,128,954	..88.9354	10,115,871	11,374,404	11,128,954	0	67,290	0	0	4.161	5.094	MON	79,286	324,163	04/28/2022	03/01/2067
85573J-AA-4	Starwood Mortgage Reside-STAR 2021-3 A1	...	4	.....	.. 1.A	5,258,142	..80.7222	4,518,633	5,597,755	5,258,142	0	121,380	10,573	0	1.127	4.483	MON	44,256	.....	05/03/2022	06/01/2056
85573T-AA-2	Starwood Mortgage Reside-STARWOOD MORTGA	...	4	.....	.. 1.A FE	43,339,537	..87.0912	37,745,233	43,339,878	43,339,537	0	489	0	0	2.447	2.447	MON	177,239	1,130,176	01/26/2022	12/01/2066
85573T-AB-0	Starwood Mortgage Reside-STARWOOD MORTGA	...	4	.....	.. 1.C FE	20,626,567	..70.3477	14,510,612	20,627,000	20,626,567	0	(210)	0	0	3.040	3.040	MON	104,510	627,061	01/26/2022	12/01/2066
85573T-AC-8	Starwood Mortgage Reside-STARWOOD MORTGA	...	4	.....	.. 1.F FE	10,999,606	..66.8629	7,354,922	11,000,000	10,999,606	0	(58)	60,335	0	3.291	3.291	MON	60,335	362,010	01/26/2022	12/01/2066
85573U-AC-5	Starwood Mortgage Reside-STAR 2022-2 A3	...	4	.....	.. 1.F FE	8,750,991	..67.2395	5,884,132	8,751,000	8,750,991	0	10	0	0	3.875	3.875	MON	56,517	282,584	03/04/2022	02/01/2067
863572-LV-3	Structured Asset Securit-SASC 1996-4 A	...	4	.....	.. 1.A FM	16,964	..99.0477	17,413	17,580	16,964	0	692	0	0	7.190	10.988	MON	214	1,105	09/09/2008	09/01/2031
863579-C3-0	Structured Adjustable Ra-SARM 2005-21 6A	...	4	.....	.. 1.A FM	640,472	..92.8988	697,613	750,939	640,472	0	144,745	0	0	3.675	11.921	MON	9,308	30,279	02/10/2016	11/01/2035
863579-J9-0	Structured Adjustable Ra-SARM 2005-22 1A	...	4	.....	.. 1.A FM	349,527	..82.7403	353,839	427,651	349,527	0	16,160	27,642	0	4.132	6.624	MON	2,945	14,945	01/04/2017	12/01/2035
863579-RP-5	Structured Adjustable Ra-SARM 2005-11 1A	...	4	.....	.. 1.A FM	611,553	..83.1459	595,598	716,329	611,553	0	34,867	64,850	0	3.845	8.325	MON	8,799	24,947	11/18/2016	05/01/2035
863579-SU-3	Structured Adjustable Ra-SARM 2005-12 3A	...	4	.....	.. 1.A FM	289,928	..86.0470	321,937	374,141	289,928	0	158,527	2,543	0	4.068	20.535	MON	374,141	15,947	04/20/2012	05/01/2035
863579-UL-0	Structured Adjustable Ra-SARM 2005-15 1A	...	4	.....	.. 1.A FM	285,918	..62.7683	286,173	455,920	285,918	0	49,822	0	0	3.652	8.109	MON	1,391	16,212	10/18/2012	07/01/2035
863579-UU-0	Structured Adjustable Ra-SARM 2005-15 4A	...	4	.....	.. 1.A FM	1,120,823	..88.8579	1,153,414	1,298,044	1,120,823	0	88,975	0	0	3.688	8.890	MON	8,052	45,888	01/15/2016	07/01/2035
863579-VH-8	Structured Adjustable Ra-SARM 2005-17 1A	...	4	.....	.. 1.A FM	1,009,915	..93.7849	952,208	1,015,315	1,009,915	0	20,169	6,525	0	3.846	5.450	MON	6,525	34,127	01/10/2019	08/01/2035
863579-VII-5	Structured Adjustable Ra-SARM 2005-17 5A	...	4	.....	.. 1.A FM	912,434	..66.0971	970,110	1,467,704	912,434	0	218,565	0	0	4.689	9.442	MON	8,332	30,065	08/27/2008	08/25/2035
863579-XC-7	Structured Adjustable Ra-SARM 2005 - 18	...	4	.....	.. 1.A FM	1,124,061	..71.0299	1,170,138	1,647,389	1,124,061	0	160,280	127,781	0	3.748	8.682	MON	15,961	57,840	12/29/2021	09/01/2035
863579-XR-4	Structured Adjustable Ra-SARM 2005-18 8A	...	4	.....	.. 1.A FM	2,230,340	..82.8180	2,310,694	2,489,490	2,230,340	0	159,458	14,942	0	3.590	8.287	MON	14,942	77,778	09/09/2017	09/01/2035
863579-ZL-5	Structured Adjustable Ra-SARM 2005-20 3A	...	4	.....	.. 1.A FM	1,046,608	..94.9154	1,229,177	1,295,023	1,046,608	0	206,053	0	0	4.113	11.942	MON	30,966	51,843	02/04/2016	10/01/2035
86358R-DX-2	Structured Asset Securit-SASC 2001-SB1 A	...	4	.....	.. 1.A FM	1,311,080	..92.1764	1,265,567	1,372,984	1,311,080	0	103,072	0	0	3.375	9.888	MON	3,862	54,366	07/31/2013	08/01/2031
86358R-XY-8	Structured Asset Securit-SASC 2002-AL1 A	...	4	.....	.. 6. *	331,709	..95.3793	369,803	387,719	331,709	0	61,503	2,835	0	3.450	11.967	MON	2,835	18,647	08/17/2011	02/01/2032
86358R-XZ-5	Structured Asset Securit-SASC 2002-AL1 A	...	4	.....	.. 6. *	455,171	..59.2675	471,122	794,908	455,171	0	33,014	117,460	0	3.450	1.886	MON	2,278	30,474	04/25/2012	02/01/2032
86358R-YB-7	Structured Asset Securit-SASC 2002-AL1 A	...@..	4	.....	.. 6. *	192,953	..70.8953	153,099	215,951	153,099	0	6,257	0	0	0.000	(0.466)	N/A	.....	.....	12/04/2002	02/01/2032
86359A-ME-0	Structured Asset Securit-SASC 2003-AL1 A	...	4	.....	.. 6. *	216,769	..98.6526	225,466	228,545	216,769	0	20,996	0	0	3.357	10.334	MON	1,287	9,185	06/28/2010	04/01/2031
86359A-MG-5	Structured Asset Securit-SASC 2003-AL1 A	...@..	4	.....	.. 6. *	88,038	..96.8979	93,526	96,520	88,038	0	7,827	0	0	0.000	7.525	N/A	.....	.....	02/05/2003	04/01/2031
86359A-WR-0	Structured Asset Securit-SASC 2003-AL2 A	...	4	.....	.. 6. *	1,623,537	..92.2376	1,701,469	1,844,659	1,623,537	0	140,604	0	0	3.357	10.722	MON	5,160	75,473	10/19/2015	01/01/2031
86359A-WT-6	Structured Asset Securit-SASC 2003-AL2 A	...@..	4	.....	.. 6. *	303,879	..92.4163	339,042	366,863	303,879	0	34,747	0	0	0.000	8.810	N/A	.....	.....	05/20/2003	01/25/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
		C o d e	F o r e i g n	Bond Char			Rate Used to Obtain Fair Value	Fair Value			Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
CUSIP Identification	Description				NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Par Value	Book/ Adjusted Carrying Value											
86359B-4U-2	Structured Asset Securit-SASC 2005-4XS 1 .....	.....	.....	4	.. 1.A FM	2,021,834	106.9006	2,161,353	2,021,834	2,021,834	0	24,409	0	0	...5.114	6.995	MON	17,581	115,661	10/18/2012	03/01/2035
86359B-LE-9	Structured Adjustable Ra-SARM 2004-2 4A1 .....	.....	.....	4	.. 1.A FM	270,641	..95.6479	..266,476	278,601	270,641	0	12,022	0	0	...3.887	6.888	MON	1,819	9,745	08/13/2013	03/01/2034
86359F-AB-8	Structured Asset Securit-SASC 2006-S2 A2 .....	.....	.....	4	.. 1.A FM	59,830	..39.4522	56,591	143,443	59,830	0	78,591	0	0	...6.000	5.685	MON	1,579	6,198	12/26/2007	06/25/2036
86359L-NA-3	Structured Asset Mortgage-SAMI 2005-AR6 2 .....	.....	.....	4	.. 1.A FM	1,175,442	..96.2730	1,347,370	1,399,531	1,175,442	0	128,641	0	0	...5.009	10.636	MON	5,509	32,415	05/31/2016	09/25/2045
86360B-AG-3	Structured Adjustable Ra-SARM 2006-4 4A1 .....	.....	.....	4	.. 1.A FM	1,878,511	..82.0369	1,982,119	2,416,132	1,878,511	0	67,801	0	0	...3.414	7.935	MON	13,747	76,603	08/03/2016	05/01/2036
86360B-AJ-7	Structured Adjustable Ra-SARM 2006-4 5A1 .....	.....	.....	4	.. 1.A FM	721,456	..80.1007	766,709	957,182	721,456	0	27,930	25,674	0	...3.930	7.525	MON	9,432	32,637	09/27/2012	05/01/2036
86363B-AA-3	Structured Asset Securit-SASC 2007-RM1 A .....	.....	.....	4	.. 1.E FE	6,840,734	..99.0740	7,101,514	7,167,892	6,840,734	0	.....	.....0	0	...4.669	1.057	MON	4,648	236,713	07/10/2020	05/25/2047
86363G-AF-1	Structured Adjustable Ra-SARM 2007-3 3A1 .....	.....	.....	4	.. 1.A FM	1,415,604	..50.7069	1,437,559	2,835,034	1,415,604	0	.....	.....267,407	0	...3.490	8.806	MON	15,288	99,856	12/29/2021	04/01/2047
87222S-AD-9	TBW Mortgage-Backed Trus-TBW 2006-5 A3 .....	.....	.....	4	.. 1.A FM	9,607,034	..87.5688	9,187,208	10,491,417	9,607,034	0	335,561	0	0	...6.450	6.793	MON	71,055	404,135	12/29/2021	11/01/2036
87222E-AB-4	TBW Mortgage-Backed Trus-TBW 2007-1 A2 .....	.....	.....	4	.. 1.A FM	838,871	..25.5908	817,668	3,195,160	838,871	0	182,350	147,972	0	...4.689	8.154	MON	5,192	21,647	01/10/2022	03/25/2037
87222E-AC-2	TBW Mortgage-Backed Trus-TBW 2007-1 A3 .....	.....	.....	4	.. 1.A FM	960,878	..27.2173	815,432	2,996,000	960,878	0	100,068	110,498	0	...6.380	5.898	MON	18,848	45,256	01/10/2022	03/01/2037
87263S-AC-1	TRK 2022-INV1 Trust-TRK 2022-INV1 A3 .....	.....	.....	4	.. 1.G FE	4,700,856	..72.8668	3,425,467	4,701,000	4,700,856	0	26	0	0	...3.699	3.700	MON	14,491	159,399	02/02/2022	02/01/2057
87267T-AD-3	TRK 2021-INV2 Trust-TRK 2021-INV2 M1 .....	.....	.....	4	.. 2.B FE	7,348,761	..69.4545	5,556,361	8,000,000	7,348,761	0	43,780	0	0	...3.280	4.659	MON	21,867	207,733	06/08/2022	11/01/2056
881561-CH-5	Terwin Mortgage Trust Se-TMTS 2003-6HE M .....	.....	.....	4	.. 1.A FM	587,360	..97.0744	572,039	589,279	587,360	0	18,040	0	0	...5.439	4.957	MON	590	13,391	12/19/2018	11/25/2033
881561-LE-2	Terwin Mortgage Trust Se-TMTS 2004-11HE .....	.....	.....	4	.. 1.A FM	269,983	..96.7152	277,483	286,907	269,983	0	27,110	0	0	...5.169	7.534	MON	1,270	8,273	09/24/2010	10/25/2035
881561-LR-3	Terwin Mortgage Trust 20-TMTS 2004-19HE .....	.....	.....	4	.. 1.A FM	257,290	..94.6397	263,728	278,665	257,290	0	19,213	0	0	...5.129	8.708	MON	1,383	7,213	09/15/2010	10/25/2034
881561-LS-1	Terwin Mortgage Trust 20-TMTS 2004-19HE .....	.....	.....	4	.. 1.A FM	419,648	..92.3584	388,110	420,222	419,648	0	19,203	0	0	...5.514	6.654	MON	529	10,354	03/28/2012	10/25/2034
881561-VY-7	Terwin Mortgage Trust Se-TMTS 2005-12AL .....	.....	.....	4	.. 1.A FM	2,267,132	..93.0512	2,166,233	2,328,001	2,267,132	0	39,488	0	0	...4.212	5.860	MON	16,673	112,729	03/08/2017	07/01/2036
88156E-AB-2	Terwin Mortgage Trust 20-TMTS 2006-17HE .....	.....	.....	4	.. 1.A FM	2,147,440	..105.2954	2,151,297	2,043,107	2,147,440	0	(114,356)	0	0	...4.789	2.039	MON	9,216	109,988	10/19/2016	01/25/2038
88157V-AB-3	Terwin Mortgage Trust 20-TMTS 2007-6ALT .....	.....	.....	4	.. 1.A FM	1,227,320	..71.8524	1,339,058	1,863,624	1,227,320	0	214,111	0	0	...4.989	7.981	MON	3,049	21,172	04/30/2010	08/25/2038
885220-DX-8	Thornburg Mortgage Secur-TMST 2003-4 M1 .....	.....	.....	4	.. 1.A FM	380,874	..98.3323	380,363	380,874	380,874	0	26,115	1,499	0	...5.039	8.439	MON	1,499	9,365	02/09/2011	09/25/2043
885220-GB-3	Thornburg Mortgage Secur-TMST 2004-4 1A .....	.....	.....	4	.. 1.A FM	288,006	..93.2547	275,238	295,147	288,006	0	8,284	0	0	...4.969	5.352	MON	1,144	6,231	01/03/2019	12/25/2044
885220-GK-3	Thornburg Mortgage Secur-TMST 2004-4 5A .....	.....	.....	4	.. 1.A FM	1,459,633	..90.0068	1,414,998	1,572,102	1,459,633	0	68,446	0	0	...2.617	7.095	MON	6,923	34,659	09/12/2013	12/01/2044
885220-HM-8	Thornburg Mortgage Secur-TMST 2005-2 A1 .....	.....	.....	4	.. 1.A FM	1,278,359	..94.8969	1,213,123	1,278,359	1,278,359	0	14,428	0	0	...3.304	4.951	MON	4,356	37,369	04/04/2019	07/25/2045
885220-KW-2	Thornburg Mortgage Secur-TMST 2006-2 A2B .....	.....	.....	4	.. 1.A FM	2,082,510	..92.1428	2,073,599	2,250,419	2,082,510	0	63,704	118,660	0	...2.517	6.285	MON	11,466	65,142	12/11/2018	04/25/2036
89171D-AD-9	Towd Point Mortgage Trus-TPMT 2015-1 A4 .....	.....	.....	4	.. 1.A	6,163,069	..98.8496	6,053,743	6,124,194	6,163,069	0	(43,183)	0	0	...3.638	2.993	MON	18,567	476,999	03/27/2017	10/01/2053
89171U-AG-4	Towd Point Mortgage Trus-TPMT 2015-4 M2 .....	.....	.....	4	.. 1.A	11,209,123	..98.1487	11,041,728	11,250,000	11,209,123	0	35,548	0	0	...3.750	4.086	MON	35,156	421,875	03/28/2017	04/01/2055
89171V-AF-4	Towd Point Mortgage Trus-TPMT 2015-5 B2 .....	.....	.....	4	.. 1.A	15,731,864	..93.9944	15,039,102	16,000,000	15,731,864	0	44,305	0	0	...3.970	4.360	MON	52,932	633,502	10/05/2018	05/01/2055
89172P-AE-9	Towd Point Mortgage Trus-TPMT 2016-2 B1 .....	.....	.....	4	.. 1.A	20,334,455	..89.9253	18,864,536	20,978,000	20,334,455	0	106,090	0	0	...3.482	4.166	MON	182,271	721,704	10/03/2018	08/01/2055
89172R-AD-7	Towd Point Mortgage Trus-TPMT 2015-6 M2 .....	.....	.....	4	.. 1.A	11,383,942	..96.1888	11,383,942	11,835,000	11,648,866	0	11,582,427	0	0	...3.750	4.304	MON	36,984	443,813	11/20/2018	04/01/2055
89172Y-AD-2	Towd Point Mortgage Trus-TPMT 2016-3 M2 .....	.....	.....	4	.. 1.A	5,742,651	..95.7479	5,502,630	5,747,000	5,742,651	0	1,597	0	0	...4.000	4.031	MON	19,157	229,880	05/02/2017	04/01/2056
89173H-AC-0	Towd Point Mortgage Trus-TPMT 2017-2 M1 .....	.....	.....	4	.. 1.A	1,789,700	..93.3562	1,680,411	1,800,000	1,789,700	0	3,066	0	0	...3.750	3.946	MON	11,250	67,500	03/08/2019	04/01/2057
89175V-AC-7	Towd Point Mortgage Trus-TPMT 2018-2 M1 .....	.....	.....	4	.. 1.A	36,646,953	..89.8390	34,138,812	38,000,000	36,646,953	0	264,905	0	0	...3.416	4.186	MON	216,363	1,260,896	10/05/2018	03/01/2058
924921-AD-1	Verus Securitization Tru-VERUS 2022-5 M1 .....	.....	.....	4	.. 2.B FE	6,983,861	..65.5708	5,261,401	8,024,000	6,983,861	0	52,033	0	0	...3.818	5.773	MON	51,063	179,010	06/03/2022	04/01/2067
92537M-AA-8	Verus Securitization Tru-VERUS 2019-INV3 .....	.....	.....	4	.. 1.A FE	9,286,482	..94.5215	8,845,374	9,358,054	9,286,482	0	72,655	0	0	...2.692	3.789	MON	20,993	194,202	05/12/2022	11/01/2059
92538N-AD-9	Verus Securitization Tru-VERUS 2022-4 M1 .....	.....	.....	4	.. 2.C FE	6,267,497	..84.7591	5,496,630	6,267,497	6,267,497	0	30,670	0	0	...4.722	5.648	MON	25,517	231,094	04/22/2022	04/01/2067
92538Q-AA-8	Verus Securitization Tru-VERUS 2021-7 A1 .....	.....	.....	4	.. 1.A FE	39,126,393	..85.0489	35,528,140	41,773,760	39,126,393	0	.....	.....0	0	...1.829	3.937	MON	127,840	525,600	05/26/2022	10/01/2066
92539A-AA-2	Verus Securitization Tru-VERUS 2022-6 A1 .....	.....	.....	4	.. 1.A FE	5,835,119	..97.4280	5,732,837	5,884,178	5,835,119	0	8,666	0	0	...4.910	5.211	MON	40,711	169,658	06/21/2022	06/01/2067
92539A-AB-0	Verus Securitization Tru-VERUS 2022-6 A2 .....	.....	.....	4	.. 1.C FE	5,861,957	..95.9179	5,744,220	5,988,681	5,861,957	0	21,393	0	0	...4.910	5.652	MON	41,573	172,757	06/24/2022	06/01/2067
92539J-AA-3	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	.....	4	.. 1.A FE	4,850,560	..98.2745	4,766,861	4,850,560	4,850,560	0	93	0	0	...5.041	5.144	MON	20,376	90,604	08/18/2022	08/01/2067
92539J-AB-1	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	.....	4	.. 1.C FE	4,365,504	..97.9182	4,274,622	4,365,504	4,365,504	0	35	0	0	...5.802	5.904	MON	37,564	103,940	08/18/2022	08/01/2067
92539J-AC-9	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	.....	4	.. 1.F FE	4,808,823	..96.6200	4,808,823	4,850,560	4,808,823	0	10,078	0	0	...5.830	6.235	MON	67,431	115,215	08/18/2022	08/01/2067
92539J-AD-7	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	.....	4	.. 2.C FE	3,162,610	..85.1055	2,893,588	3,400,000	3,162,610	0	8,203	0	0	...5.887	7.285	MON	33,359	83,352	08/18/2022	08/01/2067
92539N-AA-4	Verus Securitization Tru-VERUS 2022-7 A1 .....	.....	.....	4	.. 1.A FE	4,798,161	..97.9707	4,700,789	4,798,161	4,798,161	0	56	0	0	...5.152	5.195	MON	20,600	125,583	07/28/2022	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
929227-4T-0	WalMu Mortgage Pass-Thru-WAMU 2003-S4 2A	4			1.A FM	484,226	97.2411	470,140	483,478	484,226	0	(250)	0	0	5.500	5.443	MON	2,216	28,377	03/03/2016	06/01/2033
929227-R5-7	WalMu Mortgage Pass-Thru-WAMU 2003-AR5 A	4			1.A FM	3,978,738	95.9392	4,336,207	4,519,747	3,978,738	0	0	0	0	3.206	8.735	MON	24,216	150,182	03/23/2020	06/01/2033
92922F-3N-6	WalMu Mortgage Pass-Thru-WAMU 2005-AR12	4			1.A FM	2,303,886	93.9059	2,227,476	2,372,030	2,303,886	0	62,016	0	0	3.813	5.228	MON	15,092	82,243	06/02/2020	10/01/2035
92922F-3Q-9	WalMu Mortgage Pass-Thru-WAMU 2005-AR12	4			1.A FM	73,344	97.0855	71,499	73,646	73,344	0	4,680	0	0	3.923	4.872	MON	482	3,093	01/02/2019	09/01/2035
92922F-7C-6	WalMu Mortgage Pass-Thru-WAMU 2005-AR16	4			1.A FM	198,839	86.0114	205,140	238,504	198,839	0	26,152	0	0	3.971	11.122	MON	2,138	7,238	08/24/2016	12/01/2035
92922F-BT-8	WalMu Mortgage Pass-Thru-WAMU 2005-AR18	4			1.A FM	1,853,534	91.5602	1,709,108	1,866,649	1,853,534	0	42,296	0	0	3.401	5.163	MON	11,442	65,467	01/10/2019	01/01/2036
92922F-GY-8	WalMu Mortgage Pass-Thru-WAMU 2003-S11 3	4			1.A FM	137,771	97.1662	132,618	136,486	137,771	0	417	0	0	5.939	5.503	MON	778	4,858	01/27/2017	11/25/2033
92922F-J5-8	WalMu Mortgage Pass-Thru-WAMU 2005-AR6 2	4			1.A FM	2,749,039	96.0214	2,922,911	3,044,021	2,749,039	0	328,399	0	0	5.069	10.109	MON	12,295	73,439	02/16/2016	04/25/2045
92925C-CC-4	WalMu Mortgage Pass-Thru-WAMU 2006-AR1 1	4			1.A FM	760,484	85.7958	816,188	951,315	760,484	0	67,103	0	0	3.118	9.012	MON	4,664	17,781	04/30/2008	01/01/2046
92925G-AD-5	WalMu Mortgage Pass-Thru-WAMU 2006-AR16	4			3.C FM	1,374,237	89.1344	1,207,614	1,354,825	1,374,237	0	27,815	0	0	3.406	4.372	MON	7,701	35,221	06/14/2019	12/01/2036
92925V-AF-7	WalMu Mortgage Pass-Thru-WAMU 2007-HY1 2	4			1.B FM	2,267,943	90.1779	2,075,655	2,301,732	2,267,943	0	76,207	0	0	3.093	5.884	MON	24,322	75,846	05/20/2016	02/01/2037
92925V-AP-5	WalMu Mortgage Pass-Thru-WAMU 2007-HY1 5	4			1.A FM	1,288,988	92.5297	1,315,112	1,421,287	1,288,988	0	98,841	0	0	3.290	7.560	MON	7,858	49,400	12/29/2021	02/01/2037
92927X-AC-8	WAMU MORTGAGE PASS-THRU-SERIES 2007-HY6	4			1.A FM	2,108,237	88.7159	2,015,931	2,272,343	2,108,237	0	134,869	0	0	3.240	7.338	MON	31,043	74,141	04/07/2020	06/01/2037
92979D-AC-9	Wachovia Mortgage Loan T-WMLT 2007-A 2A1	4			1.A FM	2,720,694	95.3552	2,853,153	2,992,132	2,720,694	0	101,718	150,498	0	3.086	7.455	MON	14,890	87,154	05/12/2020	03/01/2037
92990G-AD-5	WalMu Mortgage Pass-Thru-WAMU 2007-HY5 2	4			1.C FM	1,436,380	93.4902	1,355,949	1,450,366	1,436,380	0	67,761	0	0	3.143	6.677	MON	7,610	47,767	12/29/2021	05/01/2037
92990G-AG-8	WalMu Mortgage Pass-Thru-WAMU 2007-HY5 2	4			1.A FM	7,592,786	87.4873	7,510,142	8,584,270	7,592,786	0	351,896	0	0	3.260	7.108	MON	23,319	285,488	02/17/2016	05/01/2037
92990G-AJ-2	WalMu Mortgage Pass-Thru-WAMU 2007-HY5 3	4			1.A FM	1,189,907	88.1223	1,113,930	1,264,073	1,189,907	0	56,255	0	0	3.342	6.865	MON	10,486	41,488	04/14/2016	05/01/2037
933636-AA-0	WalMu Mortgage Pass-Thru-WAMU 2007-HY4 1	4			1.A FM	1,268,375	90.7537	1,169,807	1,288,991	1,268,375	0	38,508	0	0	2.766	5.269	MON	15,101	36,501	08/04/2016	04/01/2037
933636-AG-7	WalMu Mortgage Pass-Thru-WAMU 2007-HY4 3	4			3.A FM	2,472,306	92.1249	2,306,581	2,503,755	2,472,306	0	79,534	0	0	3.127	5.854	MON	13,263	79,188	01/06/2017	04/01/2037
933636-AL-6	WAMU MORTGAGE PASS-THRU-SERIES 2007-HY4	4			3.A FM	5,301,416	92.2970	4,859,232	5,264,780	5,301,416	0	152,458	0	0	3.156	5.336	MON	67,792	174,314	12/29/2021	11/01/2036
933638-AA-6	WalMu Mortgage Pass-Thru-WAMU 2006-AR19	4			1.A FM	1,148,993	89.8719	1,148,993	1,175,581	1,148,993	0	57,147	0	0	2.788	6.253	MON	9,985	18,062	12/29/2021	01/01/2047
93363E-AB-1	WalMu Mortgage Pass-Thru-WAMU 2006-AR10	4			2.C FM	672,677	84.8121	583,959	688,533	672,677	0	21,278	0	0	3.738	6.179	MON	10,616	23,914	01/11/2017	09/01/2036
93363N-AB-1	WalMu Mortgage Pass-Thru-WAMU 2006-AR12	4			3.A FM	720,772	90.1670	644,619	714,917	720,772	0	12,381	0	0	3.801	5.285	MON	6,488	24,823	03/13/2017	10/01/2036
93363P-AA-8	WalMu Mortgage Pass-Thru-WAMU 2006-AR14	4			1.A FM	677,470	92.5017	658,416	711,788	677,470	0	(34,966)	0	0	3.329	6.740	MON	3,746	20,570	09/16/2016	11/01/2036
93363P-AC-4	WalMu Mortgage Pass-Thru-WAMU 2006-AR14	4			3.A FM	8,013,427	92.5017	7,259,073	7,847,502	8,013,427	0	181,692	0	0	3.329	5.196	MON	39,101	227,010	09/16/2016	11/01/2036
93363P-AD-2	WalMu Mortgage Pass-Thru-WAMU 2006-AR14	4			1.A FM	115,288	92.5017	112,052	121,135	115,288	0	(1,440)	0	0	3.329	6.741	MON	905	3,502	10/06/2016	11/01/2036
93364F-AA-7	WalMu Mortgage Pass-Thru-WAMU 2007-HY7 3	4			4.B FM	1,377,605	89.3013	1,186,100	1,328,201	1,377,605	0	34,423	0	0	3.524	5.606	MON	10,240	41,609	12/29/2021	07/01/2037
939336-TX-1	Washington Mutual MSC Mo-WAMMS 2003-MS7	0			1.A FM	77	91.6988	71	77	77	0	0	0	0	0.000	0.000	N/A	0	0	01/25/2008	03/01/2033
939336-X9-9	WalMu Mortgage Pass-Thru-WAMU 2005-AR1 A	4			1.A FM	1,875,422	89.5571	1,844,073	2,059,103	1,875,422	0	121,921	0	0	5.189	7.024	MON	8,125	49,407	01/22/2016	01/25/2045
93934F-KP-6	Washington Mutual Mortgage-WMALT 2006-1 3A	4			4.B FM	385,542	99.5530	365,085	366,725	385,542	0	(2,279)	0	0	5.750	6.719	MON	8,308	25,352	06/01/2016	02/01/2036
93934F-MD-1	Washington Mutual Mortgage-WMALT 2006-2 2C	4			2.C FM	1,599,666	69.8543	1,669,656	2,390,199	1,599,666	0	11,494	234,160	0	6.500	7.185	MON	33,406	159,651	12/29/2021	03/01/2036
93934N-AC-9	Washington Mutual Mortgage-WMALT 2006-5 1A	4			4.B FM	485,595	77.4664	412,326	532,265	485,595	0	8,135	32,585	0	6.000	5.070	MON	9,854	10,681	12/29/2021	07/01/2036
93934N-AR-6	Washington Mutual Mortgage-WMALT 2006-5 2C	4			1.A FM	101,581	65.4157	133,431	203,974	101,581	0	23,218	1,316	0	4.989	17.490	MON	4,673	4,673	12/29/2008	07/01/2036
93936N-AA-1	Washington Mutual Mortgage-WMALT 2007-4 1A	4			3.B FM	656,352	95.8251	615,581	642,401	656,352	0	732	0	0	5.500	6.763	MON	2,944	36,235	12/29/2021	06/01/2037
94984D-AC-8	Wells Fargo Mortgage Bac-WFMB 2006-AR13	4			1.A FM	345,160	92.9732	349,356	375,760	345,160	0	4,906	53,693	0	4.198	6.864	MON	7,941	15,497	02/24/2016	09/01/2036
94985A-AA-7	Wells Fargo Mortgage Bac-WFMB 2006-AR15	4			3.A FM	197,818	94.7404	189,765	200,300	197,818	0	7	8,555	0	4.479	4.479	MON	2,292	7,218	10/18/2016	07/25/2036
94986M-AA-0	Wells Fargo Mortgage Bac-WFMB 2007-AR10	4			3.B FM	990,525	89.2452	910,414	1,020,127	990,525	0	19,902	0	0	4.449	5.648	MON	10,640	31,728	08/24/2010	01/01/2038
94986M-AF-9	Wells Fargo Mortgage Bac-WFMB 2007-AR10	4			1.A FM	1,189,379	93.9686	1,272,712	1,354,402	1,189,379	0	0	0	0	4.040	4.040	MON	13,778	42,456	05/05/2020	01/01/2038
95002F-AA-2	Wells Fargo Mortgage Bac-WFMB 2019-4 A1	4			1.A	1,464,963	87.9617	1,255,082	1,426,850	1,464,963	0	(5,985)	0	0	3.500	3.106	MON	8,430	55,816	11/19/2019	09/01/2049
95002K-AA-1	Wells Fargo Mortgage Bac-WFMB 2020-1 A1	4			1.A	3,046,167	88.2656	2,640,048	2,991,029	3,046,167	0	(6,583)	0	0	3.000	2.756	MON	15,007	96,062	02/14/2020	12/01/2049
97652P-AL-5	WinWater Mortgage Loan T-WIN 2014-1 A11	4			1.A	690,471	94.4537	656,621	695,178	690,471	0	1,136	0	0	3.500	3.641	MON	2,028	29,024	06/19/2014	06/01/2044
03072S-RC-1	Ameriquet Mortgage Secu-AMSI 2004-FR1W	4			1.A FM	94,356	98.2288	93,016	94,693	94,356	0	6,316	0	0	3.865	7.219	MON	644	7,484	11/16/2010	05/01/2034
126694-MH-8	CHL Mortgage Pass-Thru-CIHL 2005-HYB7	4			1.A FM	2,458,516	84.8694	2,436,146	2,870,463	2,458,516	0	280,039	0	0	3.632	8.927	MON	16,608	93,032	04/08/2020	11/01/2035
83612T-AR-3	Soundview Home Loan Trus-SVHE 2007-0PT1	4			6.FE	106,267	0.1442	97,647	67,725,441	97,647	0	(8,620)	0	0	0.049	22.406	MON	2,511	22,974	10/04/2007	06/25/2037
23248A-AJ-0	COUNTRYWIDE ASSET-BACKED-SERIES 2007-SEA	4			1.A FM	738,675	97.0930	763,976	786,850	738,675	0	0	0	0	4.679	10.091	MON	10,250	16,311	06/29/2011	05/25/2047

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest				Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
759676-AF-6	RENAISSANCE HOME EQUITY -RAMC 2006-2 AF3			4	.. 1.A FM	378,947	..39.8373	359,320	901,969	378,947	0	(16,924)	78,517	0	5.797	6.933	MON	7,942	49,698	03/19/2008	08/01/2036
75970J-AX-4	RENAISSANCE HOME EQUITY -RAMC 2007-1 AF1			4	.. 1.A FM	757,753	..30.1249	927,599	3,079,180	757,753	0	(69,042)	0	0	5.784	12.953	MON	24,200	151,989	01/03/2011	04/01/2037
75971F-AY-9	RENAISSANCE HOME EQUITY -RAMC 2007-3W AF			4	.. 1.A FM	3,705,896	..76.8500	3,661,384	4,764,325	3,705,896	0	69,747	0	0	3.269	5.925	MON	52,063	139,706	09/21/2010	09/01/2037
07325V-AE-4	Bayview Financial Acquis-BAYV 2007-A 1A4			4	.. 1.A FM	13,797,063	..97.9714	14,695,530	14,999,824	13,797,063	0	392,804	0	0	7.225	10.690	MON	90,311	1,120,803	03/23/2020	05/01/2037
00077B-4W-0	ABN Amro Mortgage Corp-AMAC 2002-9 A30			4	.. 1.A FM	5,629	..98.8567	5,699	5,765	5,629	0	123	0	0	5.750	6.835	MON	28	460	02/03/2003	12/01/2032
000780-NL-6	ABN Amro Mortgage Corp-AMAC 2003-12 2A			4	.. 1.A FM	5,969	..96.8131	5,873	6,066	5,969	0	27	0	0	5.500	6.034	MON	28	342	01/21/2004	12/01/2033
004375-FG-1	ACCREDITED MORTGAGE LOAN-ACCR 2006-1 A4			4	.. 1.A FM	635,870	..98.7889	628,355	636,058	635,870	0	170,922	0	0	4.669	2.519	MON	412	(24,423)	04/07/2016	04/25/2036
05953Y-AH-4	Banc of America Funding -BAFC 2007-4 TA1			4	.. 1.A FM	233,405	..89.1363	253,384	284,266	233,405	0	9,256	0	0	5.774	11.750	MON	2,482	14,180	04/25/2008	05/01/2037
94986C-AA-2	Wells Fargo Mortgage Bac-WFMBS 2007-AR4			4	.. 1.A FM	289,300	..86.8287	276,087	317,967	289,300	0	(355)	35,554	0	4.096	6.940	MON	1,085	5,105	12/29/2021	08/01/2037
75116C-ET-9	RESIDENTIAL ACCREDIT LOA-SERIES 2007-QS6			4	.. 1.A FM	166,252	..81.9488	218,297	266,382	166,252	0	2,667	94,742	0	5.750	16.691	MON	1,276	8,001	12/29/2021	04/01/2037
05990E-AD-2	Banc of America Funding -BAFC 2012-R6 2A			4	.. 3.B FM	2,473,445	..96.9996	2,451,251	2,527,072	2,473,445	0	84,489	0	0	3.605	6.174	MON	22,557	50,384	01/24/2017	07/26/2036
92977Y-BW-0	Wachovia Mortgage Loan T-WMLT 2005-B 2A4			4	.. 1.A FM	290,747	..89.1512	274,811	308,253	290,747	0	17,664	0	0	4.160	8.104	MON	1,072	9,584	07/20/2020	10/01/2035
36157N-FL-3	GE Mortgage Services LLC-GECMS 1997-HE4			4	.. 6. FM	33,507	..89.9687	49,479	54,995	33,507	0	(5,938)	13,087	0	7.170	36.016	MON	530	3,574	04/01/2004	12/01/2028
05535D-BG-8	BlackRock Capital Financ-BCF 1997-R2 3B1			4	.. 6. *	226,054	..50.0513	273,000	545,440	226,054	0	0	44,266	0	7.000	7.000	MON	3,182	60,442	06/19/1997	12/01/2035
12489W-JQ-8	Credit-Based Asset Servi-CBASS 2004-CB4			4	.. 1.A FM	9,288	..94.0218	8,801	9,361	9,288	0	61	0	0	3.891	4.485	MON	61	400	01/19/2017	05/01/2035
17307G-RE-0	Citigroup Mortgage Loan -CMLT1 2005-2 1A			4	.. 1.A FM	270,422	..95.5811	268,546	280,962	270,422	0	16,412	0	0	2.910	6.804	MON	1,421	9,255	06/17/2016	05/01/2035
17307G-VN-5	Citigroup Mortgage Loan -CMLT1 2005-WF2			4	.. 1.A FM	1,597	..85.8126	8,350	9,730	1,597	0	1,694	0	0	5.050	172.892	MON	79	567	07/07/2011	08/01/2035
17307G-W9-5	Citigroup Mortgage Loan -CMLT1 2005-11 A			4	.. 1.A FM	59,067	..98.8385	59,536	60,235	59,067	0	4,781	0	0	6.470	7.705	MON	651	2,838	12/14/2016	11/01/2035
22541Q-CZ-3	Credit Suisse First Bost-CSFB 2003-AR15			4	.. 1.A FM	612,795	..107.6879	649,556	603,184	612,795	0	1,764	0	0	6.839	5.230	MON	2,550	23,679	03/15/2017	06/25/2033
22541Q-XS-6	Credit Suisse First Bost-CSFB 2003-23 DB			4	.. 1.C FM	1,769,325	..98.2541	1,742,175	1,773,132	1,769,325	0	1,559	0	0	5.835	5.923	MON	17,735	110,905	12/19/2018	09/01/2033
225458-2Y-3	Credit Suisse First Bost-CSFB 2005-8 9A1			4	.. 3.A FM	1,214,701	..76.1262	1,076,359	1,413,913	1,214,701	0	33,189	39,048	0	5.250	4.863	MON	6,194	86,865	12/29/2021	09/01/2035
225458-L5-5	Credit Suisse First Bost-CSFB 2005-7 1A1			4	.. 4.A FM	541,599	..79.9303	471,470	589,852	541,599	0	5,263	6,365	0	5.250	6.155	MON	2,581	31,607	01/10/2022	08/01/2035
2254W0-FJ-9	Credit Suisse First Bost-CSFB 2003-1 1A1			4	.. 2.B FM	208,191	..97.1542	199,021	204,851	208,191	0	(1,080)	0	0	7.000	6.400	MON	1,195	15,273	11/02/2010	02/01/2033
576434-J7-0	MASTR Alternative Loan T-MALT 2005-2 4A3			4	.. 1.A FM	938,224	..97.6524	930,285	952,650	938,224	0	30,847	4,308	0	4.789	6.456	MON	4,308	21,211	07/09/2012	03/25/2035
78386N-BC-2	SACO I Inc-SACO 1999-3 1B1			4	.. 1.A FM	417,591	..98.2670	413,178	420,465	417,591	0	1,314	0	0	5.124	5.544	MON	3,631	22,770	05/13/1999	04/01/2039
81745A-AB-3	Sequoia Mortgage Trust 2-SEMT 2013-5 A2			4	.. 1.A	2,541,856	..90.5437	2,416,056	2,668,386	2,541,856	0	18,328	0	0	3.000	3.809	MON	13,364	85,529	03/17/2014	05/01/2043
81745J-AA-6	Sequoia Mortgage Trust 2-SEMT 2013-11 A1			4	.. 1.A	1,064,979	..91.9476	991,535	1,078,370	1,064,979	0	2,337	6,316	0	3.500	3.734	MON	6,316	41,421	02/27/2014	09/01/2043
855541-AC-2	SUNTRUST ADJUSTABLE RATE-SERIES 2007-S1			4	.. 1.A FM	872,254	..82.2845	825,613	1,003,364	872,254	0	49,608	0	0	3.598	5.673	MON	6,036	29,649	10/10/2012	01/01/2037
86359D-EY-9	STRUCTURED ASSET SECURIT-SASC 2005-RF2 A			4	.. 5.A FE	260,794	..5.3886	226,639	4,205,921	260,794	0	0	0	0	1.471	(9.440)	MON	6,216	84,584	02/03/2015	04/25/2035
80382S-AP-3	Sail Net Interest Margin Notes	D.....		4	.. 1.A FM	28	..153.8293	24,075	15,651	28	0	32	0	0	7.750	21,382.249	MON	26	1,233	12/19/2022	04/27/2033
74951P-DQ-8	RESI Finance LP 2005-A	D.....		4	.. 1.A FM	0	..8.0780	70,447	0	(319,662)	(319,661)	28,598	0	0	4.854	3.894	MON	1,792	16,782	06/10/2022	03/10/2037
1029999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Residential Mortgage-Backed Securities						2,322,735,727	XXX	2,143,180,371	2,592,906,128	2,322,367,591	(368,135)	34,479,239	11,543,317	0	XXX	XXX	XXX	12,386,982	77,902,724	XXX	XXX
00217L-AC-6	AREIT 2019-CRE3 Trust-AREIT 2019-CRE3 AS				.. 1.A FE	11,000,000	..97.0622	10,676,845	11,000,000	11,000,000	0	0	0	0	5.740	5.739	MON	197,468	342,136	08/09/2019	09/14/2036
03882L-AS-9	Arbor Multifamily Mortga-AMMST 2022-MF-4				.. 1.A	9,843,433	..72.1690	7,216,901	10,000,000	9,843,433	0	13,303	0	0	3.293	3.555	MON	54,889	305,555	02/08/2022	02/01/2055
05359A-AG-8	Aventura Mall Trust-AVMT 2018-AVM C				.. 1.A	9,293,307	..83.7962	8,379,622	10,000,000	9,293,307	0	46,432	0	0	4.112	5.671	MON	70,823	211,175	07/25/2022	07/01/2040
05359A-AJ-2	Aventura Mall Trust-SERIES 2018 AVM CLAS				.. 1.G	13,445,222	..78.6937	11,804,051	15,000,000	13,445,222	0	104,597	0	0	4.112	6.414	MON	106,235	316,306	07/15/2022	07/01/2040
05490T-AA-0	BBOCRE Trust 2015-GTP-BBOCR 2015-GTP A				.. 1.A	31,014,231	..95.7097	29,430,733	30,750,000	31,014,231	0	(95,447)	0	0	3.966	3.619	MON	84,691	1,219,545	09/09/2015	08/06/2033
054976-AL-9	BBCMS Trust-BBCMS 2022-C17 C				.. 1.A	4,489,868	..85.5645	3,850,404	4,500,000	4,489,868	0	259	20,438	0	5.450	5.480	MON	20,438	81,750	08/16/2022	09/01/2055
054976-AR-6	BBCMS Trust-BBCMS 2022-C17 D				.. 1.A	5,587															

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
05552X-AJ-7	BBCMS Mortgage Trust 202-BBCMS 2021-C12				1.F	9,323,830	53.8926	7,544,957	14,000,000	9,323,830	0	201,955	0	0	2.500	7.730	MON	29,167	204,167	06/08/2022	11/01/2054
05552Y-AL-0	BBCMS Mortgage Trust 202-BBCMS 2022-C16				1.A	6,921,754	79.9688	5,997,659	7,500,000	6,921,754	0	18,239	0	0	4.600	5.661	MON	57,500	143,750	08/05/2022	06/01/2055
05552Y-AX-4	BBCMS Mortgage Trust 202-BBCMS 2022-C16				1.A	13,220,202	53.1696	10,353,190	19,472,000	13,220,202	0	231,852	0	0	2.500	7.206	MON	81,133	283,967	06/07/2022	06/01/2055
05552Y-AZ-9	BBCMS Mortgage Trust 202-BBCMS 2022-C16				1.B	9,258,382	52.2721	7,707,520	14,745,000	9,258,382	0	192,890	0	0	2.500	8.180	MON	61,438	215,031	06/07/2022	06/01/2055
05591U-AA-5	BSREP Commercial Mortgag-BSREP 2021-DC A				1.A	5,603,693	97.4365	5,743,883	5,895,000	5,603,693	0	3,443	0	0	5.268	5.818	MON	14,665	38,373	11/30/2022	08/15/2038
05602N-AK-6	BMO 2022-C2 C-BMO 2022-C2 C				1.A	19,356,365	81.3346	17,545,500	21,572,000	19,356,365	0	90,420	0	0	4.813	6.461	MON	173,058	524,949	06/28/2022	07/01/2054
05605N-AA-5	BX Commercial Mortgage T-BX 2020-VIV2 C				1.G FE	42,345,337	75.4762	37,496,561	49,680,000	42,345,337	0	410,371	0	0	3.542	6.433	MON	293,309	889,703	07/12/2022	03/01/2044
05606D-AC-2	BX TRUST - BX 2022-PSB B-BX 2022-PSB B				1.A	4,918,530	99.7182	4,928,885	4,942,815	4,918,530	0	8,984	0	0	7.285	7.880	MON	17,003	119,014	08/04/2022	08/15/2039
05608B-AA-8	BX Commercial Mortgage T-BX 2019-IMC A				1.A	18,000,000	98.2106	17,677,913	18,000,000	18,000,000	0	0	0	0	5.318	5.318	MON	45,203	493,502	05/02/2019	04/15/2034
05608R-AL-9	BX Trust 2021-ARIA-BX 2021-ARIA E				1.A	19,920,677	90.7647	19,813,923	21,830,000	19,920,677	0	9,339	0	0	6.563	8.613	MON	66,307	66,307	12/20/2022	10/15/2036
05608W-AG-9	BX Commercial Mortgage T-BX 2021-SOAR B				1.A	2,652,419	95.3261	2,627,303	2,756,122	2,652,419	0	27,213	0	0	5.188	13.178	MON	6,752	17,650	11/15/2022	06/15/2038
05608W-AN-4	BX Trust-BX 2021-SOAR E				1.A	9,924,817	94.1243	9,341,668	9,924,817	9,924,817	0	0	0	0	6.118	5.605	MON	28,673	353,408	06/11/2021	06/15/2038
05609K-AJ-8	BX Commercial Mortgage T-BX 2021-XL2 E				1.A	4,622,771	94.0131	4,356,167	4,633,575	4,622,771	0	13,895	0	0	6.164	5.950	MON	13,486	169,491	10/14/2021	10/15/2038
05609K-AL-3	BX Commercial Mortgage T-BX 2021-XL2 F				1.A	11,558,344	93.3915	10,818,416	11,583,938	11,558,344	0	35,861	0	0	6.562	6.334	MON	35,898	471,776	10/14/2021	10/15/2038
05609K-AN-9	BX Commercial Mortgage T-BX 2021-XL2 G				1.A	13,868,134	91.6766	12,743,710	13,900,726	13,868,134	0	41,510	0	0	7.161	6.950	MON	47,005	652,625	10/14/2021	10/15/2038
05609M-BJ-3	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 D				1.A	11,029,771	51.1828	7,165,593	14,000,000	11,029,771	0	214,194	0	0	2.000	4.898	MON	23,333	256,667	02/10/2022	02/01/2055
05609M-BL-8	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 E				1.C	7,332,361	50.3240	5,032,397	10,000,000	7,332,361	0	183,569	0	0	2.000	5.782	MON	16,667	183,333	02/10/2022	02/01/2055
05609M-CH-6	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 C				1.A	12,465,888	73.7851	9,198,054	12,466,000	12,465,888	0	14	0	0	3.617	3.617	MON	37,575	413,321	02/10/2022	02/01/2055
05609R-AL-8	BX Trust-BX 2021-BXMF D				1.A	10,736,487	93.8348	10,108,348	10,772,500	10,736,487	0	44,365	0	0	6.148	6.065	MON	31,275	386,109	10/28/2021	10/15/2026
05609R-AN-4	BX Trust-BX 2021-BXMF E				1.A	20,094,184	91.5649	18,461,313	20,162,000	20,094,184	0	83,069	0	0	6.745	6.666	MON	64,219	844,690	10/28/2021	10/15/2026
05609V-AG-0	BX Commercial Mortgage T-BX 2021-VOLT B				1.A	8,014,071	94.7771	8,008,662	8,450,000	8,014,071	0	2,414	0	0	5.268	6.396	MON	21,020	21,020	12/15/2022	09/15/2036
05609V-AL-9	BX Commercial Mortgage T-BX 2021-VOLT D				1.A	2,804,857	93.5224	2,805,671	3,000,000	2,804,857	0	4,544	0	0	5.968	6.523	MON	8,454	35,344	11/07/2022	09/15/2036
05609V-AN-5	BX Commercial Mortgage T-BX 2021-VOLT E				1.A	4,997,000	92.8530	4,639,863	4,997,000	4,997,000	0	0	0	0	6.318	6.318	MON	14,908	187,666	09/15/2021	09/15/2036
05609V-AQ-8	BX Commercial Mortgage T-BX 2021-VOLT F				1.D	4,996,000	91.9027	4,591,460	4,996,000	4,996,000	0	0	0	0	6.718	6.205	MON	15,849	207,890	09/15/2021	09/15/2036
05609V-AS-4	BX Commercial Mortgage T-BX 2021-VOLT G				1.F	5,002,000	91.7287	4,588,270	5,002,000	5,002,000	0	0	0	0	7.168	7.168	MON	16,931	230,961	09/15/2021	09/15/2036
06539L-AJ-9	BANK 2018-BNK13-BANK 2018-BN13 D				3.B	10,570,939	63.8481	8,842,956	13,850,000	10,570,939	0	257,894	0	0	3.000	8.353	MON	34,625	242,375	06/03/2022	08/01/2061
06539W-AA-4	BANK 2020-BNK25-BANK 2020-BN25 D				2.C	3,480,731	60.7472	2,788,297	4,590,000	3,480,731	0	68,353	0	0	2.500	6.857	MON	9,563	66,938	06/06/2022	01/01/2063
06539W-BG-0	BANK 2020-BNK25-BANK 2020-BN25 C				1.E	2,725,600	72.7058	2,290,959	3,151,000	2,725,600	0	20,541	0	0	3.354	5.740	MON	17,612	53,434	07/27/2022	01/01/2063
065402-AJ-8	BANK 2019-BNK18-BANK 2019-BN18 D				2.A	7,117,759	65.3288	5,742,398	8,790,000	7,117,759	0	124,215	0	0	3.000	6.694	MON	21,975	175,800	05/24/2022	05/01/2062
06540D-AJ-4	BANK 2021-BNK36-BANK 2021-BN36 D				1.C	4,712,614	56.7640	2,980,109	5,250,000	4,712,614	0	50,603	0	0	2.500	3.882	MON	10,938	131,250	09/24/2021	03/01/2064
06540D-BV-6	BANK 2021-BNK36-BANK 2021-BN36 C				1.A	10,256,699	71.5434	7,155,053	10,001,000	10,256,699	0	(29,152)	0	0	3.200	2.875	MON	53,344	323,640	09/24/2021	09/01/2064
06540M-CA-1	BANK 2022-BNK41-BANK 2022-BNK41 C				1.A	10,432,690	75.0884	8,307,782	11,064,000	10,432,690	0	35,152	0	0	3.790	4.608	MON	104,831	281,878	04/25/2022	04/01/2065
06541K-AJ-7	BANK 2018-BNK12-BANK 2018-BN12 D				3.A	2,340,820	65.0990	1,952,970	3,000,000	2,340,820	0	58,476	0	0	3.000	8.085	MON	7,500	60,000	05/19/2022	05/01/2061
06541L-AJ-5	Bank-22-BNK40 D SUB				1.A	7,820,065	55.5499	5,392,779	9,708,000	7,820,065	0	127,553	0	0	2.500	5.168	MON	20,225	202,250	02/25/2022	03/01/2064
06541L-AL-0	Bank-SERIES 22-BNK40 CLASS E				1.C	3,854,982	52.3437	2,698,843	5,156,000	3,854,982	0	83,621	0	0	2.500	6.101	MON	10,742	107,417	02/25/2022	03/01/2064
06541L-BZ-8	BANK 2022-BNK40 C				1.A	22,080,707	72.4975	16,580,176	22,870,000	22,080,707	0	55,296	0	0	3.394	3.887	MON	129,353	655,391	02/25/2022	03/01/2064
06541M-CF-9	BANK-BANK 2022-BNK42 C				1.A	7,574,182	80.8404	6,467,235	8,000,000	7,574,182	0	17,222	0	0	4.722	5.473	MON	62,954	222,435	05/20/2022	06/01/2055
06541Q-BQ-7	BANK 2022-BNK43-BANK 2022-BNK43 C				1.A	25,788,192	82.7621	22,758,739	27,499,000	25,788,192	0	35,522	0	0	5.230	6.147	MON	119,855	557,733	09/27/2022	08/01/2055
06541T-AJ-8	BANK 2020-BNK29-BANK 2020-BN29 D				1.B	2,099,159	59.4519	1,724,105	2,900,000	2,099,159	0	31,436	0	0	2.500	7.064	MON	6,042	36,250	07/27/2022	11/01/2053
06541U-BE-5	BANK 2020-BNK30-BANK 2020-BN30 MDOE				1.A	1,258,804	66.9477	1,054,427	1,575,000	1,258,804	0	13,262	0	0	2.918	6.204	MON	7,660	23,236	07/25/2022	12/01/2053
08161Y-BL-6	Benchmark 2022-B34 Mortg-BMARK 2022-B34				1.A	29,285,579	75.4070	23,376,164	31,000,000	29,285,579	0	89,193	0	0	3.833	4.613	MON	198,036	862,338	06/29/2022	04/01/2055
08163B-BH-3	Benchmark 2020-B22 Mortg-BMARK 2020-B22				1.A	276,184	68.3403	683,403	1,000,000	776,184	0	9,348	0	0	2.696	6.310	MON	2,247	13,577	07/20/2022	01/01/2054
08163N-AL-9	Benchmark 2022-B32 Mortg-BMARK 2022-B32				1.E	7,873,765	51.6040	5,160,401	10,000,000	7,873,765	0	160,839	0	0	2.000	4.930	MON	16,667	183,333	02/01/2022	01/01/2055
08163N-AN-5	Benchmark 2022-B32 Mortg-2022-B32				2.A	7,681,104	46.9276	4,916,135	10,476,000	7,681,104	0	201,792	0	0	2.000	5.814	MON	17,460	192,060	02/01/2022	01/01/2055
08163N-BQ-7	Benchmark 2022-B32 Mortg-BMARK 2022-B32				1.A	19,989,236	67.7719	13,554,374	20,000,000	19,989,236	0	(10,716)	0	0	3.454	3.450	MON	115,150	641,165	02/01/2022	01/01/2055

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
08163P-AL-4	Benchmark 2022-B33 Mortg-BMARK 2022-B33				1.B	9,362,793	51.4983	6,639,672	12,893,000	9,362,793	0	199,114	0	0	2.000	7.758	MON	21,488	194,883	07/08/2022	03/01/2055
08163P-AN-0	Benchmark 2022-B33 Mortg-BMARK 2022-B33				1.E	8,889,384	46.6666	6,090,451	13,051,000	8,889,384	0	226,453	0	0	2.000	8.826	MON	21,752	197,517	07/08/2022	03/01/2055
08163P-BN-9	Benchmark 2022-B33 Mortg-BMARK 2022-B33				1.A	25,870,089	72.8892	19,446,841	26,680,000	25,870,089	0	50,865	0	0	3.615	4.040	MON	160,760	814,543	02/24/2022	03/01/2055
08163R-BT-2	Benchmark 2022-B35 Mortg-BMARK 2022-B35				1.A	9,914,094	89.5126	8,951,256	10,000,000	9,914,094	0	5,795	0	0	4.445	4.649	MON	74,090	300,072	05/04/2022	05/01/2055
08163R-BU-9	Benchmark 2022-B35 Mortg-BMARK 2022-B35				1.A	7,270,733	86.2331	6,467,483	7,500,000	7,270,733	0	12,985	0	0	4.445	4.944	MON	55,567	225,054	05/04/2022	05/01/2055
12477B-AG-9	CAMB Commercial Mortgage-CAMB 2021-CX2 C				1.A	26,674,094	73.4998	20,212,456	27,500,000	26,674,094	0	64,093	0	0	2.771	3.010	MON	63,507	748,147	10/22/2021	11/01/2046
12477B-AJ-3	CAMB Commercial Mortgage-CAMB 2021-CX2 D				1.E	16,226,683	67.9192	11,546,262	17,000,000	16,226,683	0	74,186	0	0	2.771	3.409	MON	39,259	477,647	10/22/2021	11/01/2046
12482H-AJ-3	CAMB 2019-LIFE C				1.A	6,686,085	97.0410	6,792,869	7,000,000	6,686,085	0	7,647	0	0	5.768	5.794	MON	19,066	79,436	11/01/2022	12/15/2037
12591K-AD-7	COMM 2013-CCRE12 Mortgage-COMM 2013-CR12				1.A	8,710,490	98.5974	8,585,534	8,707,664	8,710,490	0	(6,137)	0	0	3.765	3.695	MON	54,810	340,691	10/24/2013	10/01/2046
12593F-BC-7	COMM 2015-LC21 Mortgage -COMM 2015-LC21				1.A	7,251,044	95.0620	6,880,809	7,238,234	7,251,044	0	(5,951)	0	0	3.445	3.362	MON	41,560	277,120	01/07/2016	07/01/2048
12598E-AD-4	COMM 2020-SBX Mortgage T-COMM 2020-SBX B				1.A	4,538,237	86.1978	4,309,891	5,000,000	4,538,237	0	54,448	0	0	1.802	5.130	MON	7,508	37,542	08/10/2022	01/01/2038
12598E-AF-9	COMM 2020-SBX Mortgage T-COMM 2020-SBX C				1.A	4,758,984	85.0221	4,591,195	5,400,000	4,758,984	0	55,730	0	0	2.056	6.401	MON	14,649	38,550	10/13/2022	01/01/2038
12598E-AH-5	COMM 2020-SBX Mortgage T-COMM 2020-SBX D				1.A	2,122,493	83.0397	2,075,992	2,500,000	2,122,493	0	22,884	0	0	2.321	8.039	MON	4,836	14,668	10/13/2022	01/01/2038
12625U-BF-9	COMM 2013-CCRE9 Mortgage-COMM 2013-CR9 A				1.A	18,733,204	99.3939	18,590,295	18,703,654	18,733,204	0	(104,876)	0	0	4.266	3.906	MON	232,110	1,044,239	10/16/2013	07/01/2045
12626G-AF-0	COMM 2013-LC13 Mortgage -COMM 2013-LC13				1.A	911,164	98.9474	899,860	909,433	911,164	0	(3,184)	0	0	4.205	3.857	MON	6,374	39,848	10/16/2013	08/01/2046
12630D-AJ-2	COMM 2014-CR14 Mortgage -COMM 2014-CR14				1.A	10,006,408	98.6258	9,862,583	10,000,000	10,006,408	0	(7,775)	0	0	3.955	3.873	MON	65,917	395,500	01/09/2014	02/01/2047
12632Q-AW-3	COMM 2014-CCRE18 Mortgage-COMM 2014-CR18				1.A	7,478,386	96.4597	7,207,862	7,472,412	7,478,386	0	(4,448)	0	0	3.550	3.487	MON	44,212	266,610	06/19/2014	07/01/2047
12632Q-AJ-1	COMM 2014-CCRE18 Mortgage-COMM 2014-CR18				1.A	5,021,175	97.0309	4,851,545	5,000,000	5,021,175	0	(14,752)	0	0	3.828	3.514	MON	31,900	191,400	06/19/2014	07/01/2047
12635R-AW-8	CSAIL 2015-C4 Commercial-CSAIL 2015-C4 A				1.A	2,007,465	94.8681	1,884,063	1,985,982	2,007,465	0	(8,444)	0	0	3.544	3.080	MON	11,730	70,379	02/12/2016	11/01/2048
12653V-AG-1	Credit Suisse Mortgage C-CSMC 2019-ICE4				1.A	9,737,234	97.5109	9,751,094	10,000,000	9,737,234	0	96,609	0	0	5.918	12.667	MON	27,946	153,555	09/28/2022	05/15/2036
12654Y-AJ-8	Century Plaza Towers 201-CPTS 2019-PT D				1.A	8,456,359	70.4230	7,042,297	10,000,000	8,456,359	0	70,031	0	0	2.997	5.782	MON	24,973	126,878	08/11/2022	11/01/2039
12655T-AG-4	COMM 2019-GC44 Mortgage -COMM 2019-GC44				3.C	4,722,513	62.9940	3,877,283	6,155,000	4,722,513	0	90,876	0	0	2.500	6.763	MON	12,823	89,760	06/07/2022	08/01/2057
12659J-AE-7	COLEM 2021-HLINE Mortgage-COLEM 2022-HLINE				1.D FE	6,753,529	83.0403	5,812,818	7,000,000	6,753,529	0	45,924	0	0	2.461	3.460	MON	14,356	145,951	03/01/2022	04/01/2042
12659J-AJ-6	COLEM 2021-HLINE Mortgage-COLEM 2022-HLINE				2.A FE	19,941,832	81.3329	17,893,245	22,000,000	19,941,832	0	357,751	0	0	2.461	5.137	MON	90,237	443,869	04/05/2022	04/01/2042
17328R-AG-4	Citigroup Commercial Mor-CGCMT 2020-GC46				3.A	2,325,481	60.4487	1,813,461	3,000,000	2,325,481	0	41,614	0	0	2.600	6.580	MON	6,500	45,500	06/03/2022	02/01/2053
17328R-AJ-8	Citigroup Commercial Mor-CGCMT 2020-GC46				4.A	4,762,214	58.1915	3,848,784	6,614,000	4,762,214	0	108,903	0	0	2.600	7.749	MON	14,330	100,312	06/03/2022	02/01/2053
200474-AE-4	COMM 2015-LC19 Mortgage -COMM 2015-LC19				1.C	6,785,059	86.7089	6,598,548	7,610,000	6,785,059	0	173,575	0	0	2.867	8.798	MON	18,182	109,089	07/08/2022	02/01/2048
23305M-AA-3	DBCORE 2014-ARCP Mortgage-DBCCR 2014-ARCP				1.A	5,015,945	97.9194	4,895,969	5,000,000	5,015,945	0	(15,386)	0	0	4.238	3.912	MON	17,659	211,910	01/24/2014	01/01/2034
29426V-AJ-5	Citigroup Commercial Mor-CGCMT 2022-GC48				1.A	11,297,762	82.9213	10,016,887	12,080,000	11,297,762	0	38,439	0	0	4.875	5.951	MON	147,231	345,175	06/06/2022	05/01/2054
30227F-AJ-9	Extended Stay America Tr-ESA 2021-ESH D				1.A	14,642,883	95.7657	14,022,864	14,642,883	14,642,883	0	0	0	0	6.568	6.055	MON	45,416	594,294	06/24/2021	07/15/2038
30288L-AN-3	FREMF 2016-K53 Mortgage -FREMF 2016-K53				1.A	5,943,404	94.7919	5,687,512	6,000,000	5,943,404	0	18,201	0	0	4.024	4.431	MON	40,243	244,877	06/16/2016	03/01/2049
30288R-AG-5	FREMF 2016-K54 Mortgage -FREMF 2016-K54				1.A	3,504,463	95.3330	3,640,768	3,819,000	3,504,463	0	89,396	0	0	4.053	7.120	MON	25,796	156,953	03/26/2020	04/01/2048
30291J-AJ-2	FREMF 2013-K29 Mortgage -FREMF 2013-K29				1.A	5,687,032	99.2823	5,708,731	5,750,000	5,687,032	0	264,919	0	0	3.465	8.408	MON	33,208	202,366	07/17/2013	05/01/2046
30295A-AN-8	FREMF 2016-K722 Mortgage-FREMF 2016-K722				1.A	3,243,976	99.3566	3,229,089	3,250,000	3,243,976	0	36,921	0	0	3.949	5.127	MON	21,388	128,544	06/22/2016	07/01/2049
30295D-AG-7	FREMF 2016-K57 Mortgage -FREMF 2016-K57				1.A	3,926,274	93.6142	3,744,569	4,000,000	3,926,274	0	18,248	0	0	3.918	4.522	MON	26,119	158,947	09/15/2016	08/01/2049
30295M-AS-1	FREMF 2016-K723 Mortgage-FREMF 2016-K723				1.A	6,439,932	97.9529	6,366,936	6,500,000	6,439,932	0	75,200	0	0	3.968	4.854	MON	19,326	235,195	11/03/2016	01/01/2023
30295R-AS-0	FREMF 2016-K59 Mortgage -FREMF 2016-K59				1.A	3,341,729	92.3558	3,232,452	3,500,000	3,341,729	0	38,078	0	0	3.579	4.966	MON	20,876	126,983	11/15/2016	11/01/2049
30295X-AS-7	FREMF 2017-K724 Mortgage-FREMF 2017-K724				1.A	4,758,458	97.6683														

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
36257U-AA-5	GS Mortgage Securities T-GSMS 2019-GC42				2.C	1,576,342	.61.2213	1,224,427	2,000,000	1,576,342	.0	28,530	.0	.0	2.800	6.755	MON	4,667	32,667	06/01/2022	09/01/2052
36262M-AG-3	GS Mortgage Securities C-GSMS 2021-IP D				1.A	4,250,000	.93.6123	3,978,521	4,250,000	4,250,000	.0	.0	.0	.0	6.418	5.905	MON	12,881	163,928	09/29/2021	10/15/2036
36262M-AJ-7	GS Mortgage Securities C-GSMS 2021-IP E				1.A	2,858,000	.93.9955	2,686,390	2,858,000	2,858,000	.0	.0	.0	.0	7.868	7.868	MON	10,619	152,253	09/29/2021	10/15/2036
36262M-AL-2	GS Mortgage Securities C-GSMS 2021-IP F				1.E	1,500,000	.95.5702	1,433,553	1,500,000	1,500,000	.0	.0	.0	.0	8.868	8.868	MON	6,282	95,117	09/29/2021	10/15/2036
36264K-BB-5	GS Mortgage Securities T-GSMS 2020-GSA2				1.B	4,411,078	.69.9851	3,956,255	5,653,000	4,411,078	.0	35,303	.0	.0	2.989	6.531	MON	14,081	56,323	09/09/2022	12/01/2053
46590K-AD-6	JP Morgan Chase Commerci-JPMCC 2015-JP1				1.A	13,033,728	.94.6678	12,306,810	13,000,000	13,033,728	.0	(11,276)	.0	.0	3.650	3.552	MON	79,079	474,474	12/15/2015	01/01/2049
465972-AC-1	JP Morgan Chase Commerci-JPMCC 2022-DATA				1.A	4,630,846	.83.8677	4,193,383	5,000,000	4,630,846	.0	16,386	.0	.0	3.916	4.956	MON	16,316	115,842	06/08/2022	06/01/2042
465972-AG-2	JP Morgan Chase Commerci-JPMCC 2022-DATA				1.A	3,546,900	.75.9371	3,113,422	4,100,000	3,546,900	.0	23,458	.0	.0	3.916	5.839	MON	13,379	94,991	06/08/2022	06/01/2042
465972-AJ-6	JP Morgan Chase Commerci-JPMCC 2022-DATA				1.D	1,541,525	.70.4105	1,302,594	1,850,000	1,541,525	.0	12,747	.0	.0	3.916	6.328	MON	6,037	42,862	06/08/2022	06/01/2042
46639J-AE-0	JP Morgan Chase Commerci-JPMCC 2013-C10				1.A	1,821,362	.99.7778	1,817,316	1,821,362	1,821,362	.0	112,419	.0	.0	3.143	4.447	MON	32,775	272,861	07/05/2013	12/01/2047
46639Y-AQ-0	JP Morgan Chase Commerci-JPMCC 2013-LC11				1.A	7,229,786	.99.4053	7,197,421	7,240,483	7,229,786	.0	90,436	.0	.0	2.960	3.948	MON	40,256	264,222	07/31/2013	04/01/2046
46654B-AJ-6	JP Morgan Chase Commerci-JPMCC 2021-1NEM				2.B	3,876,047	.66.4977	2,659,909	4,000,000	3,876,047	.0	12,223	.0	.0	2.654	3.097	MON	8,845	107,615	09/27/2021	10/01/2042
46654B-AL-1	JP Morgan Chase Commerci-JPMCC 2021-1NEM				2.C	5,991,684	.63.5555	4,116,490	6,477,000	5,991,684	.0	46,258	.0	.0	2.654	3.696	MON	14,322	174,256	09/27/2021	10/01/2042
482598-AN-9	KNL 2019-KNSQ Mortgage -KNL 2019-KNSQ				1.E	1,639,274	.97.3192	1,634,962	1,680,000	1,639,274	.0	224	.0	.0	6.118	6.655	MON	4,854	4,854	12/15/2022	05/15/2036
53218D-AE-8	Life Mortgage Trust US-LIFE 2022-BMR2 B				1.A	19,945,363	.96.8928	19,378,550	20,000,000	19,945,363	.0	45,372	.0	.0	6.130	6.693	MON	57,890	535,327	05/03/2022	05/15/2039
55316P-AG-2	MKT 2020-525M Mortgage T-MKT 2020-525M C				1.A	8,300,967	.68.9660	6,896,602	10,000,000	8,300,967	.0	81,045	.0	.0	2.941	5.929	MON	49,010	149,480	07/27/2022	02/01/2040
55316P-AJ-6	MKT 2020-525M Mortgage T-SERIES 20-525M				1.B	9,645,702	.59.4962	7,139,546	12,000,000	9,645,702	.0	109,842	.0	.0	2.941	6.442	MON	58,812	179,377	07/27/2022	02/01/2040
55316P-AL-1	MKT 2020-525M Mortgage T-SERIES 20-525M				3.A	4,400,047	.58.3670	2,918,352	5,000,000	4,400,047	.0	57,273	.0	.0	2.941	5.000	MON	24,505	124,567	02/28/2022	02/01/2040
55316T-AE-9	MFT 2020-B6 Mortgage Tru-MOFT 2020-B6 C				3.C FE	8,414,149	.66.3760	6,969,475	10,500,000	8,414,149	.0	73,211	.0	.0	3.283	6.677	MON	28,724	146,494	08/24/2022	08/01/2040
55317B-AQ-2	MFT Trust 2020-ABC-SERIES 2020-ABC CLASS				1.B	3,334,180	.71.6961	2,895,807	4,039,000	3,334,180	.0	28,781	.0	.0	3.477	5.596	MON	11,702	62,587	04/08/2022	02/06/2030
58403Y-AR-7	Med Trust 2021-MDLN-MED 2021-MDLN D				1.A	10,242,549	.94.5162	9,767,307	10,334,000	10,242,549	.0	50,374	.0	.0	6.318	8.009	MON	30,831	356,902	05/11/2022	11/15/2038
58403Y-AU-0	Med Trust 2021-MDLN-MED 2021-MDLN E				1.A	8,000,000	.92.7405	7,419,237	8,000,000	8,000,000	.0	.0	.0	.0	7.468	7.468	MON	28,212	393,764	10/29/2021	11/15/2038
58403Y-AX-4	Med Trust 2021-MDLN-MED 2021-MDLN F				1.A	9,000,000	.91.9987	8,279,886	9,000,000	9,000,000	.0	.0	.0	.0	8.318	7.804	MON	35,352	520,547	10/29/2021	11/15/2038
61690A-AD-6	Morgan Stanley Bank of A-MSBAM 2015-C27				1.A	3,858,512	.95.4463	3,665,586	3,840,468	3,858,512	.0	(8,664)	.0	.0	3.473	3.229	MON	22,230	133,380	02/17/2016	12/01/2047
61690F-AL-7	Morgan Stanley Bank of A-MSBAM 2015-C22				1.A	8,996,783	.94.7702	8,529,322	9,000,000	8,996,783	.0	1,507	.0	.0	3.046	3.064	MON	45,690	274,140	02/12/2016	04/01/2048
61690Q-AD-1	Morgan Stanley Bank of A-MSBAM 2015-C23				1.A	11,096,284	.95.0426	10,447,011	10,991,924	11,096,284	.0	(45,756)	.0	.0	3.451	3.001	MON	63,222	379,331	02/17/2016	07/01/2050
61690V-AZ-1	Morgan Stanley Bank of A-MSBAM 2015-C26				1.A	5,023,080	.94.4728	4,723,642	5,000,000	5,023,080	.0	(8,383)	.0	.0	3.531	3.345	MON	44,138	191,263	01/27/2016	10/01/2048
61764R-BJ-6	Morgan Stanley Bank of A-MSBAM 2015-C20				1.A	2,512,140	.93.0367	2,325,917	2,500,000	2,512,140	.0	(5,745)	.0	.0	4.160	3.907	MON	8,667	104,000	02/17/2015	02/01/2048
61774L-AG-4	Morgan Stanley Capital I-MSC 2022-L8 D				1.A	4,912,149	.57.1253	3,691,439	6,462,000	4,912,149	.0	90,650	.0	.0	2.500	5.866	MON	13,463	121,163	03/25/2022	04/01/2055
61774L-BY-4	Morgan Stanley Capital I-MSC 2022-L8 C				1.A	21,051,765	.75.3785	16,662,406	22,105,000	21,051,765	.0	16,301	.0	.0	3.795	4.476	MON	209,722	633,843	03/25/2022	04/01/2055
67118A-AN-5	OPG Trust 2021-PORT-OPG 2021-PORT E				1.A	17,071,828	.92.7475	15,891,679	17,134,353	17,071,828	.0	141,154	.0	.0	5.847	5.803	MON	47,309	664,020	09/30/2021	10/15/2036
67118A-AQ-8	OPG Trust 2021-PORT-OPG 2021-PORT F				1.A	6,838,002	.92.5184	6,333,365	6,845,517	6,838,002	.0	16,909	.0	.0	6.266	5.894	MON	20,256	302,124	09/30/2021	10/15/2036
67118A-AS-4	OPG Trust 2021-PORT-OPG 2021-PORT G				1.A	6,834,895	.92.2707	6,313,873	6,842,775	6,834,895	.0	16,435	.0	.0	6.716	6.351	MON	21,701	341,555	09/30/2021	10/15/2036
693436-AA-5	PLP Trust 2020-1-PLP 2020-1A A				6. *	9,638,427	.36.0000	6,788,869	18,857,969	6,788,869	(1,327,074)	.0	.0	.0	5.015	22.459	MON	948,354	945,727	12/02/2020	03/31/2041
78449R-AL-9	SLG 2021-OVA E FIXED CO-SLG 2021-OVA E				1.A	19,386,181	.69.6819	15,389,947	22,086,000	19,386,181	.0	82,122	.0	.0	2.851	4.455	MON	52,465	471,377	10/18/2022	07/01/2041
78449R-AN-5	SLG 2021-OVA F				1.A	14,309,508	.64.9020	10,562,799	16,275,000	14,309,508	.0	131,554	.0	.0	2.851	4.528	MON	38,661	399,561	08/09/2022	07/01/2041
78485G-AN-4	STWD Trust 2021-FLWR-SREIT 2021-FLWR E				1.A	10,069,130	.93.7597	9,450,976	10,080,000	10,069,130	.0	17,912	.0	.0	6.242	5.931	MON	69,545	370,793	07/12/2021	07/15/2036
90270Y-BF-5	UBS-BARCLAYS COMMERCIAL -UBSBB 2013-C5 A	1			1.A	141,925	.99.8538	141,718	141,925	141,925	.0	62,372	.0	.0	3.185	4.250	MON	753	(498,815)	06/24/2013	03/01/2046
92257B-AA-0	Velocity Commercial Capi-VCC 2022-3 A				1.A FE	13,898,592	.95.4061	13,282,700	13,922,279	13,898,592	.0	5,311	.0	.0	5.220	5.292	MON	27,397	462,928	06/08/2022	06/01/2052
92257B-AC-6	Velocity Commercial Capi-VCC 2022-3 M2				1.G FE	4,896,041	.94.9614	4,665,973	4,913,545	4,896,041	.0	3,286	.0	.0	6.490	6.631	MON	7,364	171,854	06/08/2022	06/01/2052
92257B-AD-4	Velocity Commercial Capi-VCC 2022-3 M3				2.B FE	6,196,935	.93.4110	5,932,765	6,351,248	6,196,935	.0	26,598	.0	.0	6.573	7.469	MON	23,721	232,411	06/08/2022	06/01/2052
92257B-AE-2	Velocity Commercial Capi-VCC 2022-3 M4				3.B FE	13,556,499	.87.4365	12,828,286	14,671,554	13,556,499	.0	177,663	.0	.0	6.573	9.481	MON	134,288	538,383	06/08/2022	06/01/2052
92257B-AF-9	Velocity Commercial Capi-VCC 2022-3 M5				4.B FE	7,208,008	.84.5690	6,877,083	8,131,917	7,208,008	.0	132,448	.0	.0	6.573	10.643	MON	30,372	297,571	06/08/2022	06/01/2052
92257C-AA-8	Velocity Commercial Capi-VCC 2019-1 A				1.A FE	1,684,731	.93.2867	1,571,587	1,684,685	1,684,731	.0	(41)	.0	.0	3.760	3.758	MON	5,279	73,698	03/11/2019	03/01/2049
92257P-AC-5	Velocity Commercial Capi-VCC 2022-5 M3				2.B FE	14,312,104	.97.6043	14,198,449	14,546,947	14,312,104	.0	12,810	.0	.0	8.352	8.927	MON	222,796	324,569	10/04/2022	10/01/2052

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
92257P-BA-8	Velocity Commercial Capi-VCC 2022-5 M2				1.G FE	2,927,035	.97.3752	2,907,056	2,985,418	2,927,035	.0	3,811	.0	.0	7.500	8.195	MON	22,401	59,810	10/04/2022	10/01/2052
92258X-AA-1	Velocity Commercial Capi-VCC 2022-1 A				1.A FE	1,845,591	.91.2776	1,693,830	1,855,691	1,845,591	.0	3,597	.0	.0	3.380	3.610	MON	10,494	65,220	02/14/2022	02/01/2052
92258X-AB-9	Velocity Commercial Capi-VCC 2022-1 M1				1.D FE	12,335,414	.89.0886	11,065,544	12,420,838	12,335,414	.0	26,394	.0	.0	3.760	4.021	MON	78,051	482,563	02/14/2022	02/01/2052
92259K-AD-2	Velocity Commercial Capi-VCC 2022-4 M1				1.D FE	3,179,326	.95.9388	3,050,208	3,179,326	3,179,326	.0	11	.0	.0	6.590	6.590	MON	34,920	87,407	08/05/2022	08/01/2052
92259K-AG-5	Velocity Commercial Capi-VCC 2022-4 M2				1.G FE	6,296,183	.95.9524	6,042,180	6,297,057	6,296,183	.0	121	.0	.0	6.970	6.975	MON	73,151	183,103	08/05/2022	08/01/2052
92259U-AA-6	Velocity Commercial Capi-VCC 2022-2 A				1.A FE	4,737,793	.94.0210	4,455,195	4,738,512	4,737,793	.0	167	.0	.0	4.670	4.675	MON	37,098	190,699	04/05/2022	04/01/2052
92259U-AB-4	Velocity Commercial Capi-VCC 2022-2 M1				1.D FE	5,904,357	.93.1328	5,499,951	5,905,492	5,904,357	.0	210	.0	.0	5.410	5.416	MON	53,248	267,840	04/05/2022	04/01/2052
92259U-AC-2	Velocity Commercial Capi-VCC 2022-2 M2				1.G FE	5,185,077	.92.7876	4,811,333	5,185,077	5,185,077	.0	51	.0	.0	5.640	5.641	MON	48,742	243,844	04/05/2022	04/01/2052
92259U-AE-8	Velocity Commercial Capi-VCC 2022-2 M4				3.B FE	18,793,727	.85.4312	16,969,966	19,863,920	18,793,727	.0	168,957	.0	.0	5.863	7.463	MON	194,117	973,764	04/05/2022	04/01/2052
92259U-AF-5	Velocity Commercial Capi-VCC 2022-2 M5				4.B FE	5,423,091	.82.6220	4,943,328	5,983,063	5,423,091	.0	80,175	.0	.0	5.863	8.558	MON	58,468	292,713	04/05/2022	04/01/2052
92259U-AG-3	Velocity Commercial Capi-VCC 2022-2 M6				6.*	4,804,987	.80.5156	4,391,990	5,454,559	4,391,990	(412,997)	85,300	.0	.0	5.863	9.168	MON	53,304	266,856	04/05/2022	04/01/2052
94989D-AV-1	Wells Fargo Commercial M-WFCM 2015-C27 A				1.A	1,713,634	.95.0350	1,638,262	1,723,853	1,713,634	.0	5,502	.0	.0	3.190	3.517	MON	9,165	63,199	12/30/2015	02/01/2048
94989D-AW-9	Wells Fargo Commercial M-WFCM 2015-C27 A				1.A	6,466,903	.95.1317	6,140,752	6,455,000	6,466,903	.0	(5,548)	.0	.0	3.451	3.358	MON	37,127	222,762	01/22/2016	02/01/2048
94989J-AZ-9	Wells Fargo Commercial M-WFCM 2015-C28 A				1.A	691,020	.94.9466	655,131	690,000	691,020	.0	(430)	.0	.0	3.540	3.472	MON	2,036	24,426	01/05/2016	05/01/2048
94989N-BD-8	Wells Fargo Commercial M-WFCM 2015-C30 A				1.A	1,933,209	.94.6418	1,832,929	1,936,701	1,933,209	.0	1,382	.0	.0	3.411	3.490	MON	11,010	66,061	12/29/2015	09/01/2058
94989Q-AV-2	Wells Fargo Commercial M-WFCM 2015-SG1 A				1.A	9,782,798	.95.2829	9,247,950	9,705,782	9,782,798	.0	(30,729)	.0	.0	3.789	3.444	MON	61,292	371,325	12/28/2015	09/01/2048
94989Y-AY-9	Wells Fargo Commercial M-WFCM 2016-C32 A				1.A	6,234,102	.93.8538	5,835,087	6,217,208	6,234,102	.0	(5,890)	.0	.0	3.294	3.191	MON	34,132	220,992	02/03/2016	01/01/2059
05525F-AA-9	BAMLL Re-REMIC Trust 201-BAMLL 2013-FRR3	.0			2.B Z	19,815,239	.93.4375	18,890,964	20,217,754	19,815,239	.0	18,890	.0	.0	0.000	4.836	N/A	.0	.0	01/25/2022	07/01/2051
05525H-AW-7	BAMLL Re-REMIC Trust 201-BAMLL 2014-FRR5				3.C FE	8,576,031	.92.5067	8,474,451	9,160,909	8,576,031	.0	.0	.0	.0	0.000	6.616	MON	.0	.0	06/26/2018	01/01/2047
12531W-BA-9	CFRCE 2016-3 MTG TR PASS THRU CTF CL A-2		4		1.A	17,370,294	.94.8931	16,437,383	17,322,002	17,370,294	.0	.0	.0	.0	3.597	3.490	MON	103,849	637,401	01/22/2016	01/01/2048
36250S-AA-0	GS Mortgage Securities C-GSMS 2018-GS10				4.C	8,954,576	.64.2097	8,526,994	10,165,125	8,954,576	.0	170,478	.0	.0	3.000	5.515	MON	25,413	304,954	01/25/2022	07/01/2051
92890P-AE-4	WFRBS Commercial Mortgage-WFRBS 2013-C14				1.A	28,948,863	.99.0307	28,718,900	29,000,000	28,948,863	.0	150,197	.0	.0	3.337	3.870	MON	161,288	967,730	06/24/2013	06/01/2046
92938E-AM-5	WFRBS Commercial Mortgage-WFRBS 2013-C16				1.A	3,255,155	.98.9170	3,218,533	3,253,770	3,255,155	.0	(3,174)	.0	.0	4.136	4.046	MON	23,010	168,516	09/17/2013	09/01/2046
92939F-AT-6	WFRBS Commercial Mortgage-WFRBS 2014-C21				1.A	2,099,981	.96.9470	2,022,198	2,085,881	2,099,981	.0	(11,631)	.0	.0	3.410	2.895	MON	18,574	83,857	02/11/2016	08/01/2047
1039999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Commercial Mortgage-Backed Securities						1,518,613,007	XXX	1,339,186,111	1,646,283,399	1,515,350,452	(1,740,071)	8,575,505	0	0	XXX	XXX	XXX	8,975,836	46,187,815	XXX	XXX
00038R-AA-4	Aaset 2019-2 Trust-AASET 2019-2 A				2.C FE	8,077,323	.72.7620	5,876,722	8,076,637	8,077,323	.0	599	.0	.0	3.376	3.383	MON	11,361	285,539	10/07/2019	10/16/2039
00110X-AD-6	AFN ABSPROP001 LLC-SERIES 2021-1A CLASS				1.F FE	2,942,633	.84.8232	2,544,445	2,999,703	2,942,633	.0	4,571	.0	.0	3.600	3.866	MON	3,300	93,295	03/09/2022	05/20/2051
00178X-AB-9	AMSR 2019-SFR1 Trust-AMSR 2019-SFR1 B				1.B FE	4,999,148	.90.2036	4,510,182	5,000,000	4,999,148	.0	198	.0	.0	3.023	3.028	MON	12,596	151,150	11/26/2019	01/01/2039
00255U-AA-3	AASET 2020-1 Trust-AASET 2020-1A A				2.A FE	4,483,561	.78.6154	3,524,780	4,483,575	4,483,561	.0	7	.0	.0	3.351	3.351	MON	6,678	187,924	02/03/2020	01/16/2040
00436M-AA-3	Accelerated Assets 2018--AALLC 2018-1 A				1.F FE	2,264,214	.96.7082	2,190,001	2,264,546	2,264,214	.0	222	.0	.0	3.870	3.879	MON	7,060	102,064	06/13/2018	12/02/2033
00834H-10-4	Affirm Asset Securitizat-2022-X1 CERT				6.*	5,608,502	2.168.7502	1,449,701	66,845	1,449,701	(4,158,801)	.0	.0	.0	6.272	13.105	MON	4,300	4,300	02/04/2022	02/15/2027
00834W-AA-9	Affirm Asset Securitizat-AFFRM 2022-A A				1.A FE	20,975,304	.95.5634	20,068,322	21,000,000	20,975,304	.0	6,607	.0	.0	4.300	4.374	MON	40,133	585,994	07/27/2022	05/17/2027
00834W-AC-5	Affirm Asset Securitizat-AFFRM 2022-A C				1.F FE	7,998,824	.94.5000	7,560,000	8,000,000	7,998,824	.0	556	.0	.0	4.890	4.898	MON	17,387	257,540	04/27/2022	05/17/2027
00834W-AF-8	Affirm Asset Securitizat-AFFRM 2022-A 1A				3.B FE	4,901,007	.95.6291	4,781,456	5,000,000	4,901,007	.0	16,997	.0	.0	4.300	5.578	MON	9,556	63,306	09/08/2022	05/17/2027
02377A-AA-6	American Airlines 2014-1-SECURED NOTE	1			3.B FE	5,182,692	.85.2620	4,417,919	5,182,692	4,417,919	.0	(449)	.0	.0	3.700	3.693	AO	47,930	199,940	09/02/2014	05/01/2026
02665U-AA-3	AMERICAN HOMES 4 RENT-SERIES 2014-SFR2 C		4		1.A FE	12,834,805	.96.3191	12,368,932	12,841,617	12,834,805	.0	(4,788)	.0	.0	3.786	3.818	MON	40,515	632,862	12/18/2014	10/01/2036
02665U-AB-1	American Homes 4 Rent 20-AHAR 2014-SFR2				1.A FE	7,008,158	.96.5453	6,758,168	7,000,000	7,008,158	.0	(4,478)	.0	.0	4.290	4.220	MON	25,025	300,300	05/14/2015	10/01/2036
02666A-AB-4	American Homes 4 Rent 20-AHAR 2015-SFR1				1.A FE	4,645,830	.94.7128	4,404,144	4,650,000	4,645,830	.0	1,747	.0	.0	3.813	3.855	MON	177,305	177,305	02/26/2015	04/01/2052
02666A-AC-2	American Homes 4 Rent 20-AHAR 2015-SFR1				1.A FE	8,525,456	.95.0276	8,096,353	8,520,000	8,525,456	.0	(2,282)	.0	.0	4.110	4.080	MON	29,181	350,172	05/05/2015	04/01/2052
02666B-AB-2	American Homes 4 Rent 20-AHAR 2015-SFR2				1.A FE	2,656,431	.96.0707	2,553,559	2,658,000	2,656,431	.0	528	.0	.0	4.295	4.318	MON	9,513	114,161	09/11/2015	10/01/2052
03027W-AJ-1	AMERICAN TOWER TRUST I-1ST LIEN	1			1.A FE	46,328,141	.98.3431	45,582,031	46,350,000	46,328,141	.0	102,650	.0	.0	3.070	3.300	MON	63,242	1,422,945	06/11/2018	03/15/2048
03235T-AA-5	Amur Finance VI LLC-ACEF 2014-1A A				6.*	2,024,793	.24.0000	550,110	2,292,124	550,110	(1,474,683)	.0	.0	.0	8.000	101.617	MON	51,504	184,048	12/10/2014	12/20/2024
03789X-AD-0	Applebee's Funding LLC /-DIN 2019-1A A21				2.B FE	21,782,467	.94.6635	20,617,710	21,780,000	21,782,467	.0	(1,689)	.0	.0	4.194	4.194	MJSD	65,972	913,453	05/28/2019	06/05/2049
03789X-AE-8	Applebee's Funding LLC /-DIN 2019-1A A21				2.B FE	4,207,500	.90.3339	3,800,799	4,207,500	4,207,500	.0	.0	.0	.0	4.723	4.723	MJSD	14,352	198,720	05/28/2019	06/05/2049

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
038370-AA-0	Aqua Finance Trust 2019--AQFIT 2019-A A				1 F FE	1,310,245	.93.0591	1,219,539	1,310,499	1,310,245	.0	.211	.0	.0	.3.140	.3.149	MON	1,829	69,283	09/16/2019	07/16/2040
038413-AA-8	Aqua Finance Trust 2020--AQFIT 2020-AA A				1 F FE	2,680,586	.93.5201	2,507,260	2,680,986	2,680,586	.0	.370	.0	.0	1.900	1.910	MON	1,981	67,213	08/19/2020	07/17/2046
03842V-AC-1	Aqua Finance Trust 2021--AQFIT 2021-A C				2 C FE	16,121,756	.86.0266	14,200,414	16,507,000	16,121,756	.0	.64,154	.0	.0	.3.140	3.714	MON	63,350	492,240	03/04/2022	07/17/2046
05351K-AB-5	Avant Credit Card Master-AVGCT 2021-1A B				1 G FE	2,221,185	.94.0256	2,115,576	2,250,000	2,221,185	.0	.14,603	.0	.0	1.620	2.352	MON	1,620	35,033	01/20/2022	04/15/2027
055328-AA-6	BCC Middle Market CLO 20-BMMC 2018-1A A1				1 A FE	27,000,000	.98.3291	26,548,857	27,000,000	27,000,000	.0	.15,500	.0	.0	5.793	6.461	JAJO	317,143	935,122	09/13/2018	10/20/2030
05553D-AB-7	BHG Securitization Trust-BHG 2022-B B				1 D FE	9,988,746	.96.8193	9,671,223	9,988,945	9,988,746	.0	.59	.0	.0	4.840	4.841	MON	18,801	271,423	05/25/2022	06/18/2035
05553D-AD-3	BHG Securitization Trust-BHG 2022-B D				2 B FE	4,860,924	.91.3113	4,560,517	4,994,473	4,860,924	.0	.11,952	.0	.0	6.690	7.319	MON	12,994	188,514	05/25/2022	06/18/2035
05567Y-AA-7	Burlington Northern and -SECURED				1 B FE	101,602	.99.7549	101,353	101,602	101,602	.0	.(273)	.0	.0	4.967	4.801	AO	1,262	8,036	09/26/2005	04/01/2023
05568D-AA-2	BNSF Railway Co 2006-3 P-FIRST LIEN				1 C FE	166,300	.98.8954	168,652	170,535	166,300	.0	.11,187	.0	.0	5.342	7.449	AO	2,278	11,617	05/26/2009	04/01/2024
05584A-AA-8	BRE Grand Islander Times-HGVGI 2017-1A A				1 F FE	866,783	.97.0144	841,003	866,884	866,783	.0	.88	.0	.0	2.940	2.949	MON	425	30,533	04/04/2017	05/25/2029
05607Y-AJ-0	B2R Mortgage Trust 2015--B2R 2015-1 B				1 B FE	377,889	.98.7691	368,649	373,244	377,889	.0	.(30,418)	.0	.0	3.965	2.636	MON	1,233	159,515	04/07/2015	05/01/2048
08860D-AB-9	BHG Securitization Trust-BHG 2022-C B				1 D FE	7,499,204	.99.1178	7,433,838	7,500,000	7,499,204	.0	.(10)	.0	.0	5.930	5.932	MON	17,296	113,658	09/12/2022	10/17/2035
08860D-AC-7	BHG Securitization Trust-BHG 2022-C C				1 G FE	9,996,558	.99.5656	9,956,564	10,000,000	9,996,558	.0	.31	.0	.0	6.560	6.566	MON	25,511	167,644	09/12/2022	10/17/2035
08860D-AD-5	BHG Securitization Trust-BHG 2022-C D				2 B FE	3,727,009	.97.3632	3,629,701	3,728,000	3,727,009	.0	.(19)	.0	.0	7.850	7.854	MON	11,381	74,788	09/12/2022	10/17/2035
09748R-AA-6	Bojangles Issuer LLC-BOJA 2020-1A A2				2 B FE	7,940,000	.89.3224	7,092,199	7,940,000	7,940,000	.0	.0	.0	.0	3.832	3.832	JAJO	60,007	305,532	09/29/2020	10/20/2050
09774X-AU-6	BOJSC Trust 1999-A-BOJ 1999-A A3				6 *	4,936	.98.6788	4,873	4,939	4,873	(62)	.103	.0	.0	5.980	6.638	MON	25	933	08/31/2012	03/01/2029
11042A-AA-2	BRITISH AIR 13-1 A PTT-FIRST LIEN				1 F FE	5,258,712	.98.0750	5,155,973	5,257,173	5,258,712	.0	.(1,624)	.0	.0	4.625	4.604	MSJD	7,429	270,537	06/26/2013	06/20/2024
11044M-AA-4	BRITISH AIR 20-1 A PPT-FIRST LIEN				1 G FE	2,148,525	.90.6080	1,946,991	2,148,807	2,148,525	.0	.71	.0	.0	4.250	4.253	FMAN	11,669	94,451	11/17/2020	11/15/2032
12327A-AA-6	Business Jet Securities -BJETS 2022-1A A				1 G FE	8,897,993	.91.6099	8,376,389	9,143,541	8,897,993	.0	.52,888	.0	.0	4.455	5.373	MON	18,104	268,395	05/05/2022	06/15/2037
12327F-AA-5	Business Jet Securities -BJETS 2020-1A A				1 G FE	3,421,027	.91.0834	3,116,016	3,421,058	3,421,027	.0	.24	.0	.0	2.981	2.981	MON	4,533	140,416	10/21/2020	11/15/2035
12510H-AB-6	CARS-DB4 LP-CAUTO 2020-1A A2				1 A FE	5,357,859	.88.1130	4,721,860	5,358,870	5,357,859	.0	.(215)	.0	.0	3.030	3.035	MON	20,760	163,714	01/15/2020	02/15/2050
12510H-AC-4	Capital Automotive Reit-CAUTO 2020-1A A3				1 A FE	5,578,536	.85.2362	4,758,018	5,582,156	5,578,536	.0	.899	.0	.0	3.250	3.263	MON	23,195	182,917	01/15/2020	02/15/2050
12510H-AF-7	Capital Automotive Reit-CAUTO 2020-1A A6				1 E FE	2,125,776	.80.8745	1,885,901	2,331,885	2,125,776	.0	.7,489	.0	.0	3.810	5.329	MON	11,359	34,089	09/02/2022	02/15/2050
12510H-AG-5	CARS-DB4 LP-CAUTO 2020-1A B1				2 B FE	1,381,177	.90.8794	1,345,015	1,480,000	1,381,177	.0	.15,799	.0	.0	4.170	7.358	MON	7,886	25,122	07/18/2022	02/15/2050
12510H-AM-2	CARS-DB5 LP-CAUTO 2021-1A A3				1 E FE	2,083,925	.86.4310	1,993,645	2,306,631	2,083,925	.0	.32,296	.0	.0	1.920	4.855	MON	1,968	24,377	06/01/2022	08/15/2051
12510H-AN-0	Capital Automotive REIT-CAUTO 2021-1A A4				1 E FE	17,207,115	.77.8792	13,997,816	17,973,750	17,207,115	.0	.61,960	.0	.0	2.760	3.337	MON	63,405	453,804	03/04/2022	08/15/2051
12510H-AE-7	Capital Automotive REIT-CAUTO 2022-1A A2				1 E FE	50,830,936	.83.7901	42,828,267	51,113,750	50,830,936	.0	.14,579	.0	.0	3.700	3.710	MON	393,781	1,457,577	03/11/2022	03/15/2052
12530M-AA-3	CF Hippolyta LLC-SORT 2020-1 A1				1 D FE	13,871,247	.91.9008	13,355,781	14,532,830	13,871,247	.0	.35,968	.0	.0	1.690	1.696	MON	31,519	175,711	07/14/2020	07/15/2060
12530M-AB-1	CF Hippolyta Issuer LLC-SERIES 20-1 CLAS				1 D FE	8,880,297	.83.6627	7,432,503	8,883,888	8,880,297	.0	.981	.0	.0	1.990	1.998	MON	22,700	180,455	07/14/2020	07/15/2060
12530M-AE-5	CF Hippolyta LLC-SORT 2021-1A A1				1 D FE	12,391,340	.89.7022	11,951,992	13,324,087	12,391,340	.0	.38,815	.0	.0	1.530	1.536	MON	17,611	115,343	03/10/2021	03/15/2061
12563L-AS-6	CLI Funding VI LLC-2020-3A A				1 F FE	2,979,476	.86.7044	2,583,791	2,980,000	2,979,476	.0	.154	.0	.0	2.070	2.075	MON	2,228	66,384	10/02/2020	10/18/2045
12565K-AA-5	CLI Funding VIII LLC-CLIF 2021-1A A				1 F FE	2,845,478	.84.9773	2,821,773	3,320,619	2,845,478	.0	.8,082	.0	.0	1.640	3.920	MON	1,967	6,554	12/09/2022	02/18/2046
12575A-AB-3	CMFT Net Lease-CIMNL 2021-1 A2				1 A FE	9,696,590	.80.0884	7,768,899	9,700,410	9,696,590	.0	.454	.0	.0	2.570	2.576	MON	7,618	252,078	07/22/2021	07/20/2051
12575A-AC-1	CMFT Net Lease-CIMNL 2021-1 A3				1 C FE	1,749,453	.82.8409	1,449,716	1,750,000	1,749,453	.0	.91	.0	.0	2.510	2.516	MON	1,342	43,925	07/22/2021	07/20/2051
12575A-AD-9	CMFT Net Lease-CIMNL 2021-1 A4				1 C FE	1,999,131	.77.9625	1,559,251	2,000,000	1,999,131	.0	.88	.0	.0	3.040	3.046	MON	1,858	60,800	07/22/2021	07/20/2051
12575A-AE-8	CMFT Net Lease-CIMNL 2021-1 A5				1 F FE	10,957,235	.81.3293	9,352,873	11,500,000	10,957,235	.0	.64,393	.0	.0	2.910	3.846	MON	10,225	283,563	07/22/2021	07/20/2051
12575A-AF-4	CMFT Net Lease-CIMNL 2021-1 A6				1 F FE	8,156,788	.75.0001	6,375,005	8,500,000	8,156,788	.0	.23,856	.0	.0	3.440	3.991	MON	8,934	254,656	04/05/2022	07/20/2051
14310Q-AA-6	Carlyle GMS Finance MM C-CGFM 2015-1A A1				1 A FE	33,000,000	.97.8851	32,302,083	33,000,000	33,000,000	.0	.4,313	.0	.0	5.629	6.357	JAJO	392,163	1,127,517	08/02/2018	10/15/2031
14310Q-AE-8	Carlyle GMS Finance MM C-CGFM 2015-1A A1				1 A FE	16,997,047	.94.9522	16,141,874	17,000,000	16,997,047	.0	.1,298	.0	.0	4.560	4.569	JAJO	1,298	775,200	08/02/2018	10/15/2031
14310Q-AG-3	Carlyle GMS Finance MM C-CGFM 2015-1A A2				1 C FE	15,000,000	.94.2608	14,139,120	15,000,000	15,000,000	.0	.1,929	.0	.0	6.279	6.670	JAJO	198,839	611,362	08/02/2018	10/15/2031
14318M-AH-2	Carmax Auto Owner Trust -CARMX 2022-3 D				2 B FE	7,497,870	.93.6467	7,023,506	7,500,000	7,497,870	.0	.223	.0	.0	6.200	6.210	MON	20,667	207,958	07/12/2022	01/16/2029
14576A-AA-0	Cars Net Lease Mortgage -CARM 2020-1A A1				1 A FE	13,714,706	.84.9161	11,650,485	13,720,000	13,714,706	.0	.275	.0	.0	2.010	2.019	MON	12,257	277,171	11/18/2020	12/15/2050
14576A-AB-8	Cars Net Lease Mortgage -CARM 2020-1A A2				1 A FE	1,469,169	.82.8343	1,217,663	1,470,000	1,469,169	.0	.43	.0	.0	2.480	2.492	MON	4,663	36,844	11/18/2020	12/15/2050
14576A-AC-6	Cars Net Lease Mortgage -CARM 2020-1A A3				1 F FE	2,226,190	.83.2252	1,853,841	2,227,500	2,226,190	.0	.6	.0	.0	3.100	3.111	MON	8,828	69,610	11/18/2020	12/15/2050
14686G-AD-8	Carvana Auto Receivables-CRVNA 2022-N1 C				1 E FE	11,299,218	.96.4423	10,897,984	11,300,000	11,299,218	.0	.489	.0	.0	3.320	3.326	MON	21,884	297,002	03/11/2022	12/11/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
14855J-AB-1	Castlelake Aircraft Secu-CLAST 2016-1 A .....	.....	.....	.....	1.G FE	376,499	.90.9167	343,893	378,250	376,499	.0	2,417	.0	.0	4.450	4.532	MON	9,371	9,371	10/14/2022	08/15/2041
14856G-AA-8	Castlelake Aircraft Stru-CLAST 2021-1A A .....	.....	.....	.....	1.G FE	3,095,202	.83.5601	2,586,354	3,095,202	3,095,202	.0	96	.0	.0	3.474	3.481	MON	4,779	119,893	01/20/2021	01/15/2046
19421U-AB-0	College Avenue Student L-CASL 2019-A A2 .....	.....	.....	.....	1.A FE	2,896,669	.89.7523	2,600,517	2,897,437	2,896,669	.0	341	.0	.0	3.280	3.291	MON	1,584	104,288	06/26/2019	12/28/2048
19424K-AB-9	College Avenue Student L-CASL 2021-A A2 .....	.....	.....	.....	1.A FE	5,751,601	.84.6692	4,870,701	5,752,627	5,751,601	.0	425	.0	.0	1.600	1.606	MON	1,534	104,807	02/09/2021	07/25/2051
19424K-AD-5	College Ave Student Loan-CASL 2021-A C .....	.....	.....	.....	1.F FE	3,728,203	.88.6057	3,544,226	4,000,000	3,728,203	.0	48,203	.0	.0	2.920	6.559	MON	1,947	50,613	07/25/2022	07/25/2051
19425A-AD-6	College Avenue Student L-CASL 2021-B C .....	.....	.....	.....	1.F FE	3,633,601	.83.4037	3,030,892	3,634,000	3,633,601	.0	95	.0	.0	2.720	2.723	MON	1,647	98,845	06/23/2021	06/25/2052
19425A-AE-4	College Avenue Student L-CASL 2021-B D .....	.....	.....	.....	2.B FE	2,998,938	.85.7671	2,573,012	3,000,000	2,998,938	.0	226	.0	.0	3.780	3.789	MON	1,890	113,400	06/23/2021	06/25/2052
20267U-AA-7	COMMONBOND STUDENT LOAN -SERIES 16-B CLA .....	.....	.....	.....	1.A FE	685,222	.94.4562	647,400	685,222	685,222	.0	33	.0	.0	2.730	2.734	MON	312	24,725	10/13/2016	10/25/2040
210795-QB-9	CONTL AIRLINES 2012-2 A-FIRST LIEN .....	.....	.....	.....	2.B FE	5,532,445	.95.2580	5,258,405	5,520,171	5,532,445	.0	(9,706)	.0	.0	4.000	3.844	AO	38,028	232,106	02/05/2014	10/29/2024
21872B-AG-1	CoreVest American Financ-CAFL 2018-1 B .....	.....	.....	.....	1.D FE	2,999,467	.99.4216	2,982,648	3,000,000	2,999,467	.0	3,616	.0	.0	4.003	4.126	MON	10,008	120,090	06/27/2018	06/01/2051
21872M-AA-0	CoreVest American Financ-CAFL 2018-2 A .....	.....	.....	.....	1.A FE	4,965,608	.98.8651	4,909,480	4,965,838	4,965,608	.0	453	.0	.0	4.026	4.034	MON	16,660	374,686	12/06/2018	11/01/2052
21872M-AG-0	CoreVest American Financ-CAFL 2018-2 B .....	.....	.....	.....	1.D FE	3,245,089	.92.7785	3,011,002	3,245,365	3,245,089	.0	67	.0	.0	4.559	4.562	MON	12,330	147,956	12/06/2018	11/01/2052
22549N-AA-9	Credit Suisse ABS Repack-CSRT 2018-PS1 A .....	.....	.....	.....	1.D FE	35,321,159	.90.8169	32,700,462	36,007,007	35,321,159	.0	196,039	.0	.0	5.658	1.852	JAJO	822,145	1,200,460	07/25/2018	01/01/2037
23345A-AE-3	DT Auto Owner Trust 2022-DTAOT 2022-2A C .....	.....	.....	.....	1.F FE	9,999,706	.95.2005	9,520,052	10,000,000	9,999,706	.0	39	.0	.0	4.720	4.721	MON	20,978	292,378	05/12/2022	03/15/2028
24736X-AA-6	DELTA AIR LINES 2015-1AA-FIRST LIEN .....	.....	.....	.....	1.F FE	4,867,929	.91.3614	4,446,593	4,867,037	4,867,929	.0	(332)	.0	.0	3.625	3.619	JJ	74,003	180,107	08/10/2015	07/30/2027
24736Y-AA-4	Delta Air Lines 2015-1 C-DAL 3 7/8 07/30 .....	.....	.....	.....	2.A FE	2,432,257	.88.4375	2,152,167	2,433,546	2,432,257	.0	418	.0	.0	3.875	3.890	JJ	39,554	96,265	08/10/2015	07/30/2027
25216A-AA-2	Dext ABS 2020-1 LLC-DEXT 2020-1 A .....	.....	.....	.....	1.A FE	498,931	.98.5239	491,570	498,931	498,931	.0	22	.0	.0	1.460	1.462	MON	324	13,971	10/28/2020	02/16/2027
25273C-AB-6	Diamond Resorts Owner Tr-DROT 2021-1A B .....	.....	.....	.....	1.F FE	1,659,182	.93.0048	1,550,551	1,667,173	1,659,182	.0	8,338	.0	.0	2.050	2.462	MON	1,044	41,819	01/21/2022	11/21/2033
25402J-AA-7	DBRG 2021-1A A2 .....	.....	.....	.....	2.B FE	8,275,000	.85.8116	7,100,907	8,275,000	8,275,000	.0	.0	.0	.0	3.933	3.933	MJSD	5,424	325,456	06/30/2021	09/25/2051
26208L-AC-2	DRIVEN BRANDS FUNDING LL-HONK 2018-1A A2 .....	.....	.....	.....	2.C FE	6,685,635	.92.3831	6,175,810	6,685,000	6,685,635	.0	(292)	.0	.0	4.739	4.734	JAJO	62,480	318,221	04/17/2018	04/20/2048
26209X-AC-5	DRIVEN BRANDS FUNDING LL-HONK 2020-2A A2 .....	.....	.....	.....	2.C FE	4,912,500	.82.6822	4,061,763	4,912,500	4,912,500	.0	3,237	.0	.0	3.237	3.237	JAJO	31,362	159,710	10/29/2020	01/20/2051
26209X-AF-8	DRIVEN BRANDS FUNDING LL-HONK 2022-1A A2 .....	.....	.....	.....	2.C FE	35,000,000	.99.3569	34,774,932	35,000,000	35,000,000	.0	.0	.0	.0	7.393	7.393	JAJO	510,322	618,137	09/28/2022	10/20/2052
26929H-AB-1	EIWC Master Issuer LLC-IWAX 2022-1A A2 .....	.....	.....	.....	2.B FE	7,189,286	.91.7821	6,849,238	7,462,500	7,189,286	.0	20,644	.0	.0	5.500	6.064	MJSD	18,242	303,296	03/28/2022	03/15/2052
28416L-AB-8	Elara HGV Timeshare Issu-EHGV 2021-A B .....	.....	.....	.....	1.F FE	2,284,671	.90.1151	2,088,895	2,318,030	2,284,671	.0	17,697	.0	.0	1.740	2.423	MON	672	44,199	01/21/2022	08/27/2035
28628C-AB-2	ELFI Graduate Loan Progr-ELFI 2022-A B .....	.....	.....	.....	1.C FE	11,231,961	.79.2748	10,662,461	13,450,000	11,231,961	.0	362,632	.0	.0	0.000	6.043	MON	.0	.0	06/09/2022	08/26/2047
30260G-AA-4	FCI Funding 2021-1 LLC-FCITL 2021-1A A .....	.....	.....	.....	1.A FE	5,586,699	.95.2980	5,324,134	5,586,828	5,586,699	.0	426	.0	.0	1.130	1.135	MON	2,806	103,272	04/06/2021	04/15/2033
302637-AG-8	FS KKR MM CLO 1 LLC-FSKMM 2019-1A A1R .....	.....	.....	.....	1.A FE	15,000,000	.98.3540	14,753,100	15,000,000	15,000,000	.0	.0	.0	.0	5.929	5.929	JAJO	187,756	558,133	12/14/2020	01/15/2031
302637-AJ-2	FS KKR MM CLO 1 LLC-FSKMM 2019-1A A2R .....	.....	.....	.....	1.A FE	2,250,000	.96.6666	2,174,999	2,250,000	2,250,000	.0	.0	.0	.0	6.329	6.328	JAJO	30,063	92,845	12/14/2020	01/15/2031
302637-AL-7	FS KKR MM CLO 1 LLC-FSKMM 2019-1A B1R .....	.....	.....	.....	1.C FE	5,000,000	.93.1126	4,655,630	5,000,000	5,000,000	.0	.0	.0	.0	6.679	6.678	JAJO	70,502	224,065	12/14/2020	01/15/2031
33768D-AB-4	FirstKey Homes 2022-SFRA-FKH 2022-SFRA C .....	.....	.....	.....	1.G FE	8,245,126	.87.7583	7,240,057	8,250,000	8,245,126	.0	489	.0	.0	3.800	3.811	MON	(26,125)	189,842	05/12/2022	01/01/2039
33768N-AC-6	FIRSTKEY HOMES TRUST-FKH 2022-SFR1 B .....	.....	.....	.....	1.D FE	4,999,919	.92.5388	4,626,941	5,000,000	4,999,919	.0	33	.0	.0	4.493	4.493	MON	18,721	157,879	04/05/2022	05/01/2039
33830J-AA-3	Five Guys Funding LLC-GUYS 2017-1A A2 .....	.....	.....	.....	2.C FE	10,862,500	.94.2830	10,241,491	10,862,500	10,862,500	.0	.0	.0	.0	4.600	4.600	JAJO	91,607	501,425	05/24/2017	07/25/2047
33830J-AB-1	Five Guys Funding LLC-GUYS 2017-1AW 1AW .....	.....	.....	.....	1.C FE	1,945,269	.97.6620	1,928,825	1,975,000	1,945,269	.0	3,735	.0	.0	3.600	3.843	JAJO	13,035	71,349	10/29/2020	07/25/2047
33938M-AA-7	Flexential Issuer 2021-1 .....	.....	.....	.....	1.G FE	26,982,966	.89.1224	24,731,469	27,750,000	26,982,966	.0	101,053	.0	.0	3.250	4.022	MON	15,031	701,052	07/25/2022	11/27/2051
33938M-AB-5	Flexential Issuer 2021-1 .....	.....	.....	.....	2.B FE	10,119,073	.85.7525	9,004,014	10,500,000	10,119,073	.0	40,345	.0	.0	3.720	4.706	MON	6,510	326,587	07/08/2022	11/27/2051
33938M-AC-7	Flexential Issuer 2021-1-FLX 2021-1A C .....	.....	.....	.....	3.C FE	41,415,317	.82.0707	35,290,418	43,000,000	41,415,317	.0	142,738	.0	.0	6.930	7.884	MON	49,665	2,296,140	06/09/2022	11/27/2051
34417M-AB-3	FOCUS Brands Funding LLC-FOCUS 2017-1A A .....	.....	.....	.....	2.B FE	5,670,000	.87.7915	4,977,778	5,670,000	5,670,000	.0	.0	.0	.0	5.093	5.093	JAJO	48,931	290,165	03/21/2017	04/30/2047
34417Q-AA-6	FOCUS Brands Funding LLC-FOCUS 2018-1 A2 .....	.....	.....	.....	2.B FE	11,521,480	.91.3083	10,518,716	11,520,000	11,521,480	.0	(553)	.0	.0	5.184	5.178	JAJO	101,192	600,031	10/19/2018	10/30/2048
34417Q-AB-4	FOCUS Brands Funding LLC-FOCUS 2018-1W A .....	.....	.....	.....	1.C FE	6,661,632	.93.9668	6,661,632	6,272,500	6,661,632	.0	61,154	.0	.0	4.434	2.135	JAJO	116,657	278,419	09/05/2019	10/29/2048
345295-AG-4	Ford Credit Auto Owner T-FORD 2022-D C .....	.....	.....	.....	1.E FE	6,998,240	.99.7111	6,979,774	7,000,000	6,998,240	.0	9	.0	.0	6.460	6.469	MON	20,098	48,988	11/17/2022	05/15/2030
35041J-AA-3	Foundation Finance Trust-FFIN 2019-1A A .....	.....	.....	.....	1.A FE	1,295,044	.97.7796	1,275,394	1,304,356	1,295,044	.0	25,654	.0	.0	3.860	5.237	MON	2,238	73,031	03/20/2019	11/15/2034
380241-AA-7	Goddard Funding LLC-GDRD 2022-1 A2 .....	.....	.....	.....	2.C FE	16,904,606	.93.0530	15,725,957	16,900,000	16,904,606	.0	(316)	.0	.0	6.864	6.859	JAJO	196,558	425,339	08/17/2022	10/30/2052
38150Y-AD-5	Goldman Home Improvement-GHIT 2022-GRN1 .....	.....	.....	.....	2.C FE	10,040,651	.95.4246	9,767,657	10,236,000	10,040,651	.0	24,378	.0	.0	7.300	8.022	MON	12,454	319,648	07/21/2022	06/25/2052
38177B-AA-0	Golub Capital BDC CLO 20-GOBCD 2018-1A A .....	.....	.....	.....	1.A FE	40,038,416	.97.9920	39,196,800	40,000,000	40,038,416	.0	30,314	.0	.0	5.723	4.524	JAJO	464,164	1,356,978	11/01/2018	01/20/2031
38217U-AC-6	Goodgreen 2021-1 Trust-GOOG 2021-1A C .....	.....	.....	.....	2.B FE	1,833,988	.85.5390	1,708,531	1,997,371	1,833,988	.0	41,116	.0	.0	5.740	8.115	MON	78,437	78,437	05/13/2022	10/15/2056

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
411707-AD-4	Hardee's Funding LLC-HNGRY 2018-1A A211				2.B FE	13,405,000	94.0591	12,608,622	13,405,000	13,405,000	0	0	0	0	4.959	4.959	1/1/20	20,312	668,881	05/23/2018	06/20/2048
411707-AH-5	Hardee's Funding LLC-HNGRY 2020-1A A2				2.B FE	11,760,000	85.3111	10,032,585	11,760,000	11,760,000	0	0	0	0	3.981	3.981	1/1/20	14,305	471,005	11/13/2020	12/20/2050
42770Q-AA-0	HERO Funding Trust 2014—HERO 2014-2A A				1.A FE	1,071,839	96.3180	1,032,675	1,071,839	1,071,839	0	121	0	0	3.990	3.999	1/1/20	12,002	49,895	10/16/2014	09/21/2040
42770R-AA-8	HERO Funding Trust 2014—HERO 2014-1A A				1.A FE	667,659	97.8452	653,273	667,659	667,659	0	0	0	0	4.750	4.747	1/1/20	8,897	37,397	03/06/2014	09/20/2038
42806M-AE-9	Hertz Vehicle Financing —HERTZ 2021-2A A				1.A FE	5,100,608	86.4174	5,162,575	5,974,000	5,100,608	0	34,189	0	0	1.680	6.020	1/1/20	1,673	18,400	10/27/2022	12/27/2027
43133R-AA-8	Hildene Trups Rescuritiz—HITRR 2019-P10B				1.G FE	12,000,000	100.0258	12,003,096	12,000,000	12,000,000	0	61,286	0	0	5.893	6.539	1/1/20	301,186	476,277	10/01/2019	07/11/2033
43283G-AD-4	Hilton Grand Vacations T-HGVT 2022-2A D				3.C FE	6,236,644	96.2885	6,005,863	6,237,362	6,236,644	0	188	0	0	8.730	8.734	1/1/20	9,075	220,126	08/01/2022	01/25/2037
433674-AA-6	NRZ Excess Spread-Collat-NZES 2020-PLS1				2.C FE	3,801,963	90.7606	3,450,688	3,801,969	3,801,963	0	3	0	0	3.844	3.844	1/1/20	2,436	174,978	12/14/2020	12/25/2025
45112A-AA-5	ICON BRAND HOLDINGS LLC-SERIES 2012-1A C				6. *	2,803,760	34.2540	960,400	2,803,760	960,400	(1,843,360)	0	0	0	4.229	4.229	1/1/20	21,738	118,571	11/16/2012	01/25/2043
45783N-AA-5	InStar Leasing III LLC-INSTR 2021-1A A				1.F FE	4,540,744	83.8963	3,811,354	4,542,936	4,540,744	0	479	0	0	2.300	2.311	1/1/20	4,644	107,780	02/03/2021	02/15/2054
46616M-AA-8	J G WENTWORTH RECV XXII-ASSET BKD NT 10-				1.A FE	553,244	93.9247	521,780	555,530	553,244	0	1,344	0	0	3.820	4.037	1/1/20	943	24,743	10/29/2010	12/15/2048
46616M-AB-6	JG Wentworth XXII LLC-HENDR 2010-3A B				1.A FE	214,458	99.6475	213,687	214,443	214,458	0	(9)	0	0	6.850	6.846	1/1/20	653	17,127	10/29/2010	12/15/2050
46616P-AA-1	JGIWPT XXIII LLC-HENDR 2011-1A A				1.A FE	2,296,756	89.8639	2,064,499	2,297,363	2,296,756	0	103	0	0	4.700	4.705	1/1/20	4,799	114,406	06/08/2011	10/15/2056
46616Q-AA-9	321 HENDERSON RECEIVABLE-SERIES 2011-2A				1.A FE	3,455,906	89.8859	3,108,118	3,457,849	3,455,906	0	264	0	0	4.940	4.950	1/1/20	7,592	178,931	12/01/2011	09/15/2056
46616V-AA-8	J G WENTWORTH RECV XXV-ASSET BKD NT 12-1				1.A FE	2,120,726	86.0845	1,811,746	2,104,614	2,120,726	0	(2,486)	0	0	4.210	4.022	1/1/20	4,184	92,239	03/13/2012	02/16/2065
46617A-AA-3	JGIWPT XXVII LLC-ASSET BKD SERIES 2012-3		4		1.A FE	3,376,139	81.6157	2,781,240	3,407,727	3,376,139	0	1,549	0	0	3.220	3.380	1/1/20	14,158	116,237	01/28/2016	09/15/2065
46617F-AA-2	JGIWPT XXVIII LLC-HENDR 2013-1A A				1.A FE	3,691,530	81.6566	3,023,066	3,702,169	3,691,530	0	356	0	0	3.220	3.223	1/1/20	5,629	125,420	04/19/2018	04/15/2067
46617J-AA-4	JGIWPT XXIX LLC-HENDR 2013-2A A				1.A FE	3,931,045	85.3025	3,353,333	3,931,107	3,931,045	0	8	0	0	4.210	4.210	1/1/20	7,356	173,313	07/23/2013	03/15/2062
46617L-AA-9	JGIWPT XXX LLC-HENDR 2013-3A A				1.A FE	6,686,003	85.5429	5,723,520	6,690,819	6,686,003	0	699	0	0	4.080	4.092	1/1/20	12,133	285,407	10/10/2013	01/17/2073
46617T-AA-2	JGIWPT XXXI LLC-ASSET BKD SERIES 2014-1 C		4		1.A FE	4,510,895	84.5546	3,816,468	4,513,614	4,510,895	0	375	0	0	3.960	3.970	1/1/20	7,944	189,250	02/10/2014	03/15/2063
46619R-AA-4	J G WENTWORTH XXVY LLC-ASSET BKD NT 15-		4		1.A FE	8,356,010	82.4754	6,883,165	8,345,719	8,356,010	0	(1,228)	0	0	3.870	3.852	1/1/20	14,355	336,397	09/17/2015	03/15/2058
46619X-AA-1	JG Wentworth XXXVI LLC-HENDR 2015-3A A				1.A FE	5,332,402	81.0714	4,326,442	5,336,580	5,332,402	0	367	0	0	4.080	4.090	1/1/20	9,677	226,488	11/20/2015	03/17/2070
46620J-AA-9	J.G. Wentworth XXXVIII L-HENDR 2017-1A A				1.A FE	5,265,009	82.5187	4,348,302	5,269,478	5,265,009	0	(886)	0	0	3.990	3.945	1/1/20	27,002	234,104	03/15/2017	08/16/2060
46620V-AA-2	J.G. Wentworth XXXIX LLC-HENDR 2017-2A A				1.A FE	7,631,743	79.0578	6,033,489	7,631,743	7,631,743	0	0	0	0	3.530	3.530	1/1/20	11,973	277,392	08/01/2017	09/15/2072
46636S-AB-9	Jack in the Box Funding —JACK 2019-1A A2				2.B FE	19,650,000	90.5019	17,783,623	19,650,000	19,650,000	0	0	0	0	4.476	4.476	1/1/20	87,953	884,234	06/28/2019	08/25/2049
46636S-AC-7	Jack in the Box Funding —JACK 2019-1A A2				2.B FE	29,803,675	89.5133	28,226,587	31,533,400	29,803,675	0	94,352	0	0	4.970	6.397	1/1/20	156,721	820,620	09/09/2022	08/25/2049
46636S-AD-5	Jack in the Box Funding —JACK 2022-1A A2				2.B FE	9,850,000	87.5545	8,624,118	9,850,000	9,850,000	0	0	0	0	3.445	3.445	1/1/20	33,933	304,414	02/02/2022	02/26/2052
46636S-AE-3	Jack in the Box Funding —JACK 2022-1A A2				2.B FE	4,538,739	77.9300	3,949,356	5,067,825	4,538,739	0	26,036	0	0	4.136	6.023	1/1/20	20,961	126,561	07/29/2022	02/26/2052
46655H-AB-9	JCP Direct Lending CLO 2-JCPDL 2022-11 A				1.A PL	17,432,686	97.9886	17,082,045	17,432,686	17,432,686	0	0	0	0	2.250	2.250	1/1/20	231,110	231,110	12/05/2022	05/19/2035
46655H-AD-5	JCP Direct Lending CLO 2-JCPDL 2022-11 B				1.C PL	2,103,945	95.4666	2,008,565	2,103,945	2,103,945	0	0	0	0	2.550	2.550	1/1/20	27,737	27,737	12/05/2022	05/19/2035
46655H-AF-0	JCP Direct Lending CLO 2-JCPDL 2022-11 C				1.F PL	2,254,227	91.9679	2,073,165	2,254,227	2,254,227	0	0	0	0	3.000	3.000	1/1/20	34,962	34,962	12/05/2022	05/19/2035
46655H-AH-6	JCP Direct Lending CLO 2-JCPDL 2022-11 D				2.B PL	3,005,636	90.8623	2,730,990	3,005,636	3,005,636	0	0	0	0	4.750	4.750	1/1/20	73,810	73,810	12/05/2022	05/19/2035
48555H-AA-8	Kapitus Asset Securitiza-KAPT 2022-1A A				1.C FE	6,749,983	94.1279	6,353,630	6,750,000	6,749,983	0	(3)	0	0	3.382	3.382	1/1/20	13,317	204,822	02/02/2022	07/10/2028
50543L-AA-0	LABRADOR AVIATION FINANC-SERIES 2016-1A				3.A FE	9,022,938	79.3012	7,184,723	9,060,043	9,022,938	0	38,656	0	0	4.300	4.731	1/1/20	17,315	409,405	12/08/2016	01/15/2042
52605A-AB-3	Lendingpoint 2022-A Asse-LENDINGPOINT 20				1.G FE	17,999,606	95.5888	17,205,980	18,000,000	17,999,606	0	569	0	0	2.410	2.413	1/1/20	19,280	403,675	01/20/2022	06/15/2029
53950T-AA-3	Loan Asset Issuer LLC, Series 2021 M-2 -				1.D PL	123,255,000	88.8400	109,499,742	123,255,000	123,255,000	0	0	0	0	1.991	1.991	1/1/20	143,150	2,321,155	06/16/2022	11/10/2033
53950T-AB-1	Loan Asset Issuer LLC, Series 2021 M-2 -				1.G PL	49,800,000	89.5200	44,580,960	49,800,000	49,800,000	0	36,810	0	0	2.981	2.981	1/1/20	86,598	1,239,927	06/16/2022	11/10/2033
53950T-AC-9	Loan Asset Issuer LLC, Series 2021 M-2 -				2.C PL	24,900,000	89.4000	22,260,600	24,900,000	24,900,000	0	0	0	0	3.967	3.967	1/1/20	57,621	808,496	06/16/2022	11/10/2033
53950T-AD-7	Loan Asset Issuer LLC, Series 2021 M-2 -				3.C PL	19,920,000	87.7600	17,481,792	19,920,000	19,920,000	0	0	0	0	4.948	4.948	1/1/20	57,496	814,701	06/16/2022	11/10/2033
53950T-AE-5	Loan Asset Issuer LLC, Series 2021 M-2 -				4.C PL	19,920,000	87.4200	17,414,064	19,920,000	19,920,000	0	0	0	0	6.900	6.900	1/1/20	80,178	1,108,207	06/16/2022	11/10/2033
53950T-AF-2	Loan Asset Issuer LLC, Series 2021 M-2 -				5.B PL	4,980,000	100.0300	4,981,494	4,980,000	4,980,000	0	0	0	0	12.661	12.657	1/1/20	36,780	540,055	06/16/2022	11/10/2033
543190-AA-0	LONGTRAIN LEASING III LL-SERIES 2015-1A				1.F FE	8,293,360	96.3780	8,045,073	8,347,420	8,293,360	0	97,920	0	0	2.980	3.772	1/1/20	11,056	252,371	03/17/2017	01/15/2045
543190-AB-8	Longtrain Leasing III LL-TRAN 2015-1A A				1.F FE	50,051,983	91.0984	45,710,096	50,176,635	50,051,983	0	299,144	0	0	4.060	4.188	1/1/20	90,541	2,044,773	09/19/2018	01/15/2045
55280H-AW-7	MCF CLO IV LLC-MCFOL 2014-1A ARR				1.A FE	41,237,500	94.4160	38,934,798	41,237,500	41,237,500	0	0	0	0	5.743	5.742	1/1/20	480,196	1,407,064	09/28/2021	10/20/2033
55281F-AP-5	MCF CLO VII LLC-MCFOL 2017-3A BR				1.C FE	2,750,000	92.5575	2,545,331	2,750,000	2,750,000	0	0	0	0	6.143	6.142	1/1/20	34,253	105,003	05/26/2021	07/20/2033

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
55283A-AA-7	MCA Fund Holding LLC-MCA 2020-1 A				1.F FE	18,436,932	.94.0408	17,311,845	18,408,862	18,436,932	.0	(20,157)	.0	.0	3.250	3.141	FIAN	99,715	700,251	01/19/2022	11/01/2035
55400U-AB-9	MVW 2022-1 LLC-MVWOT 2022-1A B				1.F FE	8,865,554	.95.6600	8,481,700	8,866,506	8,865,554	.0	.217	.0	.0	4.400	4.404	MON	11,921	266,900	05/12/2022	11/21/2039
57109N-AB-5	Marlette Funding Trust 2-MFT 2022-3A B				1.D FE	2,980,596	.98.2947	2,948,840	3,000,000	2,980,596	.0	1,874	.0	.0	5.950	6.207	MON	35,700	50,575	09/12/2022	11/15/2032
57109N-AC-3	Marlette Funding Trust 2-MFT 2022-3A C				1.G FE	3,799,153	.98.1658	3,730,302	3,800,000	3,799,153	.0	.142	.0	.0	6.890	6.897	MON	52,364	74,182	09/12/2022	11/15/2032
57109N-AD-1	Marlette Funding Trust 2-MFT 2022-3A D				2.C FE	5,298,763	.99.5762	5,277,540	5,300,000	5,298,763	.0	.219	.0	.0	7.800	7.806	MON	82,680	117,130	09/12/2022	11/15/2032
57430U-30-1	Maryland Trust 2006-1-MDIBS 2006-1A A				5.C FE	1,046,841	.26.5800	.894,645	3,365,856	1,046,841	.0	.166,113	326,298	.0	5.550	35.027	MON	57,598	76,046	06/17/2011	12/10/2065
585481-AA-0	Mid-State Capital Corp 2-MDST 2005-1 A				1.E FE	564,513	.93.1024	.525,575	.564,513	.564,513	.0	.0	.0	.0	5.745	5.745	MON	2,703	38,073	03/01/2010	01/01/2040
59549W-AA-1	Mid-State Trust XI-MDST 11 A1				1.G FE	940,099	.96.9502	.911,428	.940,099	.940,099	.0	.0	.0	.0	4.864	4.864	MON	2,032	52,803	06/18/2003	07/15/2038
61033M-AB-0	Monroe Capital Income PI-MCIP 2022-1A A				1.F FE	4,438,400	.96.3540	4,335,929	4,500,000	4,438,400	.0	11,376	.0	.0	4.050	4.445	JAJO	33,919	133,650	03/16/2022	04/30/2032
61946K-AA-2	Mosaic Solar Loan Trust -MSAIC 2022-3A A				1.D FE	5,999,727	.98.7794	5,926,765	6,000,000	5,999,727	.0	(19)	.0	.0	6.160	6.161	MON	16,427	16,427	12/12/2022	06/20/2053
61946Q-AB-7	Mosaic Solar Loan Trust -MSAIC 2022-1A B				1.G FE	26,269,556	.82.4769	22,450,887	27,220,815	26,269,556	.0	175,778	.0	.0	3.160	4.048	MON	26,283	713,697	03/10/2022	01/20/2053
61946U-AB-8	Mosaic Solar Loan Trust -MSAIC 2022-2A B				1.G FE	6,257,685	.88.2367	5,575,258	6,318,524	6,257,685	.0	6,273	.0	.0	5.130	5.431	MON	9,904	128,414	08/16/2022	01/21/2053
62878H-AA-9	NATF AMERICA LLC-AUTO LOAN				1.C FE	70,000,000	.90.5400	63,378,000	70,000,000	70,000,000	.0	.0	.0	.0	5.210	5.209	MAJD	162,089	2,137,547	05/18/2022	06/15/2029
62878Y-AA-2	NOTHING BUNDT Cakes-BUNDT 2021-1 A2				2.C FE	4,962,500	.84.5736	4,196,963	4,962,500	4,962,500	.0	.0	.0	.0	2.989	2.989	JAJO	25,134	148,483	07/16/2021	07/30/2051
62947A-AF-0	NP SPE X LP-NPRL 2021-1A A1				1.F FE	26,778,454	.85.9477	23,015,460	26,778,454	26,778,454	.0	7,692	.0	.0	2.230	2.073	MON	69,745	598,392	03/23/2021	03/19/2051
62953J-AA-3	NXT Capital CLO 2017-2 L-NKTC 2017-2A A				1.A FE	4,211,998	.99.2475	4,180,302	4,211,998	4,211,998	.0	2,229	.0	.0	5.908	6.494	JAJO	47,007	188,585	10/06/2017	10/25/2029
62955M-AA-4	NRZ FHT Excess LLC-NZES 2020-FHT1 A				2.C FE	3,361,292	.90.7385	3,050,556	3,361,921	3,361,292	.0	(563)	.0	.0	4.212	4.214	MON	2,360	158,897	11/12/2020	11/25/2025
62960N-AA-5	NXT Capital CLO 2020-1 L-NKTC 2020-1A A				1.A FE	18,000,000	.96.9592	17,452,656	18,000,000	18,000,000	.0	.0	.0	.0	6.093	6.092	JAJO	222,379	678,165	12/04/2020	01/20/2031
63940Q-AD-5	Navient Private Educatio-NAVSL 2018-BA B				1.C FE	6,686,124	.88.5366	6,197,560	7,000,000	6,686,124	.0	39,405	.0	.0	4.130	5.352	MON	12,849	181,491	05/27/2022	12/15/2059
63940V-AC-6	Navient Private Educatio-NAVSL 2018-CA B				1.B FE	2,050,171	.92.5862	2,073,930	2,240,000	2,050,171	.0	6,171	.0	.0	4.220	7.642	MON	4,201	12,079	11/22/2022	06/16/2042
63941F-AD-8	Navient Private Education Ref				1.C FE	979,039	.77.2227	.849,450	1,100,000	979,039	.0	8,977	.0	.0	3.160	5.165	MON	1,545	19,215	06/01/2022	11/15/2068
63942A-AB-2	Navient Private Educatio-NAVSL 2020-1A A				1.A FE	5,547,644	.96.4305	5,500,423	5,704,031	5,547,644	.0	473	.0	.0	5.318	5.666	MON	14,324	14,324	12/14/2022	04/15/2069
63942P-AB-9	Navient Private Educatio-NAVSL 2022-BA B				1.C FE	9,997,698	.88.7268	8,872,683	10,000,000	9,997,698	.0	194	.0	.0	4.920	4.923	MON	21,867	295,200	05/17/2022	10/15/2070
64016N-AA-5	Neighborly Issuer LLC-NBLY 2021-1A A2				2.C FE	1,386,882	.79.9469	1,259,963	1,576,000	1,386,882	.0	7,332	.0	.0	3.584	5.440	JAJO	9,571	23,728	08/17/2022	04/30/2051
64016N-AC-1	Neighborly Issuer 2022-1-NBLY 2022-1A A2				2.C FE	3,542,086	.78.9778	3,135,419	3,970,000	3,542,086	.0	34,365	.0	.0	3.695	5.880	JAJO	24,856	98,479	06/02/2022	01/30/2052
64033Q-AB-5	Nelnet Student Loan Trus-NSLT 2015-2A A2				1.A FE	6,727,127	.97.2578	6,771,186	6,962,098	6,727,127	.0	.0	.0	.0	4.989	4.989	MON	21,425	21,425	12/15/2022	09/25/2042
64034Y-AC-5	Nelnet Student Loan Trus-NSLT 2021-DA B				1.C FE	6,299,026	.82.3047	5,185,197	6,300,000	6,299,026	.0	180	.0	.0	2.900	2.903	MON	5,583	182,700	10/21/2021	04/20/2062
64830Y-AC-1	NRZ Excess Spread-Collat-NZES 2021-FNT1				2.C FE	5,151,254	.88.5248	4,560,173	5,151,296	5,151,254	.0	21	.0	.0	2.981	2.981	MON	2,559	174,573	03/12/2021	03/25/2026
67181D-AA-9	Oak Street Investment Gr-OAKIG 2020-1A A				1.A FE	6,263,847	.89.9243	5,632,717	6,263,847	6,263,847	.0	192	.0	.0	1.850	1.850	MON	3,541	116,953	11/06/2020	11/20/2050
67181D-AB-7	Oak Street Investment Gr-OAKIG 20-1A CL				1.A FE	6,262,403	.86.2749	5,404,125	6,263,847	6,262,403	.0	817	.0	.0	2.210	2.218	MON	4,230	139,711	11/06/2020	11/20/2050
67181D-AH-4	Oak Street Investment Gr-OAKIG 2020-1A B				2.A FE	3,077,859	.91.0413	2,731,239	3,000,000	3,077,859	.0	(11,204)	.0	.0	5.570	4.976	MON	5,106	144,356	02/18/2022	11/20/2050
67181D-AM-3	Oak Street Investment Gr-OAKIG 2021-2A A				1.F FE	3,000,000	.84.1384	2,524,153	3,000,000	3,000,000	.0	.194	.0	.0	3.240	3.240	MON	2,970	97,200	11/19/2021	11/20/2051
67181D-AP-6	Oak Street Investment Gr-OAKIG 2021-2A B				2.A FE	4,499,737	.84.8096	3,816,432	4,500,000	4,499,737	.0	.589	.0	.0	4.520	4.521	MON	6,215	203,400	11/19/2021	11/20/2051
67190A-AA-4	Oak Street Investment Gr-OAKIG 2021-1A A				1.A FE	8,207,787	.88.4782	7,564,168	8,549,188	8,207,787	.0	7,701	.0	.0	1.480	1.483	MON	3,866	90,350	01/20/2021	01/20/2051
67190A-AB-2	Oak Street Investment Gr-OAKIG 2021-1A A				1.A FE	5,224,149	.84.7687	4,428,745	5,224,504	5,224,149	.0	349	.0	.0	1.930	1.932	MON	3,081	102,251	01/20/2021	01/20/2051
67190A-AC-0	Oak Street Investment Gr-OAKIG 2021-1A A				1.F FE	8,268,127	.89.1991	7,849,524	8,268,127	8,268,127	.0	75,377	.0	.0	2.800	4.941	MON	7,529	126,996	08/18/2022	01/20/2051
67190A-AD-8	Oak Street Investment Gr-OAKIG 2021-1A A				1.F FE	8,960,839	.86.1224	7,867,277	9,135,000	8,960,839	.0	26,024	.0	.0	3.260	3.677	MON	9,099	257,267	03/08/2022	01/20/2051
68267E-AD-6	OnelMain Direct Auto Rece-ODART 2019-1A D				2.A FE	4,417,769	.92.4044	4,250,603	4,600,000	4,417,769	.0	18,839	.0	.0	4.680	6.043	MON	10,166	81,926	08/16/2022	04/14/2031
68267H-AA-9	OnelMain Financial Issuan-OMFIT 2022-S1 D				2.B FE	3,102,684	.90.3702	3,072,586	3,400,000	3,102,684	.0	12,934	.0	.0	5.200	7.350	MON	8,349	52,549	09/27/2022	05/14/2035
682687-AC-2	OnelMain Direct Auto Rece-ODART 2021-1A C				1.C FE	2,565,506	.89.1159	2,495,244	2,800,000	2,565,506	.0	42,881	.0	.0	1.420	5.058	MON	1,878	21,758	07/05/2022	07/14/2028
68268V-AB-1	OnelMain Financial Issuan-OMFIT 2022-2A B				1.C FE	9,997,552	.94.2282	9,422,820	10,000,000	9,997,552	.0	.215	.0	.0	5.240	5.248	MON	68,411	163,022	08/31/2022	10/14/2034
68268V-AC-9	OnelMain Financial Issuan-OMFIT 2022-2A C				1.F FE	6,999,663	.94.3329	6,603,302	7,000,000	6,999,663	.0	.22	.0	.0	5.630	5.631	MON	51,452	122,609	08/31/2022	10/14/2034
68268V-AD-7	OnelMain Financial Issuan-OMFIT 2022-2A D				2.B FE	20,905,093	.95.6493	20,000,277	20,910,000	20,905,093	.0	335	.0	.0	6.550	6.557	MON	178,810	426,099	08/31/2022	10/14/2034
682696-AD-1	OnelMain Financial Issuan-OMFIT 2020-2A D				2.B FE	9,934,602	.84.2224	8,422,238	10,000,000	9,934,602	.0	9,992	.0	.0	3.450	3.595	MON	16,292	303,792	03/01/2022	09/14/2035
68269M-AE-4	OnelMain Financial Issuan-OMFIT 2021-1A D				2.B FE	7,331,081	.78.3539	6,660,082	8,500,000	7,331,081	.0	68,581	.0	.0	2.470	5.266	MON	9,914	127,239	10/12/2022	06/16/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
68378N-AA-8	Oportun Issuance Trust 2-OPTN 2022-A A .....	.....	.....	.....	1.D FE	4,997,993	.95.0267	4,751,336	5,000,000	4,997,993	0	639	0	0	5.050	5.073	MON	16,132	153,604	05/19/2022	06/09/2031
69144A-AA-7	Oxford Finance Funding 2-OXFIN 2020-1A A .....	.....	.....	.....	1.F FE	3,179,960	.97.6488	3,118,024	3,193,102	3,179,960	0	11,224	0	0	3.101	3.501	MON	4,401	82,625	06/01/2022	02/15/2028
69145*-AG-6	Oxford Finance Funding XIII, LLC/Class A .....	.....	.....	.....	1.F PL	6,603,000	.93.3530	6,164,099	6,603,000	6,603,000	0	0	0	0	4.285	4.285	MON	83,310	219,513	03/25/2022	04/15/2030
69145*-AH-4	Oxford Finance Funding XIII, LLC/Class B .....	.....	.....	.....	2.B PL	897,000	.92.1774	826,831	897,000	897,000	0	0	0	0	5.085	5.085	MON	13,430	35,226	03/25/2022	04/15/2030
69145B-AA-4	OXFORD FINANCE FUNDING T-OXFIN 2022-1A A .....	.....	.....	.....	1.F FE	18,000,000	.90.8231	16,348,156	18,000,000	18,000,000	0	0	0	0	3.602	3.602	MON	28,816	569,116	02/08/2022	02/15/2030
69346M-AA-7	PNMAC FMSR ISSUER TRUST -PNMSR 2018-FT1 .....	.....	.....	.....	2.C FE	7,000,000	.97.7246	6,840,721	7,000,000	7,000,000	0	293	0	0	6.739	7.511	MON	6,552	287,901	04/20/2018	04/25/2023
69546V-AA-5	PAGAYA AI Debt Trust 202-PAID 2022-2 A .....	.....	.....	.....	1.G FE	7,688,063	.98.4579	7,569,506	7,688,063	7,688,063	0	0	0	0	4.970	4.969	MON	16,982	296,504	05/03/2022	01/15/2030
706874-AG-9	PenFed Auto Receivables -PNFED 2022-A D .....	.....	.....	.....	2.B FE	1,899,660	.93.1733	1,770,292	1,900,000	1,899,660	0	24	0	0	5.850	5.857	MON	4,940	37,668	08/19/2022	06/17/2030
72703P-AC-7	Planet Fitness Master Is-2019-1A A2 FIXE .....	.....	.....	.....	2.C FE	10,786,476	.81.5717	8,703,700	10,670,000	10,786,476	0	(15,704)	0	0	3.858	3.670	MJSD	29,730	413,994	07/15/2021	12/05/2049
74166Y-AC-4	Primose Funding LLC-PROSE 2022-1 A2 .....	.....	.....	.....	2.B FE	2,693,250	.92.5271	2,491,986	2,693,250	2,693,250	0	0	0	0	5.709	5.709	JAJO	26,053	89,423	05/25/2022	04/30/2052
74331C-AB-4	Progress Residential 202-PROG 2020-SFR1 .....	.....	.....	.....	1.A FE	4,499,309	.92.7078	4,171,850	4,500,000	4,499,309	0	298	0	0	2.033	2.040	MON	7,624	91,485	03/04/2020	04/01/2037
74331U-AC-2	PROG 2022-SFR3 B-PROG 2022-SFR3 B .....	.....	.....	.....	1.D FE	5,309,414	.89.3184	4,912,511	5,500,000	5,309,414	0	27,932	0	0	3.600	4.497	MON	16,500	138,050	04/05/2022	04/01/2039
74332V-AE-5	Progress Residential 202-PROG 2022-SFR2 .....	.....	.....	.....	1.F FE	5,943,161	.89.0265	5,341,592	6,000,000	5,943,161	0	.9.309	0	0	3.750	3.993	MON	18,750	173,125	03/14/2022	04/01/2027
74332Y-AC-3	Progress Residential 202-PROG 2022-SFR5 .....	.....	.....	.....	1.D FE	2,485,927	.94.8715	2,371,787	2,500,000	2,485,927	0	1,474	0	0	4.896	5.038	MON	10,200	62,084	06/10/2022	06/01/2039
74333W-AJ-1	Progress Residential Trust1-PROG 2021-SFR .....	.....	.....	.....	2.A FE	9,997,353	.78.4016	7,838,343	9,997,678	9,997,353	0	49	0	0	3.567	3.568	MON	29,718	357,684	11/19/2021	12/01/2040
74334D-AG-8	Progress Residential 202-PROG 2022-SFR6 .....	.....	.....	.....	2.C FE	10,499,649	.92.3609	9,697,897	10,500,000	10,499,649	0	(3)	0	0	6.035	6.036	MON	105,613	264,031	07/25/2022	07/01/2039
76042E-AA-7	Republic Finance Issuanc-REPS 2020-A A .....	.....	.....	.....	1.C FE	5,999,479	.94.0185	5,641,111	6,000,000	5,999,479	0	383	0	0	2.470	2.477	MON	4,528	148,200	10/06/2020	11/20/2030
78397W-AC-0	SCF Equipment Leasing 20-SCFET 2022-2A A .....	.....	.....	.....	1.A FE	7,975,136	.101.0859	8,086,875	8,000,000	7,975,136	0	667	0	0	6.500	6.602	MON	15,889	56,333	11/08/2022	10/21/2030
78433X-AA-8	Stonepeak 2021-1 ABS-SALT T 2021-1A AA .....	.....	.....	.....	1.C FE	1,466,342	.89.0532	1,388,834	1,559,555	1,466,342	0	19,036	0	0	2.301	5.029	MON	1,595	20,114	07/06/2022	02/28/2033
78433X-AC-4	Stonepeak 2021-1 ABS-SALT T 2021-1A B .....	.....	.....	.....	2.B FE	1,814,622	.87.1284	1,701,327	1,952,666	1,814,622	0	25,840	0	0	3.821	6.972	MON	3,316	41,665	07/06/2022	02/28/2033
78443C-BN-3	SLM Private Credit Stude-SLMA 2004-B A3 .....	.....	.....	.....	1.A FE	999,297	.99.3157	995,639	1,002,499	999,297	0	157,907	0	0	5.099	6.670	MJSD	2,414	37,339	03/07/2012	03/15/2024
78449C-AC-2	SMB Private Education Lo-SMB 2022-C B .....	.....	.....	.....	1.C FE	15,293,566	.88.3593	13,518,976	15,300,000	15,293,566	0	572	0	0	5.090	5.096	MON	34,612	307,182	08/02/2022	05/16/2050
78449X-AA-0	SMB Private Education Lo-SMB 2020-B A1A .....	.....	.....	.....	1.A FE	5,261,914	.89.2803	4,772,516	5,345,540	5,261,914	0	48,351	0	0	1.290	2.149	MON	3,065	75,070	01/19/2022	07/15/2053
78449X-AC-6	SMB Private Education Lo-SMB 2020-B B .....	.....	.....	.....	1.C FE	2,259,703	.80.0777	1,982,724	2,476,000	2,259,703	0	26,274	0	0	2.760	4.785	MON	3,037	48,596	04/27/2022	07/15/2053
78450F-AD-9	SMB Private Education Lo-SMB 2022-A B .....	.....	.....	.....	1.D FE	4,880,264	.92.0377	4,537,460	4,930,000	4,880,264	0	10,246	0	0	3.250	3.553	MON	7,121	126,845	03/08/2022	11/16/2054
78450F-AE-7	SMB Private Education Lo-SMB 2022-A C .....	.....	.....	.....	1.G FE	7,997,002	.90.5359	7,242,869	8,000,000	7,997,002	0	379	0	0	3.940	3.948	MON	14,009	249,533	03/08/2022	11/16/2054
78488L-AA-8	SWC Funding LLC 2018-1-SWC 2018-1A A .....	.....	.....	.....	2.A FE	31,226,816	.97.1775	30,384,391	31,266,889	31,226,816	0	63,352	0	0	4.750	4.938	FMAN	189,773	1,689,512	07/27/2018	08/15/2033
80285U-AF-8	Santander Drive Auto Rec-SDART 2022-3 C .....	.....	.....	.....	1.F FE	9,998,375	.94.6526	9,465,258	10,000,000	9,998,375	0	287	0	0	4.490	4.496	MON	19,956	278,131	05/11/2022	08/15/2029
81761T-AA-3	ServiceMaster Funding LL-SERV 2020-1 A21 .....	.....	.....	.....	2.C FE	2,800,644	.80.4118	2,370,138	2,947,500	2,800,644	0	14,986	0	0	2.841	3.576	JAJO	14,189	77,313	02/18/2022	01/30/2051
81761T-AC-9	ServiceMaster Funding LL-SERIES 20-1 CLA .....	.....	.....	.....	2.C FE	4,334,618	.75.0953	3,707,830	4,937,500	4,334,618	0	3,493	0	0	3.337	3.337	JAJO	3,203	44,395	01/21/2022	01/30/2051
81761T-AE-5	ServiceMaster Funding LL-SERV 2021-1 A21 .....	.....	.....	.....	2.C FE	12,633,742	.76.8542	11,384,028	14,812,500	12,633,742	0	101,738	0	0	2.865	5.736	JAJO	71,909	249,449	09/28/2022	07/30/2051
81761T-AG-0	ServiceMaster Funding LL-SERV 2021-1 A21 .....	.....	.....	.....	2.C FE	22,712,500	.73.0542	16,592,428	22,712,500	22,712,500	0	0	0	0	3.113	3.113	JAJO	119,804	710,302	07/26/2021	07/30/2051
817743-AA-5	SERVPRO Master Issuer LL-SPRO 2019-1A A2 .....	.....	.....	.....	2.C FE	17,763,657	.88.2659	15,625,271	17,702,500	17,763,657	0	(15,163)	0	0	3.882	3.782	JAJO	125,989	690,340	01/22/2020	10/25/2049
82652R-AB-5	Sierra Timeshare 2021-2 -SRFC 2021-2A B .....	.....	.....	.....	1.F FE	673,187	.91.2697	665,867	729,560	673,187	0	6,729	0	0	1.800	3.299	MON	401	2,747	11/16/2022	09/20/2038
826934-AC-5	Sierra Timeshare 2022-3 -SRFC 2022-3A C .....	.....	.....	.....	2.B FE	3,572,293	.98.0743	3,504,323	3,573,131	3,572,293	0	90	0	0	7.630	7.641	MON	8,330	58,333	10/12/2022	07/20/2039
84858D-AA-6	SPIRIT AIR 2015-1 PTT A-SECURED .....	.....	.....	.....	2.B FE	3,058,266	.83.8000	2,562,266	3,057,597	3,058,266	0	(307)	0	0	4.100	4.091	AO	31,340	130,311	07/28/2015	04/01/2028
84858W-AA-4	Spirit Airlines Pass Thr-FIRST LIEN .....	.....	.....	.....	1.G FE	4,524,142	.83.0231	3,755,045	4,522,890	4,524,142	0	(275)	0	0	3.375	3.370	FA	57,667	156,932	11/13/2017	02/15/2030
85239K-AD-4	Stack Infrastructure Iss-SIDC 2020-1A A2 .....	.....	.....	.....	1.G FE	4,152,091	.87.5525	3,913,595	4,470,000	4,152,091	0	61,391	0	0	1.893	5.180	MON	8,462	43,719	07/11/2022	08/25/2045
86212V-AA-2	Store Master Funding I-V-STR 2016-1A A1 .....	.....	.....	.....	1.E FE	9,230,677	.91.3925	8,437,994	9,232,703	9,230,677	0	536	0	0	3.960	3.963	MON	11,172	370,245	10/12/2016	10/20/2046
86212V-AD-6	Store Master Funding I-V-STR 2018-1A A1 .....	.....	.....	.....	1.A FE	10,655,754	.94.8414	10,157,545	10,710,031	10,655,754	0	1,918	0	0	3.960	6.337	MON	12,959	379,127	12/08/2022	10/20/2048
86212V-AE-4	Store Master Funding I-V-SERIES 18-1A CL .....	.....	.....	.....	1.A FE	12,412,411	.89.7183	11,138,877	12,415,390	12,412,411	0	604	0	0	4.290	4.296	MON	16,275	535,526	10/12/2018	10/20/2048
86213C-AB-1	STORE MASTER FUNDING LLC-SERIES 2015-1A .....	.....	.....	.....	1.E FE	20,645,972	.93.3786	19,306,808	20,675,833	20,645,972	0	12,328	0	0	4.170	4.237	MON	26,344	864,473	07/18/2018	04/20/2045
86744V-AA-9	Helios Issuer LLC-SNVA 2022-B A .....	.....	.....	.....	1.G FE	7,995,566	.93.2022	7,500,550	8,047,615	7,995,566	0	4,758	0	0	5.000	5.188	MON	12,295	151,005	08/12/2022	08/20/2049
86744V-AB-7	Helios Issuer LLC-SNVA 2022-B B .....	.....	.....	.....	2.C FE	9,341,386	.92.2473	9,053,304	9,814,164	9,341,386	0	37,640	0	0	6.000	7.355	MON	17,993	220,983	08/12/2022	08/20/2049
86772R-AA-3	Sunrun Jupiter Issuer 20-SUNRN 2022-1A A .....	.....	.....	.....	1.G PL	14,075,465	.89.1417	12,646,940	14,187,460	14,075,465	0	10,059	0	0	4.750	4.896	JAJO	114,189	461,809	04/26/2022	07/30/2057

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
869507-AA-1	SUTTONPARK STRUCTURED SE-SERIES 17-1A CL				1 A FE	5,904,449	.90.7670	5,361,405	5,906,778	5,904,449	.0	236	.0	.0	4.190	4.195	MON	11,000	259,174	02/09/2017	01/15/2071
87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A				1 F FE	22,890,575	.84.5102	21,859,198	25,865,755	22,890,575	.0	337,014	.0	.0	2.070	5.262	MON	20,822	289,798	06/28/2022	06/19/2051
87342R-AC-8	TACO BELL FUNDING LLC-SERIES 2016-1A CLA		4		2 B FE	11,215,022	.95.1956	10,660,241	11,198,250	11,215,022	.0	(15,819)	.0	.0	4.970	4.920	FMAN	55,655	559,645	06/22/2018	05/25/2046
87342R-AF-1	Taco Bell Funding LLC-BELL 2018-1AW A2W				1 C FE	6,721,179	.93.4040	6,276,749	6,720,000	6,721,179	.0	(193)	.0	.0	4.590	4.586	FMAN	30,845	310,135	12/10/2018	11/25/2048
89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A				1 F FE	9,850,148	.94.4351	9,303,647	9,851,894	9,850,148	.0	268	.0	.0	4.760	4.766	MON	18,237	284,028	05/19/2022	05/17/2052
89609M-AB-5	Tribute Rail LLC-TRP 2022-1 B				2 B FE	1,649,793	.90.9223	1,500,218	1,650,000	1,649,793	.0	23	.0	.0	5.750	5.754	MON	3,690	56,925	05/19/2022	05/17/2052
89656G-AB-0	Trinity Rail Leasing 202-TRL 2021-1A B				2 B FE	3,499,595	.76.6578	2,683,021	3,500,000	3,499,595	.0	65	.0	.0	3.080	3.082	MON	3,593	107,800	06/22/2021	07/19/2051
89656R-AA-8	Trinity Rail Leasing 202-TRL 2022-1 A				1 F FE	7,881,581	.91.3332	7,198,733	7,881,835	7,881,581	.0	91	.0	.0	4.550	4.551	MON	9,962	242,396	04/20/2022	05/20/2052
89657B-AA-2	Trinity Rail Leasing 201-TRL 2019-1A A				1 F FE	38,028,132	.92.2737	36,546,776	39,606,930	38,028,132	.0	322,597	.0	.0	3.820	4.917	MON	160,637	1,273,741	03/31/2020	04/17/2049
89657B-AB-0	Trinity Rail Leasing 201-TRL 2019-2A A1				1 F FE	7,756,027	.92.2655	7,157,210	7,757,187	7,756,027	.0	726	.0	.0	2.390	2.398	MON	23,668	209,726	10/08/2019	10/18/2049
89657B-AC-8	Trinity Rail Leasing 201-TRL 2019-2A A2				1 F FE	3,926,084	.84.2355	3,369,420	4,000,000	3,926,084	.0	17,673	.0	.0	3.100	3.622	MON	15,156	124,000	03/11/2020	10/18/2049
89680H-AA-0	Triton Container Finance-TCF 2020-1A A				1 F FE	6,508,308	.85.4725	6,522,025	7,630,556	6,508,308	.0	60,885	.0	.0	2.110	7.728	MON	4,920	32,106	11/16/2022	09/20/2045
89680H-AB-8	Triton Container Finance-TCF 2020-1A B				2 B FE	2,391,884	.85.4274	2,210,861	2,588,000	2,391,884	.0	19,990	.0	.0	3.740	5.857	MON	11,377	44,347	07/28/2022	09/20/2045
89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A				1 F FE	2,496,664	.84.9648	2,371,459	2,791,108	2,496,664	.0	13,811	.0	.0	2.150	3.803	MON	2,334	22,575	08/16/2022	06/19/2051
903436-AA-1	US AIRWAYS 2011-1A PTT-FIRST LIEN				3 B FE	641,356	.99.4375	637,584	641,191	641,356	.0	(515)	.0	.0	7.125	7.054	AO	8,756	49,938	06/21/2011	10/22/2023
90345W-AA-2	US AIRWAYS 2012-1A PTT-FIRST LIEN				2 A FE	1,980,416	.98.2156	1,944,296	1,979,620	1,980,416	.0	(731)	.0	.0	5.900	5.869	AO	29,199	125,516	04/30/2012	10/01/2024
90346W-AA-1	US AIRWAYS 2013-1A PTT-FIRST LIEN				3 A FE	1,773,582	.90.2125	1,601,564	1,775,324	1,773,582	.0	878	.0	.0	3.950	3.985	MM	8,960	76,555	01/21/2014	11/15/2025
90352W-AD-6	ITE Rail Fund Levered LP-SERIES 21-1A CL				1 F FE	13,749,255	.83.7300	11,512,637	13,749,716	13,749,255	.0	97	.0	.0	2.250	2.251	MON	2,578	314,804	01/15/2021	02/28/2051
90352W-AE-4	ITE Rail Fund Levered LP-STEAM 2021-2A B				2 B FE	6,702,896	.63.6032	4,961,046	7,800,000	6,702,896	.0	80,208	.0	.0	2.980	6.171	MON	1,937	118,157	07/15/2022	02/28/2051
90783X-AA-9	Union Pacific Railroad C-FIRST LIEN				1 C FE	1,548,462	.103.8820	1,607,829	1,547,745	1,548,462	.0	(449)	.0	.0	6.176	6.157	JJ	47,529	95,788	07/19/2007	01/02/2031
909319-AA-3	UNITED AIR 2013-1 A PTT-FIRST LIEN				2 C FE	4,222,699	.91.7625	3,873,986	4,221,753	4,222,699	.0	(508)	.0	.0	4.300	4.289	FA	68,580	187,121	08/01/2013	08/15/2025
90932Q-AA-4	UNITED AIR 2014-2 A PASS THRU TR-1ST LIE				2 A FE	2,432,237	.91.2995	2,220,164	2,431,738	2,432,237	.0	(269)	.0	.0	3.750	3.740	MS	29,890	94,666	07/28/2014	09/03/2026
918628-AA-2	Viva Capital 3 LS 2021 L Viva Term Note				1 G PL	60,254,772	.93.9406	59,284,545	63,108,538	60,254,772	.0	383,464	.0	.0	3.500	4.947	MON	650,369	1,206,044	06/28/2022	10/15/2031
92212K-AA-4	Vantage Data Centers Iss-VDC 2019-1A A2				1 G FE	8,700,000	.95.0946	8,273,228	8,700,000	8,700,000	.0	8	.0	.0	3.188	3.188	MON	12,327	278,783	07/30/2019	07/15/2044
92212K-AB-2	Vantage Data Centers Iss-VDC 2020-1A A2				1 G FE	8,332,491	.88.4716	8,316,330	9,400,000	8,332,491	.0	65,823	.0	.0	1.645	6.204	MON	6,872	39,635	11/22/2022	09/15/2045
94353W-AA-3	WAVE 2017-1 TRUST-WAIV 2017-1A A				2 B FE	4,332,983	.76.5278	3,315,875	4,332,903	4,332,983	.0	(66)	.0	.0	3.844	3.843	MON	7,403	204,315	11/08/2017	11/15/2042
94354K-AA-8	WAVE 2019-1 LLC-WAIV 2019-1 A				2 A FE	4,457,657	.75.3071	3,356,992	4,457,736	4,457,657	.0	23	.0	.0	3.597	3.598	MON	7,126	167,563	09/30/2019	09/15/2044
95058X-AE-8	Wendy's Funding LLC-WEN 2018-1A A211				2 B FE	7,394,301	.89.1978	6,779,033	7,600,000	7,394,301	.0	36,430	.0	.0	3.884	4.487	IMJSD	13,119	296,988	10/11/2018	03/15/2048
95058X-AG-3	Wendy's Funding LLC-WEN 2019-1A A21				2 B FE	22,750,000	.91.8647	20,899,219	22,750,000	22,750,000	.0	.0	.0	.0	3.783	3.783	IMJSD	38,250	866,123	06/13/2019	06/15/2049
95058X-AL-2	Wendy's Funding LLC-WEN 2020-1A A211				2 B FE	5,910,000	.76.8314	4,540,736	5,910,000	5,910,000	.0	.0	.0	.0	2.775	2.775	IMJSD	.0	164,969	06/15/2021	06/15/2051
97063Q-AA-0	WILLIS ENGINE STRUCTURED-SERIES 17-A CLA		4,5		2 B FE	7,114,942	.81.8754	5,828,029	7,118,168	7,114,942	.0	858	.0	.0	4.690	4.704	MON	14,837	347,428	07/28/2017	08/15/2042
97064E-AA-6	Willis Engine Structured-WIESTF 2018-A A				2 A FE	6,728,020	.78.4731	5,279,644	6,727,967	6,728,020	.0	(20)	.0	.0	4.750	4.750	MON	14,203	329,542	08/16/2018	09/15/2043
97064F-AA-3	Willis Engine Structured-WIESTF 2020-A A				1 F FE	11,819,662	.77.0881	9,111,553	11,819,662	11,819,662	.0	3	.0	.0	3.228	3.228	MON	3,957	392,619	02/18/2020	03/15/2045
974153-AB-4	Wingstop Funding LLC-WSTOP 2020-1A A2				2 B FE	10,395,000	.84.4185	8,775,303	10,395,000	10,395,000	.0	.0	.0	.0	2.841	2.841	IMJSD	21,329	296,519	10/09/2020	12/05/2050
97988P-BA-3	Woodmont 2017-1 Trust-WDMNT 2017-1A A1RR				1 A FE	17,500,000	.94.0539	16,459,433	17,500,000	17,500,000	.0	.0	.0	.0	5.714	5.713	JAJO	208,312	602,915	09/24/2021	10/18/2033
97988Q-AA-7	Woodmont 2017-2 Trust-WDMNT 2017-2A BR				1 C FE	5,000,000	.91.4000	4,570,040	5,000,000	5,000,000	.0	.0	.0	.0	6.393	6.392	JAJO	64,814	203,587	02/05/2021	03/20/2033
97988R-AN-2	WDMNT 2022-9A D-WDMNT 2022-9A D				2 C FE	8,500,000	.89.6787	7,622,690	8,500,000	8,500,000	.0	.0	.0	.0	8.510	8.509	JAJO	136,633	352,959	05/05/2022	04/25/2034
97988R-AQ-5	WDMNT 2022-9A E-WDMNT 2022-9A E				3 C FE	7,869,362	.78.6322	6,290,576	8,000,000	7,869,362	.0	29,362	.0	.0	12.940	13.246	JAJO	195,538	536,961	05/05/2022	04/25/2034
98920M-AA-0	ZAXBY'S FUNDING LLC-ZAXBY 2021-1A A2				2 B FE	23,961,783	.80.0263	20,547,543	25,675,988	23,961,783	.0	149,827	.0	.0	3.238	5.913	JAJO	140,874	687,027	07/25/2022	07/30/2051
94945P-AA-3	Welk Resorts 2017-A LLC-WLKRG 2017-AA A				1 F FE	1,772,213	.99.8047	1,769,269	1,772,731	1,772,213	.0	141	.0	.0	2.820	2.827	MON	2,222	61,954	06/15/2017	06/15/2033
000366-AA-2	AASET 2017-1 TRUST-SERIES 17-1A CLASS A		4		2 B FE	4,643,660	.78.6226	3,650,966	4,643,660	4,643,660	.0	.0	.0	.0	3.967	3.967	MON	7,676	238,015	05/25/2017	05/16/2042
00256D-AA-0	Aaset 2019-1 Trust-AASET 2019-1 A				4 C FE	2,857,622	.63.9862	2,169,908	3,391,213	2,857,622	.0	.0	.0	.0	3.844	16.200	MON	5,794	170,602	06/12/2019	05/15/2039
00432C-CW-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3		4		1 A FE	643,175	.97.0715	639,204	658,487	643,175	.0	39,691	.0	.0	4.728	6.779	JAJO	5,881	16,821	04/13/2016	07/25/2035
14855M-AA-6	Castlelake Aircraft Secu-SERIES 2019-1A				2 B FE	3,400,720	.85.3889	2,903,812	3,400,690	3,400,720	.0	(15)	.0	.0	3.967	3.967	MON	5,996	141,774	04/11/2019	04/15/2039
23802W-AA-9	DataBank Issuer-COLO 2021-1A A2				1 G FE	8,000,000	.84.4387	6,755,097	8,000,000	8,000,000	.0	1,511	.0	.0	2.060	2.065	MON	2,747	164,800	02/24/2021	02/27/2051

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
23802W-AC-5	DataBank Issuer-COLO 2021-1A B				2.B FE	6,883,271	.87.3730	6,194,742	7,090,000	6,883,271	.0	52,186	.0	.0	2.650	3.631	MON	3,131	175,359	02/18/2022	02/27/2051
23802W-AG-6	DataBank Issuer-COLO 2021-2A A2				1.G FE	1,797,730	.85.7097	1,714,193	2,000,000	1,797,730	.0	8,980	.0	.0	2.400	3.720	MON	800	24,800	07/06/2022	10/25/2051
32010L-AN-4	First Eagle Commercial L-MNSTR 2016-1A A				1.A FE	8,882,374	.95.2689	8,462,704	8,882,966	8,882,374	.0	701	.0	.0	3.353	3.360	JAJO	54,605	349,298	12/17/2019	01/25/2032
38179E-AC-8	Golub Capital Partners A-GCPAF 2022-1A A				1.F FE	8,000,000	.92.4702	7,397,618	8,000,000	8,000,000	.0	.0	.0	.0	6.580	6.577	JAJO	166,693	166,693	08/24/2022	07/22/2030
38179E-AE-4	Golub Capital Partners A-GCPAF 2022-1A B				2.B FE	2,000,000	.91.9596	1,839,192	2,000,000	2,000,000	.0	.0	.0	.0	7.830	7.826	JAJO	49,590	49,590	08/24/2022	07/22/2030
47760Q-AB-9	Jimmy Johns Funding LLC-JIMMY 2017-1A A2				2.B FE	4,374,000	.90.2833	3,948,992	4,374,000	4,374,000	.0	.0	.0	.0	4.846	4.846	JAJO	35,916	223,321	06/27/2017	07/30/2047
63939E-AB-9	NAVIENT PRIVATE ED LN TR 2015-A LN BACKE	4			1.A FE	290,194	.98.9032	287,016	290,198	290,194	.0	51	.0	.0	2.650	2.659	MON	342	14,985	01/13/2015	12/15/2028
64033N-AA-4	Nelnet Student Loan Trus-NSLT 2014-5A A				1.A FE	12,733,452	.96.0730	12,690,230	13,208,947	12,733,452	.0	25,936	.0	.0	4.939	5.128	MON	9,060	65,204	12/06/2022	07/25/2046
78449Y-AA-8	SMB Private Education Lo-SMB 2021-B A				1.A FE	11,498,411	.90.4482	11,285,111	12,476,872	11,498,411	.0	290,131	.0	.0	1.310	5.546	MON	7,264	93,088	06/16/2022	07/17/2051
78472J-AE-3	SPS Servicer Advance Rec-SPART 2020-T2 A				1.A FE	12,000,000	.89.9061	10,788,793	12,000,000	12,000,000	.0	2,216	.0	.0	1.830	3.956	MON	9,760	219,600	10/23/2020	11/15/2055
87407R-AA-4	TAL Advantage VII LLC-TAL 2020-1A A				1.F FE	6,841,164	.87.5510	6,793,695	7,759,700	6,841,164	.0	28,814	.0	.0	2.050	7.359	MON	4,861	18,269	12/08/2022	09/20/2045
87407R-AC-0	TAL Advantage VII LLC-TAL 2020-1A B				2.B FE	3,218,588	.86.0002	2,791,511	3,245,938	3,218,588	.0	9,677	.0	.0	3.290	3.648	MON	3,263	97,863	02/24/2022	09/20/2045
89657A-AC-0	Trinity Rail Leasing 201-TRL 2020-1A A				1.F FE	3,371,781	.87.1160	2,937,901	3,372,400	3,371,781	.0	211	.0	.0	1.960	1.966	MON	2,571	70,757	10/14/2020	10/17/2050
96034L-AA-9	Westgate Resorts 2020-1 -NIESTR 2020-1A A				1.A FE	2,695,151	.97.8742	2,638,364	2,695,668	2,695,151	.0	1,551	.0	.0	2.713	2.756	MON	6,094	97,188	07/08/2020	03/01/2034
42806M-AK-5	Hertz Vehicle Financing -HERTZ 2022-1A B				1.F FE	2,413,879	.90.8127	2,451,943	2,700,000	2,413,879	.0	9,297	.0	.0	2.190	7.259	MON	986	5,913	11/30/2022	06/25/2026
42806M-AM-1	Hertz Vehicle Financing -HERTZ 2022-1A D				3.B FE	9,110,353	.88.4392	8,843,918	10,000,000	9,110,353	.0	166,287	.0	.0	4.850	9.200	MON	8,083	250,583	06/30/2022	06/25/2026
006346-AS-9	ADAMS OUTDOOR ADV SECD REV NT SER 2018-1				1.F FE	14,508,756	.93.0868	13,497,111	14,499,490	14,508,756	.0	(6,987)	.0	.0	4.810	4.759	MON	30,997	717,786	10/31/2018	11/15/2048
90932P-AA-6	United Airlines 2014-1 C-SECURED NOTE				2.B FE	3,532,749	.91.5750	3,234,279	3,531,836	3,532,749	.0	(415)	.0	.0	4.000	3.990	AO	31,394	148,093	03/24/2014	04/11/2051
233046-AF-8	DNKN 2017-1A A2II				2.B FE	20,002,500	.89.4641	17,895,057	20,002,500	20,002,500	.0	.0	.0	.0	4.030	4.030	FMAN	91,806	810,426	09/14/2017	11/20/2047
233046-AH-4	DB Master Finance LLC-DNKN 2017-1AW A2II				1.C FE	11,427,312	.94.5306	10,804,848	11,430,000	11,427,312	.0	499	.0	.0	3.350	3.355	FMAN	139,837	384,960	11/22/2017	11/20/2047
233046-AM-3	DB Master Finance LLC-DNKN 2019-1AW A23W				1.C FE	17,541,567	.92.9073	16,179,806	17,541,567	17,541,567	.0	(18,232)	.0	.0	4.002	3.868	FMAN	79,375	700,630	11/07/2019	05/20/2049
25755T-AE-0	DOMINOS PIZZA MASTER ISS-SERIES 2015-1A	4			2.A FE	15,040,000	.94.8254	14,261,740	15,040,000	15,040,000	.0	.0	.0	.0	4.474	4.477	JAJO	123,363	676,051	10/14/2015	10/25/2045
25755T-AH-3	DOMINOS PIZZA MASTER ISS-SERIES 17-1A CL	4			2.A FE	21,899,825	.91.4021	20,023,915	21,907,500	21,899,825	.0	1,175	.0	.0	4.118	4.218	JAJO	165,394	901,049	03/24/2022	07/25/2047
25755T-AJ-9	Dominio's Pizza Master Is-DPABS 2018-1A A				2.A FE	6,720,547	.95.0795	6,389,342	6,720,547	6,720,547	.0	(207)	.0	.0	4.116	4.112	JAJO	50,709	277,868	04/18/2018	07/25/2048
25755T-AK-6	Dominio's Pizza Master Is-DPABS 2018-1A A				2.A FE	3,359,806	.91.7394	3,082,444	3,360,000	3,359,806	.0	32	.0	.0	4.328	4.329	JAJO	26,660	146,090	06/06/2018	07/25/2048
25755T-AL-4	Dominio's Pizza Master Is-DPABS 2019-1A A				2.A FE	7,293,750	.86.8298	6,333,156	7,293,750	7,293,750	.0	.0	.0	.0	3.668	3.668	JAJO	49,048	268,750	11/06/2019	10/25/2049
25755T-AM-2	Dominio's Pizza Master Is-DPABS 2019-1AW				1.C FE	20,919,215	.89.2578	18,662,693	20,908,750	20,919,215	.0	(1,321)	.0	.0	3.668	3.660	JAJO	332,831	698,514	12/05/2019	10/25/2049
69335P-EQ-4	PFS Financing Corp-PFSCF 2022-D B				1.F FE	3,499,169	.97.6252	3,416,880	3,500,000	3,499,169	.0	107	.0	.0	4.900	4.909	MON	7,622	67,647	08/02/2022	08/15/2027
90783T-AA-8	Union Pacific Railroad C-FIRST LIEN				1.C FE	181,692	.98.1823	178,179	181,478	181,692	.0	(1,372)	.0	.0	5.404	5.353	JJ	4,876	9,927	07/22/2004	07/02/2025
42806M-BL-2	Hertz Vehicle Financing -HERTZ 2022-5A B				1.F FE	4,998,249	.91.5799	4,578,996	5,000,000	4,998,249	.0	249	.0	.0	4.280	4.289	MON	3,567	161,094	02/02/2018	05/25/2028
42806M-BN-8	Hertz Vehicle Financing -HERTZ 2022-5A C				2.B FE	4,301,139	.87.3111	3,754,376	4,300,000	4,301,139	.0	(163)	.0	.0	4.820	4.813	MON	3,454	156,021	04/07/2022	09/25/2028
78403D-AH-3	SBA TOWER TRUST-SECURED NOTE		1,5		1.F FE	28,399,347	.94.7980	26,830,689	28,303,000	28,399,347	.0	(10,740)	.0	.0	3.869	3.774	MON	48,669	1,095,043	05/12/2015	10/15/2049
46618A-AA-2	JGWPT XXXII LLC-ASSET BKD SERIES 2014-2				1.A FE	9,842,089	.82.6052	8,140,135	9,854,260	9,842,089	.0	1,653	.0	.0	3.610	3.629	MON	15,811	373,520	11/20/2018	01/17/2073
46618H-AA-7	J G WENTWORTH XXXIII LLC-ASSET BKD SER 2	4			1.A FE	13,723,482	.80.3659	11,020,343	13,712,718	13,723,482	.0	(1,395)	.0	.0	3.500	3.488	MON	21,331	499,729	10/25/2017	06/15/2077
46618L-AA-8	J G WENTWORTH XXXIV LLC-ASSET BKD SER 20	4			1.A FE	14,198,501	.79.1948	11,275,899	14,198,501	14,198,501	.0	4,645	.0	.0	3.260	3.299	MON	20,630	484,838	06/03/2015	09/15/2072
67087T-DE-8	Oakwood Mortgage Investo-OAK 2002-A A3				5.A FE	55,442	.98.9897	54,882	55,442	55,442	.0	153,930	.0	.0	6.030	6.030	MON	1,120	5,900	02/25/2002	05/01/2024
674135-EM-6	Oakwood Mortgage Investo-OAK 1999-A M2				.6. FE	28,658	.80.4395	176,656	219,614	28,658	.0	186	.0	.0	7.690	64.332	MON	1,407	16,775	06/09/1999	04/01/2029
02665X-AB-5	American Homes 4 Rent 20-AHAR 2014-SFR3				1.A FE	16,711,210	.96.5797	14,100,629	14,600,000	14,671,210	.0	(35,262)	.0	.0	4.201	3.936	MON	51,112	613,346	05/06/2015	12/01/2036
02665X-AC-3	American Homes 4 Rent 20-AHAR 2014-SFR3				1.A FE	5,595,713	.97.0584	5,435,270	5,600,000	5,595,713	.0	2,096	.0	.0	4.596	4.638	MON	21,448	257,376	11/20/2014	12/01/2036
05377R-EK-6	Avis Budget Rental Car F-AESOP 2021-1A C				2.C FE	4,554,939	.83.7380	4,006,863	4,785,000	4,554,939	.0	51,245	.0	.0	2.130	3.624	MON	3,114	88,048	03/02/2022	08/20/2027
05377R-ET-7	Avis Budget Rental Car F-AESOP 2021-2A C				2.C FE	6,100,962	.82.6865	5,788,054	7,000,000	6,100,962	.0	71,939	.0	.0	2.350	6.031	MON	5,026	59,860	08/18/2022	02/20/2028
05377R-FB-5	Avis Budget Rental Car F-AESOP 2022-1A B				1.F FE	4,999,144	.92.3030	4,615,151	5,000,000	4,999,144	.0	123	.0	.0	4.300	4.304	MON	6,569	153,486	04/07/2022	08/20/2028
05377R-FR-0	Avis Budget Rental Car F-AESOP 2022-4A C				2.C FE	12,500,000	.95.7777	11,972,206	12,500,000	12,500,000	.0	1,278	.0	.0	1.000	6.275	MON	55,556	55,556	07/12/2022	02/20/2029
05377R-FV-1	Avis Budget Rental Car F-AESOP 2022-5A A				1.A FE	4,999,116	.101.4181	5,070,904	5,000,000	4,999,116	.0	8	.0	.0	6.120	6.129	MON	9,350	27,200	11/18/2022	04/20/2027
05377R-FW-9	Avis Budget Rental Car F-AESOP 2022-5A B				1.F FE	3,998,983	.100.2734	4,010,938	4,000,000	3,998,983	.0	11	.0	.0	7.090	7.104	MON	8,666	25,209	11/18/2022	04/20/2027

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
48669R-AB-7	Great Lakes Kcap F3c Sen-KCAP 2017-1A B .....	.....	.....	.....	.. 1.C FE	6,533,492	.. 95.2175	6,189,138	6,500,000	6,533,492	0	64,958	0	0	.. 7.246	.. 7.138	MON	15,699	285,889	08/18/2020	12/20/2029
53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2 .....	.....	.....	.....	.. 1.G PL	31,403,435	100.0000	31,403,435	31,403,435	31,403,435	0	0	0	0	.. 6.413	.. 6.413	MON	33,565	564,466	09/22/2022	11/25/2047
53946H-AB-4	Loan Asset Issuer LLC - Series 2022 NG-2 .....	.....	.....	.....	.. 2.C PL	12,292,361	100.0000	12,292,361	12,292,361	12,292,361	0	0	0	0	.. 7.385	.. 7.385	MON	15,130	253,827	09/22/2022	11/25/2047
53946H-AC-2	Loan Asset Issuer LLC - Series 2022 NG-2 .....	.....	.....	.....	.. 3.C PL	6,914,454	100.0000	6,914,454	6,914,454	6,914,454	0	0	0	0	.. 8.353	.. 8.352	MON	9,626	161,493	09/22/2022	11/25/2047
53948W-10-3	Loan Asset Issuer LLC - Series 2021 NG-1 .....	.....	.....	.....	.. 6. *	21,656,553	6	2,548,543	11,768	2,548,543	(2,379,258)	0	0	0	.. 0.000	.. 0.000	MON	0	5,722,720	08/30/2021	10/25/2046
53948W-AA-1	Loan Asset Issuer LLC - Series 2021 NG-1 .....	.....	.....	.....	.. 1.G PL	17,846,317	.. 92.0436	16,426,401	17,846,317	17,846,317	0	0	0	0	.. 2.981	.. 2.981	MON	8,867	575,838	08/30/2021	10/25/2046
53948W-AB-9	Loan Asset Issuer LLC - Series 2021 NG-1 .....	.....	.....	.....	.. 2.C PL	11,744,036	.. 87.1241	10,231,891	11,744,036	11,744,036	0	0	0	0	.. 3.967	.. 3.967	MON	7,765	500,753	08/30/2021	10/25/2046
53948W-AC-7	Loan Asset Issuer LLC - Series 2021 NG-1 .....	.....	.....	.....	.. 3.C PL	7,965,432	.. 85.5065	6,810,963	7,965,432	7,965,432	0	0	0	0	.. 5.438	.. 5.438	MON	7,219	464,159	08/30/2021	10/25/2046
53950X-AA-4	Loan Asset Issuer LLC - Series 2022 NG-1 .....	.....	.....	.....	.. 1.G PL	19,826,999	.. 93.9487	18,627,203	19,826,999	19,826,999	0	0	0	0	.. 2.981	.. 2.981	MON	9,851	524,939	02/28/2022	02/25/2047
53950X-AB-2	Loan Asset Issuer LLC - Series 2022 NG-1 .....	.....	.....	.....	.. 2.C PL	12,626,668	.. 91.4226	11,543,624	12,626,668	12,626,668	0	0	0	0	.. 3.967	.. 3.967	MON	8,348	441,513	02/28/2022	02/25/2047
53950X-AC-0	Loan Asset Issuer LLC - Series 2022 NG-1 .....	.....	.....	.....	.. 3.C PL	7,461,213	.. 91.4873	6,826,063	7,461,213	7,461,213	0	0	0	0	.. 5.438	.. 5.438	MON	24,821	359,557	02/28/2022	02/25/2047
62946A-AA-2	NP SPE II LLC-NPRL 2016-1A A1 .....	.....	.....	.....	.. 1.G FE	4,448,491	.. 95.3797	4,242,855	4,448,382	4,448,491	0	(75)	0	0	.. 4.164	.. 4.162	MON	5,660	215,678	04/25/2016	04/20/2046
62946A-AB-0	NP SPE II LLC-NPRL 2016-1A A2 .....	.....	.....	.....	.. 2.A FE	17,696,912	.. 90.9631	15,959,476	17,545,000	17,696,912	0	(41,823)	0	0	.. 5.438	.. 5.149	MON	29,153	954,097	11/10/2016	04/20/2046
62946A-AC-8	NP SPE II LLC-NPRL 2017-1A A1 .....	.....	.....	.....	.. 1.G FE	6,720,462	.. 93.8063	6,304,210	6,720,462	6,720,462	0	(4)	0	0	.. 3.372	.. 3.372	MON	6,924	242,372	11/10/2017	10/21/2047
62946A-AD-6	NP SPE II LLC-NPRL 2017-1A A2 .....	.....	.....	.....	.. 2.A FE	5,992,520	.. 87.4918	5,249,507	5,992,520	5,992,520	0	1,389	0	0	.. 4.219	.. 4.248	MON	7,735	253,140	06/26/2018	10/21/2047
62947A-AB-9	NP SPE II LLC-NPRL 2019-2A A2 .....	.....	.....	.....	.. 1.F FE	3,635,535	.. 77.6071	2,821,549	3,635,683	3,635,535	0	34	0	0	.. 3.098	.. 3.099	MON	3,754	126,604	11/01/2019	11/19/2049
62947A-AC-7	NP SPE II LLC-NPRL 2019-2A A3 .....	.....	.....	.....	.. 1.F FE	19,999,367	.. 84.0956	16,819,118	20,000,000	19,999,367	0	76	0	0	.. 3.802	.. 3.803	MON	25,347	760,400	11/01/2019	11/19/2049
62954J-AB-0	NP SPE II LLC-NPRL 2019-1A A2 .....	.....	.....	.....	.. 1.F FE	4,250,037	.. 83.1375	3,533,345	4,250,000	4,250,037	0	(10)	0	0	.. 3.241	.. 3.241	MON	4,209	137,742	08/22/2019	09/20/2049
493268-AY-2	Keycorp Student Loan Tru-KSLT 2000-B A2 .....	.....	.....	.....	.. 1.A FE	7,591	.. 99.8415	7,579	7,591	7,591	0	202	0	0	.. 4.668	.. 4.668	JAJO	67	355	07/02/2008	07/25/2029
83546D-AL-2	Sonic Capital LLC-SONIC 2020-1AW A21W .....	.....	.....	.....	.. 1.C FE	6,956,564	.. 88.0946	6,027,871	6,842,500	6,956,564	0	(2,146)	0	0	.. 3.395	.. 3.394	MON	26,473	233,326	02/03/2020	01/20/2050
83546D-AM-0	Sonic Capital LLC-SONIC 2020-1AW A21W .....	.....	.....	.....	.. 1.C FE	17,945,793	.. 91.9297	15,725,722	17,106,250	17,945,793	0	(205,869)	0	0	.. 2.745	.. 1.469	MON	14,348	471,634	06/15/2020	01/20/2050
126650-BQ-2	CVS HEALTH CORP PASS THRU CTF 30/360 .....	.....	.....	.....	.. 2.B FE	3,741,151	.. 102.0497	3,538,896	3,467,818	3,741,151	0	(113,143)	0	0	.. 6.943	.. 4.358	MON	14,045	253,239	12/02/2013	01/10/2030
126650-BY-5	CVS PASS-THROUGH TRUST-SENIOR SECURED NO .....	.....	.....	.....	.. 2.B FE	725,932	.. 96.9966	640,452	660,283	725,932	0	(15,267)	0	0	.. 5.926	.. 3.913	MON	2,282	67,761	08/31/2012	01/10/2034
02377U-AB-0	AMERICAN AIRLINES 2013-2-FIRST LIEN .....	.....	.....	.....	.. 3.B FE	966,637	.. 98.7233	954,296	966,637	966,637	0	(328)	0	0	.. 4.950	.. 4.918	JJ	22,063	49,686	07/24/2013	01/15/2023
86744W-AA-7	Sunnova Helios X Issuer -SNVA 2022-C A .....	.....	.....	.....	.. 1.D FE	12,084,332	.. 94.6168	12,075,305	12,762,324	12,084,332	0	21,821	0	0	.. 5.300	.. 6.126	MON	20,668	97,223	11/03/2022	11/22/2049
89655Y-AA-4	TRINITY RAIL LEASING L.P-SERIES 2009-1A .....	.....	.....	.....	.. 2.C FE	7,834,857	.. 99.9369	7,768,827	7,773,733	7,834,857	0	(33,671)	0	0	.. 6.657	.. 6.318	MON	21,562	531,507	08/31/2012	11/16/2039
89656C-AA-1	Trinity Rail Leasing 201-TRL 2010-1A A .....	.....	.....	.....	.. 1.F FE	14,759,275	.. 95.5804	13,747,401	14,383,073	14,759,275	0	(122,570)	0	0	.. 5.194	.. 4.274	MON	31,127	777,561	01/17/2019	10/16/2040
12479R-AE-7	CAPITAL AUTOMOTIVE REIT-SERIES 17-1A CLA .....	.....	4	.....	.. 1.E FE	5,247,207	.. 96.0185	5,035,828	5,244,644	5,247,207	0	(2,183)	0	0	.. 4.180	.. 4.129	MON	28,045	221,603	01/09/2020	04/15/2047
12510H-AR-1	Capital Automotive REIT-CAUTO 2022-1A B .....	.....	.....	.....	.. 2.B FE	999,612	.. 89.7154	897,154	1,000,000	999,612	0	28	0	0	.. 4.680	.. 4.686	MON	5,980	37,310	03/08/2022	03/15/2052
009088-AA-3	AIR CANADA 2015-2AA PTT-FIRST LIEN	A	.....	.....	.. 1.G FE	4,806,796	.. 88.0000	4,805,929	4,805,929	4,806,796	0	(241)	0	0	.. 3.750	.. 3.746	JD	8,010	189,153	12/01/2015	12/15/2027
009088-AB-1	Air Canada 2015-2 Class -2ND LIEN	A	.....	.....	.. 2.B FE	3,090,243	.. 79.4100	2,453,422	3,089,562	3,090,243	0	(188)	0	0	.. 4.125	.. 4.120	JD	5,664	133,758	12/01/2015	12/15/2027
009089-AA-1	AIR CANADA 2013-1A PTT-FIRST LIEN	A	.....	.....	.. 2.C FE	1,712,616	.. 90.1568	1,543,712	1,712,253	1,712,616	0	(256)	0	0	.. 4.125	.. 4.111	MM	9,025	74,303	04/24/2013	05/15/2025
009090-AB-7	AIR CANADA 2015-1B PTT-2ND LIEN	A	.....	.....	.. 2.B FE	1,270,127	.. 98.2352	1,270,712	1,270,127	1,270,127	0	(283)	0	0	.. 3.875	.. 3.855	MS	14,492	52,881	03/11/2015	03/15/2023
576339-CY-9	Master Credit Card Trust-MCCT 2022-4A C	A	.....	.....	.. 2.B FE	9,268,407	.. 97.4935	9,036,673	9,269,000	9,268,407	0	(12)	0	0	.. 7.220	.. 7.221	MON	18,589	131,985	10/13/2022	04/21/2029
009090-AA-9	AIR CANADA 2015-1A PTT-FIRST LIEN	A	.....	.....	.. 1.F FE	9,056,871	.. 89.6202	8,115,211	9,055,115	9,056,871	0	(774)	0	0	.. 3.600	.. 3.592	MS	95,984	336,666	03/11/2015	03/15/2027
34960J-BC-8	Fortress Credit Opportun-FCO 2015-6A BFR	D	.....	.....	.. 1.C FE	11,001,057	.. 93.9879	10,338,669	11,000,000	11,001,057	0	(466)	0	0	.. 4.940	.. 4.935	JAJO	122,265	543,400	06/29/2018	07/10/2030
38218J-AA-4	Goodgreen 2022-1-GOODG 2022-1A A	D	.....	.....	.. 1.A FE	19,437,876	.. 87.5011	17,008,363	19,437,876	19,437,876	0	7,390	0	0	.. 3.840	.. 3.880	MON	96,127	639,249	03/11/2022	10/15/2056
38218J-AB-2	Goodgreen 2022-1-GOODG 2022-1A B	D	.....	.....	.. 1.C FE	4,848,201	.. 88.2856	4,281,884	4,850,035	4,848,201	0	5,404	0	0	.. 4.590	.. 4.659	MON	47,127	181,684	03/15/2022	10/15/2056
38218J-AC-0	Goodgreen 2022-1-GOODG 2022-1A C	D	.....	.....	.. 2.B FE	6,038,891	.. 90.2056	5,447,416	6,038,891	6,038,891	0	17,573	0	0	.. 0.000	.. 5.575	MON	0	0	03/11/2022	10/15/2056
38411D-AD-6	GRACIE POINT INTERNATION-GPIF 2022-3A B	C	.....	.....	.. 1.D FE	9,830,000	.. 101.5649	9,983,831	9,830,000	9,830,000	0	0	0	0	.. 7.700	.. 7.699	MON	65,178	65,178	10/27/2022	11/01/2024
38411H-AA-3	GRACIE POINT INTERNATION-GPIF 2022-1A A	C	.....	.....	.. 1.C FE	52,933,245	.. 99.2540	53,191,799	64,597,763	28,699,388	(215)	15,473	0	0	.. 5.950	.. 6.625	MON	142,876	508,024	11/29/2022	04/01/2024
440405-AE-8	HORZN 2018-1 A	C	.....	.....	.. 2.C FE	7,902,602	.. 81.3513	6,428,761	7,902,602	7,902,602	0	(49)	0	0	.. 4.458	.. 4.457	MON	15,657	356,587	11/16/2018	12/15/2038
44040H-AA-0	Horizon Aircraft Finance-HORZN 2019-1 A	D	.....	.....	.. 2.B FE	5,554,244	.. 78.8126	4,377,365	5,554,143	5,554,244	0	(48)	0	0	.. 3.721	.. 3.720	MON	9,185	219,588	06/21/2019	07/15/2039

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
49255P-AA-1	Kestrel Aircraft Funding-KSTRL 2018-1A A	D.....			.. 2.B FE	5,065,337	..79.7198	4,088,769	5,128,925	5,065,337	0	39,085	0	0	..4.250	..5.080	MON	9,688	222,136	12/11/2018	12/15/2038
55446M-AA-5	MACH 1 Cayman 2019-1 Ltd	D.....			.. 1.G FE	5,093,806	..81.3042	4,141,517	5,093,854	5,093,806	0	18	0	0	..3.474	..3.474	MON	7,865	183,569	10/04/2019	10/15/2039
65130P-AA-0	Newfleet CLO 2016-1 Ltd-NEWFL 2016-1A A2	D.....			.. 1.A FE	1,342,061	..99.2180	1,331,597	1,342,092	1,342,061	0	111	0	0	..3.868	..3.872	JAJO	10,238	88,952	05/21/2018	04/20/2028
72353P-AA-4	Pioneer Aircraft Finance-SERIES 19-1 CLA	D.....			.. 2.C FE	11,630,932	..78.6826	9,151,646	11,631,093	11,630,932	0	61	0	0	..3.967	..3.968	MON	20,507	489,241	05/23/2019	06/15/2044
77879R-AB-2	Rotor Engines Securitized-ROTOR 2011-1A A	D.....			.. 5.A FE	9,668,009	..84.3500	8,277,981	9,813,848	9,668,009	0	22,087	0	0	..5.750	..6.012	MON	72,105	571,996	06/14/2018	06/15/2046
88606W-AA-0	Thunderbolt Aircraft Lea-SERIES 17-A CLA	D.....	4,5		.. 2.B FE	5,395,155	..85.4527	4,609,361	5,394,050	5,395,155	0	(1,279)	0	0	..4.212	..4.190	MON	10,098	248,533	04/25/2017	05/17/2032
894127-AE-9	Trapeza CDO LLC-TRAP 2002-1A B1	C.....			.. 1.F FE	5,445,752	..95.3880	5,242,830	5,496,321	5,445,752	0	133,191	0	0	..2.707	..5.680	MON	88,870	111,655	05/18/2018	11/30/2032
91824X-AC-4	VCP RRL ABS II Ltd-VCPRL 2022-1A A	C.....			.. 1.F FE	6,411,987	..95.4754	6,201,125	6,495,000	6,411,987	0	9,021	0	0	..5.480	..5.822	JAJO	167,087	167,087	06/15/2022	01/20/2033
91824X-AE-0	VCP RRL ABS II Ltd-VCPRL 2022-1A B	C.....			.. 2.B FE	993,461	..93.9955	944,655	1,005,000	993,461	0	1,295	0	0	..6.480	..6.791	JAJO	30,572	30,572	06/15/2022	01/20/2033
98944P-AB-3	Zephyrus Capital Aviation-ZCAP 2018-1 A	C.....			.. 2.C FE	3,650,256	..78.0726	2,874,427	3,681,735	3,650,256	0	23,827	0	0	..4.605	..5.237	MON	21,790	187,428	09/28/2018	10/15/2038
05351K-AA-6	Avant Credit Card Master Trust	C.....			.. 3.B PL	1,599,411	..99.9688	1,598,911	1,599,411	1,599,411	0	0	0	0	..11.220	..0.000	MAT	272,107	272,107	12/27/2021	12/18/2023
05351K-AA-8	Avant Credit Card Master Trust	C.....			.. 2.B PL	2,169,990	..99.9688	2,169,312	2,169,990	2,169,990	0	0	0	0	..6.220	..0.000	MAT	186,865	186,865	12/27/2021	12/18/2023
05351K-AA-0	Avant Credit Card Master Trust	C.....			.. 1.G PL	21,516,600	..99.9688	21,509,876	21,516,600	21,516,600	0	0	0	0	..4.970	..0.000	MAT	1,598,147	1,598,147	12/27/2021	12/18/2023
427108-AA-9	Hercules Capital Funding Trust	3.....			.. 1.F PL	7,467,117	..95.2500	7,143,750	7,500,000	7,467,117	0	4,617	0	0	..4.950	..5.089	MON	42,281	194,906	07/12/2022	07/20/2031
74041N-AA-3	Preferred Term Securities XII Ltd / Preferred Term Securities XII Inc	D.....	2		.. 1.A FE	3,448,166	..98.4922	3,396,174	3,448,166	3,448,166	0	246,572	0	0	..5.446	..5.828	MJSD	2,375	133,800	04/18/2022	12/24/2033
74041C-AA-7	Preferred Term Securities XV Ltd / Preferred Term Securities XV Inc	D.....	2		.. 1.A FE	1,929,393	..92.2171	2,160,598	2,342,947	1,929,393	0	389,573	0	0	..5.226	..21.684	MJSD	25,535	59,878	08/31/2022	09/26/2034
74040Y-AB-8	Preferred Term Securities X Ltd / Preferred Term Securities X Inc	D.....	2		.. 1.A FE	2,482,357	..92.9165	2,306,519	2,482,357	2,482,357	0	36,944	0	0	..4.501	..5.320	JAJO	27,935	66,673	08/18/2022	07/03/2033
01449C-AA-8	ALESCO Preferred Funding VIII Ltd	D.....	2		.. 1.A FE	3,957,989	..95.5960	4,755,092	4,974,154	3,957,989	0	286,280	0	0	..5.099	..11.450	MJSD	6,341	111,860	03/25/2022	12/23/2035
01449C-AA-9	ALESCO Preferred Funding VIII Ltd	D.....	2		.. 1.A FE	6,355,892	..95.6461	8,177,097	8,549,326	6,355,892	0	0	0	0	..5.109	..13.567	MJSD	10,109	193,127	03/25/2022	12/23/2035
74043A-AC-5	Preferred Term Securities XXIII Ltd / Preferred Term Securities XXIII Inc	D.....	2		.. 1.B FE	1,728,761	..99.3363	2,074,610	2,088,471	1,728,761	0	276,871	0	0	..4.969	..24.708	MJSD	2,883	39,743	06/22/2022	12/22/2036
74042D-AA-4	Preferred Term Securities XX Ltd / Preferred Term Securities XX Inc	D.....	2		.. 1.A FE	7,293,480	..89.9694	6,982,488	7,760,958	7,293,480	0	250,829	0	0	..5.169	..5.472	MJSD	11,143	168,303	11/08/2022	03/22/2038
74042E-AA-2	Preferred Term Securities XVII Ltd / Preferred Term Securities XVII Inc	D.....	2		.. 1.B FE	9,540,747	..92.1468	10,490,865	11,384,948	9,540,747	0	0	0	0	..5.138	..8.218	MJSD	59,104	272,579	06/23/2022	06/23/2035
74042J-AA-1	Preferred Term Securities XXI Ltd / Preferred Term Securities XXI Inc	D.....	2		.. 1.A FE	27,350,117	..91.0211	27,540,741	30,257,535	27,350,117	0	0	0	0	..5.119	..6.341	MJSD	43,025	631,102	11/08/2022	03/22/2038
74042H-AA-5	Preferred Term Securities XIX Ltd/Preferred Term Securities XIX Inc	D.....	2		.. 1.A FE	19,140,634	..93.1866	21,274,765	22,830,284	19,140,634	0	0	0	0	..5.119	..4.799	MJSD	32,463	497,817	06/22/2022	12/22/2035
74043A-AD-3	Preferred Term Securities XXIII Ltd / Preferred Term Securities XXIII Inc	D.....	2		.. 1.A FE	18,621,009	..85.7126	16,568,656	19,330,479	18,621,009	0	0	0	0	..5.079	..7.846	MJSD	27,272	390,907	06/22/2022	12/22/2036
014498-AB-5	ALESCO Preferred Funding XIV Ltd	D.....	2		.. 1.B FE	32,895,414	..87.6398	38,271,514	43,669,102	32,895,414	0	0	0	0	..5.049	..8.969	MJSD	55,121	966,697	06/28/2022	09/23/2037
74042M-AA-4	Preferred Term Securities XXII Ltd / Preferred Term Securities XXII Inc	D.....	2		.. 1.A FE	8,582,238	..92.8292	8,834,783	9,517,246	8,582,238	0	0	0	0	..5.109	..8.760	MJSD	13,507	204,865	11/08/2022	09/22/2036
89413G-AA-6	Trapeza Cdo Xii Ltd	D.....	2		.. 1.B FE	1,573,235	..95.5687	1,826,011	1,910,679	1,573,235	0	128,140	0	0	..4.031	..11.186	JAJO	18,612	40,229	01/14/2022	04/06/2042
01449T-AA-1	ALESCO Preferred Funding IX Ltd	D.....	2		.. 1.A FE	22,488,071	..89.1733	26,614,925	29,846,294	22,488,071	0	0	0	0	..5.089	..11.009	MJSD	337,028	667,988	12/31/2022	06/23/2036
74043C-AA-5	Preferred Term Securities XXIV Ltd/Preferred Term Securities XXIV Inc	D.....	2		.. 1.C FE	12,418,244	..87.5686	13,080,357	14,937,269	12,418,244	0	0	0	0	..5.069	..7.467	MJSD	156,681	303,080	06/23/2022	03/22/2037
89413C-AA-5	Trapeza CDO X Ltd	D.....	2		.. 1.B FE	41,871,632	..91.2525	40,275,115	44,135,903	41,871,632	0	0	0	0	..4.081	..5.607	JAJO	435,256	953,338	01/12/2022	07/06/2041
83438J-AA-4	Soloso CDO 2007-1 Ltd	D.....	2		.. 1.D FE	10,238,902	..91.8876	10,011,246	10,895,100	10,238,902	0	275,556	0	0	..4.044	..5.393	JAJO	180,965	232,842	01/11/2022	10/07/2037
01449J-AA-4	ALESCO Preferred Funding X Ltd	D.....	2		.. 1.A FE	11,858,512	..92.1070	11,990,381	13,017,883	11,858,512	0	334,527	0	0	..5.069	..6.540	MJSD	16,497	288,712	12/31/2022	09/23/2036
01448Q-AA-8	ALESCO Preferred Funding IV Ltd	D.....	2		.. 1.C FE	8,286,823	..97.8257	8,322,125	8,507,095	8,286,823	0	0	0	0	..4.895	..6.818	JAJO	71,713	211,964	02/08/2022	07/30/2034
01450B-AA-6	ALESCO Preferred Funding XV Ltd	D.....	2		.. 1.C FE	17,577,103	..95.4875	17,894,372	18,740,015	17,577,103	0	0	0	0	..5.009	..6.400	MJSD	23,467	414,144	06/23/2022	12/23/2037
74042T-AA-9	Preferred Term Securities XXVII Ltd / Preferred Term Securities XXVII Inc	D.....	2		.. 1.B FE	2,539,783	..87.7447	3,437,430	3,917,536	2,539,783	0	176,233	0	0	..5.069	..11.789	MJSD	5,516	77,899	12/19/2022	12/22/2037

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
74042W-AA-2	Preferred Term Securities XVIII Ltd / Preferred Term Securities XVIII Inc		D	2	1.C FE	2,807,229	94.7368	2,659,479	2,807,229	2,807,229	0	76,425	0	0	5.149	5.480	MJSD	3,614	76,161	06/22/2022	09/23/2035
74041N-AL-9	Preferred Term Securities XII Ltd / Preferred Term Securities XII Inc		D	2	1.A FE	38,103	99.2906	37,833	38,103	38,103	0	16,259	0	0	5.276	5.658	MJSD	25	1,348	06/22/2022	12/24/2033
74041E-AA-3	Preferred Term Securities XVI Ltd / Preferred Term Securities XVI Inc		D	2	1.A FE	2,032,722	95.5340	2,287,779	2,394,727	2,032,722	0		0	0	5.269	18.237	MJSD	3,154	92,268	10/25/2022	03/23/2035
89707Y-AA-2	Tropic CDO IV Ltd		D	2	1.A FE	1,797,445	98.4808	2,128,464	2,161,298	1,797,445	0		0	0	4.509	19.234	JAJO	20,574	50,105	03/30/2022	04/15/2035
88606X-10-0	Thunderbolt II Aircraft Lease Ltd	R	D	3	6 *	894,023	6.453.0000	1,871	29	1,871	(892,151)	(1,259,821)	0	0	0.000	(84.784)	MON	0	0	04/01/2022	09/15/2038
36321B-AB-7	Galaxy Xxiv Clo Ltd		D	2	1.C FE	3,968,408	96.1131	3,844,524	4,000,000	3,968,408	0	44,333	0	0	5.479	6.073	JAJO	46,268	130,585	12/19/2022	01/15/2031
74041N-AC-9	Preferred Term Securities XII Ltd / Preferred Term Securities XII Inc		D	2	1.A FE	5,896,979	90.3908	5,423,448	6,000,000	5,896,979	0	61,428	0	0	5.626	5.371	MJSD	4,282	153,119	12/19/2022	12/24/2033
55312H-AC-3	MLcapS Funding XVII Ltd		D	2	1.D FE	4,274,315	80.1209	5,808,765	7,250,000	4,274,315	0	243,942	0	0	5.361	11.523	MJSD	33,466	171,630	12/19/2022	12/01/2035
01449S-AB-1	ALESCO Preferred Funding XIII Ltd		D	2	1.B FE	3,674,474	93.2235	4,288,848	4,600,609	3,674,474	0	167,111	0	0	5.049	8.688	MJSD	5,807	101,100	12/19/2022	09/23/2037
000823-AN-4	ABPCI Direct Lending Fund CLO II LLC		D	2	1.C FE	4,250,000	92.0947	3,914,025	4,250,000	4,250,000	0	0	0	0	6.393	6.392	JAJO	55,092	173,049	12/19/2022	04/20/2032
000825-AA-7	ACAM 2019-FL1 Ltd		D	2	1.A FE	4,887,638	99.4794	4,862,192	4,887,638	4,887,638	0	0	0	0	5.840	5.840	MON	88,362	214,295	01/19/2022	11/17/2034
000844-AA-8	ABPCI Direct Lending Fund CLO VIII Ltd		D	2	1.A FE	28,060,495	97.2965	27,243,020	28,000,000	28,060,495	0	36,089	0	0	6.093	6.526	JAJO	345,923	1,054,923	05/26/2022	04/20/2032
00085K-AS-2	ABPCI Direct Lending Fund CLO VII LP		D	2	1.A FE	10,000,000	97.2055	9,720,550	10,000,000	10,000,000	0	0	0	0	5.788	5.779	JAJO	114,279	343,403	12/19/2022	10/20/2031
00085U-AL-5	ABPCI Direct Lending Fund CLO IV Ltd		D	2	1.A FE	50,000,000	94.6402	47,320,100	50,000,000	50,000,000	0	0	0	0	5.888	5.887	JAJO	539,733	1,722,063	12/19/2022	01/20/2033
00091R-AA-8	AGL CLO 20 Ltd		D	2	3.C FE	2,415,900	95.7602	2,394,005	2,500,000	2,415,900	0	9,650	0	0	11.378	12.890	JAJO	112,994	112,994	06/30/2022	07/20/2035
00119E-AA-5	AGL CLO 23 Ltd		D	2	1.A FE	7,700,000	99.2874	7,645,130	7,700,000	7,700,000	0	0	0	0	6.781	6.774	JAJO	34,811	34,811	12/08/2022	01/20/2036
00121G-AA-6	AGL Core CLO 15 Ltd		D	2	1.A FE	5,087,031	97.3938	5,160,897	5,299,000	5,087,031	0	10,760	0	0	5.393	6.306	JAJO	57,944	123,944	07/06/2022	01/20/2035
001406-AA-5	AIM Aviation Finance Ltd		D	2	4.C FE	1,798,755	67.5913	1,216,611	1,799,952	1,798,755	0	(1,175)	0	0	6.213	4.213	MON	34,345	89,427	01/18/2022	02/15/2040
00140L-AJ-3	Aimco CLO 12 Ltd		D	2	1.F FE	1,771,160	93.0128	1,720,737	1,850,000	1,771,160	0	8,573	0	0	5.914	7.060	JAJO	23,096	57,851	05/26/2022	01/17/2032
00140M-AC-6	Aimco CLO 12 Ltd		D	2	3.C FE	924,288	87.1094	871,094	1,000,000	924,288	0	3,488	0	0	9.964	11.952	JAJO	21,034	42,725	09/14/2022	01/17/2032
001748-AF-9	AMMC CLO XIV Ltd		D	2	3.C FE	345,668	91.5185	320,315	350,000	345,668	0	1,396	0	0	11.708	11.701	JAJO	7,741	32,755	12/19/2022	07/25/2029
001748-AH-5	AMMC CLO XIV Ltd		D	2	3.C FE	337,895	89.0652	311,728	350,000	337,895	0	2,991	0	0	10.888	11.552	JAJO	7,198	29,845	12/19/2022	07/25/2029
00175L-AN-2	AMMC CLO XIV Ltd		D	2	2.B FE	669,000	94.6936	633,500	669,000	669,000	0	323	0	0	7.958	8.068	JAJO	10,057	37,173	12/19/2022	07/25/2029
00176B-AH-6	AMMC CLO XIII Ltd		D	2	3.C FE	253,966	84.8432	218,895	258,000	253,966	0	1,679	0	0	10.765	11.091	JAJO	5,323	21,761	05/26/2022	07/24/2029
00176B-AK-9	AMMC CLO XIII Ltd		D	2	3.C FE	257,294	84.7947	218,770	258,000	257,294	0	1,033	0	0	11.275	11.241	JAJO	5,575	23,095	05/26/2022	07/24/2029
00176B-AM-5	AMMC CLO XIII Ltd		D	2	5.B FE	204,829	56.3783	145,456	258,000	204,829	0	(6,814)	17,083	0	12.625	11.410	JAJO	6,243	26,626	01/10/2022	07/24/2029
00176C-AQ-4	AMMC CLO XII Ltd		D	2	1.C FE	1,140,000	96.9577	1,105,318	1,140,000	1,140,000	0	4	0	0	6.092	5.996	FIAM	10,031	38,682	05/26/2022	11/10/2030
00176C-AS-0	AMMC CLO XII Ltd		D	2	1.F FE	6,280,497	93.7194	5,878,081	6,272,000	6,280,497	0	80,346	0	0	6.492	6.230	FIAM	58,815	238,257	05/26/2022	11/10/2030
00176C-AU-5	AMMC CLO XII Ltd		D	2	2.B FE	490,000	88.6850	434,557	490,000	490,000	0	13	0	0	7.292	6.988	FIAM	5,161	22,588	05/26/2022	11/10/2030
00176D-AJ-8	AMMC CLO XIII Ltd		D	2	1.A FE	1,225,000	97.7856	1,197,874	1,225,000	1,225,000	0	306	0	0	6.025	6.364	JAJO	14,145	44,450	05/26/2022	07/24/2029
00176D-AN-9	AMMC CLO XIII Ltd		D	2	2.B FE	601,000	93.4514	561,643	601,000	601,000	0	275	0	0	7.925	8.052	JAJO	9,128	33,386	05/26/2022	07/24/2029
00176E-AG-2	AMMC CLO XII Ltd		D	2	4.A FE	490,000	78.0346	382,370	490,000	490,000	0	9,015	0	0	10.772	10.448	FIAM	7,624	39,877	05/26/2022	11/10/2030
00176E-AJ-6	AMMC CLO XII Ltd		D	2	5.A FE	266,290	72.9451	204,246	280,000	266,290	0	2,544	0	0	12.957	10.905	FIAM	5,240	28,990	05/26/2022	11/10/2030
00176K-AE-3	AMMC CLO 16 Ltd		D	2	3.C FE	927,293	90.4437	854,693	945,000	927,293	0	9,330	0	0	10.071	10.848	JAJO	20,884	75,463	12/19/2022	04/14/2029
00178L-AC-3	AMMC CLO 21 LTD		D	2	1.C FE	1,836,100	96.5744	1,773,203	1,836,100	1,836,100	0	275	0	0	6.140	6.179	FIAM	18,790	65,660	12/19/2022	11/02/2030
00178L-AD-1	AMMC CLO 21 LTD		D	2	1.F FE	872,900	94.0341	820,824	872,900	872,900	0	184	0	0	6.560	6.468	FIAM	9,544	34,932	12/19/2022	11/02/2030
00178L-AE-9	AMMC CLO 21 LTD		D	2	2.C FE	752,500	88.6708	667,248	752,500	752,500	0	247	0	0	7.560	7.395	FIAM	9,482	37,744	12/19/2022	11/02/2030
00179T-AA-9	AMMC CLO 21 LTD		D	2	4.A FE	536,102	81.9013	443,741	541,800	536,102	0	4,395	0	0	10.960	11.017	FIAM	9,897	45,852	12/19/2022	11/02/2030
00190Y-BH-7	Ares XXVII CLO Ltd		D	2	1.F FE	9,250,000	92.1885	8,527,436	9,250,000	9,250,000	0	0	0	0	6.374	6.373	JAJO	106,452	362,942	12/19/2022	10/28/2034
008511-AN-7	AGL CLO 7 Ltd		D	2	1.C FE	4,634,195	95.5833	4,492,415	4,700,000	4,634,195	0	9,395	0	0	5.779	6.150	JAJO	57,342	141,636	05/02/2022	07/15/2034
00889B-AC-5	Aimco CLO 15 Ltd		D	2	1.F FE	3,075,844	92.8521	3,017,693	3,250,000	3,075,844	0	12,719	0	0	6.029	7.036	JAJO	41,367	104,498	05/26/2022	10/17/2034
00900C-AQ-7	AIMCO CLO Series 2017-A		D	2	1.F FE	8,000,000	93.3346	7,466,768	8,000,000	8,000,000	0	16,000	0	0	6.343	6.260	JAJO	102,891	265,183	04/22/2022	04/20/2034

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
00900L-AS-3	AIMCO CLO Series 2015-A	D	2		1.F FE	3,750,000	.93.1200	3,492,000	3,750,000	3,750,000	.0	.0	.0	.0	.6.079	6.078	JAU	48,127	146,691	12/19/2022	10/17/2034
01448T-AA-2	ALESCO Preferred Funding V Ltd	D	2		1.A FE	1,616,012	.99.4549	1,644,303	1,653,315	1,616,012	.0	95,335	.0	.0	.5.209	5.636	MJD	2,153	39,255	06/28/2022	12/23/2034
01448T-AB-0	ALESCO Preferred Funding V Ltd	D	2		1.B FE	3,155,569	.93.0621	3,539,152	3,803,000	3,155,569	.0	121,975	.0	.0	.5.379	8.410	MJD	5,114	96,296	12/19/2022	12/23/2034
01448X-AA-3	ALESCO Preferred Funding VI Ltd	D	2		1.D FE	6,159,800	.95.9830	6,550,725	6,824,880	6,159,800	.0	342,132	.0	.0	.4.074	8.960	MJD	6,951	160,989	03/28/2022	03/23/2035
01448X-AC-9	ALESCO Preferred Funding VI Ltd	D	2		2.B FE	10,294,442	.81.6014	8,750,979	10,724,055	10,294,442	.0	135,704	.0	.0	.4.804	5.682	MJD	12,879	328,331	12/19/2022	03/23/2035
01449W-AB-2	ALESCO Preferred Funding X Ltd	D	2		1.C FE	27,057,352	.81.3551	24,570,275	30,201,272	27,057,352	.0	5,654	.0	.0	.5.229	5.654	MJD	39,481	718,801	12/19/2022	09/23/2036
01450A-AA-8	ALESCO Preferred Funding XI Ltd	D	2		1.A FE	1,955,818	.91.2495	2,399,722	2,629,846	1,955,818	.0	157,979	.0	.0	.5.059	12.558	MJD	3,326	58,058	06/28/2022	12/23/2036
01749K-AA-7	Allegro CLO XV Ltd	D	2		3.C FE	7,000,000	.90.0880	6,306,160	7,000,000	7,000,000	.0	70,000	.0	.0	.9.031	11.188	JAU	359,975	359,975	04/29/2022	07/20/2035
01749W-AG-8	Allegro CLO XV Ltd	D	2		2.C FE	9,500,000	.91.2717	8,670,812	9,500,000	9,500,000	.0	5,336	.0	.0	.5.331	5.336	JAU	288,378	288,378	04/29/2022	07/20/2035
03328R-AL-3	Anchorage Capital CLO 6 Ltd	D	2		3.C FE	6,047,570	.86.9148	5,345,260	6,150,000	6,047,570	.0	39,545	.0	.0	10.429	11.097	JAU	277,714	490,627	04/07/2022	07/15/2030
03328W-AU-2	Anchorage Capital CLO 9 Ltd	D	2		1.C FE	3,250,000	.96.1009	3,123,279	3,250,000	3,250,000	.0	.0	.0	.0	.5.829	5.829	JAU	39,994	117,634	12/19/2022	07/15/2032
03329K-BG-7	Anchorage Capital CLO 8 Ltd	D	2		2.B FE	8,350,000	.92.7858	7,747,614	8,350,000	8,350,000	.0	7,957	.0	.0	.7.958	7.957	JAU	121,824	462,860	05/03/2022	10/27/2034
03329L-AS-0	Anchorage Credit Funding 2 Ltd	D	2		1.A FE	5,000,000	.92.3562	4,617,810	5,000,000	5,000,000	.0	.0	.0	.0	.3.928	3.927	AO	36,007	196,400	12/19/2022	04/25/2038
03329W-AJ-6	Anchorage Capital CLO 25 Ltd	D	2		2.A FE	15,000,000	.89.1168	13,367,520	15,000,000	15,000,000	.0	.0	.0	.0	.7.463	4.135	JAU	1,723	253,271	02/15/2022	04/20/2035
03329X-AA-3	Anchorage Capital CLO 25 Ltd	D	2		3.C FE	9,846,592	.84.7826	8,478,260	10,000,000	9,846,592	.0	592	.0	.0	11.133	7.805	JAU	2,168	318,706	02/15/2022	04/20/2035
03330E-AJ-3	Anchorage Credit Funding 3 Ltd	D	2		1.A FE	6,250,000	.88.0983	5,506,144	6,250,000	6,250,000	.0	.0	.0	.0	.2.871	2.871	JAU	31,402	179,438	12/19/2022	01/28/2039
03330P-AA-7	Anchorage Credit Funding 5 Ltd	D	2		1.A FE	23,000,000	.95.1703	21,889,169	23,000,000	23,000,000	.0	.0	.0	.0	.4.100	4.098	AO	172,883	943,000	12/19/2022	04/25/2036
03330Y-AE-0	Anchorage Capital CLO 20 Ltd	D	2		1.C FE	10,000,000	.95.0783	9,507,830	10,000,000	10,000,000	.0	.0	.0	.0	.6.043	6.042	JAU	122,530	371,649	05/03/2022	01/20/2035
03330Y-AG-5	Anchorage Capital CLO 20 Ltd	D	2		1.E FE	7,000,000	.92.0610	6,444,270	7,000,000	7,000,000	.0	.0	.0	.0	.6.643	6.642	JAU	94,288	302,738	05/03/2022	01/20/2035
03331F-AJ-9	Anchorage Credit Funding 7 Ltd	D	2		1.C FE	9,000,000	.85.4345	7,689,105	9,000,000	9,000,000	.0	.0	.0	.0	.3.133	3.133	AO	51,695	281,970	12/19/2022	04/25/2037
03331Q-AA-4	Anchorage Capital CLO 20 Ltd	D	2		2.B FE	10,000,000	.92.4520	9,245,200	10,000,000	10,000,000	.0	7,891	.0	.0	.7.893	7.891	JAU	160,044	559,219	05/03/2022	01/20/2035
03665L-AA-1	Antares CLO 2018-3 LTD	D	2		1.A FE	10,056,934	.97.4636	9,746,360	10,000,000	10,056,934	.0	53,399	.0	.0	.5.693	6.055	JAU	115,433	336,203	12/19/2022	01/20/2031
03665T-AN-6	Antares CLO 2018-2 Ltd	D	2		1.A FE	9,000,000	.93.6962	8,432,658	9,000,000	9,000,000	.0	.0	.0	.0	.5.913	5.913	JAU	107,918	246,406	04/21/2022	04/20/2034
03665T-AQ-9	Antares CLO 2018-2 Ltd	D	2		1.C FE	18,000,000	.91.9972	16,559,496	18,000,000	18,000,000	.0	6,503	.0	.0	.6.263	4.335	JAU	6,503	6,503	04/21/2022	04/20/2034
03665T-AU-0	Antares CLO 2018-2 Ltd	D	2		2.B FE	5,250,000	.87.7234	4,605,479	5,250,000	5,250,000	.0	.0	.0	.0	.8.313	6.385	JAU	2,794	2,794	04/21/2022	04/20/2034
03666L-AL-6	Antares CLO 2020-1 Ltd	D	2		1.A FE	8,000,000	.94.0929	7,527,432	8,000,000	8,000,000	.0	.0	.0	.0	.5.785	5.784	JAU	88,697	282,169	05/03/2022	10/23/2033
03666L-AS-1	Antares CLO 2020-1 Ltd	D	2		1.F FE	12,000,000	.87.5770	10,509,240	12,000,000	12,000,000	.0	.0	.0	.0	.6.775	6.774	JAU	155,815	554,263	05/03/2022	10/23/2033
03666L-AU-6	Antares CLO 2020-1 Ltd	D	2		2.C FE	5,000,000	.84.3045	4,215,225	5,000,000	5,000,000	.0	.0	.0	.0	.7.925	7.923	JAU	75,944	294,353	05/03/2022	10/23/2033
03768Q-AQ-1	Apidos CLO XXXII Arbor Realty Collateralized Loan Obligation 2020-	D	2		3.C FE	2,231,353	.92.7123	2,086,027	2,250,000	2,231,353	.0	8,803	.0	.0	10.993	11.155	JAU	50,154	148,983	04/18/2022	01/20/2033
03880W-AC-2	FL1 Ltd	D	2		1.A FE	6,513,760	.96.1314	6,248,539	6,500,000	6,513,760	.0	494	.0	.0	.5.850	5.925	MON	17,957	208,322	01/20/2022	02/15/2035
039937-AE-7	Ares LXIII CLO Ltd	D	2		1.C FE	10,000,000	.94.9712	9,497,120	10,000,000	10,000,000	.0	.0	.0	.0	.5.913	5.913	JAU	119,909	303,445	03/10/2022	04/20/2035
039937-AG-2	Ares LXIII CLO Ltd	D	2		1.F FE	4,850,000	.92.3431	4,478,640	4,850,000	4,850,000	.0	.0	.0	.0	.6.363	6.363	JAU	143,184	143,184	03/10/2022	04/20/2035
039938-AA-3	Ares LXIII CLO Ltd	D	2		3.C FE	8,477,477	.90.8092	7,718,782	8,500,000	8,477,477	.0	62,477	.0	.0	11.213	11.188	JAU	542,952	542,952	03/10/2022	04/20/2035
04016P-AL-2	Ares XLIII CLO Ltd	D	2		1.C FE	3,983,226	.95.5068	3,820,272	4,000,000	3,983,226	.0	.0	.0	.0	.5.779	5.956	JAU	16,026	120,541	04/25/2022	07/15/2034
04017A-AG-5	Ares XLIII CLO Ltd	D	2		3.C FE	9,503,919	.86.3811	8,292,586	9,600,000	9,503,919	.0	39,759	.0	.0	10.939	11.206	JAU	221,700	648,435	04/22/2022	07/15/2034
04017W-AE-2	Ares LIV CLO Ltd	D	2		1.C FE	6,852,776	.96.4153	6,652,656	6,900,000	6,852,776	.0	11,426	.0	.0	.5.929	6.274	JAU	86,368	215,438	05/02/2022	10/15/2032
04017X-AA-8	Ares LIV CLO Ltd	D	2		3.C FE	4,982,000	.85.4850	4,530,705	5,300,000	4,982,000	.0	22,585	.0	.0	11.419	12.981	JAU	127,767	355,241	06/02/2022	10/15/2032
04018X-AE-9	ARES Loan Funding I Ltd	D	2		1.C FE	15,000,000	.95.4023	14,310,345	15,000,000	15,000,000	.0	.0	.0	.0	.5.729	5.729	JAU	181,423	527,660	12/19/2022	10/15/2034
04018X-AG-4	ARES Loan Funding I Ltd	D	2		1.F FE	2,750,000	.92.2572	2,537,073	2,750,000	2,750,000	.0	.0	.0	.0	.6.079	6.079	JAU	35,293	106,496	12/19/2022	10/15/2034
04018X-AJ-8	ARES Loan Funding I Ltd	D	2		2.C FE	1,725,000	.92.4674	1,585,063	1,725,000	1,725,000	.0	.0	.0	.0	.7.079	7.078	JAU	25,780	84,292	12/19/2022	10/15/2034
04019F-AE-7	Ares LXV CLO Ltd	D	2		1.C FE	10,000,000	.95.6501	9,565,010	10,000,000	10,000,000	.0	.0	.0	.0	.6.060	6.059	JAU	114,467	265,342	04/27/2022	07/25/2034
04019G-AA-3	Ares LXV CLO Ltd	D	2		3.C FE	5,700,000	.86.6587	4,939,546	5,700,000	5,700,000	.0	.0	.0	.0	11.160	10.991	JAU	309,012	309,012	04/27/2022	07/25/2034
04019H-AN-3	Ares LXIV CLO Ltd	D	2		2.C FE	8,000,000	.91.0143	7,281,144	8,000,000	8,000,000	.0	.0	.0	.0	.7.614	7.613	JAU	303,103	303,103	03/28/2022	04/15/2035
04019T-AA-5	Ares LXVI CLO Ltd	D	2		3.C FE	7,618,577	.95.6456	7,651,648	8,000,000	7,618,577	.0	20,177	.0	.0	11.299	13.761	JAU	328,924	328,924	07/15/2022	07/25/2034

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
04965H-AA-5	Atrium XIV LLC	D	2		3.C FE	4,713,327	.88.5676	4,561,231	5,150,000	4,713,327	.0	26,827	.0	.0	.9.729	12.021	FIAN	206,601	206,601	08/31/2022	08/23/2030
05492A-AJ-0	BFNS 2017-1	D	2		1.B FE	32,703,237	.94.3480	30,854,853	32,703,237	32,703,237	.0	.0	.0	.0	.3.250	3.250	JAJO	194,857	1,426,506	03/22/2022	01/25/2029
05492K-AA-7	BDS 2019-FL4 LTD	D	2		1.A FE	93,686	.99.5409	93,255	93,686	93,686	.0	74,178	.0	.0	.5.426	5.426	MON	2,056	49,019	01/19/2022	08/15/2036
05492K-AE-9	BDS 2019-FL4 LTD	D	2		1.C FE	9,000,000	.98.8657	8,897,911	9,000,000	9,000,000	.0	.0	.0	.0	.6.076	5.551	MON	174,415	316,891	12/19/2022	08/15/2036
05682E-AG-8	Bain Capital Credit CLO 2021-5 Ltd	D	2		1.F FE	4,600,000	.92.4220	4,251,412	4,600,000	4,600,000	.0	.0	.0	.0	.6.325	6.324	JAJO	55,762	180,013	12/19/2022	10/23/2034
05682G-AJ-7	Bain Capital Credit CLO 2022-2 Ltd	D	2		1.F FE	9,000,000	.93.2900	8,396,100	9,000,000	9,000,000	.0	.0	.0	.0	.6.537	6.537	JAJO	112,772	290,109	03/11/2022	04/22/2035
05682G-AL-2	Bain Capital Credit CLO 2022-2 Ltd	D	2		2.B FE	5,000,000	.90.5859	4,529,295	5,000,000	5,000,000	.0	.0	.0	.0	.7.687	7.686	JAJO	73,672	201,741	03/11/2022	04/22/2035
05682L-AJ-6	Bain Capital Credit CLO 2019-2	D	2		1.A FE	2,531,055	.97.5479	2,536,245	2,600,000	2,531,055	.0	1,255	.0	.0	.3.840	6.642	JAJO	21,176	21,176	11/15/2022	10/17/2032
05682Q-AL-0	Bain Capital Credit CLO 2017-1 Ltd	D	2		1.F FE	9,001,250	.95.4872	8,595,042	9,001,250	9,001,250	.0	11,252	.0	.0	.6.743	6.852	JAJO	123,069	323,975	04/26/2022	07/20/2030
05682X-AE-1	Bain Capital Credit CLO 2019-4 Ltd	D	2		3.C FE	7,389,831	.84.7967	6,359,753	7,500,000	7,389,831	.0	(35,169)	.0	.0	12.044	12.163	JAJO	370,975	605,669	02/25/2022	04/23/2035
05683E-AU-6	Bain Capital Credit CLO 2020-2 Ltd	D	2		2.C FE	2,400,000	.89.0603	2,137,447	2,400,000	2,400,000	.0	.0	.0	.0	.7.527	7.526	JAJO	37,131	125,913	12/19/2022	07/19/2034
05683H-AA-4	Bain Capital Credit CLO 2017-2 Ltd	D	2		1.F FE	5,625,000	.93.2393	5,244,711	5,625,000	5,625,000	.0	.0	.0	.0	.6.458	6.458	JAJO	68,621	227,003	12/19/2022	07/25/2034
05684A-AW-9	Bain Capital Credit CLO 2019-4 Ltd	D	2		2.C FE	14,846,854	.89.4439	13,416,585	15,000,000	14,846,854	.0	(3,146)	.0	.0	.7.676	7.668	JAJO	219,432	693,922	02/25/2022	04/23/2035
05684K-AN-7	Bain Capital Credit CLO 2020-4 Ltd	D	2		1.C FE	2,497,811	.95.9357	2,494,328	2,600,000	2,497,811	.0	6,491	.0	.0	.6.193	6.989	JAJO	32,649	83,411	07/07/2022	10/20/2033
05684U-AJ-4	Bain Capital Credit CLO 2017-2 Ltd	D	2		2.C FE	15,000,000	.86.1066	12,915,990	15,000,000	15,000,000	.0	.0	.0	.0	.7.129	7.065	JAJO	222,767	589,990	02/15/2022	04/18/2035
05684W-AA-9	Bain Capital Credit CLO 2022-1 Ltd	D	2		3.C FE	10,000,000	.82.5971	8,259,710	10,000,000	10,000,000	.0	.0	.0	.0	10.429	10.426	JAJO	217,261	659,160	02/15/2022	04/18/2035
05685A-AJ-7	Bain Capital Credit CLO 2021-4 Ltd	D	2		1.F FE	7,000,000	.91.3325	6,393,275	7,000,000	7,000,000	.0	.0	.0	.0	.6.293	6.292	JAJO	89,320	276,500	12/19/2022	10/20/2034
05685C-AA-2	Bain Capital Credit CLO 2022-4 Ltd	D	2		3.C FE	2,955,543	.89.4147	2,682,441	3,000,000	2,955,543	.0	15,543	.0	.0	.9.790	11.830	JAJO	156,638	156,638	05/19/2022	07/16/2035
05685K-AA-4	Bain Capital Credit CLO 2022-5 Ltd	D	2		3.C FE	7,694,600	.91.1664	7,293,312	8,000,000	7,694,600	.0	14,600	.0	.0	11.637	12.390	JAJO	178,441	414,320	06/03/2022	07/24/2034
05874R-AA-0	Ballyrock CLO 21 Ltd	D	2		3.C FE	3,119,046	.96.3733	3,132,132	3,250,000	3,119,046	.0	(954)	.0	.0	13.152	13.154	JAJO	72,425	72,425	09/27/2022	10/20/2035
05874W-AG-6	Ballyrock CLO 19 Ltd	D	2		1.F FE	7,500,000	.92.8996	6,967,470	7,500,000	7,500,000	.0	.0	.0	.0	.6.313	6.313	JAJO	96,015	239,844	03/03/2022	04/20/2035
05874W-AJ-0	Ballyrock CLO 19 Ltd	D	2		2.C FE	18,000,000	.91.2425	16,423,650	18,000,000	18,000,000	.0	.0	.0	.0	.7.463	7.462	JAJO	272,411	730,300	03/03/2022	04/20/2035
05875K-AE-6	Ballyrock CLO 2019-1 Ltd	D	2		3.C FE	1,221,781	.90.1430	1,171,859	1,300,000	1,221,781	.0	.0	.0	.0	10.829	12.429	JAJO	61,159	61,159	08/19/2022	07/15/2032
05876D-AA-9	Ballyrock CLO 20 Ltd	D	2		3.C FE	7,247,407	.94.8251	7,111,883	7,500,000	7,247,407	.0	52,657	.0	.0	11.078	12.899	JAJO	360,045	360,045	07/01/2022	07/15/2034
06744N-BG-1	Bardot CLO Ltd	D	2		1.A FE	10,287,907	.98.0381	10,294,001	10,500,000	10,287,907	.0	3,157	.0	.0	.5.415	5.962	JAJO	108,968	108,968	12/05/2022	10/22/2032
06744N-BJ-5	Bardot CLO Ltd	D	2		1.C FE	1,190,868	.95.3683	1,192,104	1,250,000	1,190,868	.0	1,806	.0	.0	.5.925	7.248	JAJO	14,194	14,194	11/04/2022	10/22/2032
06759F-AC-0	Barings CLO Ltd 2015-II	D	2		1.B FE	4,241,001	.96.8645	5,293,645	5,465,000	4,241,001	.0	156,660	.0	.0	.5.833	14.395	JAJO	64,635	161,333	06/24/2022	10/20/2030
06759F-AE-6	Barings CLO Ltd 2015-II	D	2		1.E FE	10,597,181	.95.1711	13,086,026	13,750,000	10,597,181	.0	320,922	.0	.0	.6.193	13.666	JAJO	172,661	441,116	06/24/2022	10/20/2030
06761C-AL-3	Barings CLO Ltd 2016-II	D	2		1.A FE	19,578,134	.98.1184	19,623,680	20,000,000	19,578,134	.0	8,134	.0	.0	.5.313	5.919	JAJO	215,454	215,454	11/30/2022	01/20/2032
07355V-AL-1	Beechwood Park CLO Ltd	D	2		3.C FE	10,000,000	.86.6150	8,661,500	10,000,000	10,000,000	.0	.0	.0	.0	10.364	10.362	JAJO	218,787	717,863	02/15/2022	01/17/2035
07403K-AA-1	Bear Mountain Park CLO Ltd	D	2		3.C FE	8,764,792	.95.9641	8,756,724	9,125,000	8,764,792	.0	19,556	.0	.0	10.834	12.970	JAJO	356,979	356,979	07/13/2022	07/15/2035
08186A-AG-1	Benefit Street Partners CLO XXVI Ltd	D	2		2.C FE	3,250,000	.92.3043	2,999,890	3,250,000	3,250,000	.0	.0	.0	.0	.7.713	5.824	JAJO	526	526	05/02/2022	07/20/2034
08186U-AA-1	Benefit Street Partners CLO XXII Ltd	D	2		2.C FE	11,000,000	.89.5444	9,849,884	11,000,000	11,000,000	.0	.0	.0	.0	.7.313	7.312	JAJO	163,128	473,504	02/18/2022	04/20/2035
087598-AE-8	Bethpage Park CLO Ltd	D	2		1.F FE	3,600,000	.92.8277	3,341,797	3,600,000	3,600,000	.0	.0	.0	.0	.6.079	6.079	JAJO	46,201	139,303	05/06/2022	10/15/2036
09628V-AN-4	BlueMountain CLO 2016-3 Ltd	D	2		1.A FE	8,000,000	.96.4643	7,717,144	8,000,000	8,000,000	.0	176	.0	.0	.6.056	5.850	FIAN	63,253	265,342	12/19/2022	11/15/2030
09630A-AE-6	BlueMountain CLO 2018-3 Ltd	D	2		1.A FE	18,000,000	.96.1605	17,308,890	18,000,000	18,000,000	.0	8,048	.0	.0	.5.758	5.813	JAJO	195,787	598,660	12/19/2022	10/25/2030
09630Q-AS-0	BlueMountain CLO XXX Ltd	D	2		2.A FE	14,250,000	.87.0661	12,406,919	14,250,000	14,250,000	.0	.0	.0	.0	.7.164	7.163	JAJO	215,505	653,635	02/15/2022	04/15/2035
09631J-AJ-5	BlueMountain CLO XXXIV Ltd	D	2		2.C FE	15,000,000	.90.9388	13,640,820	15,000,000	15,000,000	.0	.0	.0	.0	.7.713	5.509	JAJO	2,295	403,969	03/23/2022	04/20/2035
09631R-AC-2	BlueMountain CLO XXXV Ltd	D	2		1.C FE	8,300,000	.96.3085	7,993,606	8,300,000	8,300,000	.0	.0	.0	.0	.4.243	4.251	JAJO	189,782	189,782	05/10/2022	07/22/2035
10901A-AA-4	Brigade Debt Funding II Ltd	D	2		1.A FE	18,400,000	.96.1838	17,697,819	18,400,000	18,400,000	.0	.0	.0	.0	.4.750	4.749	AO	160,233	874,000	12/19/2022	10/25/2035
10901U-AA-0	Brigade Debt Funding I Ltd	D	2		1.A FE	12,000,000	.95.6177	11,474,124	12,000,000	12,000,000	.0	.0	.0	.0	.4.250	4.249	AO	93,500	510,000	12/19/2022	04/25/2036
11124T-AL-8	Broad River Bsl Funding CLO Ltd 2020-1	D	2		1.C FE	1,868,936	.93.8152	1,876,304	2,000,000	1,868,936	.0	7,336	.0	.0	.5.943	7.176	JAJO	24,100	60,607	07/12/2022	07/20/2034
11124T-AN-4	Broad River Bsl Funding CLO Ltd 2020-1	D	2		1.F FE	2,958,579	.92.6448	2,964,634	3,200,000	2,958,579	.0	4,339	.0	.0	.6.243	8.185	JAJO	40,507	40,507	11/22/2022	07/20/2034
12482Q-AA-2	CBAM 2019-10 Ltd	D	2		3.C FE	6,491,241	.78.9429	5,131,289	6,500,000	6,491,241	.0	46,491	.0	.0	11.243	11.284	JAJO	148,183	559,827	01/20/2022	04/20/2032
12553B-AA-9	CIFC Funding 2019-I Ltd	D	2		3.C FE	5,015,857	.91.7710	4,831,743	5,265,000	5,015,857	.0	14,107	.0	.0	11.073	12.225	JAJO	118,214	246,572	08/18/2022	04/20/2032

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
12555Q-AU-0	CIFC Funding 2020-I Ltd	D	2		1.F FE	4,700,000	.93.7973	4,408,473	4,700,000	4,700,000	.0	.0	.0	.0	.6.079	6.079	JAU	60,319	182,030	12/19/2022	.07/15/2036
12555Q-AW-6	CIFC Funding 2020-I Ltd	D	2		2.C FE	3,000,000	.92.5574	2,776,722	3,000,000	3,000,000	.0	.0	.0	.0	.7.179	7.178	JAU	89,429	149,647	12/19/2022	.07/15/2036
12556C-AA-4	CIFC Funding 2019-VI Ltd	D	2		3.C FE	2,858,192	.94.0130	2,749,880	2,925,000	2,858,192	.0	.4.855	.0	.0	.11.479	12.149	JAU	70,884	208,293	.06/10/2022	.01/16/2033
12560E-AQ-9	CIFC Funding 2020-III Ltd	D	2		1.C FE	6,580,301	.96.3072	6,452,582	6,700,000	6,580,301	.0	.9.276	.0	.0	.5.893	6.139	JAU	80,057	200,650	.05/03/2022	.10/20/2034
12563E-AA-1	CIFC Funding 2021-I Ltd	D	2		1.A FE	4,907,299	.98.3759	4,918,795	5,000,000	4,907,299	.0	.4.799	.0	.0	.5.468	6.481	JAU	51,646	51,646	.11/21/2022	.04/25/2033
12565E-AC-5	CIFC Funding 2021-V Ltd	D	2		1.C FE	1,416,064	.96.4120	1,446,180	1,500,000	1,416,064	.0	.2.314	.0	.0	.5.729	6.938	JAU	18,142	18,142	.10/20/2022	.07/15/2034
12565E-AE-1	CIFC Funding 2021-V Ltd	D	2		1.F FE	7,000,000	.93.9466	6,576,262	7,000,000	7,000,000	.0	.0	.0	.0	.6.129	6.128	JAU	90,575	274,703	.03/21/2022	.07/15/2034
12567W-AJ-8	CIFC Funding 2022-IV Ltd	D	2		2.C FE	5,500,000	.92.2808	5,075,444	5,500,000	5,500,000	.0	.0	.0	.0	.6.074	6.074	JAU	2,784	2,784	.04/20/2022	.07/16/2035
12567X-AA-5	CIFC Funding 2022-IV Ltd	D	2		3.B FE	4,250,000	.89.1779	3,790,061	4,250,000	4,250,000	.0	.0	.0	.0	.9.524	9.524	JAU	3,373	3,373	.04/20/2022	.07/16/2035
12569B-AA-1	CIFC Funding 2022-VI Ltd	D	2		3.C FE	8,178,070	.95.8076	8,143,646	8,500,000	8,178,070	.0	18,070	.0	.0	.11.694	13.091	JAU	306,475	306,475	.08/02/2022	.07/16/2035
12572G-AE-7	CIFC Funding 2022-V Ltd	D	2		1.E FE	5,000,000	.99.5794	4,978,970	5,000,000	5,000,000	.0	.0	.0	.0	.5.715	5.717	JAU	129,379	129,379	.06/13/2022	.07/16/2033
12574H-AA-3	CIFC Funding 2022-VI Ltd	D	2		1.C FE	10,000,000	.99.3618	9,936,180	10,000,000	10,000,000	.0	.6.234	.0	.0	.6.234	6.232	JAU	192,209	192,209	.08/02/2022	.07/16/2035
12807C-AA-1	CAL Funding IV Ltd	D	2		1.F FE	5,919,608	.86.8446	5,727,008	6,594,548	5,919,608	.0	53,744	.0	.0	.2.220	4.972	MON	2,440	52,308	.09/01/2022	.09/25/2045
13876G-AL-2	Canyon Capital CLO 2017-1 Ltd	D	2		1.B FE	13,992,525	.96.2207	13,470,898	14,000,000	13,992,525	.0	24,525	.0	.0	.5.679	6.071	JAU	167,850	482,182	.03/01/2022	.07/15/2030
13876N-AS-2	Canyon CLO 2020-2 Ltd	D	2		1.F FE	3,800,000	.92.7048	3,522,782	3,800,000	3,800,000	.0	.0	.0	.0	.6.129	6.128	JAU	49,169	166,996	.01/11/2022	.10/15/2034
13876Q-AE-6	Canyon CLO 2020-2 Ltd	D	2		3.C FE	1,299,702	.89.2493	1,338,740	1,500,000	1,299,702	.0	.7.452	.0	.0	.10.609	13.390	JAU	33,596	97,729	.07/06/2022	.10/15/2034
13876R-AJ-3	Canyon CLO 2020-3 Ltd	D	2		2.C FE	4,015,727	.95.0765	3,803,060	4,000,000	4,015,727	.0	14,927	.0	.0	.7.779	7.791	JAU	65,691	216,641	.02/18/2022	.01/15/2034
13876T-AA-8	Canyon CLO 2020-3 Ltd	D	2		3.C FE	903,905	.92.2264	922,264	1,000,000	903,905	.0	4,405	.0	.0	.11.329	13.536	JAU	23,917	70,373	.07/06/2022	.01/15/2034
13877E-AG-7	Canyon Capital CLO 2021-2 Ltd	D	2		1.F FE	4,000,000	.92.5064	3,700,256	4,000,000	4,000,000	.0	5,586	.0	.0	.6.029	6.104	JAU	50,913	152,891	.12/19/2022	.04/15/2034
13877J-AC-5	Canyon Capital CLO 2022-1 Ltd	D	2		1.C FE	2,269,983	.94.8821	2,253,450	2,375,000	2,269,983	.0	4,827	.0	.0	.5.779	6.534	JAU	28,973	74,672	.05/25/2022	.04/15/2035
13877L-AC-0	Canyon Capital CLO 2022-2 Ltd	D	2		1.D Z	7,500,000	.99.9826	7,498,695	7,500,000	7,500,000	.0	.0	.0	.0	.0.000	0.000	JAU	.0	.0	.12/08/2022	.01/15/2036
13877P-AC-1	Canyon CLO 2021-4 Ltd	D	2		1.C FE	1,427,792	.95.3538	1,430,307	1,500,000	1,427,792	.0	.917	.0	.0	.5.779	6.785	JAU	18,301	18,301	.11/28/2022	.10/15/2034
13887T-AJ-6	Canyon Capital CLO 2019-1 Ltd	D	2		1.A FE	4,119,554	.98.1694	4,123,115	4,200,000	4,119,554	.0	1,034	.0	.0	.5.179	5.718	JAU	45,922	45,922	.12/08/2022	.04/15/2032
13887W-AN-0	Canyon Capital CLO 2019-2 Ltd	D	2		1.F FE	5,000,000	.92.7441	4,637,205	5,000,000	5,000,000	.0	.0	.0	.0	.6.229	6.228	JAU	65,752	201,254	.12/19/2022	.10/15/2034
143113-AA-6	CARLYLE US CLO 2022-2 LTD	D	2		3.C FE	2,000,000	.87.9507	1,759,014	2,000,000	2,000,000	.0	.0	.0	.0	.11.363	9.343	JAU	519	519	.04/11/2022	.04/20/2035
143119-AJ-4	CARLYLE US CLO 2022-2 LTD	D	2		2.C FE	12,000,000	.90.0028	10,800,336	12,000,000	12,000,000	.0	.0	.0	.0	.7.513	5.493	JAU	1,831	1,831	.04/11/2022	.04/20/2035
143122-AA-7	CARLYLE US CLO 2021-11 LTD	D	2		1.A FE	4,390,498	.97.8939	4,405,226	4,500,000	4,390,498	.0	.2.548	.0	.0	.5.453	6.102	JAU	46,354	46,354	.11/18/2022	.01/25/2033
143122-AE-9	CARLYLE US CLO 2021-11 LTD	D	2		1.F FE	5,000,000	.94.3496	4,717,480	5,000,000	5,000,000	.0	.0	.0	.0	.6.408	2.712	JAU	753	11,877	.12/19/2022	.01/25/2033
143133-AE-6	CARLYLE US CLO 2021-6 LTD	D	2		1.C FE	8,500,000	.96.2490	8,181,165	8,500,000	8,500,000	.0	.0	.0	.0	.5.779	5.779	JAU	103,703	303,600	.03/29/2022	.07/15/2034
143133-AG-1	CARLYLE US CLO 2021-6 LTD	D	2		1.F FE	7,000,000	.93.3981	6,537,867	7,000,000	7,000,000	.0	.0	.0	.0	.6.179	6.178	JAU	91,314	278,412	.03/29/2022	.07/15/2034
14315J-AU-3	Carlyle US CLO 2017-2 Ltd	D	2		1.C FE	13,300,000	.96.1957	12,794,028	13,300,000	13,300,000	.0	.0	.0	.0	.5.843	5.842	JAU	304,058	467,396	.12/19/2022	.07/20/2031
14316B-AQ-8	CARLYLE US CLO 2019-1 LTD	D	2		1.C FE	7,570,896	.95.2756	7,622,048	8,000,000	7,570,896	.0	15,896	.0	.0	.5.843	7.175	JAU	94,779	182,892	.10/13/2022	.04/20/2031
14316E-AS-8	CARLYLE US CLO 2019-2 LTD	D	2		1.F FE	5,000,000	.93.5362	4,676,810	5,000,000	5,000,000	.0	.0	.0	.0	.6.279	6.278	JAU	66,280	203,729	.12/19/2022	.07/15/2032
14316W-AC-3	Carlyle US CLO 2021-7 LTD	D	2		1.C FE	10,000,000	.95.3714	9,537,140	10,000,000	10,000,000	.0	.0	.0	.0	.5.729	5.729	JAU	120,949	352,795	.01/20/2022	.10/15/2035
14316W-AE-9	Carlyle US CLO 2021-7 LTD	D	2		1.F FE	3,000,000	.94.0236	2,820,708	3,000,000	3,000,000	.0	.0	.0	.0	.6.179	6.178	JAU	39,135	119,526	.01/20/2022	.10/15/2035
15186P-AA-6	Centerbridge Credit Funding 1 Ltd	D	2		1.A FE	10,000,000	.88.4658	8,846,580	10,000,000	10,000,000	.0	.0	.0	.0	.3.164	3.164	JAU	58,007	316,400	.12/19/2022	.07/25/2039
15672R-AA-3	Cerberus Loan Funding XXIV LP	D	2		1.A FE	16,386,953	.98.9926	16,221,871	16,386,953	16,386,953	.0	.3.946	.0	.0	.5.479	6.357	JAU	297,675	561,628	.10/19/2022	.07/15/2030
15672R-AC-9	Cerberus Loan Funding XXIV LP	D	2		1.B FE	7,000,000	.96.4580	6,752,060	7,000,000	7,000,000	.0	.2.428	.0	.0	.5.979	6.819	JAU	140,456	265,676	.12/19/2022	.07/15/2030
15673F-AA-8	CERBERUS LOAN FUNDING XXVII LP	D	2		1.A FE	11,740,680	.97.8675	11,744,100	12,000,000	11,740,680	.0	229,379	.0	.0	.5.879	7.940	JAU	148,938	443,145	.12/19/2022	.01/15/2032
15673N-AA-1	Cerberus Loan Funding XXII LP	D	2		1.A FE	21,084,745	.97.9653	20,572,713	21,000,000	21,084,745	.0	79,976	.0	.0	.5.479	6.188	JAU	242,909	689,403	.12/19/2022	.04/15/2030
15673N-AE-3	Cerberus Loan Funding XXII LP	D	2		1.C FE	5,032,698	.95.8332	4,791,660	5,000,000	5,032,698	.0	31,268	.0	.0	.5.829	6.326	JAU	61,530	182,081	.12/19/2022	.04/15/2030
15674H-AA-3	Cerberus Loan Funding XXIX LP	D	2		1.A FE	6,500,000	.98.5094	6,403,111	6,500,000	6,500,000	.0	.0	.0	.0	.5.979	5.979	JAU	130,423	246,699	.12/19/2022	.10/15/2032
16409T-AE-9	Chenango Park CLO Ltd	D	2		1.C FE	5,965,123	.96.8106	5,808,636	6,000,000	5,965,123	.0	37,123	.0	.0	.5.629	6.085	JAU	71,302	174,287	.04/28/2022	.04/15/2030
17181T-AE-1	CIFC Funding 2018-IV Ltd	D	2		1.F FE	868,203	.95.7292	861,563	900,000	868,203	.0	.3.933	.0	.0	.6.179	7.243	JAU	11,740	29,905	.05/24/2022	.10/17/2031
17275G-AA-4	Cirrus Funding 2018-1 Ltd	D	2		1.A FE	36,000,000	.95.9129	34,528,644	36,000,000	36,000,000	.0	.0	.0	.0	.4.800	4.799	JJ	748,800	1,728,000	.12/19/2022	.01/25/2037

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
22284H-AC-7	Covenant Credit Partners CLO III Ltd	D.....	2		1.B FE	5,000,000	.97.2729	4,863,645	5,000,000	5,000,000	0	832	0	0	5.929	6.446	JAJO	62,585	186,044	12/19/2022	10/15/2029
22284H-AJ-2	Covenant Credit Partners CLO III Ltd	D.....	2		1.E FE	4,999,615	.88.8965	4,444,825	5,000,000	4,999,615	0	(292)	0	0	4.539	4.533	JAJO	104,649	226,320	12/19/2022	10/15/2029
22846M-AC-7	Crown Point CLO 7 Ltd	D.....	2		1.C FE	19,127,643	.96.1781	18,273,839	19,000,000	19,127,643	0	122,529	0	0	6.193	6.138	JAJO	238,586	735,105	12/19/2022	10/20/2031
24460R-AA-1	Deerpath Capital CLO 2020-1 LTD	D.....	2		1.A FE	14,000,000	.98.1732	13,744,248	14,000,000	14,000,000	0	0	0	0	5.929	5.928	JAJO	175,239	526,344	12/19/2022	04/17/2032
25255D-AE-0	Diameter Capital Clo 1 Ltd	D.....	2		1.C FE	7,700,000	.95.3274	7,340,210	7,700,000	7,700,000	0	0	0	0	5.879	5.879	JAJO	95,569	282,600	12/19/2022	07/15/2036
26248E-AA-4	Dryden 113 CLO Ltd	D.....	2		3.C FE	4,000,000	.87.7913	3,511,652	4,000,000	4,000,000	0	0	0	0	9.675	9.675	JAJO	1,075	1,075	04/28/2022	07/15/2037
26249M-AQ-0	Dryden 37 Senior Loan Fund	D.....	2		1.C FE	3,769,165	.95.9551	3,646,294	3,800,000	3,769,165	0	41,483	0	0	5.479	6.060	JAJO	43,955	123,696	12/19/2022	01/15/2031
26827E-AC-9	ECAF I Ltd	D.....	2		5.B FE	9,475,682	.61.7662	5,998,942	9,712,338	9,475,682	0	44,817	0	0	4.947	5.526	MON	21,354	499,076	03/17/2022	06/15/2040
27829P-AS-5	Eaton Vance CLO 2020-2 Ltd	D.....	2		1.F FE	3,300,000	.90.0131	2,970,432	3,300,000	3,300,000	0	0	0	0	6.179	6.178	JAJO	43,048	131,132	12/19/2022	01/15/2035
27830Q-AQ-1	Eaton Vance CLO 2020-1 Ltd	D.....	2		2.C FE	2,500,000	.94.7460	2,368,650	2,500,000	2,500,000	0	0	0	0	7.179	7.178	JAJO	37,890	124,706	12/19/2022	10/15/2034
282523-AK-5	1828 CLO Ltd	D.....	2		1.A FE	7,969,704	.96.3120	7,675,782	7,969,704	7,969,704	0	0	0	0	4.442	4.442	JAJO	74,736	354,014	12/19/2022	10/15/2031
28851Q-AE-3	Ellington Clo I Ltd	D.....	2		1.A FE	22,199,520	.98.9824	21,973,618	22,199,520	22,199,520	0	3,623	0	0	5.699	6.510	JAJO	267,094	861,253	04/18/2022	10/15/2029
28851Q-AN-3	Ellington Clo I Ltd	D.....	2		1.B FE	20,600,000	.91.7528	18,901,077	20,600,000	20,600,000	0	0	0	0	2.579	2.579	JAJO	112,158	531,274	12/19/2022	10/15/2029
28852E-AA-7	Ellington Clo II Ltd	D.....	2		1.A FE	5,720,596	.99.1221	5,670,375	5,720,596	5,720,596	0	8,822	0	0	6.306	6.638	FIAN	47,098	326,389	02/16/2022	02/15/2029
28852L-AA-1	Ellington Clo III Ltd	D.....	2		1.A FE	17,100,446	.98.7271	16,788,927	17,005,388	17,100,446	0	93,453	0	0	5.893	6.128	JAJO	203,194	607,974	10/21/2022	07/20/2030
28852L-AN-3	Ellington Clo III Ltd	D.....	2		1.A FE	22,673,850	.98.5374	22,342,223	22,673,850	22,673,850	0	0	0	0	5.993	5.992	JAJO	275,524	833,702	10/21/2022	07/20/2030
28853R-AN-9	Ellington CLO IV Ltd	D.....	2		1.A FE	4,000,000	.98.8189	3,952,756	4,000,000	4,000,000	0	0	0	0	6.079	6.079	JAJO	51,335	154,167	12/19/2022	04/15/2029
29001X-AC-9	Elmwood CLO 17 Ltd	D.....	2		1.C FE	9,000,000	.97.1252	8,741,268	9,000,000	9,000,000	0	0	0	0	4.923	4.147	JAJO	199,922	199,922	05/11/2022	07/17/2035
29002G-AB-7	Elmwood CLO IV Ltd	D.....	2		1.A FE	9,717,347	.98.3691	9,836,910	10,000,000	9,717,347	0	25,856	0	0	5.319	6.541	JAJO	83,422	147,729	05/20/2022	04/15/2033
29002H-AQ-2	Elmwood CLO III Ltd	D.....	2		1.F FE	5,000,000	.94.1531	4,707,655	5,000,000	5,000,000	0	0	0	0	6.343	6.342	JAJO	64,307	201,032	12/19/2022	10/20/2034
29002H-AS-8	Elmwood CLO III Ltd	D.....	2		2.C FE	2,500,000	.94.7449	2,368,623	2,500,000	2,500,000	0	0	0	0	7.393	7.392	JAJO	37,476	127,131	12/19/2022	10/20/2034
29002U-AG-5	Elmwood CLO 16 Ltd	D.....	2		2.C FE	15,000,000	.94.9026	14,235,390	15,000,000	15,000,000	0	0	0	0	7.563	7.562	JAJO	230,051	591,037	03/16/2022	04/20/2034
29002V-AA-6	Elmwood CLO X Ltd	D.....	2		1.A FE	8,716,877	.98.1927	8,837,343	9,000,000	8,716,877	0	18,127	0	0	5.283	6.626	JAJO	96,407	96,407	10/20/2022	10/20/2034
29002V-AE-8	Elmwood CLO X Ltd	D.....	2		1.F FE	5,000,000	.94.0620	4,703,100	5,000,000	5,000,000	0	0	0	0	6.193	6.192	JAJO	62,786	193,874	01/21/2022	10/20/2034
29003B-AL-5	Elmwood CLO V Ltd	D.....	2		1.A FE	19,476,114	.97.4042	19,480,840	20,000,000	19,476,114	0	6,114	0	0	5.393	6.018	JAJO	218,699	218,699	12/07/2022	10/20/2034
29003D-AA-5	Elmwood CLO 16 Ltd	D.....	2		3.C FE	2,068,104	.92.7855	1,929,938	2,080,000	2,068,104	0	9,112	0	0	11.183	11.306	JAJO	47,169	132,782	03/16/2022	04/20/2034
29003U-AA-7	Elmwood CLO IX Ltd	D.....	2		1.A FE	3,373,259	.97.5727	3,415,045	3,500,000	3,373,259	0	5,384	0	0	5.373	6.293	JAJO	38,130	72,476	10/07/2022	07/20/2034
29004Y-AA-8	Elmwood CLO 19 Ltd	D.....	2		3.C FE	6,428,718	.95.6723	6,218,700	6,500,000	6,428,718	0	(6,282)	0	0	12.168	12.691	JAJO	197,728	197,728	08/19/2022	10/17/2034
30259A-AA-0	PDF III Ltd	D.....	2		1.A FE	16,000,000	.96.3891	15,422,256	16,000,000	16,000,000	0	0	0	0	3.900	3.899	JJ	270,400	624,000	12/19/2022	01/25/2036
33829W-AJ-8	522 Funding CLO 2019-5 Ltd	D.....	2		2.C FE	13,550,000	.84.1760	11,405,848	13,550,000	13,550,000	0	0	0	0	7.114	7.113	JAJO	607,784	814,731	02/15/2022	04/15/2035
33835N-AE-1	522 Funding CLO 2018-3A Ltd	D.....	2		1.F FE	5,000,000	.93.8542	4,692,710	5,000,000	5,000,000	0	0	0	0	6.293	6.292	JAJO	63,800	198,518	12/19/2022	10/20/2031
33836J-AG-4	ASSURANT CLO I LTD	D.....	2		1.F FE	3,700,000	.92.8507	3,435,476	3,700,000	3,700,000	0	0	0	0	6.393	6.392	JAJO	47,962	150,651	12/19/2022	10/20/2034
34955Y-AN-9	Fortress Credit BSL VI Ltd	D.....	2		1.C FE	24,000,000	.86.1056	20,665,344	24,000,000	24,000,000	0	0	0	0	2.904	2.904	JAJO	131,643	696,936	12/19/2022	07/23/2031
34956N-AA-0	Fortress Credit Bsl VII Ltd	D.....	2		1.A FE	12,375,000	.98.3050	12,165,244	12,375,000	12,375,000	0	0	0	0	5.775	5.749	JAJO	136,361	417,068	12/19/2022	07/23/2032
34960J-AS-4	Fortress Credit Opportunities VI CLO Ltd	D.....	2		1.A FE	49,136,648	.98.3904	48,398,792	49,190,564	49,136,648	0	344,295	0	0	5.269	5.009	JAJO	590,334	1,670,844	10/11/2022	07/10/2030
34960J-AW-5	Fortress Credit Opportunities VI CLO Ltd	D.....	2		1.C FE	7,000,000	.97.4901	6,824,307	7,000,000	7,000,000	0	4,269	0	0	5.959	6.827	JAJO	95,008	273,044	12/19/2022	07/10/2030
34960N-AN-6	Fortress Credit BSL III Ltd	D.....	2		1.C FE	11,081,713	.95.4807	10,598,358	11,100,000	11,081,713	0	52,852	0	0	5.924	6.210	JAJO	136,986	406,047	12/19/2022	04/18/2031
34961P-AL-4	Fortress Credit BSL V Ltd	D.....	2		1.C FE	16,000,000	.87.7000	14,032,000	16,000,000	16,000,000	0	0	0	0	2.723	2.723	JAJO	96,818	435,680	12/19/2022	07/11/2030
34961W-AC-9	Fortress Credit Opportunities XI CLO Ltd	D.....	2		1.A FE	11,726,906	.97.6051	11,712,612	12,000,000	11,726,906	0	319,178									

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
36319T-AL-0	Galaxy XXIII CLO Ltd	D	2		1.F FE	9,992,574	96.1073	10,812,071	11,250,000	9,992,574	0	79,276	0	0	6.625	5.083	JAUJ	161,025	404,649	09/01/2022	04/24/2029
36361W-AW-6	Gallatin CLO IX 2018-1 Ltd	D	2		1.A FE	3,992,007	95.8525	3,834,100	4,000,000	3,992,007	0	2,063	0	0	4.770	4.812	JAUJ	38,160	190,800	12/19/2022	01/21/2028
36655L-AB-1	Garrison Funding 2018-2 LTD	D	2		1.A FE	10,190,804	99.0959	10,098,669	10,190,804	10,190,804	0	1,716	0	0	6.255	6.607	FIAN	72,602	347,872	12/19/2022	11/20/2029
36655L-AD-7	Garrison Funding 2018-2 LTD	D	2		1.C FE	1,214,832	98.0254	1,200,811	1,225,000	1,214,832	0	12,652	0	0	7.125	8.133	FIAN	9,941	52,622	12/19/2022	11/20/2029
381362-AL-6	GoldenTree Credit Opportunities 2012-1 Financing Ltd	D	2		1.A FE	12,784,241	98.0723	12,537,799	12,784,241	12,784,241	0	0	0	0	4.604	4.603	MJSD	27,794	812,518	01/12/2022	06/15/2034
38136N-AQ-9	Goldentree Loan Management US Clo 8 Ltd	D	2		1.A FE	11,564,322	97.3433	11,681,196	12,000,000	11,564,322	0	11,322	0	0	5.393	6.267	JAUJ	131,219	131,219	11/07/2022	10/20/2034
38136N-AU-0	Goldentree Loan Management US Clo 8 Ltd	D	2		1.F FE	6,725,000	93.3624	6,278,621	6,725,000	6,725,000	0	0	0	0	6.243	6.242	JAUJ	85,129	263,598	12/19/2022	10/20/2034
38137V-AA-5	Goldentree Loan Management US Clo 14 Ltd	D	2		3.C FE	4,360,633	90.5543	3,984,389	4,400,000	4,360,633	0	4,633	0	0	11.693	11.788	JAUJ	104,330	210,611	06/14/2022	07/20/2035
38138D-AS-5	Goldentree Loan Management US CLO 5 Ltd	D	2		1.F FE	5,000,000	94.5150	4,725,750	5,000,000	5,000,000	0	0	0	0	6.293	6.292	JAUJ	63,800	198,518	12/19/2022	10/20/2032
38138F-AL-5	Goldentree Loan Management US Clo 12 Ltd	D	2		2.C FE	5,000,000	89.3155	4,465,775	5,000,000	5,000,000	0	0	0	0	7.463	5.361	JAUJ	745	120,630	03/31/2022	04/20/2034
38138T-AC-5	Goldentree Loan Management US Clo 10 Ltd	D	2		1.A FE	3,852,233	97.6353	3,905,412	4,000,000	3,852,233	0	6,233	0	0	5.343	6.290	JAUJ	43,334	82,279	10/11/2022	07/20/2034
38138T-AG-6	Goldentree Loan Management US Clo 10 Ltd	D	2		1.F FE	3,850,000	92.3960	3,557,246	3,850,000	3,850,000	0	0	0	0	6.193	6.192	JAUJ	48,345	148,955	12/19/2022	07/20/2034
38172H-AA-2	Golub Capital Partners Clo 45M Ltd	D	2		1.A FE	8,000,000	97.5582	7,804,656	8,000,000	8,000,000	0	0	0	0	5.963	5.962	JAUJ	96,726	290,862	12/19/2022	10/20/2031
38174Y-AC-9	Golub Capital Partners CLO 24M-R Ltd	D	2		1.C FE	2,500,000	92.9567	2,323,918	2,500,000	2,500,000	0	384	0	0	6.532	6.708	FIAN	24,947	97,463	12/19/2022	11/05/2029
38175C-AA-0	Golub Capital Partners CLO 21M Ltd	D	2		1.A FE	14,400,000	97.2825	14,008,680	14,400,000	14,400,000	0	10,906	0	0	5.828	6.392	JAUJ	158,533	489,148	12/19/2022	01/25/2031
38175C-AC-6	Golub Capital Partners CLO 21M Ltd	D	2		1.C FE	7,000,000	93.9868	6,579,076	7,000,000	7,000,000	0	1,936	0	0	6.158	6.465	JAUJ	81,428	261,201	12/19/2022	01/25/2031
38175D-AC-4	Golub Capital Partners Clo 38M Ltd	D	2		1.C FE	20,000,000	95.1918	19,038,360	20,000,000	20,000,000	0	1,503	0	0	6.143	6.613	JAUJ	249,115	763,655	12/19/2022	07/20/2030
38175J-AA-5	Golub Capital Partners CLO 17 Ltd	D	2		1.A FE	14,000,000	98.2279	13,751,906	14,000,000	14,000,000	0	4,769	0	0	6.008	6.614	JAUJ	158,890	501,111	12/19/2022	10/25/2030
38175J-AC-1	Golub Capital Partners CLO 17 Ltd	D	2		1.C FE	7,200,000	93.9197	6,762,218	7,200,000	7,200,000	0	3,335	0	0	6.508	6.902	JAUJ	88,515	294,214	12/19/2022	10/25/2030
38175W-AC-2	Golub Capital Partners CLO 31M Ltd	D	2		1.A FE	16,053,858	97.0613	15,529,808	16,000,000	16,053,858	0	51,103	0	0	6.182	6.333	FIAN	151,105	566,987	12/19/2022	08/05/2030
38176K-AC-7	Golub Capital Partners Clo 42M Ltd	D	2		1.A FE	7,000,000	96.8017	6,776,119	7,000,000	7,000,000	0	0	0	0	6.243	6.242	JAUJ	88,610	274,377	12/19/2022	04/20/2031
38176P-AC-6	Golub Capital Partners Clo 44M Ltd	D	2		1.A FE	5,860,383	96.0081	5,760,486	6,000,000	5,860,383	0	69,096	0	0	6.432	7.513	MJSD	119,687	220,199	12/19/2022	06/21/2031
38176Y-AC-7	Golub Capital Partners Clo 46M Ltd	D	2		1.A FE	15,000,000	92.6878	13,903,170	15,000,000	15,000,000	0	0	0	0	3.440	3.440	JAUJ	101,767	516,000	12/19/2022	04/20/2032
38178D-AJ-6	Golub Capital Partners CLO 50B-R Ltd	D	2		2.C FE	13,000,000	91.3004	11,869,052	13,000,000	13,000,000	0	0	0	0	7.413	7.412	JAUJ	195,423	580,883	02/22/2022	04/20/2035
38178E-AC-9	Golub Capital Partners CLO 16 Ltd	D	2		1.A FE	13,000,000	93.8474	12,200,162	13,000,000	13,000,000	0	0	0	0	6.158	6.158	JAUJ	151,224	485,088	12/19/2022	07/25/2033
38179J-AJ-2	Golub Capital Partners CLO 2016-30M Ltd	C	2		2.C FE	20,000,000	88.8274	17,765,480	20,000,000	20,000,000	0	0	0	0	7.813	7.812	JAUJ	316,874	975,367	02/15/2022	04/20/2034
390556-AL-2	Great Lakes CLO 2014-1 Ltd	D	2		1.A FE	8,270,375	99.7043	8,207,877	8,232,220	8,270,375	0	37,438	0	0	5.699	5.901	JAUJ	99,046	360,396	02/07/2022	10/15/2029
390556-AN-8	Great Lakes CLO 2014-1 Ltd	D	2		1.A FE	5,033,331	97.9870	4,899,350	5,000,000	5,033,331	0	32,783	0	0	6.079	6.636	JAUJ	64,169	193,648	12/19/2022	10/15/2029
39809L-AC-8	Greystone CRE Notes 2019-FL2 Ltd	D	2		1.B FE	5,025,910	96.2483	4,812,417	5,000,000	5,025,910	0	15,796	0	0	6.050	5.749	MON	34,161	168,791	12/19/2022	09/15/2037
40170F-AA-4	Guggenheim MM CLO 2018-1 Ltd	D	2		1.A FE	25,028,260	97.6081	24,402,025	25,000,000	25,028,260	0	27,345	0	0	4.042	4.531	JAUJ	213,328	766,400	12/19/2022	01/15/2031
40170F-AJ-5	Guggenheim MM CLO 2018-1 Ltd	D	2		1.A FE	8,000,537	94.8638	7,589,104	8,000,000	8,000,537	0	(433)	0	0	4.550	4.544	JAUJ	76,844	364,000	12/19/2022	01/15/2031
40256G-AC-5	Gulf Stream Meridian 6 Ltd	D	2		1.C FE	10,000,000	94.2984	9,429,840	10,000,000	10,000,000	0	0	0	0	5.829	5.829	JAUJ	123,060	389,458	01/12/2022	01/15/2037
40440X-AE-1	HPS Loan Management 2021-16 Ltd	D	2		1.F FE	4,500,000	92.8136	4,176,612	4,500,000	4,500,000	0	0	0	0	6.425	6.424	JAUJ	55,412	181,330	12/19/2022	01/23/2035
406371-AC-8	Halseypoint Clo 5 Ltd	D	2		1.C FE	10,000,000	95.1310	9,513,100	10,000,000	10,000,000	0	0	0	0	6.215	6.214	JAUJ	107,031	375,871	08/04/2022	01/30/2035
40639G-AA-7	Halseypoint Clo 6 Ltd	D	2		1.A FE	34,912,122	99.5119	34,829,165	35,000,000	34,912,122	0	(378)	0	0	5.951	6.469	JAUJ	619,039	619,039	08/19/2022	10/20/2034
42086N-AJ-7	Hayfin Kingsland XI Ltd	D	2		1.C FE	6,130,000	93.7806	5,748,751	6,130,000	6,130,000	0	0	0	0	6.143	6.142	JAUJ	76,354	251,356	01/11/2022	10/20/2034
43133A-AA-5	Hildene TruPS Financials Note Securitization 2018-1 Ltd	D	2		1.B FE	61,202,946	88.6110	54,464,113	61,464,280	61,202,946	0	0	0	0	5.269	5.915	JAUJ	737,630	1,987,894	04/12/2022	10/10/2038
43133J-AA-6	Hildene TruPS Securitization 2019-2 Ltd	D	2		1.C FE	40,279,191	91.3479	36,794,195	40,279,191	40,279,191	0	156,895	0	0	6.425	6.120	FIAN	287,542	1,463,615	02/28/2022	05/22/2039
44330G-AE-3	Highbridge Loan Management 4-2014 Ltd	D	2		1.C FE	4,191,475	96.4335	4,080,101	4,231,000	4,191,475	0	42,116	0	0	5.874	6.291	JAUJ	44,872	144,567	12/19/2022	01/28/2030
44331D-AJ-8	Highbridge Loan Management 5-2015 Ltd	D	2		1.C FE	8,001,051	92.5603	7,404,824	8,000,000	8,001,051	0	(222)	0	0	4.830	4.826	JAUJ	81,573	386,400	12/19/2022	10/15/2030
44929F-BG-6	ICG US CLO 2014-3 Ltd	D	2		1.F FE	6,250,758	86.7458	5,421,613	6,250,000	6,250,758	0	(166)	0	0	4.640	4.637	JAUJ	53,167	290,000	12/19/2022	04/25/2031
46146J-AC-0	Invesco CLO 2021-3 Ltd	D	2		1.C FE	2,130,271	95.6944	2,153,124	2,250,000	2,130,271	0	3,346	0	0	5.975	7.290	JAUJ	25,790	25,765	11/01/2022	10/22/2034
46146J-AG-1	Invesco CLO 2021-3 Ltd	D	2		2.C FE	8,629,751	92.7438	8,156,817	8,795,000	8,629,751	0	54,626	0	0	7.325	7.449	JAUJ	123,471	458,191	03/15/2022	10/22/2034

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
46146W-AA-5	Invesco CLO 2022-3 Ltd	D	2		3.C FE	8,000,000	95.6561	7,652,488	8,000,000	8,000,000	0	0	0	0	12.105	12.085	JAJO	260,936	260,936	09/06/2022	10/22/2035
46603V-AB-1	IVY Hill Middle Market Credit Fund XIV Ltd	D	2		1.C FE	7,000,000	95.0223	6,651,561	7,000,000	7,000,000	0	2,843	0	0	5.894	6.463	JAJO	85,950	253,937	12/19/2022	04/18/2030
46651N-AA-2	JOL Air Ltd	D	2		2.A FE	12,630,768	80.5379	10,170,186	12,627,826	12,630,768	0	(972)	0	0	3.967	3.959	MON	22,264	532,959	01/25/2022	04/15/2044
481938-AA-6	KKR CLO 38 Ltd	D	2		3.C FE	9,936,578	85.3649	8,536,490	10,000,000	9,936,578	0	36,578	0	0	11.044	11.278	JAJO	635,849	635,849	03/07/2022	04/15/2033
481940-AA-2	KKR CLO 49 Ltd	D	2		3.C FE	5,814,472	90.8570	5,451,420	6,000,000	5,814,472	0	54,472	0	0	10.170	12.608	JAJO	301,705	301,705	06/02/2022	07/20/2035
48244X-AA-0	KDAC Aviation Finance Ltd	D	2		3.C FE	3,516,410	75.7025	2,662,010	3,516,410	3,516,410	0	0	0	0	4.212	4.212	MON	6,583	153,852	01/26/2022	12/15/2042
48252R-AS-3	KKR CLO 24 Ltd	D	2		1.E FE	5,500,000	94.4070	5,192,385	5,500,000	5,500,000	0	0	0	0	6.343	6.342	JAJO	70,737	221,158	12/19/2022	04/20/2032
48254G-AC-0	KKR CLO 29 Ltd	D	2		1.C FE	4,413,008	95.7973	4,272,560	4,460,000	4,413,008	0	28,828	0	0	5.579	6.089	JAJO	52,531	127,937	04/28/2022	01/15/2032
48254U-AD-7	KKR CLO 40 Ltd	D	2		2.B FE	1,250,000	89.9770	1,124,713	1,250,000	1,250,000	0	0	0	0	7.863	5.759	JAJO	200	200	03/30/2022	10/20/2034
48255A-AE-8	KKR CLO 36 Ltd	D	2		1.F FE	4,800,000	92.6772	4,448,506	4,800,000	4,800,000	0	0	0	0	6.229	6.228	JAJO	63,122	193,206	04/26/2022	10/15/2034
48255E-AC-4	KKR CLO 42 Ltd	D	2		1.C FE	9,000,000	95.9160	8,632,440	9,000,000	9,000,000	0	0	0	0	3.714	3.719	JAJO	192,215	192,215	04/27/2022	07/20/2034
48255E-AE-0	KKR CLO 42 Ltd	D	2		1.E FE	5,000,000	93.6702	4,683,510	5,000,000	5,000,000	0	0	0	0	4.214	4.220	JAJO	121,161	121,161	04/27/2022	07/20/2034
48255F-AA-5	KKR CLO 42 Ltd	D	2		3.C FE	7,450,000	88.4196	6,587,260	7,450,000	7,450,000	0	37,250	0	0	9.084	11.314	JAJO	389,148	389,148	04/27/2022	07/20/2034
48255M-AA-0	KKR CLO 41 Ltd	D	2		3.C FE	3,496,048	82.7911	2,897,689	3,500,000	3,496,048	0	31,048	0	0	10.564	10.621	JAJO	78,053	242,102	02/15/2022	04/15/2035
48255P-AG-0	KKR CLO 41 Ltd	D	2		2.B FE	15,000,000	87.7299	13,159,485	15,000,000	15,000,000	0	0	0	0	7.114	7.113	JAJO	225,264	632,206	02/15/2022	04/15/2035
48255U-AA-2	KKR CLO 43 Ltd	D	2		1.A FE	10,000,000	99.6857	9,968,570	10,000,000	10,000,000	0	0	0	0	6.665	6.663	JAJO	18,515	18,515	11/16/2022	07/15/2034
48259B-AL-6	KKR CLO 38 Ltd	D	2		1.F FE	7,000,000	94.3705	6,605,935	7,000,000	7,000,000	0	0	0	0	6.364	6.363	JAJO	94,040	238,609	04/19/2022	04/15/2033
48259B-AN-2	KKR CLO 38 Ltd	D	2		2.C FE	5,000,000	91.8936	4,594,680	5,000,000	5,000,000	0	0	0	0	7.514	7.513	JAJO	191,923	191,923	03/07/2022	04/15/2033
48661B-AA-2	Rad CLO 1 Ltd	D	2		3.C FE	3,500,359	81.1505	3,246,020	4,000,000	3,500,359	0	40,359	0	0	9.699	13.119	JAJO	81,904	234,221	06/16/2022	07/15/2031
48661F-AA-3	Rad CLO 7 Ltd	D	2		3.C FE	6,517,014	92.3065	6,461,455	7,000,000	6,517,014	0	21,014	0	0	10.579	12.289	JAJO	156,336	319,838	09/08/2022	04/17/2033
48661K-AA-2	Rad CLO 6 Ltd	D	2		3.C FE	7,412,877	93.5717	7,017,878	7,500,000	7,412,877	0	5,547	0	0	11.773	12.047	JAJO	179,041	538,209	06/08/2022	01/20/2033
48662A-AA-3	Rad CLO 4 Ltd	D	2		3.C FE	3,574,530	87.3621	3,494,484	4,000,000	3,574,530	0	20,580	0	0	11.108	13.669	JAJO	83,930	241,545	07/14/2022	04/25/2032
50188N-AA-6	LCM XVIII LP	D	2		1.D FE	13,097,224	70.5870	11,735,089	16,625,000	13,097,224	0	380,059	0	0	0.000	5.318	JAJO	0	507,942	12/19/2022	07/15/2027
540543-AA-3	Logan CLO I Ltd	D	2		1.A FE	5,876,248	97.5833	5,933,065	6,080,000	5,876,248	0	5,400	0	0	5.403	6.220	JAJO	66,608	66,608	11/07/2022	07/20/2034
55312H-AA-7	MMcapS Funding XVII Ltd	D	2		1.A FE	1,407,537	97.8670	1,387,483	1,417,724	1,407,537	0	29,676	0	0	5.111	5.108	MJSD	6,239	29,970	03/03/2022	12/01/2035
558189-AG-1	Madison Park Funding LIII Ltd	D	2		2.C FE	15,250,000	89.4710	13,644,328	15,250,000	15,250,000	0	0	0	0	7.188	7.187	JAJO	219,225	627,544	02/15/2022	04/21/2035
55819T-AS-0	Madison Park Funding XX Ltd	D	2		1.C FE	13,397,855	96.6330	13,045,455	13,500,000	13,397,855	0	117,208	0	0	5.908	6.129	JAJO	146,223	467,697	12/19/2022	07/27/2030
55820B-AL-1	Madison Park Funding XLV Ltd	D	2		1.C FE	6,000,000	96.1351	5,768,106	6,000,000	6,000,000	0	0	0	0	5.779	5.779	JAJO	73,202	214,128	12/19/2022	07/15/2034
55820E-AA-9	Madison Park Funding XXIX LTD	D	2		3.C FE	3,747,960	88.0979	3,523,916	4,000,000	3,747,960	0	16,760	0	0	9.894	11.488	JAJO	82,448	168,726	08/18/2022	10/18/2030
55820R-AA-2	Madison Park Funding XXV Ltd	D	2		2.C FE	8,591,583	93.8227	8,101,590	8,635,000	8,591,583	0	38,616	0	0	7.708	7.789	JAJO	125,729	437,914	03/09/2022	04/25/2029
55821L-AE-4	Madison Park Funding XXXIX Ltd	D	2		1.F FE	3,900,000	91.8888	3,583,663	3,900,000	3,900,000	0	0	0	0	6.325	6.324	JAJO	47,276	153,525	05/05/2022	10/22/2034
55822A-AQ-0	Madison Park Funding XLVI Ltd	D	2		1.F FE	3,870,000	92.2157	3,568,748	3,870,000	3,870,000	0	0	0	0	6.129	6.128	JAJO	50,075	151,846	12/19/2022	10/15/2034
55954N-AA-9	Magnetite XXIII Ltd	D	2		1.F FE	5,000,000	93.2698	4,663,490	5,000,000	5,000,000	0	0	0	0	6.408	6.408	JAJO	60,524	199,236	05/10/2022	01/25/2035
55954U-AA-1	Magnetite XXXV Ltd	D	2		3.C FE	11,764,980	95.9213	11,510,556	12,000,000	11,764,980	0	64,980	0	0	10.509	12.256	JAJO	497,405	497,405	07/13/2022	10/25/2035
56577G-AA-7	Maranon Loan Funding 2020-1 Ltd	D	2		1.A FE	13,000,000	97.6370	12,692,810	13,000,000	13,000,000	0	0	0	0	6.029	6.029	JAJO	165,466	496,896	12/19/2022	01/15/2034
56577L-AA-6	Maranon Loan Funding 2021-1 Ltd	D	2		1.A FE	8,500,000	95.8004	8,143,034	8,500,000	8,500,000	0	0	0	0	5.779	5.779	JAJO	164,611	304,361	04/05/2022	04/15/2034
56577L-AC-2	Maranon Loan Funding 2021-1 Ltd	D	2		1.A FE	12,000,000	85.9583	10,314,996	12,000,000	12,000,000	0	0	0	0	2.720	2.720	JAJO	68,907	326,400	12/19/2022	04/15/2034
56577L-AJ-7	Maranon Loan Funding 2021-1 Ltd	D	2		1.C FE	4,000,000	81.6947	3,267,788	4,000,000	4,000,000	0	0	0	0	3.330	3.330	JAJO	28,120	133,200	12/19/2022	04/15/2034
56577P-AC-3	Marathon CLO IX Ltd	D	2		1.A FE	4,000,000	98.3984	3,935,936	4,000,000												

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
61033W-AC-6	Monroe Capital MML CLO IX Ltd	D	2		1.A FE	6,000,000	.91.0232	5,461,392	6,000,000	6,000,000	.0	.0	.0	.0	3.279	3.279	JAN	37,709	196,740	12/19/2022	10/22/2031
61034H-AA-2	Monroe Capital MML CLO VI Ltd	D	2		1.A FE	8,583,759	.97.5428	8,325,372	8,535,096	8,583,759	.0	47,146	.0	.0	5.529	5.967	JAN	99,627	308,612	07/18/2022	04/15/2030
61034H-AC-8	Monroe Capital MML CLO VI Ltd	D	2		1.B FE	2,415,362	.93.3626	2,240,702	2,400,000	2,415,362	.0	14,847	.0	.0	5.829	6.290	JAN	29,534	86,868	12/19/2022	04/15/2030
61773K-AE-2	Morgan Stanley Eaton Vance CLO 2021-1 Ltd	D	2		1.F FE	4,000,000	.92.5736	3,702,944	4,000,000	4,000,000	.0	.0	.0	.0	6.425	6.424	JAN	49,255	161,403	05/04/2022	10/20/2034
61774K-AA-9	Morgan Stanley Eaton Vance CLO 2022-16 Ltd	D	2		3.C FE	5,800,383	.85.0157	5,100,942	6,000,000	5,800,383	.0	40,383	.0	.0	10.714	11.329	JAN	376,297	376,297	02/25/2022	04/15/2035
617923-AA-5	Morgan Stanley Eaton Vance CLO 2022-17A Ltd	D	2		3.B FE	9,529,862	.94.2951	9,429,510	10,000,000	9,529,862	.0	29,862	.0	.0	10.395	12.687	JAN	433,119	433,119	06/30/2022	07/20/2035
617925-AA-0	Morgan Stanley Eaton Vance CLO 2022-18 Ltd	D	2		3.C FE	6,855,417	.94.9654	6,647,578	7,000,000	6,855,417	.0	(4,583)	.0	.0	12.340	12.731	JAN	189,555	189,555	09/09/2022	10/20/2035
64130T-BA-2	Neuberger Berman CLO XX Ltd	D	2		1.A FE	15,009,832	.97.3957	14,989,198	15,390,000	15,009,832	.0	.4,582	.0	.0	5.239	5.837	JAN	170,220	170,220	12/07/2022	07/15/2034
64131P-AA-0	Neuberger Berman Loan Advisers CLO 26 Ltd	D	2		3.C FE	3,751,952	.90.2494	3,609,976	4,000,000	3,751,952	.0	17,952	.0	.0	10.094	11.722	JAN	84,114	172,437	08/18/2022	10/18/2030
64131T-AU-8	Neuberger Berman CLO XVI-S Ltd	D	2		2.C FE	8,588,406	.90.9275	8,015,259	8,815,000	8,588,406	.0	57,249	.0	.0	6.979	7.503	JAN	129,878	409,252	03/09/2022	04/15/2034
64132E-AL-0	Neuberger Berman Loan Advisers CLO 32 Ltd	D	2		3.C FE	1,842,013	.89.8972	1,797,944	2,000,000	1,842,013	.0	7,763	.0	.0	10.327	12.308	JAN	87,133	87,133	09/06/2022	01/20/2032
64132J-AN-5	Neuberger Berman Loan Advisers CLO 31 Ltd	D	2		1.A FE	3,906,117	.98.0025	3,920,100	4,000,000	3,906,117	.0	10,117	.0	.0	5.283	6.635	JAN	42,848	81,179	10/07/2022	04/20/2031
64133J-AL-8	Neuberger Berman Loan Advisers CLO 36 Ltd	D	2		3.C FE	3,141,803	.91.7092	3,026,404	3,300,000	3,141,803	.0	9,630	.0	.0	10.993	12.061	JAN	73,559	218,508	06/10/2022	04/20/2033
64133V-AC-1	Neuberger Berman Loan Advisers CLO 44 Ltd	D	2		1.C FE	13,000,000	.96.1152	12,494,976	13,000,000	13,000,000	.0	.0	.0	.0	5.679	5.764	JAN	155,861	456,976	03/10/2022	10/16/2034
64134M-AC-0	Neuberger Berman Loan Advisers CLO 45 Ltd	D	2		1.C FE	2,834,494	.96.1851	2,885,553	3,000,000	2,834,494	.0	5,494	.0	.0	5.661	6.871	JAN	37,267	68,954	10/07/2022	10/14/2035
64134Q-AC-1	Neuberger Berman Loan Advisers CLO 46 Ltd	D	2		1.C FE	3,853,518	.96.3105	3,852,420	4,000,000	3,853,518	.0	10,318	.0	.0	5.893	6.484	JAN	47,795	119,791	05/26/2022	01/20/2036
64134W-AA-2	Neuberger Berman Loan Advisers CLO 50 Ltd	D	2		3.C FE	9,696,876	.93.5393	9,120,082	9,750,000	9,696,876	.0	44,376	.0	.0	10.633	11.720	JAN	455,019	455,019	06/22/2022	07/23/2036
64135D-AC-0	Neuberger Berman Loan Advisers CLO 47 Ltd	D	2		1.A FE	3,838,696	.97.2673	3,838,696	4,000,000	3,838,696	.0	6,696	.0	.0	5.127	6.147	JAN	45,005	81,786	10/07/2022	04/14/2035
64135D-AC-9	Neuberger Berman Loan Advisers CLO 47 Ltd	D	2		1.C FE	6,097,074	.95.3151	5,909,536	6,200,000	6,097,074	.0	11,774	.0	.0	5.627	5.982	JAN	76,560	197,267	05/02/2022	04/14/2035
64135J-AC-6	Neuberger Berman Loan Advisers CLO 49 Ltd	D	2		1.C FE	6,800,000	.97.4232	6,624,778	6,800,000	6,800,000	.0	.0	.0	.0	6.060	4.152	JAN	784	784	05/03/2022	07/25/2034
64135J-AG-7	Neuberger Berman Loan Advisers CLO 49 Ltd	D	2		2.B FE	8,000,000	.92.8500	7,426,000	8,000,000	8,000,000	.0	.0	.0	.0	7.460	5.552	JAN	1,234	1,234	05/03/2022	07/25/2034
64135K-AA-7	Neuberger Berman Loan Advisers CLO 49 Ltd	D	2		3.C FE	5,500,000	.89.1715	4,904,433	5,500,000	5,500,000	.0	.0	.0	.0	11.060	9.152	JAN	1,398	1,398	05/03/2022	07/25/2034
65252B-AC-7	NewStar Fairfield Fund CLO Ltd	D	2		1.B FE	3,600,000	.94.5591	3,404,128	3,600,000	3,600,000	.0	1,300	.0	.0	5.993	6.436	JAN	43,746	131,983	12/19/2022	04/20/2030
67092B-AG-8	OCF CLO 2015-9 Ltd	D	2		3.C FE	6,812,500	.89.2460	6,079,884	6,812,500	6,812,500	.0	.0	.0	.0	10.664	8.177	JAN	1,547	1,547	02/15/2022	01/15/2033
67092R-AS-7	OCF CLO 2016-12 Ltd	D	2		2.C FE	2,970,014	.92.2979	2,768,937	3,000,000	2,970,014	.0	14	.0	.0	7.269	4.863	JAN	405	405	02/24/2022	04/18/2033
67092T-AG-9	OCF CLO 2016-12 Ltd	D	2		3.C FE	14,846,049	.89.1326	13,369,890	15,000,000	14,846,049	.0	146,049	.0	.0	11.079	11.332	JAN	1,008,684	1,008,684	02/24/2022	04/18/2033
67097L-AM-8	OCF CLO 2017-13 Ltd	D	2		1.C FE	11,500,000	.96.4367	11,090,221	11,500,000	11,500,000	.0	.0	.0	.0	5.629	5.629	JAN	136,663	392,923	12/19/2022	07/15/2030
67098D-AW-3	OHA Credit Funding 4 Ltd	D	2		1.F FE	4,200,000	.94.0204	3,948,857	4,200,000	4,200,000	.0	.0	.0	.0	6.375	6.374	JAN	51,315	167,431	12/19/2022	10/22/2036
67098W-AN-1	OHA Credit Funding 7 Ltd	D	2		1.C FE	3,843,821	.97.5745	3,902,980	4,000,000	3,843,821	.0	2,501	.0	.0	5.255	5.255	FIN	13,430	52,818	10/06/2022	02/24/2037
67108B-BS-3	OZLM Funding II Ltd	D	2		1.A FE	10,000,000	.97.2269	9,722,690	10,000,000	10,000,000	.0	.0	.0	.0	6.715	6.714	JAN	247,100	421,682	12/19/2022	07/30/2031
67108L-BE-2	OZLM VI Ltd	D	2		1.C FE	9,000,000	.91.0109	8,190,981	9,000,000	9,000,000	.0	5	.0	.0	4.490	4.490	JAN	83,065	404,100	12/19/2022	04/17/2031
67110N-AP-0	OHA Credit Partners XIII Ltd	D	2		1.C FE	5,000,000	.96.5179	4,825,895	5,000,000	5,000,000	.0	.0	.0	.0	5.978	5.977	JAN	56,455	178,018	12/19/2022	10/25/2034
67110N-AT-2	OHA Credit Partners XIII Ltd	D	2		1.F FE	4,250,000	.94.0338	3,996,437	4,250,000	4,250,000	.0	.0	.0	.0	6.378	6.377	JAN	51,198	168,362	12/19/2022	07/17/2030
67112C-AN-7	OZLM XIX Ltd	D	2		1.C FE	8,600,000	.94.3740	8,116,164	8,600,000	8,600,000	.0	.0	.0	.0	5.929	5.929	JAN	107,647	319,967	12/19/2022	01/15/2035
67113G-AC-1	OHA Credit Funding 5 Ltd	D	2		1.A FE	2,923,851	.98.2027	2,946,081	3,000,000	2,923,851	.0	5,601	.0	.0	5.364	6.387	JAN	33,523	63,502	10/06/2022	04/18/2033
67115L-AC-8	OHA Credit Partners XVI	D	2		1.C FE	13,600,000	.96.3829	13,108,074	13,600,000	13,600,000	.0	.0	.0	.0	5.794	5.793	JAN	164,155	477,206	12/19/2022	10/18/2034
67115V-AG-7	OHA Credit Funding 11 Ltd	D	2		2.C FE	7,500,000	.94.1823	7,063,673	7,500,000	7,500,000	.0	.0	.0	.0	7.555	6.153	JAN	1,282	1,282	04/14/2022	07/19/2033
67116D-AA-9	OHA Credit Funding 13 Ltd	D	2		3.C FE	6,015,983	.96.0464	5,906,854	6,150,000	6,015,983	.0	20,133	.0	.0	11.610	12.795	JAN	255,866	255,866	07/28/2022	07/20/2035
67400F-AC-5	Oaktree CLO 2018-1 Ltd	D	2		1.A FE	10,875,106	.95.5072	10,314,778	10,800,000	10,875,106	.0	70,435	.0	.0	5.693	5.678	JAN	124,667	363,099	12/19/2022	10/20/2030
67402L-AL-0	Oaktree CLO 2022-1 Ltd	D	2		2.C FE	17,325,913	.93.1658	16,304,015	17,500,000	17,325,913	.0	913	.0	.0	8.235	5.818	FIN	2,828	2,828	03/18/2022	05/15/2033
67577N-AG-6	Octagon Investment Partners 45 Ltd	D	2		3.C FE	9,957,366	.85.1193	8,511,930	10,000,000	9,957,366	.0	7,366	.0	.0	10.684	7.476	JAN	6,230	282,436	02/15/2022	04/15/2035
67590B-AU-4	Octagon Investment Partners XVI Ltd	D	2		1.C FE	3,996,425	.96.3461	3,853,844	4,000,000	3,996,425	.0	33,655	.0	.0	5.679	5.974	JAN	47,957	140,245	12/19/2022	07/17/2030
675929-AA-1	Octagon 58 Ltd	D	2		3.C FE	6,000,000	.90.2784	5,416,704	6,000,000	6,000,000	.0	.0	.0	.0	8.774	8.784	JAN	311,460	311,460	04/21/2022	07/15/2037
675930-AJ-0	Octagon 59 Ltd	D	2		2.C FE	10,000,000	.92.3139	9,231,390	10,000,000	10,000,000	.0	.0	.0	.0	7.965	7.964	FIN	372,052	372,052	03/18/2022	05/15/2035
675931-AA-7	Octagon 59 Ltd	D	2		3.C FE	4,985,453	.87.4976	4,374,880	5,000,000	4,985,453	.0	35,453	.0	.0	11.865	11.545	FIN	320,359	320,359	03/18/2022	05/15/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
675932-AL-1	Octagon 58 Ltd	...	...	2	.. 2.C FE	12,750,000	..93.2148	11,884,887	12,750,000	12,750,000	0	0	0	0	...5.124	...5.133	JAJO	386,506	386,506	...04/21/2022	...07/15/2037
67707A-AA-0	OHA Credit Partners XV Ltd	D	2 .....	.....	.. 3.C FE	4,110,970	..89.1092	3,898,528	4,375,000	4,110,970	0	29,908	0	0	...9.543	...11.046	JAJO	84,657	222,462	...04/28/2022	...01/20/2030
67707L-AJ-7	OHA Credit Funding 10 Ltd	D	2 .....	.....	.. 1.F FE	5,000,000	..94.1448	4,707,240	5,000,000	5,000,000	0	0	0	0	...6.294	...6.293	JAJO	65,559	202,005	...12/19/2022	...01/18/2036
691204-AA-9	Owl Rock CLO III Ltd	D	2 .....	.....	.. 1.A FE	19,943,951	..97.5423	19,508,460	20,000,000	19,943,951	0	51,805	0	0	...6.043	...6.714	JAJO	245,060	743,378	...12/19/2022	...04/20/2032
69120L-AA-1	Owl Rock Technology Financing 2020-1 LLC	D	2 .....	.....	.. 1.F FE	21,000,000	..98.6034	20,706,714	21,000,000	21,000,000	0	81,342	0	0	...7.029	...7.793	JAJO	311,625	1,015,496	...12/19/2022	...01/15/2031
69688K-AA-7	Palmer Square CLO 2022-2 Ltd	D	2 .....	.....	.. 3.C FE	5,990,105	..93.7888	5,627,328	6,000,000	5,990,105	0	51,797	0	0	...10.746	...11.731	JAJO	319,819	319,819	...05/19/2022	...07/20/2034
69688N-AE-3	Palmer Square CLO 2022-2 Ltd	D	2 .....	.....	.. 1.F FE	7,500,000	..97.7021	7,327,658	7,500,000	7,500,000	0	0	0	0	...5.766	...4.969	JAJO	199,537	199,537	...05/19/2022	...07/20/2034
69688Y-AG-4	Palmer Square CLO 2014-1 Ltd	D	2 .....	.....	.. 3.C FE	3,859,643	..87.2518	3,577,324	4,100,000	3,859,643	0	23,273	0	0	...9.779	...11.479	JAJO	84,644	242,015	...06/02/2022	...01/17/2031
69700G-AL-6	Palmer Square CLO 2019-1 Ltd	D	2 .....	.....	.. 1.C FE	941,416	..96.1819	961,819	1,000,000	941,416	0	1,416	0	0	...6.350	...6.939	FIAN	8,466	20,107	...10/11/2022	...11/14/2034
69702A-AA-1	Palmer Square CLO 2021-2 Ltd	D	2 .....	.....	.. 3.C FE	881,549	..86.1478	861,478	1,000,000	881,549	0	5,049	0	0	...10.429	...12.929	JAJO	22,017	63,848	...07/06/2022	...07/15/2034
69702N-AA-3	Palmer Square CLO 2022-5 Ltd	D	2 .....	.....	.. 3.C FE	13,250,000	..95.0246	12,590,760	13,250,000	13,250,000	0	0	0	0	...11.658	...11.644	JAJO	407,631	407,631	...08/23/2022	...10/20/2035
69916K-AC-7	Parallel 2021-2 Ltd	D	2 .....	.....	.. 1.C FE	9,450,000	..94.6525	8,944,661	9,450,000	9,450,000	0	6,092	0	0	...6.093	...6.092	JAJO	116,749	355,976	...04/28/2022	...10/20/2034
70016W-AA-2	Park Blue CLO 2022-1 Ltd	D	2 .....	.....	.. 1.A FE	4,970,506	..99.2615	4,963,075	5,000,000	4,970,506	0	506	0	0	...0.000	...0.118	JAJO	0	0	...11/29/2022	...10/20/2034
70018C-AA-4	Park Blue CLO 2022-II Ltd	D	2 .....	.....	.. 1.A Z	9,950,000	..99.4913	9,949,130	10,000,000	9,950,000	0	0	0	0	...0.000	...0.000	JAJO	0	0	...12/15/2022	...01/20/2035
70469Q-AL-3	Peaks CLO 1 Ltd	D	2 .....	.....	.. 1.A FE	9,969,078	..97.7923	9,917,115	10,140,998	9,969,078	0	319,855	0	0	...5.732	...8.125	JAJO	110,496	354,969	...10/26/2022	...07/25/2030
70469X-AN-4	Peaks CLO 2 Ltd	D	2 .....	.....	.. 1.A FE	13,569,126	..98.4638	13,705,391	13,919,218	13,569,126	0	368,542	0	0	...6.043	...8.563	JAJO	170,552	517,362	...12/19/2022	...07/20/2031
70470M-AC-9	Peace Park CLO Ltd	D	2 .....	.....	.. 1.A FE	4,337,068	..97.3677	4,381,547	4,500,000	4,337,068	0	4,693	0	0	...5.373	...6.304	JAJO	49,025	49,025	...11/04/2022	...10/20/2034
70470M-AE-5	Peace Park CLO Ltd	D	2 .....	.....	.. 1.C FE	4,149,895	..94.3342	4,032,881	4,275,100	4,149,895	0	10,743	0	0	...5.843	...6.329	JAJO	50,649	126,510	...05/10/2022	...10/20/2034
70470M-AJ-4	Peace Park CLO Ltd	D	2 .....	.....	.. 1.F FE	4,200,000	..93.3505	3,920,721	4,200,000	4,200,000	0	0	0	0	...6.243	...6.242	JAJO	53,166	164,641	...12/19/2022	...10/20/2034
70806U-AA-0	PennantPark CLO II Ltd	D	2 .....	.....	.. 1.A FE	9,000,000	..97.6785	8,791,065	9,000,000	9,000,000	0	0	0	0	...5.979	...5.979	JAJO	113,604	339,442	...12/19/2022	...01/15/2032
70806U-AE-2	PennantPark CLO II Ltd	D	2 .....	.....	.. 1.C FE	2,000,000	..94.7911	1,895,822	2,000,000	2,000,000	0	6,678	0	0	...6.679	...6.678	JAJO	28,201	89,626	...12/19/2022	...01/15/2032
73052V-AA-3	Point Au Roche Park CLO Ltd	D	2 .....	.....	.. 1.A FE	3,367,403	..97.2735	3,404,573	3,500,000	3,367,403	0	6,003	0	0	...5.323	...6.289	JAJO	37,775	71,674	...10/06/2022	...07/20/2034
74040T-AC-7	Preferred Term Securities IV Ltd / Preferred Term Securities IV Inc	D	2 .....	.....	.. 3.A FE	645,343	..97.5865	642,705	658,600	645,343	0	19,756	0	0	...6.996	...6.910	MJSD	1,152	30,145	...06/22/2022	...12/23/2031
74041E-AL-9	Preferred Term Securities XVI Ltd / Preferred Term Securities XVI Inc	D	2 .....	.....	.. 1.C FE	11,206,513	..85.1428	10,217,136	12,000,000	11,206,513	0	375,358	0	0	...5.349	...3.431	MJSD	16,047	271,638	...12/19/2022	...03/23/2035
74041N-AD-7	Preferred Term Securities XII Ltd / Preferred Term Securities XII Inc	D	2 .....	.....	.. 1.A FE	16,656,511	..90.3908	15,366,436	17,000,000	16,656,511	0	123,999	0	0	...5.626	...5.429	MJSD	12,132	454,773	...12/19/2022	...12/24/2033
74041P-AB-6	Preferred Term Securities VIII Ltd / Preferred Term Securities VIII Inc	D	2 .....	.....	.. 1.C FE	19,184,255	..93.9181	22,150,975	23,585,416	19,184,255	0	0	0	0	...4.541	...8.554	JAJO	267,779	563,233	...03/10/2022	...01/03/2033
74042F-AA-9	Preferred Term Securities XXV Ltd/Preferred Term Securities XXV Inc	D	2 .....	.....	.. 1.E FE	9,176,305	..88.5393	9,285,205	10,487,100	9,176,305	0	0	0	0	...5.059	...6.581	MJSD	14,737	224,531	...06/22/2022	...06/22/2037
74042H-AB-3	Preferred Term Securities XIX Ltd/Preferred Term Securities XIX Inc	D	2 .....	.....	.. 1.B FE	5,179,793	..87.1754	4,515,506	5,179,793	5,179,793	0	0	0	0	...5.199	...5.199	MJSD	7,480	110,358	...06/22/2022	...12/22/2035
74980P-AC-7	RR 14 Ltd	D	2 .....	.....	.. 1.C FE	2,313,516	..95.4029	2,346,911	2,460,000	2,313,516	0	4,806	0	0	...5.579	...6.866	JAJO	54,745	54,745	...10/07/2022	...04/15/2036
74980Q-AE-1	RR 17 Ltd	D	2 .....	.....	.. 1.C FE	3,966,833	..95.8801	3,835,204	4,000,000	3,966,833	0	21,433	0	0	...5.729	...5.988	JAJO	48,379	119,091	...04/28/2022	...07/15/2034
74983A-AC-7	RR 19 Ltd	D	2 .....	.....	.. 1.C FE	2,555,522	..96.1880	2,597,076	2,700,000	2,555,522	0	9,962	0	0	...5.729	...6.852	JAJO	51,045	80,387	...07/12/2022	...10/15/2035
74983D-AQ-0	Race Point X CLO Ltd	D	2 .....	.....	.. 1.A FE	17,500,000	..96.6901	16,920,768	17,500,000	17,500,000	0	7,722	0	0	...5.808	...5.896	JAJO	192,001	590,902	...12/19/2022	...07/25/2031
74989U-AG-8	RR 20 Ltd	D	2 .....	.....	.. 2.C FE	5,000,000	..93.0833	4,654,165	5,000,000	5,000,000	0	0	0	0	...7.464	...7.463	JAJO	184,999	184,999	...04/06/2022	...07/15/2037
75000F-AA-6	RR 22 Ltd	D	2 .....	.....	.. 3.A FE	7,355,179	..94.4729	7,085,468	7,500,000	7,355,179	0	42,679	0	0	...10.530	...12.258	JAJO	326,865	326,865	...06/30/2022	...10/15/2035
75009K-AA-6	Rad CLO 17 Ltd	D	2 .....	.....	.. 3.C FE	8,812,759	..95.4015	8,586,135	9,000,000	8,812,759	0	(7,241)	0	0	...12.263	...12.560	JAJO	223,806	223,806	...09/15/2022	...10/20/2035
75009L-AA-4	Rad CLO 16 Ltd	D	2 .....	.....	.. 1.A FE	25,500,000	..99.7327	25,431,839	25,500,000	25,500,000	0	0	0	0	...4.865	...4.869	JAJO	420,434	420,434	...08/04/2022	...10/15/2034
75009M-AA-2	Rad CLO 16 Ltd	D	2 .....	.....	.. 3.C FE	9,300,472	..93.7320	9,138,870	9,750,000	9,300,472	0	37,972	0	0	...10.835	...13.192	JAJO	358,013	358,013	...08/04/2022	...10/15/2034
75009P-AE-7	Rad CLO 12 Ltd	D	2 .....	.....	.. 1.F FE	4,500,000	..93.4597	4,205,687	4,500,000	4,500,000	0	0	0	0	...6.465	...6.464	JAJO	50,102	178,022	...05/12/2022	...10/30/2034
75009R-AC-7	Rad CLO 14 Ltd	D	2 .....	.....	.. 1.C FE	2,100,649	..95.9594	2,159,087	2,250,000	2,100,649	0	3,649	0	0	...5.729	...7.025	JAJO	27,213	27,213	...10/19/2022	...01/15/2035
750103-AE-3	Rad CLO 15 Ltd	D	2 .....	.....	.. 1.F FE	5,500,000	..93.5209	5,143,650	5,500,000	5,500,000	0	0	0	0	...6.293	...6.292	JAJO	70,180	218,615	...12/19/2022	...01/20/2034
77587A-AU-0	Romark WM-R Ltd	D	2 .....	.....	.. 1.C FE	8,000,000	..84.8290	6,786,320	8,000,000	8,000,000	0	0	0	0	...2.540	...2.540	JAJO	40,077	203,208	...12/19/2022	...04/20/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
77588E-AA-5	Romark Credit Funding I Ltd	D	2		.. 1.A FE	10,000,000	..91.2499	9,124,990	10,000,000	10,000,000	0	0	0	0	3.572	3.571	AO	62,510	357,200	12/19/2022	04/28/2038
78090G-AA-9	RR 21 Ltd	D	2		.. 3.B FE	6,769,954	..90.0576	6,304,032	7,000,000	6,769,954	0	49,954	0	0	9.907	12.136	JAJO	333,261	333,261	06/09/2022	07/15/2035
78110T-AG-4	RR 21 Ltd	D	2		.. 1.F FE	5,000,000	..96.1511	4,807,555	5,000,000	5,000,000	0	0	0	0	5.507	5.522	JAJO	132,321	132,321	06/09/2022	07/15/2035
78111F-AA-6	RR 23 Ltd	D	2		.. 3.A FE	7,621,591	..95.5599	7,644,792	8,000,000	7,621,591	0	21,591	0	0	10.699	13.067	JAJO	304,331	304,331	07/25/2022	10/15/2035
80306A-AA-8	SAPPHIRE AVIATION FINANCE I LTD	D	2		.. 3.B FE	4,282,231	..77.4804	3,306,685	4,267,770	4,282,231	0	(7,258)	0	0	4.250	4.080	MON	8,061	196,904	01/19/2022	03/15/2040
80349B-BD-8	Saratoga Investment Corp CLO 2013-1 Ltd	D	2		.. 1.A FE	37,000,000	..94.9150	35,118,550	37,000,000	37,000,000	0	0	0	0	5.893	5.892	JAJO	442,106	1,318,978	12/19/2022	04/20/2033
82670Q-AE-9	Signal Peak CLO 10 Ltd	D	2		.. 1.C FE	3,938,524	..95.6554	3,826,216	4,000,000	3,938,524	0	4,524	0	0	5.978	6.177	JAJO	47,821	121,416	05/02/2022	07/21/2034
82671C-AC-3	Signal Peak CLO 10 Ltd	D	2		.. 1.C FE	14,000,000	..95.2699	13,337,786	14,000,000	14,000,000	0	100,800	0	0	6.075	5.908	JAJO	163,001	523,474	03/01/2022	01/24/2035
83004M-AA-1	610 Funding CLO 2 Ltd	D	2		.. 3.C FE	1,545,801	..89.7213	1,390,680	1,550,000	1,545,801	0	5,489	0	0	11.493	11.487	JAJO	65,200	166,300	02/15/2022	01/20/2034
83012Q-AE-4	Sixth Street CLO XX Ltd	D	2		.. 1.F FE	3,400,000	..93.7684	3,188,126	3,400,000	3,400,000	0	0	0	0	6.243	6.242	JAJO	43,039	133,269	04/29/2022	10/20/2034
83608G-AQ-9	Sound Point CLO II Ltd	D	2		.. 1.C FE	7,123,296	..94.4035	6,797,052	7,200,000	7,123,296	0	75,260	0	0	5.777	6.260	JAJO	77,410	242,252	12/19/2022	01/26/2031
83609Y-AE-6	Sounds Point CLO IV-R LTD	D	2		.. 1.C FE	1,796,238	..94.0839	1,693,510	1,800,000	1,796,238	0	15,574	0	0	5.944	6.214	JAJO	22,289	66,210	12/19/2022	04/18/2031
83615F-AA-7	Sound Point CLO XXVIII Ltd	D	2		.. 3.C FE	1,902,303	..79.9935	1,599,870	2,000,000	1,902,303	0	6,703	0	0	11.258	12.346	JAJO	42,532	132,892	06/08/2022	01/25/2032
83615P-AC-1	Sound Point Clo XXXI Ltd	D	2		.. 1.C FE	11,000,000	..92.0753	10,128,283	11,000,000	11,000,000	0	0	0	0	6.008	6.008	JAJO	124,842	393,784	12/19/2022	10/25/2034
83615P-AE-7	Sound Point Clo XXXI Ltd	D	2		.. 1.F FE	5,000,000	..89.6744	4,483,720	5,000,000	5,000,000	0	0	0	0	6.508	6.508	JAJO	61,469	204,340	12/19/2022	10/25/2034
85572R-AA-7	Start Ltd/Bermuda	D	2		.. 2.A FE	13,134,759	..81.0392	10,663,060	13,157,904	13,134,759	0	7,504	0	0	4.089	4.144	MON	23,912	620,271	06/23/2022	05/15/2043
85573L-AA-9	Start II LTD	D	2		.. 2.B FE	3,925,462	..86.0032	3,376,055	3,925,500	3,925,462	0	9	0	0	4.089	4.089	MON	7,134	174,349	01/25/2022	03/15/2044
86268H-AA-6	Strata CLO I Ltd	D	2		.. 1.A FE	16,114,675	..99.0384	15,846,144	16,000,000	16,114,675	0	111,158	0	0	5.669	6.005	JAJO	191,491	553,164	12/19/2022	01/15/2031
86271P-AE-5	Strata CLO II Ltd	D	2		.. 1.C FE	11,000,000	..95.8824	10,547,064	11,000,000	11,000,000	0	0	0	0	6.293	6.292	JAJO	140,359	436,698	12/19/2022	10/20/2033
86271P-AG-0	Strata CLO II Ltd	D	2		.. 1.F FE	10,000,000	..93.6269	9,362,690	10,000,000	10,000,000	0	0	0	0	7.093	7.092	JAJO	143,822	478,109	12/19/2022	10/20/2033
86271P-AJ-4	Strata CLO II Ltd	D	2		.. 2.C FE	8,990,828	..87.9156	7,912,404	9,000,000	8,990,828	0	78,573	0	0	8.593	8.568	JAJO	156,814	567,173	12/19/2022	10/20/2033
87165V-AP-4	Symphony CLO XVI Ltd	D	2		.. 1.F FE	4,000,757	..91.0097	3,640,388	4,000,000	4,000,757	0	(134)	0	0	5.150	5.146	JAJO	43,489	206,000	12/19/2022	10/15/2031
87168B-AE-0	Symphony CLO XXVIII Ltd	D	2		.. 1.C FE	5,855,118	..95.5986	5,941,453	6,215,000	5,855,118	0	6,450	0	0	5.975	6.932	JAJO	71,170	121,203	10/14/2022	10/23/2034
87168B-AG-5	Symphony CLO XXVIII Ltd	D	2		.. 1.F FE	7,000,000	..93.8625	6,570,375	7,000,000	7,000,000	0	0	0	0	6.425	6.424	JAJO	86,196	282,910	12/19/2022	10/23/2034
87168G-AG-4	Symphony CLO XXIX Ltd	D	2		.. 1.F FE	3,700,000	..92.1387	3,409,132	3,700,000	3,700,000	0	0	0	0	6.229	2.758	JAJO	284	(454)	12/19/2022	01/15/2034
87168V-AA-4	Symphony CLO 36 Ltd	D	2		.. 3.C FE	1,980,028	..95.7098	1,914,196	2,000,000	1,980,028	0	28	0	0	11.978	12.354	JAJO	63,885	63,885	08/16/2022	10/24/2035
87169E-AA-3	Symphony CLO 35 Ltd	D	2		.. 3.C FE	11,287,590	..96.3718	11,323,687	11,750,000	11,287,590	0	7,590	0	0	11.316	0.802	JAJO	506,014	506,014	07/18/2022	07/24/2034
87244C-AJ-5	TIAA Churchill Middle Market CLO I LTD	D	2		.. 1.A FE	16,000,000	..97.8474	15,655,584	16,000,000	16,000,000	0	69	0	0	5.773	6.471	JAJO	187,288	550,902	12/19/2022	10/20/2030
87244C-AL-0	TIAA Churchill Middle Market CLO I LTD	D	2		.. 1.C FE	7,200,000	..93.0218	6,697,570	7,200,000	7,200,000	0	55	0	0	6.393	6.856	JAJO	93,332	293,166	12/19/2022	10/20/2030
87246M-AS-1	TICP CLO VI 2016-2 Ltd	D	2		.. 1.A FE	4,827,025	..98.0615	4,803,075	5,000,000	4,827,025	0	18,909	0	0	5.199	6.394	JAJO	54,880	116,536	05/18/2022	01/15/2034
87248K-AJ-3	TICP CLO V 2016-1 Ltd	D	2		.. 1.A FE	4,885,491	..98.4407	4,922,035	5,000,000	4,885,491	0	15,491	0	0	5.169	7.023	JAJO	54,563	54,563	10/21/2022	07/17/2031
87249Q-AC-4	TICP CLO XI Ltd	D	2		.. 1.C FE	8,237,562	..97.1964	8,261,694	8,500,000	8,237,562	0	6,812	0	0	5.973	6.896	JAJO	102,944	102,944	11/15/2022	10/20/2031
87250C-AN-7	TICP CLO XIV Ltd	D	2		.. 1.C FE	6,730,345	..96.8326	6,778,282	7,000,000	6,730,345	0	1,595	0	0	5.893	6.963	JAJO	83,642	83,642	12/20/2022	10/20/2032
87267J-AA-1	TruPS Financials Note Securitization 2018-2 Ltd	D	2		.. 1.B FE	56,015,316	..91.7526	51,395,509	56,015,316	56,015,316	0	27,834	0	0	6.530	6.234	MJSD	992,169	2,070,354	01/03/2022	09/30/2039
87268R-AA-2	TruPS Financials Note Securitization 2019-2 Ltd	D	2		.. 1.B FE	6,307,793	..95.5039	6,024,188	6,307,793	6,307,793	0	0	0	0	7.036	7.035	FIAN	103,450	261,497	03/01/2022	02/28/2039
87974K-AA-3	Telos CLO 2014-5 Ltd	D	2		.. 1.A FE	6,737,017	..99.8017	6,737,017	6,737,017	6,737,017	0	53,172	0	0	5.329	5.189	JAJO	75,794	250,072	07/19/2022	04/17/2028
88432F-AY-5	THL Credit Wind River 2015-1 CLO Ltd	D	2		.. 1.A FE	8,052,668	..95.9087	7,672,696	8,000,000	8,052,668	0	52,660	0	0	5.743	5.728	JAJO	93,157	273,018	12/19/2022	10/20/2030
88432U-AC-0	THL Credit Wind River 2018-3 CLO Ltd	D	2		.. 1.A FE	6,443,167	..96.5644	6,180,122	6,400,000	6,443,167	0	41,870	0	0	5.693	5.673	JAJO	73,877	215,170	12/19/2022	01/20/2031
88607A-AA-7	Thunderbolt III Aircraft Lease Ltd	D	2		.. 3.B FE	6,152,377	..78.1218	4,td													

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
		C o d e	F o r e i g n	Bond Char			Rate Used to Obtain Fair Value	Fair Value			Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
CUSIP Identification	Description				NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Par Value	Book/ Adjusted Carrying Value											
89708B-AA-1	Tropic CDO V Ltd	D	2		1.B FE	31,778,631	.86.1869	30,283,642	35,137,175	31,778,631	.0		.0	.0	.4.369	6.171	JAU	324,096	787,678	05/26/2022	07/15/2036
898203-AA-2	TruPS Financials Note Securitization 2017-2 Ltd	D	2		1.C FE	9,534,071	.95.4236	9,119,979	9,557,363	9,534,071	.0		.0	.0	.6.316	6.322	MJD	20,121	413,133	03/22/2022	09/20/2039
898203-AB-0	TruPS Financials Note Securitization 2017-2 Ltd	D	2		1.C FE	4,369,080	.95.9032	4,190,088	4,369,080	4,369,080	.0		.0	.0	.6.316	6.223	MJD	62,079	227,536	03/22/2022	09/20/2039
89820U-AB-0	TruPS Financials Note Securitization 2018-1 Ltd	D	2		1.D FE	3,759,201	.91.5794	3,442,653	3,759,201	3,759,201	.0		.0	.0	.4.050	4.063	MJD	38,485	154,829	01/20/2022	03/30/2039
89820X-AA-6	TruPS Financials Note Securitization 2020-2 Ltd	D	2		1.C FE	9,685,795	.89.8770	8,705,302	9,685,795	9,685,795	.0		.0	.0	.6.619	6.618	JAU	135,347	378,112	01/24/2022	07/15/2041
89821J-AA-6	TruPS Financials Note Securitization 2019-1 Ltd	D	2		1.C FE	57,490,293	.96.6305	55,553,158	57,490,293	57,490,293	.0		.0	.0	.6.510	6.510	FIAN	951,621	2,282,070	02/08/2022	02/02/2039
89822P-AA-1	TruPS Financials Note Securitization 2020-1 Ltd	D	2		1.C FE	12,856,511	.93.5724	12,030,146	12,856,511	12,856,511	.0		.0	.0	.7.079	7.078	JAU	192,139	659,947	01/26/2022	04/15/2040
90342W-AA-5	US Capital Funding V Ltd	D	2		1.C FE	2,373,557	.88.2893	2,420,707	2,741,790	2,373,557	.0	171,865	.0	.0	.4.189	6.749	JAU	26,159	59,465	01/14/2022	10/10/2040
913318-AJ-0	Unity-Peace Park CLO Ltd	D	2		2.C FE	5,000,000	.91.5949	4,579,745	5,000,000	5,000,000	.0		.0	.0	.7.463	7.462	JAU	170,789	170,789	04/12/2022	04/20/2035
92916X-AL-1	Voya CLO 2013-3 Ltd	D	2		1.C FE	1,995,272	.93.3500	1,867,000	2,000,000	1,995,272	.0	16,785	.0	.0	.5.890	6.110	JAU	24,557	72,562	12/19/2022	10/18/2031
92917T-AG-0	Voya CLO 2018-2 Ltd	D	2		2.C FE	21,132,042	.78.1267	19,326,648	24,737,571	21,132,042	.0	18,855	.0	.0	.0.000	6.251	JAU	.0	1,387,283	12/19/2022	07/15/2031
92918G-AE-2	Voya CLO 2020-1 Ltd	D	2		3.C FE	927,122	.88.3954	883,954	1,000,000	927,122	.0	3,372	.0	.0	10.429	11.939	MJD	22,017	44,995	08/11/2022	07/16/2034
92918Q-AE-0	Voya CLO 2021-1 Ltd	D	2		1.C FE	10,650,000	.95.3067	10,150,164	10,650,000	10,650,000	.0		.0	.0	.5.729	5.729	JAU	128,810	374,985	12/19/2022	07/15/2034
92918Y-AA-1	Voya CLO 2021-2 Ltd	D	2		3.C FE	9,422,175	.89.4992	8,949,920	10,000,000	9,422,175	.0	22,175	.0	.0	10.843	11.861	JAU	219,863	457,782	08/17/2022	10/20/2034
92919D-AA-2	Voya CLO 2021-3 Ltd	D	2		1.C FE	3,807,472	.94.9944	3,799,776	4,000,000	3,807,472	.0	15,472	.0	.0	.5.843	6.637	JAU	47,390	118,369	05/17/2022	01/20/2035
92919P-AA-9	Voya CLO 2022-2 Ltd	D	2		3.C FE	7,160,518	.95.9022	7,192,665	7,500,000	7,160,518	.0	35,518	.0	.0	11.915	13.422	JAU	301,042	301,042	07/12/2022	07/20/2034
94949K-AA-0	Wellfleet CLO 2022-2 Ltd	D	2		3.C FE	2,402,075	.95.1156	2,377,890	2,500,000	2,402,075	.0	2,075	.0	.0	12.173	13.131	JAU	85,382	85,382	08/12/2022	10/18/2035
94949V-AE-8	Wellfleet CLO X LTD	D	2		3.C FE	2,047,696	.80.2253	2,064,647	2,062,500	2,047,696	.0	16,134	.0	.0	10.853	10.988	JAU	45,389	169,907	01/18/2022	07/20/2032
94950A-AS-9	Wellfleet CLO 2020-2 Ltd	D	2		1.F FE	3,825,000	.91.1147	3,485,137	3,825,000	3,825,000	.0		.0	.0	.6.379	6.378	JAU	51,512	159,775	12/19/2022	07/15/2034
94950B-AE-8	Wellfleet CLO 2020-2 Ltd	D	2		3.C FE	2,970,000	.80.3851	2,387,437	2,970,000	2,970,000	.0	19,305	.0	.0	11.329	11.402	JAU	71,034	262,776	01/18/2022	07/15/2034
94950N-AA-1	Wellfleet CLO 2019-1 Ltd	D	2		1.F FE	5,500,000	.92.1773	5,069,752	5,500,000	5,500,000	.0		.0	.0	.6.593	6.592	JAU	73,525	247,231	12/19/2022	07/20/2032
94950N-AU-6	Wellfleet CLO 2019-1 Ltd	D	2		2.C FE	9,000,000	.86.3631	7,772,679	9,000,000	9,000,000	.0		.0	.0	.7.793	7.791	JAU	142,214	523,659	12/19/2022	07/20/2032
94950U-AA-4	Wellfleet CLO 2022-1 Ltd	D	2		3.C FE	3,432,999	.88.2453	3,088,586	3,500,000	3,432,999	.0	3,699	.0	.0	11.724	12.254	JAU	86,624	194,323	05/12/2022	04/15/2034
94952D-AA-0	Wellfleet CLO 2017-2A Ltd	D	2		3.C FE	4,247,211	.80.0132	3,490,976	4,363,000	4,247,211	.0	27,976	.0	.0	10.993	11.928	JAU	97,253	321,287	01/19/2022	10/20/2029
95023A-AC-4	Wellfleet CLO 2021-2 Ltd	D	2		1.C FE	5,650,000	.94.8412	5,358,528	5,650,000	5,650,000	.0		.0	.0	.5.879	5.879	JAU	70,125	207,211	12/19/2022	07/15/2034
95023A-AE-0	Wellfleet CLO 2021-2 Ltd	D	2		1.F FE	4,400,000	.91.2880	4,016,672	4,400,000	4,400,000	.0		.0	.0	.6.429	6.428	JAU	59,720	185,904	12/19/2022	07/15/2034
97314D-AE-8	Wind River 2016-1K CLO Ltd	D	2		1.C FE	4,700,000	.94.3446	4,434,196	4,700,000	4,700,000	.0		.0	.0	.5.879	5.879	JAU	58,334	172,499	12/19/2022	10/15/2034
97314D-AG-3	Wind River 2016-1K CLO Ltd	D	2		1.F FE	4,500,000	.93.7782	4,220,019	4,500,000	4,500,000	.0		.0	.0	.6.429	6.428	JAU	61,077	190,252	12/19/2022	10/15/2034
97314E-AJ-5	THL Credit Wind River 2019-2 CLO Ltd	D	2		2.C FE	4,500,000	.87.4420	3,934,890	4,500,000	4,500,000	.0		.0	.0	.7.164	7.163	JAU	68,054	205,962	02/15/2022	01/15/2035
97314F-AA-1	THL Credit Wind River 2019-2 CLO Ltd	D	2		3.C FE	10,000,000	.81.3811	8,138,110	10,000,000	10,000,000	.0		.0	.0	10.864	10.862	JAU	229,343	783,498	03/22/2022	01/15/2035
97315M-AA-5	Wind River 2022-2 CLO Ltd	D	2		3.C FE	6,886,702	.92.5519	6,478,633	7,000,000	6,886,702	.0	61,702	.0	.0	11.517	12.756	JAU	427,730	427,730	06/03/2022	07/20/2035
97316D-AC-0	Wind River 2021-3 CLO Ltd	D	2		1.C FE	15,000,000	.95.4275	14,314,125	15,000,000	15,000,000	.0		.0	.0	.5.943	5.942	JAU	180,753	542,907	03/22/2022	07/20/2033
97316D-AA-1	Wind River 2021-3 CLO Ltd	D	2		1.F FE	5,000,000	.93.6452	4,682,260	5,000,000	5,000,000	.0		.0	.0	.6.393	6.392	JAU	64,814	203,782	03/22/2022	07/20/2033
97316G-AA-7	Wind River 2022-1 CLO Ltd	D	2		3.C FE	9,815,193	.88.5201	8,852,010	10,000,000	9,815,193	.0	15,193	.0	.0	12.083	9.895	JAU	588,393	588,393	05/13/2022	07/20/2035
98625L-AJ-1	Generate CLO Ltd	D	2		1.F FE	8,502,167	.90.8006	7,718,051	8,500,000	8,502,167	.0	(390)	.0	.0	.5.093	5.087	JAU	82,973	432,905	12/19/2022	10/22/2031
98875N-AC-9	Zais CLO 9 Ltd	D	2		2.C FE	2,200,000	.96.4189	2,121,216	2,200,000	2,200,000	.0	1,855	.0	.0	.6.243	6.383	JAU	27,849	86,233	12/19/2022	07/20/2031
98875N-AJ-4	Zais CLO 9 Ltd	D	2		1.C FE	19,000,000	.87.7089	16,664,691	19,000,000	19,000,000	.0	(903)	.0	.0	.3.540	3.496	JAU	136,388	672,600	12/19/2022	07/20/2031
98876N-AN-4	Zais CLO 13 Ltd	D	2		1.A FE	4,000,000	.87.5560	3,502,240	4,000,000	4,000,000	.0		.0	.0	.3.930	3.930	JAU	33,187	157,200	12/19/2022	07/15/2032
98878C-AA-4	Z Capital Credit Partners CLO 2018-1 Ltd	D	2		1.A FE	29,694,032	.99.0099	29,400,031	29,694,032	29,694,032	.0		.0	.0	.5.849	5.849	JAU	366,667	1,099,768	10/18/2022	01/16/2031
98878C-AC-0	Z Capital Credit Partners CLO 2018-1 Ltd	D	2		1.A FE	7,918,408	.98.8077	7,823,997	7,918,408	7,918,408	.0	62,175	.0	.0	.5.639	6.408	JAU	94,267	276,274	10/18/2022	01/16/2031
98887T-AB-4	Zais CLO 6 Ltd	D	2		1.A FE	10,820,303	.97.1614	10,444,851	10,750,000	10,820,303	.0	75,078	.0	.0	.5.579	5.948	JAU	126,615	361,848	12/19/2022	07/15/2029
98887T-AQ-1	Zais CLO 6 Ltd	D	2		1.A FE	45,000,000	.97.1759	43,729,155	45,000,000	45,000,000	.0		.0	.0	.5.879	5.879	JAU	558,518	1,651,586	12/19/2022	07/15/2029
98955R-AG-4	Owl Rock CLO II Ltd	D	2		1.A FE	10,000,000	.85.6792	8,567,920	10,000,000	10,000,000	.0		.0	.0	.2.480	2.480	JAU	48,911	248,000	12/19/2022	04/20/2033
67256K-AB-0	Prop 2017-1 Ltd	D	3		2.B FE	3,071,034	.83.0000	2,553,193	3,076,137	3,071,034	.0	1,207	.0	.0	.5.300	5.332	MON	75,834	167,182	01/07/2022	03/15/2042

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
1049999999	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Other Loan-Backed and Structured Securities					7,922,184,209	XXX	7,411,859,456	8,085,569,438	7,891,699,564	(11,178,802)	18,618,296	1,110,424	0	XXX	XXX	XXX	78,761,714	272,018,936	XXX	XXX
1109999999	Total - Industrial and Miscellaneous (Unaffiliated) Bonds					27,668,163,529	XXX	24,635,035,306	27,839,534,928	27,641,259,241	(13,287,008)	46,172,488	17,057,565	5,925,317	XXX	XXX	XXX	285,908,961	1,165,034,264	XXX	XXX
10924B-AA-5	Brighthouse Holdings LLC-BHF 6 1/2 PERP	..R.	2		..2.C FE	18,506,207	..91.1500	15,495,500	17,000,000	18,506,207	..0	..(65,634)	..0	..0	..6.500	..5.601	JJ	288,528	1,105,000	..01/23/2018	..01/01/9999
78397N-AA-4	SCF PREFERRED EQUITY LLC		2		..3.B FE	10,000,000	..87.6850	8,768,500	10,000,000	10,000,000	..0	..0	..0	..0	..7.500	..7.500	JJ	156,250	750,000	..08/17/2021	..01/01/9999
21871X-AN-9	Corebridge Financial Inc-CRBG 6 7/8 12/1		1,2		..2.C FE	34,926,848	..93.0907	32,625,508	35,047,000	34,926,848	..0	..(3,392)	..0	..0	..6.875	..6.902	JD	107,088	856,704	..08/19/2022	..12/15/2052
78486Q-AG-6	SVB Financial Group-SVB FINANCIAL GR		2		..3.B FE	4,518,743	..56.5553	2,827,763	5,000,000	4,518,743	..0	..(7)	..0	..0	..4.100	..4.537	JAJO	26,194	179,944	..02/25/2022	..01/01/9999
949746-TD-3	Wells Fargo & Co-WFC 3.9 PERP		2		..2.B FE	9,539,401	..86.8390	8,931,391	10,285,000	9,539,401	..0	..64	..0	..0	..3.900	..4.205	JAJO	17,827	218,385	..08/11/2022	..01/01/9999
190750-AE-2	CoBank ACB-COBKAC 6.45 PERP		2		..2.A FE	15,000,000	..98.5000	14,775,000	15,000,000	15,000,000	..0	..0	..0	..0	..6.450	..6.448	JAJO	354,750	354,750	..08/16/2022	..01/01/9999
854502-AM-3	Stanley Black & Decker I-SWK 4 03/15/60		1,2		..2.B FE	9,480,266	..85.6925	8,569,250	10,000,000	9,480,266	..0	..1,904	..0	..0	..4.000	..4.279	MS	117,778	417,778	..09/07/2022	..03/15/2060
00440F-AA-2	ACE Capital Trust II-JR SUBORDINATED				..2.A FE	8,266,819	123.9125	7,782,944	6,281,000	8,266,819	..0	..(226,790)	..0	..0	..9.700	..4.532	AO	152,314	609,257	..04/20/2017	..04/01/2030
020002-BB-6	ALLSTATE CORP-SUBORDINATED BOND		2		..2.B FE	5,038,006	..93.1125	4,635,625	5,000,000	5,038,006	..0	..(49,494)	..0	..0	..5.750	..4.488	FA	108,611	252,361	..03/01/2022	..08/15/2053
665859-AQ-7	Northern Trust Corp-NTRS 4.6 PERP		2		..2.A FE	5,393,958	..87.8750	4,661,769	5,305,000	5,393,958	..0	..(21,593)	..0	..0	..4.600	..4.111	JJ	61,008	244,030	..12/21/2017	..01/01/9999
369604-BQ-5	General Electric Co-GE FLOAT PERP		2		..3.A FE	16,397,147	..99.0000	16,830,000	17,000,000	16,397,147	..0	..(353)	..0	..0	..8.099	..8.510	JAJO	65,017	512,786	..02/25/2022	..01/01/9999
857477-BA-0	State Street Corp-STT 5 5/8 PERP		2		..2.A FE	3,919,914	..92.7600	4,638,000	5,000,000	3,919,914	..0	..(274)	..0	..0	..5.625	..7.175	JJ	151,563	575,159	..08/14/2022	..01/01/9999
902973-AZ-9	US Bancorp-US BANCORP		2		..2.A FE	5,100,952	..86.3000	4,315,000	5,000,000	5,100,952	..0	..(17,798)	..0	..0	..5.300	..4.771	JJ	55,944	320,944	..02/24/2022	..01/01/9999
902973-BC-9	US Bancorp-USB 3.7 PERP		2		..2.A FE	11,065,098	..81.8750	10,643,750	13,000,000	11,065,098	..0	..98	..0	..0	..3.700	..4.348	JAJO	101,544	194,044	..11/02/2022	..01/01/9999
759351-7Q-3	Reinsurance Group of Ame-SUBORDINATED				..2.B FE	4,147,583	..24.9745	49,949	200,000	4,147,583	..0	..(834,526)	..0	..0	..6.200	..(17.652)	MJSD	3,651	235,600	..08/14/2012	..09/15/2042
060505-FL-3	Bank of America Corp-BAC 5 7/8 PERP		2		..2.C FE	5,148,126	..88.0660	4,403,300	5,000,000	5,148,126	..0	..(20,624)	..0	..0	..5.875	..5.216	JJ	86,493	380,243	..02/25/2022	..01/01/9999
06055H-AB-9	Bank of America Corp-BAC 6 1/8 PERP		2		..2.C FE	9,850,050	..97.6990	9,769,897	10,000,000	9,850,050	..0	..50	..0	..0	..6.125	..6.218	JAJO	108,889	108,889	..12/14/2022	..01/01/9999
89832Q-AF-6	Truist Financial Corp-TFC 5.1 PERP		2		..2.B FE	31,925,022	..93.4531	29,904,222	32,000,000	31,925,022	..0	..22	..0	..0	..5.100	..5.100	JJ	544,000	1,610,750	..06/16/2022	..01/01/9999
74432Q-AW-2	Prudential Financial Inc-PRU 4 1/2 09/15		2		..2.B FE	10,000,000	..90.4813	9,048,125	10,000,000	10,000,000	..0	..0	..0	..0	..4.500	..4.500	MS	132,500	450,000	..09/12/2017	..09/15/2047
74432Q-BJ-0	Prudential Financial Inc-PRU 5 1/8 03/01		1,2		..2.B FE	18,815,000	..90.4333	17,015,031	18,815,000	18,815,000	..0	..0	..0	..0	..5.125	..5.125	MS	452,671	590,405	..02/23/2022	..03/01/2052
74432Q-BK-7	Prudential Financial Inc-PRU 6 09/01/52		1,2		..2.B FE	36,550,747	..97.4094	35,524,234	36,469,000	36,550,747	..0	..(2,883)	..0	..0	..6.000	..5.823	MS	814,474	814,474	..08/18/2022	..09/01/2052
025816-CH-0	American Express Co-AMERICAN EXPRESS		2		..2.C FE	13,168,731	..82.4320	12,364,800	15,000,000	13,168,731	..0	..81	..0	..0	..3.550	..4.045	JAJO	25,146	358,747	..08/24/2022	..01/01/9999
03765H-AE-1	Apollo Management Holdin-SUBORDINATED		2		..2.B FE	2,537,712	..83.8110	2,500,082	2,983,000	2,537,712	..0	..717	..0	..0	..4.950	..6.082	JJ	5,742	79,572	..12/05/2022	..01/14/2050
064058-AH-3	Bank of New York Mellon -BK 4.7 PERP		2		..2.A FE	5,000,000	..96.0130	4,800,650	5,000,000	5,000,000	..0	..0	..0	..0	..4.700	..4.700	JJ	65,931	235,000	..05/12/2020	..01/01/9999
172967-MV-0	Citigroup Inc-C 3 7/8 PERP		2		..3.A FE	4,512,498	..85.2500	4,262,500	5,000,000	4,512,498	..0	..(2)	..0	..0	..3.875	..4.294	JAJO	23,142	120,017	..06/02/2022	..01/01/9999
48128B-AG-6	JPMorgan Chase & Co-JPM 4.6 PERP		2		..2.B FE	9,013,633	..88.1250	10,539,750	11,960,000	9,013,633	..0	..24	..0	..0	..4.600	..6.104	JJ	229,233	550,160	..03/18/2020	..01/01/9999
48128B-AN-1	JPMorgan Chase & Co-JPM 5.65 PERP		2		..2.B FE	4,749,979	..85.6250	4,281,250	5,000,000	4,749,979	..0	..(21)	..0	..0	..3.650	..3.843	JAJO	15,208	152,083	..02/25/2022	..01/01/9999
55261F-AH-7	M&T Bank Corp-MTB 5 1/8 PERP		2		..2.C FE	6,480,066	..85.9949	5,409,080	6,290,000	6,480,066	..0	..(44,823)	..0	..0	..5.125	..4.261	JJ	53,727	322,363	..01/02/2018	..01/01/9999
59156R-BS-6	MetLife Inc-MET 9 1/4 04/08/38		1,2		..2.B FE	552,262	117.0583	585,292	500,000	552,262	..0	..(3,240)	..0	..0	..9.250	..7.752	AO	10,663	46,250	..01/24/2012	..04/08/2038
59156R-BT-4	MetLife Inc-MET 5 7/8 PERP		2		..2.B FE	22,176,581	..95.1104	20,924,297	22,000,000	22,176,581	..0	..(24,494)	..0	..0	..5.875	..5.691	JJ	380,569	1,318,611	..03/15/2022	..01/01/9999
92553P-BC-5	ViacomCBS Inc-VIAC 6 1/4 02/28/57		2		..3.A FE	3,000,000	..80.6391	2,419,173	3,000,000	3,000,000	..0	..0	..0	..0	..6.250	..6.250	FA	64,063	187,500	..02/23/2017	..02/28/2057
743315-AU-7	Progressive Corp/The-PGR 5 3/8 PERP		2		..2.A FE	7,500,000	..95.5333	7,165,000	7,500,000	7,500,000	..0	..(206)	..0	..0	..5.375	..5.365	JJ	118,698	403,125	..03/09/2018	..01/01/9999
534187-BR-9	Lincoln National Corp-SENIOR UNSECURED		2		..2.C FE	3,275,000	106.2000	3,478,050	3,275,000	3,275,000	..0	..0	..0	..0	..9.250	..9.252	JJ	32,818	32,818	..11/15/2022	..01/01/9999
693475-AQ-8	PNC Financial Services G-PNC 5 PERP		2		..2.B FE	21,708,388	..86.6217	18,250,320	21,069,000	21,708,388	..0	..(151,230)	..0	..0	..5.000	..4.134	JJ	175,575	1,053,450	..01/04/2018	..01/01/9999
693475-BC-8	PNC Financial Services G-PNC FINANCIAL		2		..2.A FE	4,550,058	..78.5750	3,943,750	5,000,000	4,550,058	..0	..58	..0	..0	..3.400	..3.738	JAJO	7,556	177,556	..02/24/2022	..01/01/9999
14387R-AQ-1	Carolina First Mortgage -SUBORDINATED				..1.B FE	15,306,355	125.0000	14,000,000	112	15,306,355	..0	..(283,512)	..0	..0	..11.125	..5.478	JAJO	522,628	1,249,458	..01/09/2019	..01/31/2031
29273V-AM-2	Energy Transfer LP-ET 7 1/8 PERP		2		..3.B FE	8,575,326	..82.2375	8,223,750	10,000,000	8,575,326	..0	..(380)	..0	..0	..7.125	..8.307	JJ	91,042	91,042	..12/14/2022	..01/01/9999
29379V-BN-2	Enterprise Products Oper-ENTERPRISE PROD		2		..2.C FE	4,650,663	..81.7500	4,087,500	5,000,000	4,650,663	..0	..663	..0	..0	..5.250	..5.665	FA	98,438	229,688	..03/15/2022	..08/16/2077
726503-AE-5	Plains All American Pipe-PAI FLOAT PERP				..3.B FE	8,711,138	86.0000	8,600,000	10,000,000	8,711,138	..0	..(112)	..0	..0	..8.716	10.003	JAJO	113,794	113,794	..12/12/2022	..01/01/9999
808513-BD-6	Charles Schwab Corp/The-SCHW 5 3/8 PERP		2		..2.B FE	7,000,000	..97.5760	6,830,320	7,000,000	7,000,000	..0	..0	..0	..0	..5.375	..5.375	JAJO	31,354	376,250	..04/27/2020	..01/01/9999
808513-BJ-3	Charles Schwab Corp/The-JR SUBORDINATED		2		..2.B FE	14,906,613	..79.2450	12,505,653	15,781,000	14,906,613	..0	..(11)	..0	..0	..4.000	..4.714	JAJO	52,603	534,890	..08/11/2022	..01/01/9999
808513-CB-9	Charles Schwab Corp/The-CHARLES SCHWAB		2		..2.B FE	15,000,000	..91.7676	13,765,133	15,000,000	15,000,000	..0	..0	..0	..0	..5.000	..5.000	JAJO	62,500	618,750	..03/02/2022	..01/01/9999

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
25746U-DD-8	Dominion Energy Inc-D 4.65 PERP		2		2.C FE	2,774,943	87.6304	2,628,911	3,000,000	2,774,943	0	(57)	0	0	4.650	5.027	JJ	6,200	75,950	06/15/2022	01/01/9999
25746U-DM-8	Dominion Energy Inc-D 4.35 PERP		2		2.C FE	11,369,194	84.2043	10,980,239	13,040,000	11,369,194	0	(206)	0	0	4.350	4.989	JJ	119,751	229,371	11/16/2022	01/01/9999
29250N-AN-5	Enbridge Inc-SUBORDINATED	A	2		2.C FE	6,015,979	92.1167	5,757,292	6,250,000	6,015,979	0	354	0	0	6.000	6.242	JJ	172,917	172,917	08/09/2022	01/15/2077
29250N-BC-8	Enbridge Inc-SUBORDINATED	A	2		2.C FE	4,775,000	90.2044	4,510,222	5,000,000	4,775,000	0	0	0	0	5.750	5.750	JJ	46,319	46,319	09/09/2022	07/15/2080
29250N-BN-4	Enbridge Inc-ENBCN 7 3/8 01/15/2083	A	2		2.C FE	9,706,262	97.4583	9,745,833	10,000,000	9,706,262	0	12	0	0	7.375	7.601	JJ	206,910	206,910	12/05/2022	01/15/2083
29250N-BP-9	Enbridge Inc-ENBCN 7 5/8 01/15/2083	A	2		2.C FE	6,000,000	99.2500	5,955,000	6,000,000	6,000,000	0	0	0	0	7.625	7.626	JJ	128,354	128,354	09/15/2022	01/15/2083
89356B-AG-3	Transcanada Trust-TRPCN 5.6 03/07/2082	A	2		2.C FE	3,799,907	85.4563	3,418,253	4,000,000	3,799,907	0	(93)	0	0	5.600	5.905	MS	70,933	182,933	08/17/2022	03/07/2082
064159-KJ-4	Bank of Nova Scotia/The-JR SUBORDINATED	A	2		2.C FE	12,000,048	93.6570	11,238,834	12,000,000	12,000,048	0	(2,399)	0	0	6.567	6.531	JJ	177,313	329,213	10/05/2017	01/01/9999
89117F-BZ-5	Toronto-Dominion Bank/Th-TD 8 1/8 10/31/	A	2		2.A FE	22,936,000	104.0000	23,853,440	22,936,000	22,936,000	0	0	0	0	8.125	8.124	JAJO	383,063	383,063	10/06/2022	10/31/2082
23380Y-AD-9	Dai-ichi Life Insurance Co Ltd/The	D	1,2		1.G FE	10,000,371	93.3679	9,336,786	10,000,000	10,000,371	0	(152)	0	0	4.000	3.998	JJ	174,444	369,370	04/01/2022	01/24/2171
29265W-AA-6	Enel SpA	D	2		2.C FE	4,483,258	100.2175	4,509,789	4,500,000	4,483,258	0	(4,322)	0	0	8.750	8.504	MS	302,969	393,750	04/01/2022	09/24/2073
87089N-AA-8	Swiss Re Finance Luxembourg SA	D	2		1.F FE	4,843,899	92.3138	4,615,690	5,000,000	4,843,899	0	1,399	0	0	5.000	5.219	AO	61,806	186,806	06/09/2022	04/02/2049
D07112-TU-5	Bayer AG	B	2		3.A FE	1,050,883	84.5407	1,086,618	1,200,000	1,111,485	0	331	0	60,601	3.125	3.697	NOV	5,194	42,974	07/27/2022	11/12/2079
05565Q-DV-7	BP Capital Markets PLC	D	2		2.A FE	4,575,324	87.5000	4,375,000	5,000,000	4,575,324	0	324	0	0	4.875	5.328	JJ	6,094	127,969	09/12/2022	12/22/2171
62582P-AA-8	Muenchen Rueckversicherungs-Gesellschaft AG in	D	2		1.F FE	20,835,000	99.9060	20,815,415	20,835,000	20,835,000	0	0	0	0	5.875	5.875	MN	129,206	741,234	06/14/2022	05/23/2042
654579-AH-4	Nippon Life Insurance Co	D	2		1.G FE	23,000,000	80.4026	18,492,593	23,000,000	23,000,000	0	0	0	0	2.750	2.750	JJ	281,111	632,500	12/19/2022	01/21/2051
G7S40C-AG-8	Rothsay Life PLC	D	2		2.C FE	11,724,199	75.9450	11,391,746	15,000,000	11,724,199	0	(801)	0	0	4.875	6.237	JJ	158,438	402,188	09/01/2022	04/13/2171
X10001-AA-7	Allianz SE	D	2		1.F FE	4,243,080	84.2028	4,210,142	5,000,000	4,243,080	0	80	0	0	3.500	4.125	JAN	117,153	117,153	11/29/2022	04/30/2171
654579-AD-3	Nippon Life Insurance Co	D	1,2		1.G FE	5,000,000	97.8415	4,892,075	5,000,000	5,000,000	0	0	0	0	5.100	5.100	AO	53,125	255,000	12/19/2022	10/16/2044
654579-AE-1	Nippon Life Insurance Co	D	1,2		1.G FE	5,000,000	96.1276	4,806,381	5,000,000	5,000,000	0	0	0	0	4.700	4.700	JJ	105,097	235,000	12/19/2022	01/20/2046
05565Q-DU-9	BP Capital Markets PLC	D	2		2.A FE	4,064,164	95.5000	3,844,830	4,026,000	4,064,164	0	(12,161)	0	0	4.375	3.969	JJ	48,438	224,575	02/25/2022	09/22/2171
1219999999. Subtotal - Bonds - Hybrid Securities - Issuer Obligations						634,162,401	XXX	590,636,951	633,547,112	634,223,003	0	(1,765,409)	0	60,601	XXX	XXX	XXX	8,842,359	24,516,176	XXX	XXX
1309999999. Total - Hybrid Securities						634,162,401	XXX	590,636,951	633,547,112	634,223,003	0	(1,765,409)	0	60,601	XXX	XXX	XXX	8,842,359	24,516,176	XXX	XXX
06763A-AA-8	Barings Private Credit C Senior Unsecure				2.C	11,855,081	85.6406	10,276,872	12,000,000	11,855,081	0	33,556	0	0	3.500	3.862	JJ	177,333	405,079	01/31/2022	07/29/2026
06763A-AA-2	Barings Private Credit C Senior Unsecure				2.C	22,725,574	85.6406	19,697,338	23,000,000	22,725,574	0	63,555	0	0	3.500	3.857	JJ	339,889	776,402	01/31/2022	07/29/2026
06763A-AA-0	Barings Private Credit C Senior Unsecure				2.C	10,886,916	85.6406	9,437,594	11,020,000	10,886,916	0	30,816	0	0	3.500	3.862	JJ	162,851	371,998	01/31/2022	07/29/2026
06762A-AA-3	Barings Capital Investme Senior Unsecure				2.C	75,000,000	88.1425	66,106,875	75,000,000	75,000,000	0	0	0	0	4.750	4.750	FA	1,345,833	3,127,083	02/22/2022	02/22/2027
1419999999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates - Issuer Obligations						120,467,571	XXX	105,518,679	121,020,000	120,467,571	0	127,927	0	0	XXX	XXX	XXX	2,025,906	4,680,562	XXX	XXX
	Barings Euro Clo 2022-1 -BABSE 2022-1A A	B			1.A FE	14,733,302	98.0049	15,745,957	15,000,000	15,987,013	0	834	0	1,253,711	4.870	4.972	JAJO	70,740	70,740	10/24/2022	10/28/2034
	Barings Euro Clo 2022-1 -BABSE 2022-1A B	B			1.C FE	4,812,113	99.4602	5,326,591	5,000,000	5,221,613	0	0	0	409,500	0.000	0.000	JAJO	0	0	10/24/2022	10/28/2034
	Barings Euro Clo 2022-1 -BABSE 2022-1A B	B			1.C FE	4,813,673	96.2472	5,154,519	5,000,000	5,223,194	0	1,561	0	409,521	7.270	7.835	JAJO	35,200	35,200	10/24/2022	10/28/2034
06759U-AA-1	Barings Clo Ltd 2022-II	D	2		1.A FE	4,928,307	98.3511	4,917,555	5,000,000	4,928,307	0	37,999	0	0	4.276	6.062	JAJO	90,261	241,685	06/22/2022	07/15/2035
06759U-AC-7	Barings Clo Ltd 2022-II	D	2		1.C FE	10,000,000	97.6515	9,765,150	10,000,000	10,000,000	0	0	0	0	4.976	4.978	JAJO	210,077	210,077	06/22/2022	07/15/2035
06759U-AE-3	Barings Clo Ltd 2022-II	D	2		1.F FE	5,000,000	97.1739	4,858,695	5,000,000	5,000,000	0	0	0	0	5.626	5.628	JAJO	118,761	118,761	06/22/2022	07/15/2035
06759U-AG-8	Barings Clo Ltd 2022-II	D	2		2.C FE	5,000,000	95.8003	4,790,015	5,000,000	5,000,000	0	0	0	0	6.726	6.728	JAJO	141,983	141,983	06/22/2022	07/15/2035
06760D-AE-8	Barings CLO Ltd 2022-I		2		1.F FE	10,000,000	91.3479	9,134,790	10,000,000	10,000,000	0	0	0	0	6.355	4.927	JAJO	1,369	1,369	03/18/2022	04/15/2035
06760D-AG-3	Barings CLO Ltd 2022-I		2		2.C FE	7,000,000	88.5864	6,201,048	7,000,000	7,000,000	0	1,201	0	0	7.605	6.177	JAJO	1,201	1,201	03/18/2022	04/15/2035
06760Q-AS-8	Barings Middle Market CLO Ltd 2017-I	D	3		1.G FE	12,000,000	86.8342	10,420,104	12,000,000	12,000,000	0	0	0	0	6.843	6.842	JAJO	166,503	543,310	12/19/2022	01/20/2034
06760Q-AU-3	Barings Middle Market CLO Ltd 2017-I	D	3		2.C FE	5,500,000	83.2081	4,576,446	5,500,000	5,500,000	0	0	0	0	8.043	8.041	JAJO	89,697	315,934	12/19/2022	01/20/2034

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
06762J-AG-8	Barings CLO Ltd 2021-II	D.....	2.....		.. 2.C FE	13,000,000	..94.8857	12,335,141	13,000,000	13,000,000	0	0	0	0	...7.229	...7.228	JAJ0	198,400	623,409	01/20/2022	07/15/2034
06762L-AN-8	Barings CLO Ltd 2020-I	D.....	2.....		.. 1.C FE	6,500,000	..96.0969	6,246,299	6,500,000	6,500,000	0	0	0	0	...5.729	...5.729	JAJ0	78,617	228,677	12/19/2022	10/15/2036
06762Q-AA-5	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 1.A FE	9,000,000	..99.5309	8,957,781	9,000,000	9,000,000	0	45,000	0	0	...4.683	...6.232	JAJ0	151,031	151,031	07/25/2022	07/20/2033
06762Q-AC-1	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 1.C FE	4,500,000	..98.0562	4,412,529	4,500,000	4,500,000	0	0	0	0	...5.613	...5.618	JAJ0	90,512	90,512	07/25/2022	07/20/2033
06762Q-AE-7	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 1.F FE	26,250,000	..87.0119	22,840,624	26,250,000	26,250,000	0	0	0	0	...4.500	...4.499	JAJ0	413,438	413,438	07/25/2022	07/20/2033
06762Q-AG-2	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 2.C FE	25,000,000	..82.2964	20,574,100	25,000,000	25,000,000	0	0	0	0	...5.500	...5.498	JAJ0	481,250	481,250	07/25/2022	07/20/2033
06762R-AA-3	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 3.C FE	13,250,000	..79.4327	10,524,833	13,250,000	13,250,000	0	0	0	0	...8.500	...8.495	JAJ0	394,188	394,188	07/25/2022	07/20/2033
06762R-AC-9	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 4.C FE	500,000	..73.9108	369,554	500,000	500,000	0	0	0	0	...10.000	...9.992	JAJ0	17,500	17,500	07/25/2022	07/20/2033
06762T-AE-1	Barings Clo Ltd 2021-III	D.....	2.....		.. 1.F FE	6,800,000	..92.4381	6,285,791	6,800,000	6,800,000	0	0	0	0	...6.194	...6.193	JAJ0	87,744	271,242	04/25/2022	01/18/2035
06762T-AG-6	Barings Clo Ltd 2021-III	D.....	2.....		.. 2.C FE	10,000,000	..88.5313	8,853,130	10,000,000	10,000,000	0	0	0	0	...7.194	...7.193	JAJ0	149,869	503,053	04/25/2022	01/18/2035
06762V-AC-0	Barings CLO Ltd 2022-III	D.....	2.....		.. 1.C FE	10,000,000	..98.8878	9,888,780	10,000,000	10,000,000	0	0	0	0	...6.614	...6.615	JAJ0	146,986	146,986	09/01/2022	10/20/2035
06763B-AC-3	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 1.C FE	10,000,000	..96.6725	9,667,250	10,000,000	10,000,000	0	0	0	0	...5.943	...5.942	JAJ0	120,502	362,682	08/01/2022	01/20/2034
06763B-AE-9	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 1.F FE	30,000,000	..94.9110	28,473,300	30,000,000	30,000,000	0	0	0	0	...6.343	...6.342	JAJ0	385,840	1,228,962	08/01/2022	01/20/2034
06763C-AA-5	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 3.C FE	20,000,000	..61.7357	12,347,140	20,000,000	20,000,000	0	0	0	0	...5.500	...5.494	JAJ0	216,944	1,100,000	12/19/2022	01/20/2034
06763C-AE-7	Barings Loan Partners CLO Ltd 3	D.....	2.....		.. 2.C FE	53,169,616	..80.5967	42,852,956	53,169,616	53,169,616	0	0	0	0	...2.250	...2.249	JAJ0	235,940	1,261,445	02/22/2022	01/20/2034
1449999999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates - Other Loan-Backed and Structured Securities						383,382,011	XXX	344,393,701	384,094,616	385,454,743	0	85,394	0	2,072,732	XXX	XXX	XXX	4,825,912	11,107,258	XXX	XXX
1509999999. Total - Parent, Subsidiaries and Affiliates Bonds						503,849,582	XXX	449,912,380	505,114,616	505,922,314	0	213,321	0	2,072,732	XXX	XXX	XXX	6,851,818	15,787,820	XXX	XXX
04019V-MQ-7	ARES PBN FINANCE CO. II LLC - Class A Te				.. 1.F Z	7,333,333	100.0000	7,333,333	7,333,333	7,333,333	0	0	0	0	...5.890	...5.890	JAJ0	130,780	130,780	09/12/2022	10/15/2037
08123A-MM-1	BORG MERIDIAN PEAK FUNDING LLC - Secure				.. 1.F Z	17,000,000	100.0000	17,000,000	17,000,000	17,000,000	0	0	0	0	...3.857	...3.857	FIAN	238,505	238,505	10/28/2022	08/16/2030
12575Z-MN-9	CMFT RE Lending Sub MM, LLC - Term Loan				.. 1.F Z	24,748,101	100.0000	24,748,101	24,748,101	24,748,101	0	0	0	0	...6.253	...6.253	MON	424,416	705,213	12/01/2022	09/06/2027
12575Z-MQ-2	CMFT RE Lending Sub MM, LLC - Term Loan				.. 1.F Z	4,584,000	100.0000	4,584,000	4,584,000	4,584,000	0	0	0	0	...6.853	...6.853	MON	59,214	83,305	09/14/2022	01/13/2038
12625Z-MQ-7	CRE II LENDER SUB I, LLC - Term Loan Ser				.. 1.F Z	3,234,950	100.0000	3,234,950	3,234,950	3,234,950	0	0	0	0	...6.076	...6.076	MON	34,934	56,798	08/24/2022	11/19/2027
12625Z-MP-4	CRE II LENDER SUB I, LLC - Term Loan Ser				.. 1.F Z	2,741,120	100.0000	2,741,120	2,741,120	2,741,120	0	0	0	0	...6.125	...6.125	MON	18,852	18,852	11/07/2022	02/07/2028
12625Z-MQ-2	CRE II LENDER SUB I, LLC - Term Loan Ser				.. 1.F Z	2,315,250	100.0000	2,315,250	2,315,250	2,315,250	0	0	0	0	...6.476	...6.476	MON	13,251	13,251	12/02/2022	03/02/2028
14314Z-MM-3	CARLYLE SECURED LENDING III SPV, - Senio				.. 1.F Z	6,564,000	100.0000	6,564,000	6,564,000	6,564,000	0	0	0	0	...6.524	...6.524	MJSD	62,003	109,137	11/30/2022	09/30/2030
171435-AA-8	CHURCHILL CFO 2022-1 LTD. - Class A Revo				.. 1.F PL	40,000,000	100.0000	40,000,000	40,000,000	40,000,000	0	0	0	0	...7.754	...7.754	MJSD	669,883	669,883	06/30/2022	06/30/2027
171435-AC-4	CHURCHILL CFO 2022-1 LTD. - Class B Revo				.. 2.B PL	10,000,000	100.0000	10,000,000	10,000,000	10,000,000	0	0	0	0	...7.754	...7.754	MJSD	167,471	167,471	06/30/2022	06/30/2027
40420Z-MM-9	HL Private Assets Holdings LP - Term Loa				.. 1.F Z	18,000,000	100.0000	18,000,000	18,000,000	18,000,000	0	0	0	0	...7.454	...7.454	MJSD	130,034	189,637	09/21/2022	03/12/2030
40487*-AA-6	HV Voyage L.P. - 1st Lien Term Loan (Las				.. 1.G PL	3,078,947	100.0000	3,078,947	3,078,947	3,078,947	0	0	0	0	...5.050	...5.050	MJSD	111,738	111,738	03/30/2022	03/15/2028
40487*-AB-4	HV Voyage L.P. - 1st Lien Term Loan (Par				.. 1.G PL	1,421,053	100.0000	1,421,053	1,421,053	1,421,053	0	0	0	0	...7.819	...7.819	MJSD	35,943	35,943	03/30/2022	03/15/2028
45608Z-MM-2	INDUSTRY VENTURES MM HOLDCO, LLC, - Seni				.. 1.F Z	10,000,000	100.0000	10,000,000	10,000,000	10,000,000	0	0	0	0	...8.696	...8.696	JAJ0	209,573	318,073	07/12/2022	07/12/2037
47231#-MQ-8	JEFFERIES DIRECT LENDING OFFSHORE FUND I				.. 2.B Z	4,747,500	100.0000	4,747,500	4,747,500	4,747,500	0	0	0	0	...7.133	...7.133	MJSD	50,934	50,934	12/16/2022	06/17/2031
500500-XX-6	RedSail Technologies - 2022 Incremental				.. 4.B Z	2,443,875	..98.3596	2,452,842	2,493,750	2,443,875	0	0	0	0	...9.050	...9.050	IAT	95,813	95,813	06/17/2022	12/11/2027
515095-MP-9	LANDMARK EQUITY PARTNERS XV-D, LLC - Cla				.. 1.F Z	40,000,000	100.0000	40,000,000	40,000,000	40,000,000	0	0	0	0	...5.400	...5.400	JAJ0	462,000	1,176,000	07/14/2022	07/14/2030
62879H-MQ-7	NB SOF V ISPV 2022 LLC - Class A Term Lo				.. 1.F Z	3,948,629	100.0000	3,948,629	3,948,629	3,948,629	0	0	0	0	...2.650	...2.650	FIAN	22,935	22,935	12/19/2022	08/15/2037
65172Z-MM-6	NEWPOINT JV SUB MM, LLC, - Term Loan Ser				.. 1.D Z	8,565,750	100.0000	8,565,750	8,565,750	8,565,750	0	0	0	0	...2.350	...2.350	MON	132,159	173,501	09/08/2022	01/08/2028
67080B-MM-6	NXT Capital Structured Note I, LLC - Cla				.. 1.A Z	16,393,352	100.0000	16,393,352	16,393,352	16,393,352	0	0	0	0	...6.493	...6.493	JAJ0	293,497	513,337	12/19/2022	01/26/2031
68877Z-MM-8	OT-MM REDF3 Seller, LLC - Series 2022-1				.. 1.F Z	14,833,560	100.0000	14,833,560	14,833,560	14,833,560	0	0	0	0	...2.050	...2.050	MON	264,876	395,792	08/01/2022	11/02/2027
68877Z-MM-6	OT-MM REDF3 Seller, LLC - Series 2022-2				.. 1.F Z	23,250,000	100.0000	23,250,000	23,250,000	23,250,000	0	0	0	0	...6.126	...6.126	MON	364,637	539,327	08/16/2022	11/16/2027
87264Z-MM-9	TPG TIGER HOLDCO, LLC, - Class A Term Lo				.. 1.F Z	5,318,724	100.0000	5,318,724	5,318,724	5,318,724	0	0	0	0	...3.950	...3.950	JAJ0	54,559	96,092	12/19/2022	07/14/2042
87264Z-MM-7	TPG TIGER HOLDCO, LLC, - Class B Term Lo				.. 2.B Z	1,772,908	100.0000	1,772,908	1,772,908	1,772,908	0	0	0	0	...3.950	...3.950	JAJ0	8,508	26,640	12/19/2022	07/14/2042
88676Z-MM-9	TIKEHAU GREEN DIAMOND CFO LLC - Class A				.. 1.F Z	13,777,778	100.0000	13,777,778	13,777,778	13,777,778	0	0	0	0	...6.428	...6.427	MJSD	0	0	12/22/2022	12/21/2030
88676Z-MM-7	TIKEHAU GREEN DIAMOND CFO LLC - Class B				.. 2.B Z	3,444,444	100.0000	3,444,444	3,444,444	3,444,444	0	0	0	0	...8.178	...8.177	MJSD	0	0	12/22/2022	12/21/2030
901399-MX-0	Twin Brook Capital Funding XIV WSPV, LLC				.. 1.D Z	5,963,163	100.0000	5,963,163	5,963,163	5,963,163	0	0	0	0	...5.448	...5.448	JAJ0	84,384	129,640	10/18/2022	10/18/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
901399-MY-8	Twin Brook Capital Funding XIII WSPV, LL .....	.....	.....	.....	...1.D Z	6,854,953	100.0000	6,854,953	6,854,953	6,854,953	0	0	0	0	5.448	5.448	JAJO	47,398	99,517	10/18/2022	10/18/2028
.....	Litmos - Term Loan .....	.....	.....	.....	...4.C Z	2,204,122	97.5000	2,204,122	2,260,638	2,204,122	0	0	0	0	10.400	10.400	MAT	18,947	18,947	12/01/2022	12/01/2029
.....	ATL II MRO Holdings Inc. - Senior Term L .....	.....	.....	.....	...4.C Z	1,241,207	97.5000	1,241,207	1,273,033	1,241,207	0	0	0	0	10.430	10.430	MAT	21,770	21,770	11/01/2022	11/01/2029
.....	RWA Holding Company - First Lien Term Lo .....	.....	.....	.....	...4.C Z	1,605,031	97.0000	1,605,031	1,654,671	1,605,031	0	0	0	0	10.590	10.590	MAT	28,714	28,714	11/01/2022	10/31/2028
906548-73-1	WVEC Holdings II Corp - Term Loan .....	.....	.....	.....	...4.C Z	1,751,821	97.5000	1,751,821	1,796,739	1,751,821	0	0	0	0	10.580	10.580	MAT	42,088	42,088	10/03/2022	10/03/2029
.....	Applied Aerospace Structures Corp. - Ter .....	.....	.....	.....	...4.C Z	2,033,871	97.0000	2,033,871	2,096,774	2,033,871	0	0	0	0	10.540	10.540	MAT	17,810	17,810	12/01/2022	11/22/2028
461392-MM-8	Invesco Private Credit Opportunities Hol .....	.....	.....	.....	...1.F Z	5,500,000	100.0000	5,500,000	5,500,000	5,500,000	0	0	0	0	7.113	7.113	MON	89,142	89,142	10/18/2022	09/23/2032
.....	Cleaver-Brooks Inc - 2022 Term Loan .....	.....	.....	.....	...4.C Z	3,650,252	98.3019	3,661,495	3,724,747	3,650,252	0	0	0	0	10.070	10.070	MAT	149,705	149,705	07/18/2022	07/14/2028
.....	Cleaver-Brooks Inc - 2022 Fixed PIK Term .....	.....	.....	.....	...4.C Z	790,119	98.0896	792,471	807,905	790,119	0	0	0	0	11.000	11.000	MAT	39,856	39,856	09/30/2022	07/14/2029
904569-87-0	Sparus Holdings LLC - 1st Lien Term Loan .....	.....	.....	.....	...4.C Z	1,250,457	97.7500	1,250,457	1,279,240	1,250,457	0	0	0	0	9.570	9.570	MAT	14,512	14,512	11/15/2022	03/19/2027
36831F-AA-3	GCM GROSVENOR DIVERSIFIED ALTERNATIVES I .....	.....	.....	.....	...1.G FE	20,000,000	96.5944	19,318,883	20,000,000	20,000,000	0	0	0	0	4.250	4.250	MM	106,250	403,750	11/08/2021	11/15/2041
564232-CC-8	ASC Communications LLC 2022 Term Loan .....	.....	.....	.....	...4.B Z	867,902	98.5190	869,040	882,104	867,902	0	0	0	0	9.320	9.320	MAT	33,801	33,801	07/15/2022	07/15/2027
918340-QQ-6	Van Pool Transportation LLC - 2022 Delay .....	.....	.....	.....	...4.C Z	4,981,518	98.0926	4,886,500	4,981,518	4,981,518	0	0	0	0	9.520	9.520	MAT	104,341	104,341	10/07/2022	05/22/2024
01370#-AA-4	Alcami Corporation/First Lien Term Loan .....	.....	.....	.....	...5.A FE	1,330,516	88.1250	1,189,687	1,350,000	1,330,516	0	0	0	0	5.270	5.270	MAT	17,058	70,488	07/12/2018	07/14/2025
113004-QQ-1	Armstrong Transport Group - 2022 Increme .....	.....	.....	.....	...4.B Z	2,443,750	97.7500	2,443,750	2,500,000	2,443,750	0	0	0	0	9.700	9.700	MAT	51,861	51,861	10/14/2022	06/18/2024
85780#-YY-3	Tencarva Machinery Company .....	.....	.....	.....	...4.C Z	400,944	98.8512	396,338	400,944	400,944	0	0	0	0	9.650	9.650	MAT	13,275	13,275	08/15/2022	12/20/2027
75812R-MM-9	Red Cedar Holdings B, L.P. - Series 2022 .....	.....	.....	.....	...1.D Z	24,519,610	100.0000	24,519,610	24,519,610	24,519,610	0	0	0	0	5.294	5.294	FIAN	213,528	785,264	08/10/2022	08/10/2030
456722-BB-2	HTI Technology & Industries - 2022 Delay .....	.....	.....	.....	...4.C Z	1,772	98.7139	116,610	118,130	1,772	0	0	0	0	15.000	3,071.883	MAT	0	0	07/27/2022	07/07/2025
533021-CC-3	HTI Technology & Industries - 2022 Term .....	.....	.....	.....	...4.C Z	540,288	98.7139	541,461	548,516	540,288	0	0	0	0	11.660	0.512	MAT	11,540	27,945	07/27/2022	07/07/2025
956525-ZZ-5	Kings III - 1st Lien Term Loan .....	.....	.....	.....	...4.C Z	1,783,740	98.2222	1,787,785	1,820,143	1,783,740	0	0	0	0	10.400	0.344	MAT	56,734	56,734	08/31/2022	07/07/2028
.....	Technosylva - Tranche A Term Loan .....	.....	.....	.....	...4.C Z	38,714	196.0000	38,714	39,504	38,714	0	0	0	0	9.200	9.200	MAT	111	111	12/19/2022	12/14/2028
85914#-MM-1	STEPSTONE GROUP EUROPE ALTERNATIVE INVES	C .....	.....	.....	...3.A Z	4,000,253	100.0000	4,000,253	4,000,253	4,000,253	0	0	0	0	7.137	5.470	FIAN	48,345	243,076	04/12/2022	02/28/2034
533027-CC-0	Energy Exemplar Pty Ltd - 2022 USD Term	D .....	.....	.....	...4.C Z	943,229	98.5000	943,229	957,593	943,229	0	0	0	0	6.000	6.000	MAT	29,617	29,617	08/25/2022	09/30/2025
51513#-AA-9	Landmark Equity Partners XVI-D, LLC .....	.....	.....	.....	...1.F PL	65,000,000	100.0000	65,000,000	65,000,000	65,000,000	0	0	0	0	2.903	2.903	IJSD	507,164	2,728,846	12/15/2021	12/15/2029
00910#-AG-0	Air Comm Corporation Incremental DDTL .....	.....	5 .....	.....	...4.B PL	4,952,875	98.8130	4,894,082	4,952,875	4,952,875	0	0	0	0	0.063	0.063	JAJO	285,924	359,343	10/12/2021	07/01/2027
03233#-AA-1	Antech Software First Lien Term Loan .....	.....	5 .....	.....	...5.A	2,700,000	98.7759	2,666,950	2,700,000	2,700,000	0	0	0	0	0.063	0.064	FIAN	97,326	168,981	11/02/2021	11/02/2027
08890#-AB-0	Beyond Risk DDTL .....	.....	5 .....	.....	...4.C	802,053	98.8204	855,153	865,361	802,053	0	0	0	0	5.250	5.250	JAJO	41,525	48,245	12/22/2021	09/30/2023
08890#-AA-2	Beyond Risk First Lien TL .....	.....	5 .....	.....	...4.C	1,554,950	98.8204	1,565,563	1,584,251	1,553,757	0	0	0	0	0.052	0.392	JAJO	100,738	115,583	10/08/2021	09/30/2027
09173#-AA-8	Bitly Term Loan B .....	.....	5 .....	.....	...4.C	1,255,965	99.0597	1,262,679	1,274,665	1,255,965	0	0	0	0	0.052	0.357	FIAN	64,955	81,685	11/18/2021	11/10/2026
10947U-AC-2	BrightSign Term Loan .....	.....	5 .....	.....	...3.A PL	2,188,392	99.0713	2,189,171	2,209,692	2,188,392	0	0	0	0	0.068	0.236	JAJO	109,168	171,882	10/14/2021	10/14/2027
12464#-AA-0	CAI Software Term Loan .....	.....	5 .....	.....	...5.B GI	3,841,362	97.4000	3,817,844	3,919,758	3,841,362	0	0	0	0	0.072	0.363	IJSD	255,740	328,178	12/13/2021	12/10/2028
15674#-AA-9	Cerberus Loan .....	.....	5 .....	.....	...1.D Z	429,443	100.0000	430,000	430,000	429,443	0	0	0	0	0.024	0.024	IJSD	206,060	330,020	12/16/2021	11/20/2026
6316#-AA-5	CIP VIII Holdings SPV L.P. Term Loan	C	5 .....	.....	...1.F PL	139,540	98.6475	138,106,500	140,000,000	101,328,800	0	0	0	0	0.028	0.108	IJSD	11,667,640	31,967,846	12/03/2021	12/14/2026
49375#-AA-0	DistroKid Senior Term Loan .....	.....	5 .....	.....	...5.B GI	6,746,570	98.8333	6,798,110	6,878,358	6,746,570	0	0	0	0	0.070	0.409	IJSD	302,786	541,690	10/01/2021	09/30/2027
86822#-AA-1	EFI Productivity Software Term Loan .....	.....	5 .....	.....	...5.B GI	4,496,820	98.6000	4,524,352	4,588,592	4,496,820	0	0	0	0	6.500	0.337	FIAN	279,194	358,150	12/30/2021	12/30/2027
5318#-AB-1	EHE (Life Extension Institute Inc.) Term .....	.....	5 .....	.....	...5.A	1,463,405	100.0000	1,463,405	1,463,405	1,463,405	0	0	0	0	0.065	0.065	FIAN	62,501	111,633	11/17/2021	02/19/2024
29643#-AA-0	eShipping Term Loan .....	.....	5 .....	.....	...4.C IF	2,240,339	99.4000	2,271,202	2,284,911	2,240,339	0	0	0	0	0.068	0.406	FIAN	103,701	191,457	11/05/2021	11/05/2027
30319#-AA-1	FOLLETT INDEPENDENT SCHOOL DISTRICT, TEX .....	.....	5 .....	.....	...4.C IF	7,219,732	98.8889	7,278,072	7,359,848	7,219,732	0	0	0	0	0.065	0.363	FIAN	346,808	556,369	08/31/2021	08/31/2028
38870#-AA-6	GraphPad Software Inc. ProteinMetrics In .....	.....	5 .....	.....	...5.A	3,204,541	97.5000	3,155,503	3,236,413	3,204,541	0	0	0	0	0.065	0.252	JAJO	107,072	160,516	11/26/2021	04/27/2027
40476#-AC-3	Hanley Wood LLC Dec-21 DDTL .....	.....	5 .....	.....	...4.C	425,259	98.6926	419,699	425,259	425,259	0	0	0	0	5.836	0.678	IJSD	12,266	25,966	12/17/2021	12/10/2024
40476#-AB-5	Hanley Wood LLC Dec-21 Incremental .....	.....	5 .....	.....	...4.C	3,837,801	98.6926	3,864,055	3,915,243	3,837,801	0	0	0	0	0.068	0.748	IJSD	130,072	190,737	12/17/2021	12/10/2024
62901#-AA-6	National Auto Care Corp .....	.....	.....	.....	...4.C	695,559	99.5000	704,363	695,559	695,559	0	0	0	0	9.450	0.000	MAT	51,420	67,289	12/31/2021	09/28/2024
7849#-AA-7	LendingClub Delayed Draw Facility .....	.....	5 .....	.....	...1.G PL	70,074,026	91.0956	63,834,333	70,074,026	70,074,026	0	0	0	0	2.430	2.234	MON	621,569	621,569	10/08/2021	10/19/2029
6308#-AA-3	Narda-MITCO (JFL-Narda Partners LLC) Inc .....	.....	5 .....	.....	...5.B GI	811,723	90.4000	746,844	826,154	811,723	0	0	0	0	0.063	0.361	IJSD	45,997	59,127	12/28/2021	12/06/2027
66703#-AA-9	Northstar Recycling Senior Term Loan .....	.....	5 .....	.....	...4.C	1,255,360	98.8319	1,264,932	1,279,882	1,255,360	0	0	0	0	0.058	0.396	IJSD	50,336	87,477	10/01/2021	09/30/2027

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
67117*-AA-7	Office Atly Bank LLC .....	.....	.....	.....	5.B GI	3,642,146	.98.4481	3,658,802	3,716,476	3,642,146	.0	.0	.0	.0	10.140	0.000	MAT	208,437	273,340	12/31/2021	12/10/2028
69429*-AB-2	PDQ DDTL .....	.....	.....	.....	5.A	3,009,285	.98.8333	2,974,177	3,009,285	3,009,285	.0	.0	.0	.0	.0.060	0.061	MJSD	145,729	229,317	12/30/2021	08/26/2027
69429*-AA-4	PDQ First Lien Term Loan .....	.....	.....	.....	5	4,381,833	.98.8333	4,330,711	4,381,833	4,381,833	.0	.0	.0	.0	.0.060	0.061	MJSD	238,725	305,755	08/27/2021	08/26/2027
73103*-AA-9	Polara (VSC Polara LLC) 1L Term Loan .....	.....	.....	.....	5.B GI	1,410,487	.98.3667	1,415,459	1,438,962	1,410,335	.0	.0	.0	.0	.0.058	0.396	MJSD	76,775	105,346	12/03/2021	12/03/2027
73112*-AC-4	Policy Services Company LLC, 1L Toggle DDTL .....	.....	.....	.....	5.B GI	2,625,678	.97.6900	2,655,002	2,717,783	2,625,678	.0	.0	.0	.0	.9.160	0.000	MAT	184,079	269,007	12/31/2021	06/21/2026
73112*-AB-6	Policy Services Company LLC, 1L Toggle TL .....	.....	.....	.....	5.B GI	7,450,774	.97.6900	7,494,608	7,671,827	7,450,774	.0	.0	.0	.0	14.750	0.000	MAT	822,961	841,424	12/31/2021	06/21/2026
89989*-AF-1	Portfolio Group Agency 1L Term Loan .....	.....	.....	.....	4.B PL	1,360,123	.97.2000	1,348,201	1,387,038	1,360,123	.0	.0	.0	.0	.0.062	0.562	FIAN	87,345	112,073	11/15/2021	12/02/2025
89989*-AG-9	Portfolio Group DDTL .....	.....	.....	.....	4.B PL	1,021,732	.97.2000	1,013,500	1,042,695	1,021,732	.0	.0	.0	.0	.6.160	0.160	FIAN	57,159	74,619	12/30/2021	12/02/2025
55183*-AC-7	Premium Fund Limited	C .....	.....	.....	4.C	2,856,197	.98.6963	2,876,491	2,914,487	2,856,197	.0	.0	.0	.0	.0.072	0.458	MJSD	190,291	244,153	09/09/2021	12/18/2026
74142*-AF-6	Pretium Packaging LLC FLTL .....	.....	.....	.....	4.C FE	583,044	.79.4290	465,370	585,895	583,044	.0	.0	.0	.0	.0.045	0.118	JAJO	20,271	34,264	09/22/2021	10/02/2028
7598*-AA-6	Renovation Brands (Renovation Parent Hol .....	.....	.....	.....	4.C IF	4,688,092	.94.8000	4,555,922	4,805,825	4,688,092	.0	.0	.0	.0	.0.065	0.489	FIAN	243,866	322,649	11/15/2021	11/15/2027
80586*-AB-6	Scaled Agile Inc Unitranchise Term Loan .....	.....	.....	.....	2.B PL	3,401,073	.99.1000	3,438,534	3,469,762	3,400,719	.0	.0	.0	.0	.0.065	0.404	MJSD	184,807	242,301	12/16/2021	12/15/2028
78488*-AH-3	Seaworld Entertainment Inc. TL B due 202 .....	.....	.....	.....	3.C FE	2,934,292	.98.0710	2,905,353	2,962,500	2,934,292	.0	.0	.0	.0	.0.035	0.180	FIAN	78,632	144,697	08/13/2021	08/25/2028
05471*-AA-0	Senior Secured Term Loan Facility Partic	D .....	.....	.....	1.G PL	25,152,508	.98.5375	24,634,375	25,000,000	25,152,508	.0	.0	.0	.0	.2.600	2.490	FIAN	567,210	567,210	12/20/2021	05/27/2026
88033*-AA-0	Senior Term Loan .....	.....	.....	.....	5.B GI	2,423,705	.98.8512	2,441,790	2,470,168	2,423,705	.0	.0	.0	.0	.5.500	5.956	MJSD	143,463	183,893	12/20/2021	12/20/2027
83176*-AA-2	Smartling Inc. Term Loan .....	.....	.....	.....	5.B GI	3,004,081	.98.0000	2,944,000	3,004,081	3,004,081	.0	.0	.0	.0	.0.068	0.068	JAJO	181,304	233,561	11/03/2021	10/26/2027
26869*-AA-1	Standard Elevator Systems 1L Term Loan .....	.....	.....	.....	5.B GI	2,401,438	.97.1000	2,378,785	2,449,831	2,401,438	.0	.0	.0	.0	.0.065	0.404	MJSD	148,785	190,709	12/02/2021	12/02/2027
26869*-AB-9	Standard Elevator Systems DDTL .....	.....	.....	.....	5.B GI	725,152	.97.1000	748,334	770,684	725,152	.0	.0	.0	.0	.5.833	0.292	MJSD	35,825	47,207	12/10/2021	12/02/2027
N8233*-AA-5	Straive Senior Term Loan	D .....	.....	.....	5.B GI	4,927,500	.99.0917	4,954,583	5,000,000	4,927,500	.0	.0	.0	.0	.0.065	0.341	JAJO	230,207	412,892	10/25/2021	04/28/2027
C865*-AA-6	Syntax Systems Ltd Senior Term Loan	A .....	.....	.....	4.C	1,318,843	.94.8000	1,262,892	1,332,165	1,318,843	.0	.0	.0	.0	.0.063	0.207	JAJO	55,915	98,997	10/27/2021	10/28/2028
45686*-AB-0	Term Loan .....	.....	.....	.....	2.C PL	2,910,734	105.2740	3,095,056	2,940,000	2,910,734	.0	.0	.0	.0	.0.070	0.575	JAJO	208,221	208,221	05/31/2021	10/02/2024
45054*-AA-6	Term Loan .....	.....	.....	.....	2.C PL	1,254,534	.98.6852	1,264,987	1,281,851	1,254,534	.0	.0	.0	.0	.4.750	5.236	MJSD	46,954	88,123	12/20/2021	12/20/2027
97959*-AA-3	Woodland Foods Inc. Term Loan .....	.....	.....	.....	4.C	1,689,665	.89.7000	1,546,157	1,723,698	1,689,665	.0	.0	.0	.0	.0.065	0.404	MJSD	103,553	132,426	12/03/2021	12/01/2027
105369*-ZZ-8	Spatial Business Systems Inc .....	.....	.....	.....	4.C Z	990,234	.97.5000	990,234	1,015,625	990,234	.0	.0	.0	.0	.9.830 .....	.....	MAT	14,688	22,139	10/03/2022	09/30/2028
12575Z*-MP-4	CMFT RE Lending Sub MM, LLC .....	.....	.....	.....	1.F Z	6,075,000	100.0000	6,075,000	6,075,000	6,075,000	.0	.0	.0	.0	.6.503 .....	.....	MON	101,308	269,407	07/11/2022	11/01/2027
500056*-AA-4	Technosylva Inc .....	.....	.....	.....	4.C Z	585,710	.98.0000	585,710	597,664	585,710	.0	.0	.0	.0	.9.200 .....	.....	MAT	1,680	1,680	12/19/2022	09/15/2028
783143*-LD-0	IVC Acquisition Ltd .....	.....	.....	.....	4.B Z	1,016,836	.89.7810	989,501	911,000	1,009,825	.0	.0	.0	(7,012)	.7.700 .....	.....	MAT	5,925	5,925	12/05/2022	02/13/2026
927691*-VI-3	Virgin Media SFA Finance Ltd .....	.....	.....	.....	3.C Z	1,091,366	.92.2500	1,116,041	1,000,000	1,109,992	.0	.0	.0	18,625	.6.210 .....	.....	MAT	9,344	9,344	11/16/2022	01/15/2027
00453*-AB-6	Accurus Aerospace Corp .....	.....	.....	.....	5.A	3,919,073	.98.4000	3,915,094	3,978,754	3,919,073	.0	.0	.0	.0	10.770	10.770	MAT	139,701	139,701	04/12/2022	04/05/2028
30034*-AA-3	EVERLAKE PRIVATE FUND BORROWER, LLC .....	.....	.....	.....	2.A PL	5,000,000	100.0000	5,000,000	5,000,000	5,000,000	.0	.0	.0	.0	.6.990	6.521	MON	52,416	91,527	09/30/2022	09/28/2037
05629*-AA-8	BR DSCO I INVESTCO, LLC .....	.....	.....	.....	2.B PL	8,080,000	100.0000	8,080,000	8,080,000	8,080,000	.0	.0	.0	.0	.6.410	4.898	JAJO	53,266	109,764	06/03/2022	04/22/2032
00567*-AA-4	Arqlva Financing No 2 Ltd	B .....	.....	.....	3.B Z	5,664,794	101.0000	6,109,490	5,000,000	5,973,388	.0	.0	.0	308,594	.9.230	9.230	MAT	88,487	88,487	11/11/2022	09/30/2029
12758*-AA-3	CMFT RE Lending Sub MM, LLC .....	.....	.....	.....	1.G PL	22,010,870	100.0000	22,010,870	22,010,870	22,010,870	.0	.0	.0	.0	.3.040	6.353	MON	476,498	725,282	07/16/2022	07/16/2027
12758*-AB-1	CMFT RE Lending Sub MM, LLC .....	.....	.....	.....	1.F Z	13,919,400	100.0000	13,919,400	13,919,400	13,919,400	.0	.0	.0	.0	.6.280	6.704	MON	179,642	608,392	06/29/2022	10/13/2027
25403*-AI-6	Diligent Corp .....	.....	.....	.....	4.C Z	60,741	.96.5000	58,615	60,741	60,741	.0	.0	.0	.0	10.630	10.630	MAT	1,423	1,423	12/21/2022	08/04/2025
68144*-AD-0	Olympia Acquisition Inc .....	.....	.....	.....	4.B Z	14,615	.75.0000	10,961	14,615	14,615	.0	.0	.0	.0	19.360	19.360	MAT .....	.....	918	09/20/2022	02/26/2027
75333*-AA-8	RFS ASSET SECURITIZATION III LLC .....	.....	.....	.....	1.F PL	3,558,624	.99.0000	3,523,037	3,558,624	3,558,624	.0	.0	.0	.0	.3.900	3.900	MON	65,000	65,000	08/10/2022	03/30/2029
75333*-AB-6	RFS ASSET SECURITIZATION III LLC .....	.....	.....	.....	2.B PL	424,891	.99.5000	422,767	424,891	424,891	.0	.0	.0	.0	.6.200	6.200	MON	8,802	8,802	08/10/2022	03/30/2029
C4921*-AA-9	Keats 506 LP .....	.....	.....	.....	1.F Z	5,000,000	100.0000	5,000,000	5,000,000	5,000,000	.0	.0	.0	.0	.8.220	8.220	MAT	105,021	105,021	11/07/2022	06/29/2026
05564Z*-MM-8	BREDIF MM LSA LLC .....	.....	.....	.....	1.D Z	3,964,125	100.0000	3,964,125	3,964,125	3,964,125	.0	.0	.0	.0	.6.320	5.906	MON	32,013	48,609	10/28/2022	10/20/2027
05564Z*-MO-4	BREDIF MM LSA LLC .....	.....	.....	.....	1.D Z	9,610,402	100.0000	9,610,402	9,610,402	9,610,402	.0	.0	.0	.0	.6.220	5.806	MON	75,078	109,955	10/28/2022	10/20/2028
05564Z*-MM-6	BREDIF MM LSA LLC .....	.....	.....	.....	1.D Z	7,213,019	100.0000	7,213,019	7,213,019	7,213,019	.0	.0	.0	.0	.6.320	5.906	MON	58,251	58,251	10/28/2022	10/20/2027
96525Z*-MN-3	Whitehorse Liquidity Partners V LP .....	.....	.....	.....	1.F Z	5,790,863	100.0000	5,790,863	5,790,863	5,790,863	.0	.0	.0	.0	.7.570	6.653	MJSD	75,618	75,618	10/27/2022	12/15/2032
91831Z*-MO-1	VPC LEGAL FINANCE FUND HOLDINGS .....	.....	.....	.....	1.F Z	4,814,286	100.0000	4,814,286	4,814,286	4,814,286	.0	.0	.0	.0	.8.710	7.496	JAJO	25,014	25,014	12/08/2022	10/14/2030

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
65172Z-MN-4	NEWPOINT JV SUB MM, LLC			3	1.D Z	7,875,000	100.0000	7,875,000	7,875,000	7,875,000	0	0	0	0	6.490	6.490	MON	63,166	131,330	11/09/2022	02/27/2028
12499#-MN-6	CCOF II & Carlyle Credit Opportunity Fund Co-Issuer			3	1.D Z	21,535,875	100.0000	21,535,875	21,535,875	21,535,875	0	0	0	0	7.440	5.962	FMAN	258,289	258,289	11/17/2022	11/03/2032
30208#-MM-2	EXOS COLLATERALIZED SPAC HOLDINGS FUND LP			3	1.F Z	23,000,000	100.0000	23,000,000	23,000,000	23,000,000	0	0	0	0	2.000			60,056	60,056	11/21/2022	11/14/2025
14979Z-MN-9	CAZ GP OWNERSHIP CD AGGREGATOR			3	1.F Z	22,916,667	100.0000	22,916,667	22,916,667	22,916,667	0	0	0	0	9.410	8.118	IJSD	143,804	143,804	12/16/2022	12/07/2040
14979Z-MN-7	CAZ GP OWNERSHIP EF AGGREGATOR, L.P.			3	1.F Z	18,750,000	100.0000	18,750,000	18,750,000	18,750,000	0	0	0	0	9.410	8.118	IJSD	117,658	117,658	12/16/2022	12/07/2040
749329-MN-5	RCC Real Estate SPE 9 LLC			3	1.F Z	140,438	100.0000	140,438	140,438	140,438	0	0	0	0	3.500	7.375	MON	0	0	12/31/2022	12/22/2027
749329-MO-3	RCC Real Estate SPE 9 LLC			3	1.F Z	14,069	100.0000	14,069	14,069	14,069	0	0	0	0	3.500	7.375	MON	0	0	12/31/2022	12/22/2027
12759#-AA-2	CELF SPV LLC			3	1.F PL	2,454,676	100.0000	2,454,676	2,454,676	2,454,676	0	0	0	0	7.880	8.096	IJSD	8,595	51,846	12/05/2022	12/20/2029
35042#-AA-2	Foundation Finance Trust			3	1.D Z	95,100,930	98.3203	93,785,815	95,388,039	95,100,930	0	0	0	0	5.650	2.568	MAT	684,692	835,530	09/01/2022	10/15/2042
35042#-AB-0	Foundation Finance Trust			3	1.F Z	6,322,628	98.9063	6,301,317	6,371,000	6,322,628	0	0	0	0	6.740	5.603	MAT	53,676	64,496	09/01/2022	10/15/2042
35042#-AC-8	Foundation Finance Trust			3	2.B Z	8,478,064	96.5625	8,247,403	8,541,000	8,478,064	0	0	0	0	8.000	5.286	MAT	85,410	102,629	09/01/2022	10/15/2042
35042#-AD-6	Foundation Finance Trust			3	3.C Z	8,594,315	94.6758	8,195,136	8,656,000	8,594,315	0	0	0	0	9.350	6.690	MAT	101,167	101,167	09/01/2022	10/15/2042
29251#-AB-9	Encina Business Credit LLC			3	2.B PL	9,280,000	100.0000	9,280,000	9,280,000	9,280,000	0	0	0	0	11.630	11.630	MAT	171,272	171,272	11/03/2022	07/07/2028
89989#-AH-7	TURBO BUYER INC			3	4.B PL	210,087	97.2000	204,205	210,087	210,087	0	0	0	0	10.430	10.430	MAT	2,714	3,145	04/13/2022	12/02/2025
26888*-AB-8	EPS Nass Parent Inc.			3	2.C PL	25,461	99.1333	25,241	25,461	25,461	0	0	0	0	10.010	6.312	MAT	1,136	1,897	05/19/2022	04/19/2028
26888*-AA-0	EPS Nass Parent Inc.			3	2.C PL	452,383	99.1333	448,462	452,383	452,383	0	0	0	0	9.740	9.740	MAT	20,181	27,755	01/14/2022	04/19/2028
30301*-AA-1	FS GREIT FINANCE MM-1 LLC			3	1.F PL	41,424,298	100.0000	41,424,298	41,424,298	41,424,298	0	0	0	0	4.480	6.343	IJSD	648,061	2,878,200	04/28/2022	09/20/2029
32013#-AA-2	First Eagle Direct Lending V			3	1.D PL	28,659,420	100.0000	28,659,420	28,659,420	28,659,420	0	0	0	0	3.450	6.862	IJSD	414,748	621,144	04/28/2022	06/16/2029
87300*-AE-4	THG ACQUISITION LLC			2	3.A PL	577,202	95.2500	549,785	577,202	577,202	0	0	0	0	9.680	9.680	MAT	25,475	44,454	01/31/2022	12/02/2026
87300*-AD-6	The Hilb Group, LLC			2	3.A PL	343,089	95.2500	326,792	343,089	343,089	0	0	0	0	9.200	9.200	MAT	15,143	20,487	01/31/2022	12/02/2026
87300*-AC-8	THG ACQUISITION LLC			2	4.C	116,608	95.2500	111,069	116,608	116,608	0	0	0	0	9.990	9.990	MAT	5,147	7,104	01/14/2022	12/02/2026
87300*-AB-0	THG ACQUISITION LLC			2	4.C	412,304	95.2500	392,720	412,304	412,304	0	0	0	0	9.990	9.990	MAT	18,198	25,119	01/14/2022	12/02/2026
40489#-AA-2	HPS Mezzanine Partners 2019 LP			3	1.F PL	45,499,382	100.0000	45,499,382	45,499,382	45,499,382	0	0	0	0	3.500	7.511	JAJO	340,613	450,695	07/22/2022	07/15/2030
45686#-AC-8	InfraStripe LLC			3	2.C PL	2,000,000	104.5573	2,091,146	2,000,000	2,000,000	0	0	0	0	6.760	6.760	MAT	137,841	137,841	01/31/2022	09/30/2024
12125B-AE-0	BURGESS POINT PURCHASER CORP			3	5.A	2,181,818	96.5778	2,194,950	2,272,727	2,181,818	0	0	0	0	13.300	13.300	MAT	118,007	118,007	07/29/2022	07/25/2030
55371*-AX-3	MRI Software LLC			2	5.B GI	3,559	95.8750	3,482	3,632	3,559	0	0	0	0	6.500	6.500	MAT	239	239	01/31/2022	02/10/2026
55417#-AA-5	M360 MM Series LLC			3	1.F PL	4,875,795	100.0000	4,875,795	4,875,795	4,875,795	0	0	0	0	5.590	6.453	MON	53,768	71,828	06/29/2022	06/24/2027
60510M-B*-8	Mission Lane Credit Card Master Trust			3	3.B Z	733,333	100.0000	733,333	733,333	733,333	0	0	0	0	12.100	12.100	MAT	50,929	60,489	06/10/2022	10/15/2027
60510M-A#-5	Mission Lane Credit Card Master Trust			3	2.B Z	1,466,667	100.0000	1,466,667	1,466,667	1,466,667	0	0	0	0	7.100	7.100	MAT	76,004	85,124	06/10/2022	10/15/2027
60510M-A#-7	Mission Lane Credit Card Master Trust			3	1.F Z	6,966,667	100.0000	6,966,667	6,966,667	6,966,667	0	0	0	0	6.100	6.100	MAT	291,371	325,190	06/10/2022	10/15/2027
55343#-AH-1	MJX Asset Management LLC			3	1.D Z	10,252,325	94.1600	9,653,589	10,252,325	10,252,325	0	0	0	0	3.440	3.440	MAT	337,397	337,397	12/31/2022	01/11/2034
55343#-AD-0	MJX Asset Management LLC			3	3.C PL	2,621,670	74.9910	1,994,761	2,660,000	2,621,670	0	0	0	0	4.670	4.670	MAT	118,752	118,752	12/31/2022	04/30/2031
55343#-AJ-7	MJX Asset Management LLC			3	2.B Z	1,170,625	88.2700	1,048,206	1,187,500	1,170,625	0	0	0	0	7.590	7.590	MAT	86,171	86,171	12/31/2022	01/11/2034
55343#-AF-5	MJX Asset Management LLC			3	1.F PL	49,116,930	96.2340	47,267,735	49,117,500	49,116,930	0	0	0	0	6.380	5.365	MAT	588,970	588,970	09/06/2022	07/30/2032
55343#-AG-3	MJX Asset Management LLC			3	1.F PL	17,232,194	96.6150	16,650,388	17,233,750	17,232,194	0	0	0	0	1.630	1.630	MAT	269,346	269,346	12/31/2022	10/15/2031
55343#-AC-2	MJX Asset Management LLC			3	1.F PL	23,172,431	96.3700	22,328,929	23,170,000	23,172,431	0	0	0	0	1.940	1.940	MAT	428,635	428,635	12/31/2022	04/30/2031
55343#-AA-6	MJX Asset Management LLC			3	4.A PL	2,300,493	78.6370	1,821,430	2,316,250	2,300,493	0	0	0	0	4.870	4.870	MAT	108,507	108,507	12/31/2022	10/15/2031
55343#-AE-8	MJX Asset Management LLC			3	4.B PL	3,274,123	79.2330	2,662,229	3,360,000	3,274,123	0	0	0	0	6.390	6.390	MAT	197,899	197,899	12/31/2022	07/30/2032
58576#-AA-4	Middle Market Credit Fund II SPV, LLC			3	1.A PL	63,299,180	100.0000	63,299,180	63,299,180	63,299,180	0	0	0	0	5.660	6.779	FMAN	1,180,189	1,889,891	01/25/2022	11/03/2030
62879X-AB-1	NB Select Opportunities ISPV 2022 LLC			3	1.G PL	6,849,862	89.1717	6,108,140	6,849,862	6,849,862	0	0	0	0	4.150	4.150	JAJO	102,384	209,204	03/31/2022	04/15/2037
62879X-AC-9	NB Select Opportunities ISPV 2022 LLC			3	2.C PL	1,588,332	100														

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost			Rate Used to Obtain Fair Value	Fair Value												Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
G6684@-AA-9	OHA Credit Solutions Master Fund 1	C.....	3		.. 1.F PL	39,544,883	100.0000	39,544,883	39,544,883	39,544,883	0	0	0	0	5.140	7.730	MJSD	627,933	1,231,617	08/31/2022	12/16/2032
67102*-AA-4	ORCC Financing II LLC		3		.. 1.D Z	80,000,000	100.0000	80,000,000	80,000,000	80,000,000	0	0	0	0	6.510	6.510	MAT	1,006,266	1,006,266	08/26/2022	10/10/2026
67117@-AA-5	OR Opportunistic DL (C) Funding LLC		3		.. 1.E PL	27,644,444	100.0000	27,644,444	27,644,444	27,644,444	0	0	0	0	5.260	4.396	MJSD	160,646	646,102	04/28/2022	12/31/2031
68687@-AA-3	ORO Funding I LLC		3		.. 1.D Z	30,000,000	100.0000	30,000,000	30,000,000	30,000,000	0	0	0	0	7.900	7.900	FMAN	197,610	1,083,889	05/31/2022	05/25/2029
70216*-AA-1	Partners Group Private Equity II LLC		3		.. 1.F Z	33,000,000	100.0000	33,000,000	33,000,000	33,000,000	0	0	0	0	7.650	7.623	MJSD	71,468	624,555	06/29/2022	06/09/2032
70466@-AA-6	POLYVENTIVE LLC / PHOENIX CHEM HLDG CO LLC		3		.. 3.B Z	2,089,033	99.0000	2,068,143	2,089,033	2,089,033	0	0	0	0	11.380	11.380	MAT	91,493	178,052	01/31/2022	01/01/2023
69398*-AD-7	PDI TA Holdings Inc		3		.. 5.A	5,400,909	96.1000	5,193,171	5,403,924	5,400,909	0	0	0	0	8.730	8.730	MAT	360,461	296,242	01/14/2022	10/24/2024
71384P-B@-9	Perimeter Master Note Business Trust		3		.. 4.C PL	7,532,011	87.9300	6,622,897	7,532,011	7,532,011	0	0	0	0	10.880	10.880	MAT	533,126	533,126	05/23/2022	11/15/2030
71384P-B*-1	Perimeter Master Note Business Trust		3		.. 3.C PL	21,415,410	87.1000	18,652,822	21,415,410	21,415,410	0	0	0	0	8.310	8.310	MAT	909,931	909,931	05/23/2022	11/15/2030
71384P-A@-8	Perimeter Master Note Business Trust		3		.. 1.D PL	18,548,782	86.4300	16,031,712	18,548,782	18,548,782	0	0	0	0	5.750	5.750	MAT	543,614	543,614	05/23/2022	11/15/2030
71384P-A@-0	Perimeter Master Note Business Trust		3		.. 2.C PL	13,019,172	89.2900	11,624,819	13,019,172	13,019,172	0	0	0	0	5.260	5.260	MAT	312,444	312,444	05/23/2022	11/15/2030
71384P-A*-2	Perimeter Master Note Business Trust		3		.. 1.G PL	68,911,326	90.9700	62,688,633	68,911,326	68,911,326	0	0	0	0	4.620	4.620	MAT	1,517,476	1,517,476	05/23/2022	11/15/2030
02124T-AA-1	Alt-2 Structured Trust		3		.. 1.D PL	21,620,206	90.7816	19,705,756	21,706,773	21,620,206	0	0	0	0	3.030	3.030	MAT	1,214,727	1,059,868	02/16/2022	05/06/2031
G7740*-AA-7	SCL XL I FUND L.P.		3		.. 1.G PL	31,198,493	100.0000	31,198,493	31,198,493	31,198,493	0	0	0	0	6.640	5.748	JAJO	529,552	1,491,442	04/28/2022	10/05/2029
G7741*-AA-6	SSG CREDIT STRATEGIES VII ICAV	D.....	3		.. 1.E PL	8,700,000	100.0000	8,700,000	8,700,000	8,700,000	0	0	0	0	6.600	4.561	FMAN	135,524	570,473	05/24/2022	02/28/2034
78433*-AB-9	SG Acquisition Inc		3		.. 4.B YE	408,485	100.0000	408,485	408,485	408,485	0	0	0	0	5.950	9.754	JAJO	9,468	31,529	05/10/2022	01/27/2027
52172*-AA-1	LeadsOnline		3		.. 5.B GI	2,098,197	98.7750	2,109,408	2,135,569	2,098,197	0	0	0	0	9.480	9.480	MAT	90,547	141,829	02/11/2022	02/07/2028
73103@-AB-7	Polara		3		.. 5.B GI	1,300,164	98.3667	1,305,028	1,326,698	1,300,164	0	0	0	0	9.430	9.430	MAT	45,314	65,487	05/02/2022	12/03/2027
12756@-AA-7	CGI Parent LLC		3		.. 4.C IF	4,327,307	98.5870	4,353,229	4,415,620	4,327,307	0	0	0	0	8.820	8.820	MAT	269,329	269,329	02/14/2022	02/14/2028
88430@-AA-1	36th Street Capital LLC		3		.. 1.G PL	5,350,333	97.3613	5,209,156	5,350,333	5,350,333	0	0	0	0	2.500	2.500	MAT	66,747	204,508	07/28/2022	03/01/2027
88167*-AA-8	Tetragon Financial Group Delaware LLC		3		.. 1.F PL	11,500,000	100.0000	11,500,000	11,500,000	11,500,000	0	0	0	0	4.730	8.130	MON	69,281	69,281	12/05/2022	07/15/2032
89617*-AB-4	Trident Maritime Systems Inc.		3		.. 4.B	2,456,523	98.6438	2,460,108	2,493,932	2,456,523	0	0	0	0	9.480	9.480	MAT	53,236	53,236	12/16/2022	02/26/2027
98876*-AA-3	ZB Holdings LLC		3		.. 5.B GI	466,354	98.5963	469,191	475,871	466,354	0	0	0	0	9.480	9.480	MAT	18,519	29,694	02/11/2022	02/09/2028
67115E-AC-4	OAC HOLDINGS I CORP		2		.. 5.B GI	396,868	95.7500	387,757	404,968	396,868	0	0	0	0	9.300	9.300	MAT	8,188	14,345	03/31/2022	03/31/2029
54288@-AC-2	LONG TERM CARE GROUP INC		3		.. 4.C	327,099	97.2000	324,429	333,775	327,099	0	0	0	0	10.340	10.340	MAT	1,054	4,967	04/07/2022	09/08/2027
G4604*-AA-3	HORIZON BIDCO CAYMAN LTD	D.....	3		.. 5.B GI	4,850,000	97.6750	4,883,750	5,000,000	4,850,000	0	0	0	0	9.540	9.540	MAT	30,488	231,038	05/04/2022	10/11/2028
18502@-AA-1	Clearinghouse Community Development Financial Institution		3		.. 1.G	10,000,000	86.8464	8,684,640	10,000,000	10,000,000	0	0	0	0	3.900	3.900	MAT	152,750	152,750	06/06/2022	07/01/2032
57233@-AB-1	Marshall Excelsior Co		3		.. 4.C Z	446,312	98.6194	447,991	454,262	446,312	0	0	0	0	9.800	9.800	MAT	19,534	29,604	02/28/2022	02/18/2028
87583F-AN-8	Tank Holding Corp		2		.. 4.B PL	4,620,018	94.5000	4,466,411	4,726,361	4,620,018	0	0	0	0	12.250	12.250	MAT	179,556	291,409	03/31/2022	03/31/2028
23345U-AB-5	Disa Holdings Corp		2		.. 4.C Z	46,476	99.5000	46,243	46,476	46,476	0	0	0	0	9.690	9.690	MAT	263	263	12/29/2022	09/09/2028
74140*-AA-0	Project Potter Buyer LLC		3		.. 3.C PL	1,333,391	98.1056	1,308,130	1,333,391	1,333,391	0	0	0	0	11.460	11.460	MAT	47,367	112,998	01/14/2022	04/17/2027
00777Y-AD-8	Adviser Investments LLC		3		.. 5.B GI	429,216	98.2222	430,189	437,975	429,216	0	0	0	0	8.900	0.352	MAT	11,444	11,444	09/01/2022	08/31/2028
G3165*-AB-0	CCO I CREDIT BACKED LOANS LTD.		3		.. 1.G PL	34,256,047	100.0000	34,256,047	34,256,047	34,256,047	0	0	0	0	3.380	5.430	MJSD	302,694	653,605	01/06/2022	12/17/2031
48600*-AA-1	Katia Ventures Trust		3		.. 1.G PL	1,845,291	96.5333	1,781,320	1,845,291	1,845,291	0	0	0	0	5.760	5.760	MAT	22,260	28,417	02/11/2022	02/13/2024
55371*-AZ-8	MRI Software LLC		2		.. 5.B GI	79,872	95.8750	76,577	79,872	79,872	0	0	0	0	7.550	7.550	MAT	4,031	4,821	01/31/2022	02/10/2026
94184*-AB-3	Watermill Express LLC		3		.. 3.B PL	20,217	100.0000	20,217	20,217	20,217	0	0	0	0	10.230	10.230	MAT	158	158	10/05/2022	04/20/2027
00135B-AC-7	Al Convoy Luxembourg Sarl	D.....	3		.. 4.A FE	2,687,574	97.4000	2,683,203	2,754,829	2,687,574	0	0	0	0	10.970	10.970	MAT	223,997	223,997	01/31/2022	01/17/2027
26745L-AC-2	Dwyer Instruments Inc		2		.. 5.A	1,318,935	97.5000	1,312,205	1,345,852	1,318,935	0	0	0	0	10.230	10.230	MAT	59,017	59,017	09/20/2022	07/01/2027
74273J-AE-3	Pro Mach Group Inc		2		.. 4.C FE	2,045,543	97.1000	1,995,170	2,054,758	2,045,543	0	0	0	0	8.380	8.283	MAT	44,894	94,339	02/23/2022	08/31/2028
N1603L-AD-9	Lumileds Holding BV	D.....	2		.. 6. *	515,733	33.2500	515,733	1,551,076	515,733	0	0	388,727	0	4.500	7.880	MAT	48,596	64,189	01/10/2022	06/30/2024
G9341J-AN-0	Veritas US Inc		2		.. 4.C FE	1,176,000	70.1070	828,601	1,181,910	1,176,000	0	0	0	0	9.730	9.730	MAT	47,899	105,536	03/31/2022	09/01/2025
92840@-AC-3	VistaPharm, Inc./Term B-1 Loans 10/17		5		.. 3.C Z	0	98.1682	0	0	40,348	0	0	11,462	0	9.500	9.582	MJSD	71,371	32,427	02/01/2021	04/30/2022
928432-A@-2	Visual Edge Technology, Inc./Delayed Dra		5		.. 4.B PL	0	98.4018	0	0	33,153	0	0	0	0	8.500	9.403	FMAN	74,695	104,239	08/30/2021	08/31/2022
928432-A*-4	Visual Edge Technology, Inc./Term Loan 0		5		.. 6.	0	98.0339	0	0	36,915	0	0	0	0	8.500	9.507	FMAN	14,444	90,661	08/30/2021	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
1819999999	Subtotal - Bonds - Unaffiliated Bank Loans - Issued					2,024,607,109	XXX	1,989,440,569	2,029,094,584	1,986,824,835	0	0	400,189	320,207	XXX	XXX	XXX	45,513,549	84,168,561	XXX	XXX
00216C-AD-5	AQ Sunshine Inc./Term Loan 3/19				3.B PL	1,105,864	.96.0000	1,071,979	1,116,645	1,105,864	.0	.0	.0	.0	.8.640	.8.640	MAT	73,950	73,077	10/29/2020	04/15/2025
00216C-AF-0	AQ SUNSHINE INC. - TERM LOAN B				3.B PL	385,236	.96.0000	370,578	386,019	385,236	.0	.0	.0	.0	.9.610	.9.610	MAT	25,557	25,248	06/28/2021	04/15/2025
00216C-AH-6	AQ SUNSHINE INC. - TRANCHE C TERM LOAN				5.B GI	185,432	.96.0000	178,229	185,655	185,432	.0	.0	.0	.0	10.980	10.980	MAT	10,628	10,484	02/23/2022	04/15/2025
00228*-AB-2	ATI RESTORATION LLC - INITIAL DOTL				1.F PL	764,560	100.0000	764,560	764,560	764,560	.0	.0	.0	.0	.8.580	.8.580	MAT	37,592	46,190	12/29/2021	07/31/2026
00452*-AA-7	Accommodations Plus Technologies LLC/Ter				4.B PL	2,606,037	100.0000	2,606,037	2,606,037	2,606,037	.0	.0	.0	.0	11.330	11.330	MAT	214,460	212,517	09/30/2022	05/11/2024
00843*-AA-7	AffiniPay Midco, LLC/Term Loan 2/20				3.A PL	734,213	.96.0000	704,844	734,213	734,213	.0	.0	.0	.0	.9.979	.9.979	IJSD	28,743	53,072	02/27/2020	03/02/2026
05464*-AA-2	Axiom Merger Sub Inc./Facility B Term Lo				3.B PL	1,330,746	100.0000	1,360,722	1,360,722	1,330,746	.0	.0	.0	.0	.9.261	.9.261	JAJO	105,116	83,203	04/04/2019	04/10/2024
06683*-AA-7	BANYAN SOFTWARE HOLDINGS LLC - TERM LOA				3.B PL	412,577	100.0000	412,577	412,577	412,577	.0	.0	.0	.0	.9.160	.9.160	MAT	18,986	34,852	10/29/2020	10/30/2026
06683*-AB-5	BANYAN SOFTWARE HOLDINGS LLC - DELAYED				3.B PL	243,183	100.0000	243,183	243,183	243,183	.0	.0	.0	.0	11.230	11.230	MAT	6,130	18,863	04/19/2022	10/30/2026
12721*-AB-5	CVP Holdco Inc./Term Loan 10/19				3.B PL	675,557	.99.0000	668,801	675,557	675,557	.0	.0	.0	.0	10.000	10.000	MAT	21,521	65,203	10/30/2019	10/31/2025
12721*-AC-3	CVP HOLDCO INC. - DELAYED DRAW TERM LOA				3.B PL	456,777	.99.0000	452,210	456,777	456,777	.0	.0	.0	.0	.8.660	.8.660	MAT	14,194	34,612	05/23/2022	10/31/2025
15644G-AA-1	CENTRIC BRANDS 1LEXIT TL L+1000 10/09/20				4.A PL	4,363,488	.94.0000	4,519,253	4,807,716	4,363,488	.0	.0	.0	.0	13.300	13.300	MAT	69,275	207,808	11/22/2022	10/09/2025
15644G-B*-4	CENTRIC BRANDS INC. - REVOLVING LOAN (FI				4.A PL	147,738	.94.0000	138,874	147,738	147,738	.0	.0	.0	.0	.6.500	.6.500	MAT	9,816	8,077	09/21/2021	10/09/2024
19076*-AA-7	COBALT BUYER SUB INC. - CLOSING DATE TE				3.A PL	279,141	.96.0000	267,975	279,141	279,141	.0	.0	.0	.0	.7.050	.7.050	MAT	6,218	15,830	12/29/2021	10/02/2028
19076*-AB-5	COBALT BUYER SUB INC. - DELAYED DRAW TE				3.A PL	85,099	.96.0000	81,695	85,099	85,099	.0	.0	.0	.0	.8.810	.8.810	MAT	2,242	2,242	09/14/2022	10/02/2028
21079*-AA-6	CONTINENTAL ACQUISITION HOLDINGS INC. -				3.A PL	601,261	.92.0000	553,160	601,261	601,261	.0	.0	.0	.0	10.240	10.240	MAT	29,899	52,954	01/19/2021	01/20/2027
21079*-AB-4	CONTINENTAL ACQUISITION HOLDINGS INC. -				3.A PL	221,649	.92.0000	203,917	221,649	221,649	.0	.0	.0	.0	10.080	10.080	MAT	11,022	19,185	12/21/2021	01/20/2027
23363*-AB-5	DRS Holdings III Inc./Term Loan 11/19				4.A PL	632,432	.96.0000	607,135	632,432	632,432	.0	.0	.0	.0	.8.800	.8.800	MAT	20,188	50,851	11/01/2019	11/01/2025
23363*-AC-3	DRS HOLDINGS III INC. - 2021 TERM LOAN				3.A PL	446,383	.96.0000	428,528	446,383	446,383	.0	.0	.0	.0	.8.270	.8.270	MAT	14,249	35,889	05/28/2021	11/01/2025
26789*-AA-6	DYNAMIC NC AEROSPACE HOLDINGS LLC - TER				2.C PL	437,030	100.0000	437,030	437,030	437,030	.0	.0	.0	.0	10.250	10.250	MAT	20,077	38,401	12/29/2020	12/30/2026
28619*-AA-2	ELEMICA PARENT INC. - DELAYED DRAW TERM				3.B PL	232,763	.97.0000	225,780	232,763	232,763	.0	.0	.0	.0	10.680	10.680	MAT	2,904	14,125	12/14/2020	09/18/2025
28619*-AB-0	Elemica Parent Inc./Term Loan 9/19				3.B PL	1,165,893	.97.0000	1,148,721	1,184,248	1,165,893	.0	.0	.0	.0	10.740	10.740	MAT	14,897	74,148	09/18/2019	09/18/2025
28619*-AC-8	ELEMICA PARENT INC. - AMENDMENT NO. 1 T				3.B PL	130,149	.97.0000	126,244	130,149	130,149	.0	.0	.0	.0	10.680	10.680	MAT	1,630	7,921	12/11/2020	09/18/2025
28619*-AD-6	ELEMICA PARENT INC. - AMENDMENT NO. 1 D				3.B PL	337,285	.97.0000	327,167	337,285	337,285	.0	.0	.0	.0	.8.840	.8.840	MAT	10,260	25,827	03/02/2021	09/18/2025
28622*-AA-5	ELEVATION SERVICES PARENT HOLDINGS LLC				3.A PL	176,534	.98.0000	173,004	176,534	176,534	.0	.0	.0	.0	10.740	10.740	MAT	4,442	14,228	12/17/2020	12/18/2026
28622*-AB-3	ELEVATION SERVICES PARENT HOLDINGS LLC				3.A PL	236,576	.98.0000	231,844	236,576	236,576	.0	.0	.0	.0	.8.620	.8.620	MAT	9,766	15,495	04/30/2021	12/18/2026
28931*-AB-9	ELM II Inc TRANCHE A TERM LN				3.A PL	3,876,363	.94.0000	3,666,000	3,900,000	3,876,363	.0	.0	.0	.0	10.076	10.076	MON	179,314	157,931	05/08/2019	03/06/2025
29427*-AA-2	Goldcup 17308 AB/USD Term Loan 10/18				3.B PL	1,398,647	.98.0000	1,385,351	1,413,624	1,398,647	.0	.0	.0	.0	.8.230	.8.230	MAT	38,292	82,894	10/09/2018	04/09/2026
29668*-AA-6	ESSENTIAL SERVICES HOLDING CORPORATION -				3.B PL	2,574,163	.98.0000	2,522,680	2,574,163	2,574,163	.0	.0	.0	.0	.8.120	.8.120	MAT	60,565	201,107	11/13/2020	11/16/2026
29668*-AB-4	ESSENTIAL SERVICES HOLDING CORPORATION -				3.B PL	1,376,185	.98.0000	1,348,661	1,376,185	1,376,185	.0	.0	.0	.0	.7.660	.7.660	MAT	32,377	61,231	12/15/2021	11/16/2026
29668*-AC-2	ESSENTIAL SERVICES HOLDING CORPORATION -				3.B PL	1,037,533	.98.0000	1,016,782	1,037,533	1,037,533	.0	.0	.0	.0	.7.650	.7.650	MAT	63,551	63,549	12/15/2021	11/16/2026
35042*-AC-6	FOUNDATION CONSUMER BRANDS LLC - TERM L				2.C PL	408,223	100.0000	408,223	408,223	408,223	.0	.0	.0	.0	10.150	10.150	MAT	10,102	33,409	02/11/2021	10/01/2026
35921*-AA-6	Frontline Technologies Intermediate Hold				3.C PL	3,339,756	100.0000	3,389,260	3,389,260	3,339,756	.0	.0	.0	.0	.8.090	.8.090	MAT	163,251	293,733	08/15/2019	09/18/2023
36457*-AC-5	Galway Borrower LLC-TL SR SECD				3.B PL	65,846	.95.0000	62,658	65,956	65,846	.0	.0	.0	.0	.6.000	.6.000	MON	2,483	2,483	10/03/2022	09/30/2028
36457*-AD-3	GALWAY BORROWER LLC - CLOSING DATE TERM				4.A PL	317,577	.95.0000	307,316	323,490	317,577	.0	.0	.0	.0	.8.890	.8.890	MAT	24,690	20,648	12/23/2021	09/29/2028
40348*-AB-9	Gutter Buyer, Inc. - Term Loan Tranche A				3.A PL	1,350,197	.94.0000	805,052	856,438	1,350,197	.0	.0	.0	.0	.8.300	.8.300	MAT	23,507	23,507	11/15/2021	03/08/2025
40481*-AA-8	HH - STELLA INC. - INITIAL TERM LOAN				3.A PL	474,222	.98.0000	464,737	474,222	474,222	.0	.0	.0	.0	.9.030	.9.030	MAT	23,194	28,297	04/20/2021	04/24/2028
40481*-AB-6	HH - STELLA INC. - DELAYED DRAW TERM LO				3.A PL	54,865	.98.0000	53,768	54,865	54,865	.0	.0	.0	.0	.9.060	.9.060	MAT	1,723	3,810	12/27/2022	04/24/2028
42981*-AA-9	HIGH STREET BUYER INC. - DELAYED DRAW T				3.B PL	371,395	.99.0000	367,681	371,395	371,395	.0	.0	.0	.0	.9.470	.9.470	MAT	14,402	27,713	03/01/2022	04/14/2028
42983*-AA-7	HIGH STREET BUYER INC. - TERM LOAN B				3.B PL	275,684	.99.0000	272,927	275,684	275,684	.0	.0	.0	.0	.8.760	.8.760	MAT	10,879	21,895	04/15/2021	04/14/2028
42983*-AB-5	HIGH STREET BUYER INC. - DELAYED DRAW T				3.B PL	159,610	.99.0000	158,014	159,610	159,610	.0	.0	.0	.0	.8.010	.8.010	MAT	6,298	12,672	07/01/2021	04/14/2028
42983*-AC-3	HIGH STREET BUYER INC. - DELAYED DRAW T				3.B PL	363,895	.99.0000	360,256	363,895	363,895	.0	.0	.0	.0	.8.400	.8.400	MAT	8,731	23,277	10/01/2021	04/14/2028
46126*-AB-4	INTRAPAC PARENT INC. - FIRST AMENDMENT T				5.B GI	184,688	100.0000	184,688	184,688	184,688	.0	.0	.0	.0	10.040	10.040	MAT	7,967	13,813	08/03/2021	01/11/2026
462043-VII-7	Helios Software Holdings EUR TLB (Mar '21				4.B Z	894,846	.95.5000	1,022,901	1,000,000	996,123	.0	.0	.0	101,277	.5.950	.5.950	MAT	13,347	13,347	09/26/2022	03/11/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
47231#-MR-6	JEFFERIES DIRECT LENDING OFFSHORE FUND I				..2.B Z	1,937,930	100.0000	1,937,930	1,937,930	1,937,930	0	0	0	0	7.133	7.133	MJSD	22,410	22,410	12/14/2022	06/17/2031
47231#-MS-4	JEFFERIES DIRECT LENDING OFFSHORE FUND I				..2.B Z	9,361,913	100.0000	9,361,913	9,361,913	9,361,913	0	0	0	0	7.133	7.133	MJSD	107,866	107,866	12/14/2022	06/17/2031
47231#-MT-2	JEFFERIES DIRECT LENDING FUND II C SPE L				..2.B Z	3,926,070	100.0000	3,926,070	3,926,070	3,926,070	0	0	0	0	7.133	7.133	MJSD	53,744	100,563	12/08/2022	06/17/2031
47231#-MU-9	JEFFERIES DIRECT LENDING FUND II SPE LLC				..2.B Z	19,777,443	100.0000	19,777,443	19,777,443	19,777,443	0	0	0	0	7.133	7.133	MJSD	270,662	500,160	12/08/2022	06/17/2031
48881#-AB-5	Kene Acquisition Inc./Term Loan 8/19				..3.B PL	1,169,509	96.2500	1,144,659	1,189,256	1,169,509	0	0	0	0	6.900	6.900	MAT	44,038	75,031	08/08/2019	08/10/2026
48881#-AC-3	Kene Acquisition Inc./Delayed Draw Term				..3.B PL	198,916	96.2500	191,456	198,916	198,916	0	0	0	0	6.900	6.900	MAT	33,794	33,677	02/07/2021	08/10/2026
50541#-AA-5	Laboratories Bidco LLC/Term Loan 9/19				..3.B PL	448,709	96.0000	430,760	448,709	448,709	0	0	0	0	8.730	8.730	MAT	19,462	27,326	10/03/2019	07/23/2027
50541#-AB-3	Laboratories Bidco LLC/Second Amendment				..3.B PL	71,091	96.0000	68,248	71,091	71,091	0	0	0	0	8.720	8.720	MAT	3,083	4,311	04/01/2020	07/23/2027
50541#-AC-1	LABORATORIES BIDCO LLC - THIRD AMENDMENT				..3.B PL	455,616	96.0000	437,392	455,616	455,616	0	0	0	0	8.710	8.710	MAT	19,761	35,491	10/29/2020	07/23/2027
50541#-AD-9	LABORATORIES BIDCO LLC - TL				..3.B PL	2,156,410	96.0000	2,070,153	2,156,410	2,156,410	0	0	0	0	10.380	10.380	MAT	87,408	169,255	07/21/2021	07/23/2027
50541#-AE-7	LABORATORIES BIDCO LLC - DELAYED DRAW TE				..3.B Z	157,525	96.0000	151,224	157,525	157,525	0	0	0	0	9.230	9.230	MAT	6,629	15,718	07/21/2022	07/23/2027
51206#-AA-9	LAKERS BUYER INC. - TERM LOAN				..3.B PL	463,696	100.0000	463,696	463,696	463,696	0	0	0	0	10.140	10.140	MAT	27,890	35,647	03/18/2021	03/22/2027
51206#-AB-7	LAKERS BUYER INC. - INITIAL DELAYED DRA				..3.B PL	167,403	100.0000	167,403	167,403	167,403	0	0	0	0	9.040	9.040	MAT	9,705	13,254	10/29/2021	03/22/2027
552000-CC-3	National Auto Care - 2022 Incremental De				..4.C Z	720,651	99.6000	717,768	720,651	720,651	0	0	0	0	8.810	8.810	MAT	9,439	9,439	12/08/2022	09/28/2024
57780#-AA-2	MAVERICK ACQUISITION INC. - TERM LOAN				..4.C PL	309,014	94.5000	292,018	309,014	309,014	0	0	0	0	8.820	8.820	MAT	14,576	25,384	06/01/2021	06/01/2027
57780#-AB-0	MAVERICK ACQUISITION INC. - DELAYED DRA				..4.C PL	109,955	92.0000	102,559	111,477	109,955	0	0	0	0	10.980	10.980	MAT	5,220	7,657	11/05/2021	06/01/2027
59*666-WB-3	Lord Capital Green Commercial Purchase F				..1.D Z	1,290,891	80.1513	1,034,666	1,290,891	1,290,891	0	0	0	0	4.690	4.690	MAT	18,167	18,167	05/24/2022	09/29/2045
59*666-X9-0	Lord Capital Green Commercial Purchase F				..1.F Z	1,383,333	94.0590	1,301,149	1,383,333	1,383,333	0	0	0	0	5.600	4.965	MAT	25,657	25,657	06/22/2022	08/30/2039
59*666-Y9-9	Lord Capital Green Commercial Purchase F				..1.F Z	1,550,084	92.6943	1,436,839	1,550,084	1,550,084	0	0	0	0	2.580	2.580	MAT	16,997	16,997	07/27/2022	08/30/2042
60937#-AA-8	MONICA HOLDCO (US) INC. - TERM LOAN				..2.C PL	1,559,400	96.0000	1,497,024	1,559,400	1,559,400	0	0	0	0	9.070	9.070	MAT	73,576	129,537	01/07/2021	01/07/2028
62900*-AA-9	NCWS INTERMEDIATE INC. - DELAYED DRAW T				..3.A PL	85,093	96.5000	82,115	85,093	85,093	0	0	0	0	8.310	8.310	MAT	2,672	6,132	11/04/2021	12/29/2026
62900*-AB-7	NCWS INTERMEDIATE INC. - CLOSING DATE T				..3.A PL	282,975	96.5000	273,071	282,975	282,975	0	0	0	0	8.560	8.560	MAT	8,872	22,363	12/28/2020	12/29/2026
62931*-AA-2	NMC Skincare Intermediate Holdings II L				..3.B PL	555,399	96.2500	540,631	561,694	555,399	0	0	0	0	7.340	7.340	MAT	19,766	39,546	10/29/2018	10/31/2024
62931*-AC-8	NMC Skincare Intermediate Holdings II L				..3.B PL	189,272	96.2500	182,174	189,272	189,272	0	0	0	0	7.340	7.340	MAT	6,660	13,325	02/20/2020	10/31/2024
64027*-AB-1	NELIPAK HOLDING INC TL-425 07/02/2026				..3.A PL	179,037	96.2500	174,604	181,406	179,037	0	0	0	0	8.660	8.660	MAT	6,761	11,474	08/07/2019	07/02/2026
65658#-AA-2	NORTH HAVEN FALCON BUYER LLC - TERM LOA				..3.B PL	279,772	93.0000	260,188	279,772	279,772	0	0	0	0	11.180	11.180	MAT	9,562	22,700	05/18/2021	05/19/2027
65658#-AB-0	NORTH HAVEN FALCON BUYER LLC - DELAYED				..3.B PL	46,837	93.0000	43,559	46,837	46,837	0	0	0	0	9.270	9.270	MAT	2,489	3,422	02/28/2022	05/19/2027
67008*-AA-9	TERM LOAN - LX191049				..2.C PL	549,070	100.0000	549,070	549,070	549,070	0	0	0	0	8.210	8.210	MAT	31,271	39,911	12/01/2020	12/01/2026
67096#-AA-0	OMH-HealthEdge Holdings LLC/Term Loan 9				..2.A PL	333,242	100.0000	333,242	333,242	333,242	0	0	0	0	9.220	9.220	MAT	15,145	27,149	10/23/2019	10/24/2025
67096#-AC-6	OMH-HEALTHEDGE HOLDINGS LLC - FIRST AME				..2.A PL	195,888	100.0000	195,888	195,888	195,888	0	0	0	0	10.020	10.020	MAT	8,802	11,884	03/08/2021	10/24/2025
67116#-AA-4	OSP HAMILTON PURCHASER LLC INITIAL TERM				..5.B GI	4,266,010	97.0000	4,222,164	4,352,747	4,265,851	0	0	0	0	10.730	10.730	MAT	212,485	329,317	12/28/2021	12/27/2027
70559#-AA-4	Pegasus Global Enterprise Holdings LLC/				..3.A PL	1,578,326	100.0000	1,601,818	1,578,326	1,578,326	0	0	0	0	8.350	8.350	MAT	67,360	90,127	05/24/2019	05/29/2025
70559#-AB-2	Pegasus Global Enterprise Holdings LLC/				..3.A PL	466,939	100.0000	466,939	466,939	466,939	0	0	0	0	6.500	6.500	MAT	10,614	26,224	06/24/2020	05/29/2025
70559#-AD-8	Pegasus Global Enterprise Holdings LLC				..3.A PL	468,656	100.0000	468,656	468,656	468,656	0	0	0	0	10.480	10.480	MAT	11,300	28,244	06/23/2020	05/29/2025
70559#-AE-6	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC				..3.A PL	438,995	100.0000	438,995	438,995	438,995	0	0	0	0	8.850	8.850	MAT	10,585	26,367	10/15/2020	05/29/2025
70559#-AF-3	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC				..3.A PL	125,419	100.0000	125,419	125,419	125,419	0	0	0	0	7.130	7.130	MAT	5,416	9,495	12/29/2022	05/29/2025
74140#-AB-8	PROJECT POTTER BUYER LLC - 2020 INCREME				..3.C PL	294,523	100.0000	294,523	294,523	294,523	0	0	0	0	9.340	9.340	MAT	13,105	25,083	10/28/2020	04/23/2027
74140#-AC-6	PROJECT POTTER BUYER LLC - TERM LOAN				..3.C PL	334,767	100.0000	334,767	334,767	334,767	0	0	0	0	9.730	9.730	MAT	11,890	28,365	11/17/2020	04/23/2027
74140#-AD-4	PROJECT POTTER BUYER LLC - DELAYED DRAW				..3.C PL	113,542	100.0000	113,542	113,542	113,542	0	0	0	0	9.630	9.630	MAT	5,190	9,807	12/22/2020	04/23/2027
74309#-AB-5	PRG 9/20 Last Out				..4.C PL	1,379,999	94.7500	1,307,549	1,379,999	1,379,999	0	0	0	0	16.840	16.840	MAT	67,985	75,546	12/21/2022	08/21/2024
74741#-AA-5	Olympia Acquisition Inc./Term Loan 9/19				..4.B PL	533,735	100.0000	533,735	533,735	533,735	0	0	0	0	7.520	7.520	MAT	34,252	36,848	02/28/2022	09/24/2026
75000#-AE-8	RSC Acquisition Inc./Term Loan 10/19				..3.C PL	619,892	96.7500	605,499	619,892	619,892	0	0	0	0	6.740	6.740	MAT	32,606	37,430	10/01/2020	10/30/2026
78432#-AB-8	SFE Intermediate HoldCo LLC/Incremental				..2.B PL	345,892	98.0000	342,037	349,017	345,892	0	0	0	0	9.330	9.330	MAT	15,258	26,067	09/05/2018	07/31/2024
78486#-AA-5	SSE BUYER INC.				..2.B Z	272,386	86.0000	234,252	272,386	272,386	0	0	0	0	11.860	11.860	MAT	14,268	29,070	06/29/2020	06/30/2026
816307-A#-1	SelectQuote Inc./Term Loan 10/19				..3.B PL	849,013	88.0000	747,132	849,013	849,013	0	0	0	0	8.730	8.730	MAT	38,229	72,033	11/30/2022	11/05/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
82565#-AA-9	SHUR-CO ACQUISITION INC. - TERM LOAN .....	.....	.....	.....	... 4.C	1,662,188	100.0000	1,662,188	1,662,188	1,662,188	0	0	0	0	..8.290	..8.290	MAT	76,542	134,355	06/28/2021	06/30/2027
83218#-TT-7	Atreides Funding Trust - Pass-Through In .....	.....	.....	.....	...1.F Z	42,853,564	95.9127	41,102,016	42,853,564	42,853,564	0	0	0	0	..0.250	..0.250	MAT	120,534	120,534	05/27/2022	11/18/2083
85789#-AA-2	STEALTH HOLDING LLC - U.S. INITIAL TERM .....	.....	.....	.....	...3.C PL	226,037	98.0000	221,516	226,037	226,037	0	0	0	0	..10.460	..10.460	MAT	5,859	15,197	02/26/2021	03/02/2026
85789#-AB-0	STEALTH HOLDING LLC - DELAYED DRAW TERM .....	.....	.....	.....	...3.C PL	75,112	98.0000	73,610	75,112	75,112	0	0	0	0	..9.620	..9.620	MAT	1,862	11,250	03/09/2022	03/02/2026
86662#-AA-2	SUN ACQUIRER CORP .....	.....	.....	.....	...3.B PL	981,180	97.0000	951,745	981,180	981,180	0	0	0	0	..8.310	..8.310	MAT	29,760	62,108	09/03/2021	09/08/2028
86662#-AB-0	SUN ACQUIRER CORP .....	.....	.....	.....	...3.B PL	648,278	97.0000	628,830	648,278	648,278	0	0	0	0	..8.390	..8.390	MAT	33,141	30,083	10/14/2022	09/08/2028
86738#-AA-6	Sunk Rock Foundry Partners LP/Term Loan .....	.....	.....	.....	...3.A PL	1,162,110	100.0000	1,170,063	1,170,063	1,162,110	0	0	0	0	..7.680	..7.680	MAT	21,648	59,023	10/31/2017	10/31/2023
87304#-AA-6	SECOND AMENDMENT INCREMENTAL TERM LOAN - .....	.....	.....	.....	...3.B PL	147,134	100.0000	147,134	147,134	147,134	0	0	0	0	..8.230	..8.230	MAT	3,414	8,346	12/01/2020	08/30/2026
87304#-AB-4	TOP HAWKER INTERMEDIATE LLC - DELAYED DR .....	.....	.....	.....	...3.B PL	165,572	100.0000	165,572	165,572	165,572	0	0	0	0	..9.980	..9.980	MAT	7,141	12,690	10/19/2021	08/28/2026
87326#-AA-8	TA/WIEG HOLDINGS LLC - DELAYED DRAW INCR .....	.....	.....	.....	...3.A PL	966,161	96.7500	934,761	966,161	966,161	0	0	0	0	..9.410	..9.410	MAT	58,628	52,469	07/29/2021	10/04/2027
87326#-AB-6	TA/WIEG HOLDINGS LLC - 2021 DELAYED DRAW .....	.....	.....	.....	...3.A PL	289,745	96.7500	280,329	289,745	289,745	0	0	0	0	..9.150	..9.150	MAT	4,697	1,544	11/29/2021	10/04/2027
87326#-AC-4	TA/WIEG HOLDINGS LLC - AUGUST 2021 DELAY .....	.....	.....	.....	...3.A PL	187,034	97.0000	181,423	187,034	187,034	0	0	0	0	..8.900	..8.900	MAT	7,126	6,613	08/12/2022	10/04/2027
90380#-AA-7	US SALT INVESTORS LLC - INITIAL TERM LO .....	.....	.....	.....	...3.A PL	3,349,688	96.0000	3,215,700	3,349,688	3,349,688	0	0	0	0	..8.070	..8.070	MAT	145,145	199,339	07/16/2021	07/19/2028
90385P-AC-4	Ultimus Group Mideoo LLC/-ULTGRP TL 1L US .....	.....	.....	.....	...4.B PL	1,103,885	97.0000	1,083,678	1,117,194	1,103,885	0	0	0	0	..4.394	..4.394	FIHAN	23,391	74,359	09/16/2019	02/01/2026
905301-ZZ-3	RMA Companies - Term Loan .....	.....	.....	.....	...4.C Z	661,566	98.3000	663,591	675,067	661,566	0	0	0	0	..9.230	..9.230	MAT	31,596	41,494	01/25/2022	01/21/2028
92975#-AA-4	TA/WIEG Holdings LLC/Term Loan 9/19 .....	.....	.....	.....	...3.A PL	1,458,950	96.7500	1,411,534	1,458,950	1,458,950	0	0	0	0	..7.590	..7.590	MAT	123,510	97,599	10/01/2019	10/02/2025
92975#-AB-2	TA/WIEG Holdings LLC/Initial Delayed Dra .....	.....	.....	.....	...3.A PL	913,424	96.7500	883,737	913,424	913,424	0	0	0	0	..7.350	..7.350	MAT	100,721	85,496	05/28/2021	10/02/2025
93279#-AA-3	WALNUT PARENT INC. - INITIAL TERM LOAN .....	.....	.....	.....	...3.B PL	481,436	97.0000	466,993	481,436	481,436	0	0	0	0	..8.850	..8.850	MAT	15,317	36,561	11/06/2020	11/09/2027
94979#-AA-6	WELLNESS ACQUISITIONCO INC. - TERM LOAN .....	.....	.....	.....	...2.C PL	422,194	98.2500	414,806	422,194	422,194	0	0	0	0	..9.910	..9.910	MAT	12,885	16,661	01/01/2022	01/20/2027
96811#-AA-5	Wildcat BuyerCo Inc./Term Loan 2/20 .....	.....	.....	.....	...2.C PL	239,326	96.5000	230,950	239,326	239,326	0	0	0	0	..10.480	..10.480	MAT	10,693	18,711	02/26/2020	02/27/2026
96811#-AB-3	Wildcat BuyerCo Inc./Delayed Draw Term .....	.....	.....	.....	...2.C PL	126,592	97.0000	122,794	126,592	126,592	0	0	0	0	..9.490	..9.490	MAT	5,656	9,896	11/18/2021	02/27/2026
.....	JFK Airport Terminal 6 - Term Loan .....	.....	.....	.....	...2.B Z	19,900,000	99.4408	19,888,160	20,000,000	19,900,000	0	0	0	0	..6.570	..6.570	MAT	25,614	25,614	12/23/2022	11/17/2029
C9300#-AA-9	STEALTH HOLDING LLC - CANADIAN INITIAL T .....	.....	.....	.....	...3.C PL	274,812	98.0000	271,424	276,963	274,812	0	0	0	0	..9.100	..9.100	MAT	7,161	18,618	03/05/2021	03/02/2026
75046T-AB-0	Radius Aerospace Inc-RADAER TL 1L USD .....	.....	.....	.....	...3.B Z	557,950	98.0000	551,999	563,264	557,950	0	0	0	0	..5.974	..5.974	IJSD	13,624	43,665	03/29/2019	03/29/2025
05365#-AA-4	Avetta, LLC/Term Loan 4/18 .....	.....	.....	.....	...3.B PL	1,990,360	98.0000	1,967,711	2,007,869	1,990,360	0	0	0	0	..10.356	..10.356	JAJO	78,767	161,530	02/11/2019	04/10/2024
05365#-AD-8	Avetta, LLC/Second Amendment Tranche B T .....	.....	.....	.....	...3.B PL	1,551,687	98.0000	1,534,247	1,565,558	1,551,687	0	0	0	0	..10.474	..10.474	JAJO	61,414	125,941	05/24/2019	04/10/2024
05365#-AE-6	AVETTA LLC - THIRD AMENDMENT TRANCHE B .....	.....	.....	.....	...5.B GI	206,981	98.0000	202,841	206,981	206,981	0	0	0	0	..10.160	..10.160	MAT	8,127	16,643	07/14/2021	04/10/2024
10483#-AC-9	BRAGG LIVE FOOD PRODUCTS LLC - TERM LOAN .....	.....	.....	.....	...2.C PL	4,045,691	98.0000	3,964,778	4,045,691	4,045,691	0	0	0	0	..11.225	..11.225	IJSD	110,674	369,074	12/31/2020	12/29/2025
26887#-AA-9	EP WEALTH ADVISORS LLC - TERM LOAN .....	.....	.....	.....	...1.F PL	497,200	100.0000	497,200	497,200	497,200	0	0	0	0	..10.090	..10.090	MAT	7,876	30,301	09/03/2020	09/04/2026
26887#-AB-7	EP WEALTH ADVISORS LLC - DELAYED DRAW T .....	.....	.....	.....	...1.F PL	523,813	100.0000	523,813	523,813	523,813	0	0	0	0	..5.650	..5.650	MAT	17,465	31,767	11/17/2021	09/04/2026
40406#-AD-4	HAI Acquisition Corporation/Term Loan 10 .....	.....	.....	.....	...2.C PL	3,346,813	100.0000	3,384,375	3,384,375	3,346,813	0	0	0	0	..7.470	..7.470	MAT	82,170	210,139	11/01/2017	11/03/2025
48240#-AA-5	K2 Insurance Services LLC/Term Loan 7/1 .....	.....	.....	.....	...2.C PL	4,603,885	100.0000	4,665,617	4,603,885	4,603,885	0	0	0	0	..9.730	..9.730	MAT	190,708	329,633	07/01/2019	07/01/2026
48240#-AB-3	K2 Insurance Services LLC/Delayed Draw .....	.....	.....	.....	...2.C PL	803,837	100.0000	803,837	803,837	803,837	0	0	0	0	..7.750	..7.750	MAT	32,882	51,789	09/25/2020	07/01/2026
48773#-AA-8	Kellermeyer Bergensons Services LLC/Ter .....	.....	.....	.....	...4.A PL	346,734	94.6250	330,394	349,162	346,734	0	0	0	0	..8.400	..8.400	MAT	14,069	28,514	11/07/2019	11/07/2026
48773#-AB-6	Kellermeyer Bergensons Services LLC/202 .....	.....	.....	.....	...4.A PL	76,819	90.0000	69,137	76,819	76,819	0	0	0	0	..8.650	..8.650	MAT	3,095	6,241	01/09/2020	11/07/2026
48773#-AC-4	KELLERMAYER BERGENSONS SERVICES LLC - 2 .....	.....	.....	.....	...4.A PL	922,547	90.0000	830,292	922,547	922,547	0	0	0	0	..7.110	..7.110	MAT	56,413	60,151	08/27/2020	07/01/2026
48773#-AD-2	KELLERMAYER BERGENSONS SERVICES LLC - A .....	.....	.....	.....	...4.A PL	1,973,989	90.0000	1,809,635	2,010,705	1,973,989	0	0	0	0	..8.810	..8.810	MAT	80,810	162,896	07/12/2021	11/07/2026
53173#-AA-4	LIDO ADVISORS LLC - INITIAL TERM LOAN .....	.....	.....	.....	...2.C PL	221,088	100.0000	221,088	221,088	221,088	0	0	0	0	..7.360	..7.360	MAT	4,825	14,468	06/14/2021	06/15/2027
53173#-AB-2	LIDO ADVISORS LLC - DELAYED DRAW TERM L .....	.....	.....	.....	...2.C PL	101,611	100.0000	101,611	101,611	101,611	0	0	0	0	..9.240	..9.240	MAT	2,439	2,439	08/12/2022	06/15/2027
92974#-AA-7	WSHP FC ACQUISITION 2A TL L+625 03/30/20 .....	.....	.....	.....	...3.B PL	1,291,566	98.0000	1,265,735	1,291,566	1,291,566	0	0	0	0	..10.980	..10.980	MAT	32,888	105,621	08/29/2019	03/28/2024
92974#-AD-1	WSHP FC ACQUISITION 1A TL L+650 03/30/20 .....	.....	.....	.....	...3.B PL	158,130	98.0000	157,208	160,417	158,130	0	0	0	0	..9.710	..9.710	MAT	4,085	13,213	02/11/2019	03/28/2024
92974#-AE-9	WSHP FC ACQUISITION 1A DDTL L+625 03/30/ .....	.....	.....	.....	...3.B PL	202,083	98.0000	198,042	202,083	202,083	0	0	0	0	..9.610	..9.610	MAT	5,159	16,548	08/29/2019	03/28/2024
98415D-A#-3	XIFIN Inc./Term Loan 02/20 .....	.....	.....	.....	...3.A PL	316,063	95.7500	302,630	316,063	316,063	0	0	0	0	..8.500	..8.500	MAT	9,820	24,497	02/05/2020	02/06/2026
94184#-AA-5	WATERMILL EXPRESS LLC - TERM LOAN FACIL .....	.....	.....	.....	...3.B PL	337,256	100.0000	337,256	337,256	337,256	0	0	0	0	..10.230	..10.230	MAT	7,937	25,394	04/19/2021	04/20/2027
103119-CL-5	NEFCO Holding Company, LLC - Delayed Dra .....	.....	.....	.....	...4.C Z	5,738	98.2704	5,639	5,738	5,738	0	0	0	0	..9.870	..9.870	MAT	206	206	08/19/2022	08/05/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
103119-CN-3	NEFCO Holding Company, LLC - Delayed Dra				... 4.C Z	95,107	98.2704	93,462	95,107	95,107	0	0	0	0	9.870	9.870	MAT	3,416	3,416	08/19/2022	08/05/2028
103119-CN-1	NEFCO Holding Company, LLC - Term Loan				... 4.C Z	512,629	98.2704	514,043	523,090	512,629	0	0	0	0	11.300	11.300	MAT	21,062	21,062	08/05/2022	08/05/2028
70476X-AJ-4	PetVet Care Centers, LLC - 2020 Incremen				... 4.C FE	366,358	100.0000	366,358	366,358	366,358	0	0	0	0	5.190	5.190	MAT	15,794	15,794	10/09/2020	02/14/2025
78642#-AA-4	SAFE HOME SECURITY INC. - TERM LOAN				... 2.C PL	564,459	100.0000	564,459	564,459	564,459	0	0	0	0	9.370	9.370	MAT	15,397	15,397	08/03/2020	08/04/2024
78642#-AB-2	SAFE HOME SECURITY INC. - DELAYED DRAW T				... 2.C PL	17,729	100.0000	17,729	17,729	17,729	0	0	0	0	11.758	11.758	FIAN	790	2,529	11/18/2021	08/04/2024
12721#-AA-7	CVP Holdco, Inc./Delayed Draw Term Loan				... 3.B PL	518,078	99.0000	512,897	518,078	518,078	0	0	0	0	10.604	10.604	JAJO	12,909	49,815	11/01/2021	10/31/2025
14886M-AM-3	Checkout Holding Corp-CHKOUT TL EXIT 1L				... 5.A PL	153,463	79.1880	124,004	156,595	153,463	0	0	0	0	11.880	11.880	MAT	10,260	10,515	02/15/2019	02/15/2023
14886M-AN-1	Checkout Holding Corp-CHKOUT PIK-TERM EX				... 6. PL	981,507	24.1250	74,268	307,848	74,268	(907,239)	0	0	0	14.880	14.875	MAT	34,825	33,222	11/30/2022	08/15/2023
74354#-AA-1	PROJECT ESSENTIAL BIDCO LLC - TERM LOAN				... 3.C PL	371,250	90.7500	336,909	371,250	371,250	0	0	0	0	9.990	9.990	MAT	13,836	27,633	04/19/2021	04/20/2028
74719#-AA-1	Pyramid Management Advisors LLC/Term Lo				... 3.C PL	1,465,176	100.0000	1,465,176	1,465,176	1,465,176	0	0	0	0	9.600	9.600	MAT	87,819	126,985	11/30/2022	07/15/2023
74719#-AB-9	Pyramid Management Advisors LLC/Delayed				... 3.C PL	552,749	100.0000	552,749	552,749	552,749	0	0	0	0	10.580	10.580	MAT	16,936	49,979	11/30/2022	07/15/2023
74719#-AC-7	Pyramid Management Advisors LLC/Delayed				... 3.C PL	126,482	100.0000	126,482	126,482	126,482	0	0	0	0	9.820	9.820	MAT	8,944	11,394	11/30/2022	07/15/2023
21257#-AC-8	Convey Health Solutions Inc./Term Loan				... 2.C PL	1,381,539	97.0000	1,340,093	1,381,539	1,381,539	0	0	0	0	6.720	6.720	MAT	25,604	79,497	09/03/2019	09/04/2026
76252#-AA-1	Rialto Management Group LLC/Term Loan 1				... 2.B PL	257,683	100.0000	258,966	258,966	257,683	0	0	0	0	6.620	6.620	MAT	11,597	36,600	11/28/2018	12/02/2024
76252#-AB-9	RIALTO MANAGEMENT GROUP LLC - TERM LOAN				... 2.B PL	646,487	100.0000	646,487	646,487	646,487	0	0	0	0	7.030	7.030	MAT	14,806	42,538	04/29/2021	12/02/2024
58509#-AA-6	Micromeritics Instrument Corp./Term Loan				... 2.B PL	252,991	100.0000	252,991	252,991	252,991	0	0	0	0	8.260	8.260	MAT	11,342	21,494	12/18/2019	12/18/2025
88084#-AB-8	TerSera Therapeutics LLC/First Amendment				... 3.B PL	156,655	100.0000	157,467	157,467	156,655	0	0	0	0	7.840	7.840	MAT	5,871	8,373	07/12/2018	03/30/2025
88084#-AC-6	TerSera Therapeutics LLC/Second Amendmen				... 3.B PL	150,206	100.0000	150,752	150,206	150,752	0	0	0	0	8.260	8.260	MAT	9,126	11,515	09/27/2018	03/30/2025
88084#-AD-4	TerSera Therapeutics LLC/First Amendment				... 3.B PL	158,289	100.0000	158,289	158,289	158,289	0	0	0	0	7.840	7.840	MAT	9,597	12,112	12/28/2018	03/30/2025
88084#-AE-2	TerSera Therapeutics LLC/Third Amendment				... 3.B PL	58,861	100.0000	59,459	58,861	58,861	0	0	0	0	7.840	7.840	MAT	3,599	4,542	04/01/2019	03/30/2025
03272*-AA-3	ANAQUA PARENT HOLDINGS INC. - TERM LOAN				... 3.B PL	146,475	100.0000	146,475	146,475	146,475	0	0	0	0	9.700	9.700	MAT	3,135	10,988	06/23/2021	04/10/2026
03272*-AB-1	ANAQUA PARENT HOLDINGS INC. - DELAYED D				... 3.B PL	8,029	100.0000	8,029	8,029	8,029	0	0	0	0	8.160	8.160	MAT	473	668	07/06/2022	04/10/2026
90212T-AD-3	2U INC. - INITIAL TERM LOAN				... 4.C PL	363,711	95.4380	352,524	369,375	363,711	0	0	0	0	8.000	8.000	MAT	18,725	28,618	06/28/2021	12/30/2024
104752-ZZ-6	Fortis Payment Systems LLC - 2022 Term L				... 4.C Z	1,220,462	97.5000	1,220,462	1,251,756	1,220,462	0	0	0	0	9.930	9.930	MAT	19,314	19,314	10/31/2022	05/31/2026
24360#-AC-6	DECOPAC INC. - TERM B LOAN				... 3.B PL	858,950	98.0000	841,771	858,950	858,950	0	0	0	0	10.990	10.990	MAT	45,894	83,743	09/30/2022	05/15/2028
16117L-BW-8	Charter Communications O-CHTR TL B1 1L U				... 2.C FE	3,475,078	99.3280	3,851,494	3,877,551	3,475,078	0	0	0	0	6.140	6.140	MAT	100,541	118,119	03/19/2020	04/30/2025
75445#-AA-1	RAWLINGS SPORTING GOODS COMPANY INC - T				... 3.B PL	834,271	100.0000	834,271	834,271	834,271	0	0	0	0	9.600	9.600	MAT	41,591	73,675	12/30/2020	12/31/2026
84967#-AA-9	SPRING INSURANCE SOLUTIONS LLC - INITIA				... 3.A PL	439,845	89.0000	391,462	439,845	439,845	0	0	0	0	9.980	9.980	MAT	11,478	37,705	11/20/2020	11/24/2025
84967#-AB-7	SPRING INSURANCE SOLUTIONS LLC - DELAYE				... 3.A PL	74,921	89.0000	66,680	74,921	74,921	0	0	0	0	10.790	10.790	MAT	2,792	4,419	08/08/2022	11/24/2025
23344U-AA-3	DS Admiral Bidco LLC-DSADBI TL 1L USD				... 3.A PL	2,227,500	96.7500	2,155,106	2,227,500	2,227,500	0	0	0	0	5.854	5.854	MON	87,656	169,570	03/15/2021	03/16/2028
41902#-AA-9	Sigma Electric Manufacturing Corporation				... 3.A PL	1,830,318	100.0000	1,842,849	1,842,849	1,830,318	0	0	0	0	10.480	10.480	MAT	36,050	124,648	10/31/2017	10/31/2023
41902#-AB-7	Sigma Electric Manufacturing Corporation				... 3.A PL	736,555	100.0000	739,826	739,826	736,555	0	0	0	0	7.670	7.670	MAT	13,688	48,025	09/04/2019	10/31/2023
44961*-AB-1	Implus Footcare LLC/Initial Term Loan 0				... 3.C PL	875,731	90.0000	788,158	875,731	875,731	0	0	0	0	11.360	11.360	MAT	49,370	89,458	12/30/2022	04/30/2024
45321*-AA-5	Implus Footcare LLC/Spenco Incremental				... 3.C PL	136,271	70.0000	95,390	136,271	136,271	0	0	0	0	11.360	11.360	MAT	7,684	13,955	12/30/2022	04/30/2024
45763F-AN-8	Inmar Inc-INMARI TL 1L USD				... 4.C FE	3,319,764	90.5250	3,076,258	3,398,242	3,319,764	0	0	0	0	7.800	7.800	FIAN	103,866	203,268	04/09/2019	05/01/2024
46126#-AA-6	IntraPac International LLC/U.S. Term Loa				... 3.B PL	1,406,448	100.0000	1,424,914	1,406,448	1,406,448	0	0	0	0	10.040	10.040	MAT	106,582	106,582	01/07/2019	01/11/2026
71667*-AA-3	Petroleum Service Group LLC/Delayed Draw				... 3.B PL	54,001	100.0000	54,001	54,001	54,001	0	0	0	0	10.730	10.730	MAT	2,523	4,330	03/23/2020	07/23/2025
71667*-AB-1	Petroleum Service Group LLC/Term Loan 7/				... 3.B PL	2,677,137	100.0000	2,713,030	2,713,030	2,677,137	0	0	0	0	8.220	8.220	MAT	108,931	219,596	07/23/2019	07/23/2025
74066*-AA-4	PREMIER SPECIALTIES INC. - TERM LOAN				... 3.A PL	291,182	94.0000	273,711	291,182	291,182	0	0	0	0	7.960	7.960	MAT	9,152	23,025	08/20/2021	08/20/2027
97383*-AA-1	WINEBOW HOLDINGS INC. (VINTNER GROUP I				... 3.C PL	369,375	98.0000	361,988	369,375	369,375	0	0	0	0	8.600	8.600	MAT	19,370	30,343	04/16/2021	07/01/2025
00228*-AA-4	AMERICAN TECHNOLOGIES LLC - TERM LOAN				... 1.F PL	2,177,599	100.0000	2,177,599	2,177,599	2,177,599	0	0	0	0	9.360	9.360	MAT	109,674	141,848	07/30/2020	07/31/2026
00797*-AA-5	Aero Operating LLC/Term Loan 1/20				... 3.A PL	432,166	97.0000	419,201	432,166	432,166	0	0	0	0	9.910	9.910	MAT	22,011	23,158	02/06/2020	02/07/2026
00797*-AB-3	Aero Operating LLC/Delayed Draw Term Loa				... 3.A PL	123,993	97.0000	120,273	123,993	123,993	0	0	0	0	11.110	11.110	MAT	4,364	9,404	04/03/2020	02/07/2026
25403#-AN-6	DILIGENT CORPORATION (PKA DIAMOND MERGER				... 3.C PL	2,756,550	96.5000	2,660,071	2,756,550	2,756,550	0	0	0	0	9.560	9.560	MAT	812	164,144	08/03/2020	08/04/2025
25403#-AR-7	DILIGENT CORPORATION				... 3.C PL	38,491	96.5000	37,144	38,491	38,491	0	0	0	0	7.260	7.260	MAT	0	1,405	07/30/2021	08/04/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
25403#-AT-3	DILIGENT CORPORATION (FKA DIAMOND MERGER .....	.....	.....	.....	...3.C PL	182,713	.96.5000	177,771	184,219	182,713	0	0	0	0	9.060	9.060	MAT	4,079	15,269	03/04/2021	08/04/2025
25403#-AU-0	DILIGENT CORPORATION (FKA DIAMOND MERGER .....	.....	.....	.....	...3.C PL	184,219	.96.5000	177,771	184,219	184,219	0	0	0	0	10.130	10.130	MAT	4,079	14,331	03/30/2021	08/04/2025
57810J-AC-2	Amynta Agency Borrower I-MAYAGE TL B 1L .....	.....	.....	.....	...4.C FE	903,946	.94.0000	849,730	903,968	903,946	0	0	0	0	4.632	4.632	FMAN	34,057	53,661	12/20/2018	02/28/2025
74309#-AA-7	PRODUCTION RESOURCE GROUP L.L.C. - DELA .....	.....	.....	.....	...4.C PL	555,614	100.0000	555,614	555,614	555,614	0	0	0	0	9.800	9.800	MAT	19,084	20,013	10/15/2021	08/21/2024
74309#-AC-3	PRODUCTION RESOURCE GROUP L.L.C. - DELA .....	.....	.....	.....	...5.B GI	30,084	100.0000	30,084	30,084	30,084	0	0	0	0	14.380	14.380	MAT	2,984	2,961	09/22/2021	08/21/2024
74309#-AD-1	PRODUCTION RESOURCE GROUP L.L.C. - SECO .....	.....	.....	.....	...5.B GI	177,072	100.0000	177,072	177,072	177,072	0	0	0	0	8.100	8.100	MAT	8,028	7,577	07/27/2022	08/21/2024
55371*-AU-9	MRI Software LLC/Term Loan 2/20 .....	.....	.....	.....	...4.A PL	687,571	.95.8750	659,209	687,571	687,571	0	0	0	0	10.230	10.230	MAT	41,159	51,919	10/26/2021	02/10/2026
55371*-AV-7	MRI Software LLC/Delayed Draw Term Loan .....	.....	.....	.....	...4.A PL	1,432	.95.8750	1,373	1,432	1,432	0	0	0	0	0.000	0.000	MAT	0	0	12/28/2021	02/10/2026
55371*-AY-1	MRI SOFTWARE LLC - SECOND AMENMENT TERM .....	.....	.....	.....	...4.A PL	44,992	.95.8750	43,136	44,992	44,992	0	0	0	0	9.700	9.700	MAT	482	1,506	08/09/2021	02/10/2026
65716*-AB-4	NORTH AMERICAN SCIENCE ASSOCIATES INC. ....	.....	.....	.....	...2.C PL	146,350	100.0000	146,350	146,350	146,350	0	0	0	0	10.180	10.180	MAT	2,679	5,805	03/29/2022	09/15/2027
65716#-AA-4	NORTH AMERICAN SCIENCE ASSOCIATES INC. ....	.....	.....	.....	...2.C PL	377,457	100.0000	377,457	377,457	377,457	0	0	0	0	10.180	10.180	MAT	10,426	28,838	12/29/2020	09/15/2027
65716#-AB-2	NORTH AMERICAN SCIENCE ASSOCIATES INC. ....	.....	.....	.....	...2.C PL	54,687	100.0000	54,687	54,687	54,687	0	0	0	0	10.180	10.180	MAT	1,514	4,187	12/29/2020	09/15/2027
74588B-AB-6	Puma Buyer TL 2029 .....	.....	.....	.....	...4.C PL	18,600,000	.92.0000	18,400,000	20,000,000	18,600,000	0	0	0	0	0.000	1.066	MAT	0	283,515	07/29/2022	07/14/2029
64027*-AA-3	NELIPAK HOLDINGS US TL L+425 07/02/2026 .....	.....	.....	.....	...3.A PL	1,198,460	.96.2500	1,168,562	1,214,091	1,198,460	0	0	0	0	7.510	7.510	MAT	45,366	76,988	07/02/2019	07/02/2026
00843#-AB-5	AFFINIPAY MIDCO LLC - INCREMENTAL TERM .....	.....	.....	.....	...3.A PL	74,380	.96.0000	71,405	74,380	74,380	0	0	0	0	8.340	8.340	MAT	2,902	4,521	01/28/2021	03/02/2026
00843#-AC-3	AFFINIPAY MIDCO LLC - 2ND AMENDMENT TL .....	.....	.....	.....	...3.A PL	185,156	.96.0000	177,750	185,156	185,156	0	0	0	0	8.340	8.340	MAT	7,225	14,083	06/04/2021	03/02/2026
42258#-AA-7	HEAVY CONSTR SYS SPECIALISTS LLC INITIAL .....	.....	.....	.....	...5.B GI	4,471,967	.98.7500	4,504,386	4,561,404	4,471,967	0	0	0	0	9.570	9.570	MAT	105,591	185,081	11/16/2021	11/16/2028
56629#-AA-9	MARCONI YELLOWSTONE BUYER INC. - TERM LO .....	.....	.....	.....	...3.B PL	316,489	.95.5000	307,962	322,474	316,489	0	0	0	0	9.970	9.970	MAT	13,971	24,146	06/23/2021	06/23/2028
56629#-AB-7	MARCONI YELLOWSTONE BUYER INC. - DELAYED .....	.....	.....	.....	...3.B PL	107,143	.95.5000	102,321	107,143	107,143	0	0	0	0	9.340	9.340	MAT	4,931	8,043	12/31/2021	06/23/2028
75734#-AB-9	Reddy Ice Holdings Inc./Term Loan 7/19 .....	.....	.....	.....	...5.B GI	4,497,842	.98.0000	4,491,614	4,583,280	4,497,842	0	0	0	0	10.230	10.230	MAT	112,370	391,198	07/01/2019	07/01/2025
75734#-AC-7	Reddy Ice Holdings Inc./Delayed Draw Te .....	.....	.....	.....	...5.B GI	432,911	.98.0000	424,253	432,911	432,911	0	0	0	0	9.290	9.290	MAT	15,951	24,371	03/31/2021	07/01/2025
76028#-AA-4	REPAIRIFY INC. - INITIAL TERM LOAN .....	.....	.....	.....	...1.G PL	369,375	.96.0000	354,600	369,375	369,375	0	0	0	0	7.850	7.850	MAT	7,473	21,452	06/11/2021	06/14/2027
79400#-AA-6	Saldon Holdings Inc./First Amendment Te .....	.....	.....	.....	...3.B PL	336,046	100.0000	338,001	338,001	336,046	0	0	0	0	8.020	8.020	MAT	10,202	25,871	08/29/2019	03/13/2025
79400#-AB-4	Saldon Holdings Inc./Term Loan 3/19 .....	.....	.....	.....	...3.B PL	2,062,301	100.0000	2,090,192	2,090,192	2,062,301	0	0	0	0	8.480	8.480	MAT	78,541	159,987	03/11/2019	03/13/2025
79400#-AC-2	SALDON HOLDINGS INC. - SECOND AMENMENT .....	.....	.....	.....	...5.B GI	184,688	100.0000	184,688	184,688	184,688	0	0	0	0	8.020	8.020	MAT	6,668	14,134	06/24/2021	03/13/2025
88233F-AK-6	Vistra Operations Co LLC-VST TL B3 1L US .....	.....	.....	.....	...2.C FE	4,411,661	.99.0230	4,788,412	4,835,656	4,411,661	0	0	0	0	6.120	6.120	MAT	104,799	155,010	03/19/2020	12/31/2025
88732#-AA-4	TIMECLOCK PLUS LLC - DELAYED DRAW TERM .....	.....	.....	.....	...4.C PL	163,896	100.0000	163,896	163,896	163,896	0	0	0	0	8.230	8.230	MAT	3,825	9,319	12/01/2020	08/28/2026
88732#-AC-0	TimeClock Plus LLC/Term Loan 8/19 .....	.....	.....	.....	...4.C PL	766,331	100.0000	776,685	776,685	766,331	0	0	0	0	8.230	8.230	MAT	33,499	59,534	08/30/2019	08/28/2026
91839*-AE-6	VPROP OPERATING LLC - TRANCHE A .....	.....	.....	.....	...5.A PL	229,676	100.0000	231,155	231,155	229,676	0	0	0	0	12.550	12.550	MAT	8,481	18,235	09/01/2022	11/06/2024
91839*-AF-3	VPROP OPERATING LLC - TRANCHE B LOAN .....	.....	.....	.....	...5.A PL	147,510	100.0000	147,510	147,510	147,510	0	0	0	0	13.620	13.620	MAT	6,232	13,799	09/01/2022	11/06/2024
91839*-AG-1	VPROP OPERATING LLC - TRANCHE C LOAN .....	.....	.....	.....	...5.A PL	670,499	100.0000	670,499	670,499	670,499	0	0	0	0	13.620	13.620	MAT	33,846	68,245	09/01/2022	11/06/2024
92974*-AB-5	WSHP FC ACQUISITION LLC - SECOND AMENDME .....	.....	.....	.....	...3.B PL	431,441	.98.0000	422,812	431,441	431,441	0	0	0	0	10.980	10.980	MAT	10,986	40,599	05/10/2021	03/28/2024
92974*-AC-3	WSHP FC Acquisition LLC/Third Amendment .....	.....	.....	.....	...3.B PL	386,480	.98.0000	378,751	386,480	386,480	0	0	0	0	9.640	9.640	MAT	9,840	31,604	03/30/2019	03/30/2027
.....	Disa Holdings Corp. - Term Loan A .....	.....	.....	.....	...4.C Z	413,441	.99.5000	424,097	426,228	413,441	0	0	0	0	9.790	9.790	MAT	5,761	5,761	11/07/2022	09/09/2028
24823#-AA-1	DENALI HOLDCO LLC .....	.....	.....	.....	...3.B PL	372,188	100.0000	372,188	372,188	372,188	0	0	0	0	8.510	8.510	MAT	10,041	21,922	09/15/2021	09/15/2027
C4800#-AA-5	IntraPac Canada Corporation/Canadian Ter .....	.....	.....	.....	...3.B PL	715,811	100.0000	726,073	715,811	715,811	0	0	0	0	10.040	10.040	MAT	31,322	54,309	01/07/2019	01/11/2026
001292-SU-6	Aenova Holding GmbH EUR TLB2 (Jul'2	B.....	.....	.....	...4.C Z	859,455	.87.8330	940,779	1,000,000	950,601	0	0	0	91,146	5.030	5.030	MAT	11,800	11,800	10/12/2022	03/06/2026
03979*-AA-9	RTI Surgical	C.....	.....	.....	...3.B PL	3,052,291	.99.0000	3,021,768	3,052,291	3,052,291	0	0	0	0	10.020	10.020	MAT	78,294	216,561	07/16/2020	07/20/2026
0421UA-YY-2	Auris Luxembourg III S.A EUR TLB1 (Jul'1	B.....	.....	.....	...4.C Z	890,035	.89.3210	956,717	1,000,000	990,768	0	0	0	100,733	6.440	6.440	MAT	13,197	13,197	09/26/2022	02/27/2026
655941-TB-8	Fugue Finance B.V. EUR TL (Dec'17)	B.....	.....	.....	...4.C Z	923,528	.96.5000	1,033,612	1,000,000	1,014,867	0	0	0	91,339	5.200	5.200	MAT	7,535	7,535	11/03/2022	08/31/2024
878391-TH-4	Tech 8 SASU EUR TLB (Jul'22	B.....	.....	.....	...5.B Z	909,168	.56.1880	601,830	1,000,000	996,123	0	0	0	86,955	8.050	8.050	MAT	19,530	19,530	09/29/2022	07/29/2026
G2757#-AA-8	Datix Bidco Limited/Facility B1 04/18	C.....	.....	.....	...3.B PL	886,051	.98.0000	886,835	904,934	886,051	0	0	0	0	5.340	5.340	MAT	41,368	47,636	04/27/2018	04/28/2025
G2757#-AA-0	Datix Bidco Limited/Term Loan B3 5/19	C.....	.....	.....	...3.B PL	895,059	.98.0000	884,631	902,685	895,059	0	0	0	0	5.340	5.340	MAT	41,265	47,518	05/28/2019	04/28/2025
G2757#-AB-8	Datix Bidco Limited/Term Loan B4 10/19	C.....	.....	.....	...3.B PL	353,244	.98.0000	346,179	353,244	353,244	0	0	0	0	6.010	6.010	MAT	16,148	33,648	10/06/2019	04/28/2025
G7349*-AA-6	Radius Aerospace Europe Limited/U.K. Ter	C.....	.....	.....	...3.B Z	393,477	.97.0000	381,673	393,477	393,477	0	0	0	0	8.600	8.600	MAT	17,632	24,237	11/13/2019	03/29/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates	
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date
1829999999	Subtotal - Bonds - Unaffiliated Bank Loans - Acquired					291,022,023	XXX	285,428,397	294,147,780	290,586,075	(907,239)	0	0	471,450	XXX	XXX	XXX	6,961,613	12,430,976	XXX	XXX
1909999999	Subtotal - Bonds - Unaffiliated Bank Loans					2,315,629,132	XXX	2,274,868,966	2,323,242,364	2,277,410,910	(907,239)	0	400,189	791,657	XXX	XXX	XXX	52,475,162	96,599,537	XXX	XXX
2419999999	Total - Issuer Obligations					18,516,524,854	XXX	16,187,559,910	18,047,574,273	18,523,796,504	0	(23,597,449)	4,403,824	5,985,918	XXX	XXX	XXX	222,471,289	881,905,148	XXX	XXX
2429999999	Total - Residential Mortgage-Backed Securities					2,738,552,904	XXX	2,463,076,743	3,483,192,043	2,738,192,113	(371,053)	34,285,909	11,543,317	0	XXX	XXX	XXX	13,728,095	86,433,101	XXX	XXX
2439999999	Total - Commercial Mortgage-Backed Securities					1,518,613,007	XXX	1,339,186,111	1,646,283,399	1,515,350,452	(1,740,071)	8,575,505	0	0	XXX	XXX	XXX	8,975,836	46,187,815	XXX	XXX
2449999999	Total - Other Loan-Backed and Structured Securities					8,305,566,220	XXX	7,756,253,157	8,469,664,054	8,277,154,307	(11,178,802)	18,703,690	1,110,424	2,072,732	XXX	XXX	XXX	83,587,626	283,126,194	XXX	XXX
2459999999	Total - SVO Identified Funds					0	XXX	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0	XXX	XXX
2469999999	Total - Affiliated Bank Loans					0	XXX	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0	XXX	XXX
2479999999	Total - Unaffiliated Bank Loans					2,315,629,132	XXX	2,274,868,966	2,323,242,364	2,277,410,910	(907,239)	0	400,189	791,657	XXX	XXX	XXX	52,475,162	96,599,537	XXX	XXX
2489999999	Total - Unaffiliated Certificates of Deposit					0	XXX	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0	XXX	XXX
2509999999	Total Bonds					33,394,886,117	XXX	30,020,944,887	33,969,956,133	33,331,904,286	(14,197,165)	37,967,655	17,457,754	8,850,307	XXX	XXX	XXX	381,238,008	1,394,251,795	XXX	XXX

1. Line Book/Adjusted Carrying Value by NAIC Designation Category Footnote:
Number
1A 1A ...\$ 5,725,912,172 1B ..\$ 1,225,838,546 1C ..\$ 2,413,719,914 1D ..\$ 1,428,314,630 1E ..\$ 1,000,154,376 1F ..\$ 3,669,125,401 1G ..\$ 2,262,125,542
1B 2A ...\$ 3,329,380,343 2B ..\$ 5,785,784,561 2C ..\$ 4,320,396,554
1C 3A ...\$ 316,134,709 3B ..\$ 314,908,345 3C ..\$ 844,894,163
1D 4A ...\$ 116,731,164 4B ..\$ 132,250,328 4C ..\$ 205,663,082
1E 5A ...\$ 73,389,328 5B ..\$ 134,926,962 5C ..\$ 1,046,841
1F 6\$ 31,207,325

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 2 - SECTION 1

Showing All PREFERRED STOCKS Owned December 31 of Current Year

1	2	Codes		5	6	7	8	Fair Value		11	Dividends			Change in Book/Adjusted Carrying Value					20	21
		3	4					9	10		12	13	14	15	16	17	18	19		
CUSIP Identi- fication	Description	Code	For- eign	Number of Shares	Par Value Per Share	Rate Per Share	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (15 + 16 - 17)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol	Date Acquired
00850L-20-3 ..	AgriBank FCB-AGRIBANK FCB			50,000.000	100.00	0.000	4,960,535	99.211	4,960,535	5,000,000	85,940	429,700	0	39,465	0	0	39,465	0	2.A FE	10/29/2013 ..
009522-2A-4 ...	AIRWAY THERAPEUTICS PERP PFD CLASS C	R.....		1,833,370.000	0.00	0.000	4,289,338	2.340	4,289,338	2,600,001	0	0	0	(1,689,337)	0	0	(1,689,337)	0	5.B GI	01/01/2021 ..
009522-2Z-9 ...	AIRWAY THERAPEUTICS B PERP CONVERTIBLE P	R.....		2,173,047.000	0.00	0.000	5,215,313	2.400	5,215,313	3,579,320	0	0	0	(1,635,993)	0	0	(1,635,993)	0	5.B GI	03/01/2018 ..
088555-2C-4 ...	BIDTELLECT SERIES B-1 PERP CONVEITIBLE PF	R.....		161,308.000	0.00	0.000	2,050,960	15.885	2,562,378	124,207	0	0	0	(1,926,753)	0	0	(1,926,753)	0	5.B GI	08/25/2017 ..
088577-2A-2 ...	BEXION PHARMACEUTICALS B-1 MAND REDEEM P	R.....		8,948.000	0.00	0.000	196,450	21.955	196,450	139,994	0	0	0	(56,456)	0	0	(56,456)	0	5.B GI	12/28/2017 ..
088577-2B-0 ...	BEXION PHARMACEUTICALS B PERP PFD	R.....		10,092.000	0.00	0.000	174,180	17.259	174,181	199,997	0	0	0	25,816	0	0	25,816	0	5.B GI	09/10/2018 ..
088577-2Z-7 ...	BEXION PHARMACEUTICALS A-1 PERP CONV PFD	R.....		23,433.000	0.00	0.000	456,144	19.466	456,144	319,134	0	0	0	(137,010)	0	0	(137,010)	0	5.B GI	03/06/2017 ..
08888#-12-2 ...	Bidtellect Inc. Perpetual Preferred	R.....		294,985.000	0.00	0.000	1,007,377	9.515	2,806,782	3	0	0	0	(1,007,374)	0	0	(1,007,374)	0	5.B GI	06/30/2015 ..
096444-2Z-0 ...	BLUE WATER VACCINE PERP CONV PFD	R.....		82,101.000	0.00	0.000	858,458	10.456	858,458	499,995	0	0	0	(358,463)	0	0	(358,463)	0	5.B GI	07/01/2019 ..
173333-2A-6 ...	LOSANT IoT INC B PERP CONV PFD	R.....		998,403.000	0.00	0.000	1,071,885	1.074	1,071,885	1,000,000	0	0	0	(71,885)	0	0	(71,885)	0	5.B GI	11/05/2018 ..
173333-2Z-1 ...	LOSANT IoT INC SERIES A PERP CONV PFD	R.....		1,070,173.000	0.00	0.000	1,000,000	0.934	1,000,000	700,000	0	0	0	(300,000)	0	0	(300,000)	0	5.B GI	08/02/2017 ..
23281#-12-4 ...	Cyprium Parallel Investors V LP - Perpet	R.....		29,887.730	0.00	0.000	4,844,182	162.079	4,844,182	2,988,772	0	0	0	(1,855,410)	0	0	(1,855,410)	0	2.A PL	12/07/2021 ..
277777-2Z-4 ...	EIKONOKLASTES SEED PERP PREFERRED	R.....		714,285.000	0.00	0.000	1,132,856	1.586	1,132,856	500,000	0	0	0	(632,856)	0	0	(632,856)	0	5.B GI	04/17/2020 ..
28852N-20-8 ...	Ellington Financial Inc-ELLINGTON FIN	R.....		215,546.000	25.00	0.000	4,037,177	18.730	4,037,177	5,089,914	90,933	457,418	0	1,614,440	0	0	1,614,440	0	1.G PL	03/25/2020 ..
292450-2Z-9 ...	ENABLE INJECTIONS SERIES B PERP PFD	R.....		499,597.000	0.00	0.000	7,553,907	15.120	7,553,907	2,443,030	0	0	0	(5,110,877)	0	0	(5,110,877)	0	5.B GI	10/17/2018 ..
29402T-2#-5 ...	ENVEN ENERGY CORP SERIES A CONV PERP PFD	R.....		811,220.500	0.00	0.000	19,622,298	24.189	19,622,298	10,224,624	1,095,149	0	0	(9,397,674)	0	0	(9,397,674)	0	5.C	03/31/2021 ..
333333-2A-3 ...	ECCORINE SYS SER B REDEEM PFD	R.....		5,619,203.000	0.00	0.000	0	0.000	0	3,381,074	0	0	0	3,381,074	0	0	3,381,074	0	5.B GI	06/29/2018 ..
333333-2B-1 ...	ECCORINE SYSTEM B-2 PERP PFD	R.....		1,163,370.000	0.00	0.000	0	0.000	0	700,000	0	0	0	700,000	0	0	700,000	0	5.B GI	10/04/2019 ..
371877-2A-2 ...	GENETESIS SERIES B PERP PFD	R.....		135,739.000	0.00	0.000	2,173,922	15.987	2,169,999	1,088,999	0	0	0	(1,084,922)	0	0	(1,084,922)	0	5.B GI	04/21/2020 ..
371877-2Z-7 ...	GENETESIS A-2 MAND REDEEM PFD	R.....		286,741.000	0.00	0.000	1,329,346	4.636	1,329,346	2,169,999	0	0	0	840,653	0	0	840,653	0	5.B GI	05/31/2018 ..
37427*-10-7 ...	GET ME WEARS GROUP SERIES E PERP PFD	R.....		11.770	0.00	0.000	1,793,459	152,375.446	1,793,459	664,113	0	0	0	(1,129,346)	0	0	(1,129,346)	0	5.B GI	09/02/2020 ..
451662-2Z-6 ...	IDEAL IMPLANTS SERIES B PERP PFD	R.....		920,461.000	0.00	0.000	0	0.000	0	0	0	0	0	0	0	4,387,814	(4,387,814)	0	5.B GI	10/21/2020 ..
499188-2Z-6 ...	KNOPP BIOSCIENCES LLC C PERP CONV PFD	R.....		8,615,377.000	0.00	0.000	24,507,596	2.845	24,507,596	8,378,078	0	0	0	(16,129,518)	0	0	(16,129,518)	0	5.B GI	02/14/2019 ..
534187-88-5 ...	Lincoln National Corp-PREFERRED STOCK ...			600,000.000	25.00	0.000	15,000,000	25.000	15,000,000	15,000,000	0	0	0	0	0	0	0	0	2.C FE	11/15/2022 ..
61686Z-2Z-1 ...	MORGAN JOSEPH TRI-ARTISAN GRP D 5.00% PE	R.....		5,120.930	0.00	0.000	0	0.000	0	25,853	0	0	0	25,853	0	0	25,853	0	5.B GI	01/03/2020 ..
65341T-20-6 ...	NexBank Capital Inc Noncumulative Perpet			49,993.500	1,000.00	0.000	37,867,577	757.450	37,867,577	49,993,500	0	0	0	(14,194,818)	0	0	(14,194,818)	0	2.B PL	09/01/2021 ..
69425*-10-2 ...	PRG III LLC Perpetual Preferred	R.....		4,219.000	0.00	0.000	1,273,885	301.940	1,273,885	180,784	0	0	0	(1,093,101)	0	0	(1,093,101)	0	6. *	10/06/2020 ..
714239-2B-9 ...	PERMIAN HOLDCO 2 A PERP PFD	R.....		28,050.000	0.00	0.000	(70,125)	0.000	0	0	0	0	0	0	0	0	0	0	5.B GI	11/01/2016 ..
857477-60-8 ...	State Street Corp-PREFERRED STOCK			19,800.000	25.00	0.000	481,536	24.320	481,536	357,602	0	29,201	0	61,182	0	0	61,182	0	2.A FE	03/19/2020 ..
857477-85-5 ...	State Street Corp-STATE STREET CORP			2,665.000	25.00	0.000	63,734	23.915	63,734	45,334	0	3,564	0	12,831	0	0	12,831	0	2.A FE	03/19/2020 ..
88429#-12-2 ...	THIRD POLE SERIES A 8.00% PERP CONV PFD	R.....		139,300.000	0.00	0.000	3,724,327	26.736	3,724,327	3,438,097	0	0	0	(286,230)	0	0	(286,230)	0	5.B GI	05/14/2020 ..
88429Z-2Z-6 ...	THIRD POLE SERIES B TRANCHE 1 PERP CONV	R.....		44,466.000	0.00	0.000	1,811,983	40.750	1,811,983	1,471,806	0	0	0	(340,177)	0	0	(340,177)	0	5.B GI	12/01/2021 ..
90187B-50-7 ...	Two Harbors Investment C-PREFERRED STOCK			67,160.000	25.00	0.000	1,261,265	18.780	1,261,265	906,660	38,861	194,307	0	444,599	0	0	444,599	0	4.A	03/20/2020 ..
950810-70-5 ...	WesBanco Inc-WESBANCO INC			320,000.000	25.00	0.000	8,048,000	25.150	8,048,000	8,000,000	0	540,000	0	1,152,000	0	0	1,152,000	0	2.C FE	08/04/2020 ..
04686J-30-9 ...	Athene Holding Ltd-ATHENE HOLDING LTD		D.....	80,000.000	25.00	0.000	1,965,600	24.570	1,965,600	1,984,000	31,875	0	0	324,000	0	0	324,000	0	2.C FE	06/12/2020 ..
09069Z-2A-2 ...	BIOVISH TECHNOLOGIES SERIES B PERP PFD	R.....	C.....	1,525,571.000	0.00	0.000	(155,675)	0.110	167,813	488,183	0	0	0	643,858	0	0	643,858	0	6. *	04/05/2017 ..
09069Z-2B-0 ...	BIOVISH TECHNOLOGIES SERIES C PERP PFD	R.....	C.....	5,400,615.000	0.00	0.000	(929,145)	0.090	486,055	1,458,166	0	0	0	2,387,309	0	0	2,387,309	0	6. *	04/05/2017 ..
09069Z-2C-8 ...	BIOVISH TECHNOLOGIES SERIES E PERP PFD	R.....	C.....	4,838,941.000	0.00	0.000	411,310	0.085	411,310	2,634,000	0	0	0	2,222,690	0	0	2,222,690	0	6. *	11/15/2018 ..

SCHEDULE D - PART 2 - SECTION 1

1	2	Codes		5	6	7	8	Fair Value		11	Dividends			Change in Book/Adjusted Carrying Value				20 NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	21		
		3	4					9	10		12	13	14	15	16	17	18			19	
CUSIP Identification	Description	Code	For- eign	Number of Shares	Par Value Per Share	Rate Per Share	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization) Accretion	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (15 + 16 - 17)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value		Date Acquired	
G16252-26-7 ...	Brookfield Infrastructur-PREFERRED STOCK		D	200,000,000	25.00	0.000	3,200,000	16.000	3,200,000	5,000,000	0	256,250	0	1,800,000	0	0	1,800,000	0	2.C FE	09/14/2020	
4019999999	Subtotal - Preferred Stock - Industrial and Miscellaneous (Unaffiliated) Perpetual Preferred							162,229,655	XXX	166,345,369	142,775,239	1,342,758	1,910,440	0	(42,762,430)	0	4,387,814	(47,150,244)	0	XXX	XXX
084423-80-5 ...	W R Berkley Corp-W R BERKLEY CORP			457,760,000	25.00	0.000	6,709,346	20.260	9,274,218	6,709,346	145,911	2,043,841	0	0	0	0	0	0	2.B FE	03/19/2020	
127668-12-3 ...	Cogency Global - Preferred			137,753	0.00	0.000	137,753	1,864.735	256,873	137,753	0	0	0	0	0	0	0	0	4.C IF	02/14/2022	
606336-ZZ-8 ...	MOD PIZZA PERP CONV PFD	R		25,012,000	0.00	0.000	3,499,929	229.669	5,744,476	3,499,929	0	0	0	0	0	0	0	0	5.B GI	05/01/2019	
	The Prosperity Banking C Junior Sub Note																				
743615-A*-7 ...	Reinsurance Group of Ame-REINSURANCE GRO			4,500,000,000	0.00	0.000	4,499,732	1.000	4,500,000	4,499,732	0	0	0	0	0	0	0	0	2.A FE	03/01/2018	
759351-88-5 ...	River Valley Bancorp - Non Convertible P			200,000,000	25.00	0.000	5,000,000	25.660	5,132,000	5,000,000	110,833	0	0	0	0	0	0	0	2.A FE	09/15/2022	
768475-A*-6 ...				7,000,000,000	0.00	0.000	6,998,696	1.000	7,000,000	6,998,696	0	0	0	0	0	0	0	0	3.A	03/01/2018	
333333-ZA-3 ...	First Republic Bank			5,619,203,000	0.00	0.000	(3,381,074)	0.000	0	(3,381,074)	0	0	0	0	0	0	0	0	5.B	12/31/2022	
333333-ZB-1 ...	First National Bank of San Antonio			1,163,370,000	0.00	0.000	(700,000)	0.000	0	(700,000)	0	0	0	0	0	0	0	0	5.B	12/31/2022	
61686Z-ZZ-1 ...	MORGAN JOSEPH TRI-ARTISAN GROUP			5,120,930	0.00	0.000	(25,853)	0.000	0	(25,853)	0	0	0	0	0	0	0	0	5.B	12/31/2022	
141558-AA-0 ...	Cardinal Statutory Trust I			0.000	0.00	0.000	0	1.000	72,486	7,136,598	0	0	0	0	0	0	0	0	1	12/31/2022	
759351-88-5 ...	REINSURANCE GRP			0.000	0.00	0.000	0	0.000	0	0	0	110,833	0	0	0	0	0	0	5.B	12/31/2022	
94988U-65-6 ...	WELLS FARGO CO			0.000	0.00	0.000	0	0.000	0	0	0	87,890	0	0	0	0	0	0	5.B	12/31/2022	
04686J-30-9 ...	ATHENE HOLDING			0.000	0.00	0.000	0	0.000	0	0	0	127,500	0	0	0	0	0	0	5.B	12/31/2022	
4029999999	Subtotal - Preferred Stock - Industrial and Miscellaneous (Unaffiliated) Redeemable Preferred							22,738,529	XXX	31,980,053	29,875,127	256,744	2,370,064	0	0	0	0	0	XXX	XXX	
4109999999	Total - Preferred Stock - Industrial and Miscellaneous (Unaffiliated)							184,968,184	XXX	198,325,422	172,650,366	1,599,502	4,280,504	0	(42,762,430)	0	4,387,814	(47,150,244)	0	XXX	XXX
4409999999	Total - Preferred Stock - Parent, Subsidiaries and Affiliates							0	XXX	0	0	0	0	0	0	0	0	0	XXX	XXX	
4509999999	Total Preferred Stocks							184,968,18													

1.							
Line Number	Book/Adjusted Carrying Value by NAIC Designation Category Footnote:						
1A	1A ..\$	1B ..\$	1C ..\$	1D ..\$	1E ..\$	1F ..\$	1G ..\$ 4,037,177
1B	2A ..\$ 19,849,719	2B ..\$ 44,576,923	2C ..\$ 28,213,600				
1C	3A ..\$ 6,998,696	3B ..\$ 0	3C ..\$ 0				
1D	4A ..\$ 1,261,265	4B ..\$ 0	4C ..\$ 137,753				
1E	5A ..\$ 0	5B ..\$ 59,670,378	5C ..\$ 19,622,298				
1F	6\$ 600,375						

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 2 - SECTION 2

Showing All COMMON STOCKS Owned December 31 of Current Year

1	2	Codes		5	6	Fair Value		9	Dividends			Change in Book/Adjusted Carrying Value				17	18
		3	4			7	8		10	11	12	13	14	15	16		
CUSIP Identi- fication	Description	Code	For- eign	Number of Shares	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (13 - 14)	Total Foreign Exchange Change in Book/Adjusted Carrying Value	Date Acquired	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol
001084-10-2 ...	AGCO CORP-COMMON STOCK			1,000,000	138,690	138.690	138,690	100,726	0	480	0	(37,964)	0	(37,964)	0	07/26/2022	
007737-10-1 ...	ADVANSIX INC-COMMON STOCK			2,155,000	81,933	38.020	81,933	76,436	0	312	0	0	0	0	0	09/13/2022	
037430-10-8 ...	APA Corp-COMMON STOCK			6,000,000	280,080	46.680	280,080	207,449	0	1,875	0	0	0	0	0	07/21/2022	
039483-10-2 ...	Archer-Daniels-Midland C-COMMON STOCK			3,000,000	278,550	92.850	278,550	234,350	0	2,400	0	0	0	0	0	07/28/2022	
047649-10-8 ...	Atkore Inc-COMMON STOCK			3,200,000	362,944	113.420	362,944	277,685	0	0	0	0	0	0	0	09/12/2022	
05105P-10-7 ...	Augmedix Inc-COMMON STOCK			500,000,000	780,000	1.560	780,000	1,500,000	0	0	0	720,000	0	720,000	0	09/28/2020	
05591L-10-7 ...	BM Technologies Inc-COMMON STOCK			31,790,000	165,626	5.210	165,626	217,762	0	0	0	0	193,600	(193,600)	0	01/05/2021	
05722G-10-0 ...	Baker Hughes Co-COMMON STOCK			3,900,000	115,167	29.530	115,167	96,253	0	1,443	0	0	0	0	0	07/28/2022	
09062W-20-4 ...	BIOLIFE SOLUTIONS INC-COMMON STOCK			91,316,000	1,661,951	18.200	1,661,951	1,338,693	0	0	0	0	1,863,760	(1,863,760)	0	05/03/2021	
09628D-10-4 ...	Bluestem Group Inc-COMMON STOCK			2,071,000	(13,583)	0.150	(13,583)	476	0	0	0	14,059	0	14,059	0	12/31/2014	
09739D-10-0 ...	BOISE CASCADE CO-COMMON STOCK			470,000	32,275	68.670	32,275	33,264	0	0	0	0	0	0	0	12/23/2022	
125269-10-0 ...	CF INDUSTRIES HOLDINGS I-COMMON STOCK			5,100,000	434,520	85.200	434,520	485,585	0	3,080	0	0	0	0	0	09/16/2022	
127097-10-3 ...	CABOT OIL & GAS CORP-COMMON STOCK			8,600,000	211,302	24.570	211,302	229,480	0	11,438	0	0	0	0	0	07/21/2022	
150870-10-3 ...	Celanese Corp-COMMON STOCK			1,100,000	112,464	102.240	112,464	123,254	0	770	0	0	0	0	0	09/08/2022	
156440-ZZ-5 ...	CENTURY BANK OF GEORGIA-COMMON STOCK	R.....		17,811,000	183,607	10.309	183,607	182,940	0	0	0	(667)	0	(667)	0	06/21/2021	
16411Q-10-1 ...	CHENIERE ENERGY PARTNERS-COMMON STOCK			46,906,000	2,667,544	56.870	2,667,544	2,477,593	0	61,366	0	0	0	0	0	11/02/2022	
16411R-20-8 ...	CHENIERE ENERGY INC-COMMON STOCK			15,934,000	2,389,463	149.960	2,389,463	2,039,321	0	19,020	0	0	0	0	0	07/21/2022	
166764-10-0 ...	CHEVRON CORP-COMMON STOCK			2,200,000	394,878	179.490	394,878	320,576	0	6,248	0	0	0	0	0	07/28/2022	
185899-10-1 ...	CLIFFS NATURAL RESOURCES-COMMON STOCK			3,600,000	57,996	16.110	57,996	58,538	0	0	0	542	0	542	0	07/22/2022	
201723-10-3 ...	COMMERCIAL METALS CO-COMMON STOCK			3,200,000	154,560	48.300	154,560	113,057	0	512	0	0	0	0	0	07/22/2022	
20825C-10-4 ...	ConocoPhillips-COMMON STOCK			3,600,000	424,800	118.000	424,800	317,335	2,520	11,052	0	0	0	0	0	07/21/2022	
21037T-10-9 ...	Constellation Energy Cor-COMMON STOCK			17,700,000	1,525,917	86.210	1,525,917	1,549,530	0	0	0	0	0	0	0	09/15/2022	
22052L-10-4 ...	CORTEVA INC-COMMON STOCK			4,200,000	246,876	58.780	246,876	226,236	0	1,260	0	0	0	0	0	07/26/2022	
23130Q-10-7 ...	CuriosityStream Inc-COMMON STOCK	R.....		27,931,000	31,841	1.140	31,841	82,955	0	0	0	51,114	229,532	(178,418)	0	10/18/2021	
23311P-10-0 ...	DCP MIDSTREAM PARTNERS LP COMMON UNIT			80,849,000	3,136,133	38.790	3,136,133	2,604,362	0	55,115	0	(531,770)	0	(531,770)	0	10/31/2022	
23345M-10-7 ...	DT Midstream Inc-COMMON STOCK			4,300,000	237,618	55.260	237,618	218,363	2,752	5,504	0	0	0	0	0	07/22/2022	
244199-10-5 ...	Deere & Co-COMMON STOCK			600,000	257,256	428.760	257,256	187,262	720	1,398	0	0	0	0	0	07/27/2022	
24664T-10-3 ...	Delek Logistics Partners-COMMON STOCK			387,000	17,512	45.250	17,512	19,222	0	764	0	0	0	0	0	06/29/2022	
25179M-10-3 ...	DEVON ENERGY CORP-COMMON STOCK			4,000,000	246,040	61.510	246,040	225,576	5,400	11,600	0	0	0	0	0	07/26/2022	
25278X-10-9 ...	DIAMONDBACK ENERGY INC-COMMON STOCK			1,800,000	246,204	136.780	246,204	217,379	0	9,558	0	0	0	0	0	07/26/2022	
26875P-10-1 ...	EOG Resources Inc-COMMON STOCK			2,000,000	259,040	129.520	259,040	223,062	3,000	8,250	0	0	0	0	0	07/28/2022	
26884L-10-9 ...	EQT CORP-COMMON STOCK			6,200,000	209,746	33.830	209,746	245,161	0	1,860	0	0	0	0	0	07/27/2022	
29273V-10-0 ...	ENERGY TRANSFER EQUITY L P LTD PARTNERSH			711,900,000	8,450,253	11.870	8,450,253	7,614,590	0	324,308	0	0	0	0	0	09/16/2022	
29336T-10-0 ...	ENLINK MIDSTREAM LLC COMMON UNIT			523,813,000	6,442,900	12.300	6,442,900	4,989,181	0	0	0	0	0	0	0	11/03/2022	
293792-10-7 ...	ENTERPRISE PRODS PARTNERS L P COMMON UNI			318,000,000	7,670,160	24.120	7,670,160	8,040,730	0	209,048	0	0	0	0	0	12/23/2022	
29402T-10-9 ...	Enven Energy Corp-COMMON STOCK	R.....		860,000,000	20,802,168	24.189	20,802,168	8,566,417	0	0	0	(12,235,752)	0	(12,235,752)	0	06/19/2019	
29415C-10-1 ...	Eos Energy Enterprises I-COMMON STOCK			1,204,430,000	1,782,556	1.480	1,782,556	1,597,412	0	0	0	(185,145)	11,431,163	(11,616,308)	0	12/29/2021	
294600-10-1 ...	Equitrans Midstream Corp-COMMON STOCK			25,200,000	168,840	6.700	168,840	244,732	0	3,780	0	0	0	0	0	09/13/2022	
302491-30-3 ...	FMC CORP-COMMON STOCK			1,000,000	124,800	124.800	124,800	110,510	559	1,110	0	0	0	0	0	07/28/2022	
35671D-85-7 ...	FREEMPORT-MCMORAN INC-COMMON STOCK			11,568,000	439,584	38.000	439,584	336,752	0	0	0	0	0	0	0	08/09/2022	
371927-10-4 ...	GENESIS ENERGY L P LTD PARTNERSHIP UNIT			9,604,000	98,057	10.210	98,057	115,438	0	1,441	0	0	0	0	0	09/15/2022	
403949-10-0 ...	HF Sinclair Corp-COMMON STOCK			5,000,000	259,450	51.890	259,450	215,070	0	4,000	0	0	0	0	0	07/21/2022	
406216-10-1 ...	HALLIBURTON CO-COMMON STOCK			7,200,000	283,320	39.350	283,320	207,065	0	0	0	0	0	0	0	07/21/2022	
42809H-10-7 ...	HESS CORP-COMMON STOCK			2,000,000	283,640	141.820	283,640	205,953	750	1,500	0	0	0	0	0	07/21/2022	
428103-10-5 ...	Hess Midstream LP-COMMON STOCK			12,300,000	368,016	29.920	368,016	360,046	0	13,759	0	0	0	0	0	07/27/2022	
49456B-10-1 ...	Kinder Morgan Inc/DE-KINDER MORGAN INC			38,700,000	699,696	18.080	699,696	682,140	0	19,647	0	0	0	0	0	09/15/2022	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 2 - SECTION 2

Showing All COMMON STOCKS Owned December 31 of Current Year

1	2	Codes		5	6	Fair Value		9	Dividends			Change in Book/Adjusted Carrying Value				17	18
		3	4			7	8		10	11	12	13	14	15	16		
CUSIP Identi- fication	Description	Code	For- eign	Number of Shares	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (13 - 14)	Total Foreign Exchange Change in Book/Adjusted Carrying Value	Date Acquired	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol
55336V-10-0 ...	MPLX LP COMMON UNIT			223,741.000	7,347,654	32.840	7,347,654	6,815,591	0	306,773	0	0	0	0	0	09/16/2022	
559080-10-6 ...	MAGELLAN MIDSTREAM PARTNERS LP COMMON UN			133,700.000	6,713,077	50.210	6,713,077	6,601,953	0	255,006	0	0	0	0	0	09/15/2022	
565849-10-6 ...	MARATHON OIL CORP-COMMON STOCK			9,800.000	265,286	27.070	265,286	219,138	0	1,666	0	0	0	0	0	07/21/2022	
56585A-10-2 ...	MARATHON PETROLEUM CORP-COMMON STOCK			3,800.000	442,282	116.390	442,282	324,978	0	5,054	0	0	0	0	0	07/21/2022	
60938K-10-6 ...	Moneylion Inc-COMMON STOCK			1,109,495.000	687,887	0.620	687,887	11,094,950	0	0	0	10,407,063	0	10,407,063	0	09/22/2021	
61945C-10-3 ...	MOSAIC CO/THE-COMMON STOCK			4,600.000	201,802	43.870	201,802	216,210	0	1,380	0	0	0	0	0	07/26/2022	
624756-10-2 ...	MUELLER INDUSTRIES INC-COMMON STOCK			1,513.000	89,267	59.000	89,267	90,379	0	0	0	0	0	0	0	12/23/2022	
636180-10-1 ...	National Fuel Gas Co-COMMON STOCK			1,600.000	101,280	63.300	101,280	106,403	760	1,520	0	0	0	0	0	07/22/2022	
637071-10-1 ...	National Oilwell Varco I-COMMON STOCK			6,800.000	142,052	20.890	142,052	115,801	0	0	0	0	0	0	0	08/01/2022	
651639-10-6 ...	Newmont Corp-COMMON STOCK			10,900.000	514,480	47.200	514,480	509,196	5,995	7,975	0	0	0	0	0	09/12/2022	
670346-10-5 ...	NUCOR CORP-COMMON STOCK			5,023.000	662,082	131.810	662,082	632,906	2,562	4,773	0	0	0	0	0	09/29/2022	
67058H-10-2 ...	NUSTAR ENERGY LP-COMMON STOCK LTD PART			47,562.000	760,992	16.000	760,992	704,015	0	31,287	0	0	0	0	0	09/15/2022	
674599-10-5 ...	Occidental Petroleum Cor-COMMON STOCK			3,800.000	239,362	62.990	239,362	229,531	494	988	0	0	0	0	0	07/21/2022	
682680-10-3 ...	ONEOK INC COMMON STK			10,000.000	657,000	65.700	657,000	635,128	0	0	0	0	0	0	0	12/22/2022	
684023-30-2 ...	Oragenics Inc-COMMON STOCK			10,000.000	1,051	0.105	1,051	2,399	0	0	0	0	0	0	0	10/03/2022	
69345V-10-0 ...	PLH Group Inc-COMMON STOCK			950,000.000	9,701,901	17.943	9,701,901	5,244,000	0	0	0	0	0	0	0	10/10/2018	
718546-10-4 ...	PHILLIPS 66-COMMON STOCK			2,270.000	236,262	104.080	236,262	251,464	0	9,975	0	0	0	0	0	11/16/2022	
723787-10-7 ...	PIONEER NATURAL RESOURCE-COMMON STOCK			500.000	114,195	228.390	114,195	113,744	0	7,140	0	0	0	0	0	07/28/2022	
726503-10-5 ...	PLAINS ALL AMERICAN PIPELINE L.P. LTD PA			574,341.000	6,754,250	11.760	6,754,250	6,376,204	0	138,648	0	0	0	0	0	11/16/2022	
74017N-10-5 ...	Precigen Inc-COMMON STOCK			25,000.000	38,000	1.520	38,000	50,500	0	0	0	0	0	0	0	10/03/2022	
75513E-10-1 ...	Raytheon Technologies Co-COMMON STOCK			3,100.000	312,852	100.920	312,852	264,247	0	1,705	0	0	0	0	0	09/16/2022	
759509-10-2 ...	Reliance Steel & Aluminu-COMMON STOCK			1,000.000	202,440	202.440	202,440	181,102	0	1,750	0	0	0	0	0	08/08/2022	
76155G-20-6 ...	REVOLUTION LIGHTING TECH-COMMON STOCK			730,815.000	(6,029,634)	0.110	(6,029,634)	36,541	0	0	0	(6,066,175)	0	(6,066,175)	0	05/03/2016	
780287-10-8 ...	ROYAL GOLD INC-COMMON STOCK			800.000	90,176	112.720	90,176	79,177	0	280	0	0	0	0	0	08/04/2022	
858119-10-0 ...	STEEL DYNAMICS INC-COMMON STOCK			5,437.000	531,195	97.700	531,195	396,878	1,849	3,821	0	0	0	0	0	09/29/2022	
86722A-10-3 ...	SunCoke Energy Inc-COMMON STOCK			19,200.000	165,696	8.630	165,696	126,156	0	1,536	0	0	0	0	0	09/08/2022	
87612G-10-1 ...	TARGA RES CORP COMMON STK			37,700.000	2,770,950	73.500	2,770,950	2,396,890	0	24,150	0	0	0	0	0	09/13/2022	
887399-10-3 ...	TIMKENSTEEL CORP-COMMON STOCK			900.000	16,353	18.170	16,353	15,230	0	0	0	0	0	0	0	09/13/2022	
892356-10-6 ...	TRACTOR SUPPLY CO-COMMON STOCK			400.000	89,988	224.970	89,988	79,770	0	736	0	0	0	0	0	07/22/2022	
912909-10-8 ...	UNITED STATES STEEL CORP-COMMON STOCK			11,700.000	293,085	25.050	293,085	298,301	0	585	0	0	0	0	0	08/11/2022	
918390-ZZ-1 ...	V-TEK CAPITAL INC.-COMMON STOCK			8,467.000	1,784,103	210.712	1,784,103	798,958	0	0	0	0	0	0	0	11/06/2020	
91913Y-10-0 ...	VALERO ENERGY CORP-COMMON STOCK			2,000.000	253,720	126.860	253,720	212,765	0	3,920	0	0	0	0	0	07/21/2022	
958669-10-3 ...	Western Midstream Partne-COMMON STOCK			216,703.000	5,818,476	26.850	5,818,476	5,626,296	0	174,883	0	0	0	0	0	11/16/2022	
960413-10-2 ...	WESTLAKE CHEMICAL CORP-COMMON STOCK			1,600.000	164,064	102.540	164,064	155,893	0	571	0	0	0	0	0	09/13/2022	
962166-10-4 ...	Weyerhaeuser Co-COMMON STOCK			3,400.000	105,400	31.000	105,400	116,034	0	1,224	0	0	0	0	0	07/25/2022	
969457-10-0 ...	WILLIAMS COS INC COMMON STK			24,900.000	819,210	32.900	819,210	785,638	0	21,165	0	0	0	0	0	07/27/2022	
008474-10-8 ...	Agnico Eagle Mines Ltd-COMMON STOCK			2,400.000	124,776	51.990	124,776	108,801	0	1,776	0	0	0	0	0	07/29/2022	
067901-10-8 ...	Barrick Gold Corp-COMMON STOCK			12,400.000	213,032	17.180	213,032	204,360	0	3,968	0	0	0	0	0	08/05/2022	
136385-10-1 ...	CANADIAN NATURAL RESOURC-COMMON STOCK			4,200.000	233,226	55.530	233,226	219,293	2,634	0	0	0	0	0	0	07/28/2022	
351858-10-5 ...	Franco-Nevada Corp-COMMON STOCK			400.000	54,592	136.480	54,592	49,942	0	256	0	0	0	0	0	07/19/2022	
67077M-10-8 ...	NUTRIEN LTD-COMMON STOCK			8,000.000	584,240	73.030	584,240	686,672	3,840	7,104	0	0	0	0	0	09/16/2022	
867224-10-7 ...	SUNCOR ENERGY INC-COMMON STOCK			6,400.000	203,072	31.730	203,072	207,570	0	0	0	0	0	0	0	07/21/2022	
878742-20-4 ...	TECK RESOURCES LTD-COMMON STOCK			27,100.000	1,024,922	37.820	1,024,922	855,524	3,388	4,869	0	0	0	0	0	09/16/2022	
98462Y-10-0 ...	Yamana Gold Inc-COMMON STOCK			24,200.000	134,310	5.550	134,310	118,959	726	1,652	0	0	0	0	0	08/05/2022	
03485P-30-0 ...	Anglo American PLC-ADR	C.....		9,200.000	180,412	19.610	180,412	149,408	0	5,557	0	0	0	0	0	07/22/2022	
03938L-20-3 ...	ArcelorMittal-ADR	C.....		4,800.000	125,856	26.220	125,856	113,127	0	0	0	0	0	0	0	07/22/2022	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 2 - SECTION 2

Showing All COMMON STOCKS Owned December 31 of Current Year

1	2	Codes		5	6	Fair Value		9	Dividends			Change in Book/Adjusted Carrying Value				17	18
		3	4			7	8		10	11	12	13	14	15	16		
CUSIP Identi- fication	Description	Code	For- eign	Number of Shares	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (13 - 14)	Total Foreign Exchange Change in Book/Adjusted Carrying Value	Date Acquired	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol
088606-10-8 ...	BHP Billiton Ltd-ADR	C.....		9,000,000	558,450	62.050	558,450	473,379	0	13,940	0	0	0	0	0	09/14/2022	
373737-10-5 ...	Gerdau SA-ADR	C.....		26,400,000	146,256	5.540	146,256	116,170	0	14,014	0	0	0	0	0	07/29/2022	
767204-10-0 ...	RIO TINTO PLC-ADR	C.....		8,200,000	583,840	71.200	583,840	473,693	0	9,594	0	0	0	0	0	09/14/2022	
82575P-10-7 ...	Sibanye Stillwater Ltd-ADR	C.....		5,600,000	59,696	10.660	59,696	58,673	0	1,391	0	0	0	0	0	06/28/2022	
833635-10-5 ...	Sociedad Quimica y Miner-ADR	C.....		3,700,000	295,408	79.840	295,408	362,851	0	11,609	0	0	0	0	0	09/08/2022	
91912E-10-5 ...	VALE SA-ADR	C.....		7,800,000	132,366	16.970	132,366	106,701	0	5,009	0	0	0	0	0	07/29/2022	
G16962-10-5 ...	Bunge Ltd-COMMON STOCK	C.....		2,400,000	239,448	99.770	239,448	217,996	0	0	0	0	0	0	0	07/27/2022	
G79441-10-4 ...	SeaCo Ltd-COMMON STOCK	C.....		1,043,750,000	104	1.000	104	0	0	0	0	0	0	0	0	02/12/2009	
G9456A-10-0 ...	Golar LNG Ltd-COMMON STOCK	C.....		9,500,000	216,505	22.790	216,505	257,443	0	0	0	0	0	0	0	09/15/2022	
M53213-10-0 ...	ICL Group Ltd-COMMON STOCK	C.....		25,000,000	182,750	7.310	182,750	227,186	0	0	0	0	0	0	0	07/26/2022	
5019999999. Subtotal - Common Stock - Industrial and Miscellaneous (Unaffiliated) Publicly Traded					113,553,887	XXX	113,553,887	106,428,031	37,949	1,974,095	0	(7,864,695)	13,718,055	(21,582,750)	0	XXX	XXX
009522-ZB-2 ...	AIRWAY THERAPEUTICS INC (SAFE)	R.....		500,000,000	500,000	1.000	500,000	500,000	0	0	0	0	0	0	0	03/15/2021	
081543-ZB-9 ...	BENCHMARK ACQUISITION CO	R.....		400,000	0	1.000	0	0	0	0	0	0	0	0	0	02/13/2007	
088555-ZB-6 ...	BIOTELLECT \$6.78 6/29/2025	R.....		294,985,000	662,241	2.925	662,241	0	0	0	0	0	0	0	0	06/30/2015	
08888Z-13-6 ...	BIOTELLECT \$.01 6/26/2027	R.....		116,726,000	338,054	6.130	338,054	80,541	0	0	0	0	0	0	0	08/25/2017	
130540-ZZ-3 ...	CALIFORNIA POLLUTION CONTROL FINANCING A	R.....		15,316,000	1,006,597	65.722	1,006,597	168,476	0	0	0	0	0	0	0	11/23/2020	
133999-ZA-3 ...	CGL HOLDINGS - VI CLASS A Common Stock	R.....		5,515,590	19,371,000	3,512.045	19,371,000	5,515,225	0	0	0	0	0	0	0	06/27/2019	
133999-ZB-1 ...	CGL HOLDINGS - VI CLASS B Common Stock	R.....		983,000	3,334,000	3,391.658	3,334,000	983,401	0	0	0	0	0	0	0	06/27/2019	
133999-ZZ-8 ...	CGL HOLDINGS - II CORPORATION Common Sto	R.....		8,050,000	29,035,000	3,606.832	29,035,000	8,050,000	0	0	0	0	0	0	0	04/21/2015	
23359*-10-9 ...	DTV AMERICA CORPORATION	R.....		1,333,333,000	(333,333)	1.000	(333,333)	1,333,333	0	0	0	0	0	0	0	06/30/2015	
237200-ZZ-6 ...	DataLink Project Connect	R.....		1,875,000,000	2,812,500	1.500	2,812,500	1,875,000	0	0	0	0	0	0	0	11/23/2020	
313360-ZZ-5 ...	FEDERAL HOME LOAN BANK CINCINNATI-R	R.....		482,623,000	48,262,300	100.000	48,262,300	48,262,300	748,000	2,055,486	0	0	0	0	0	02/27/2020	
404129-ZB-7 ...	HC2 BROADCASTING \$130 08/07/2024	R.....		12,495,000	1,250,312	100.065	1,250,312	754,073	0	0	0	0	0	0	0	10/21/2021	
404129-ZC-5 ...	HC2 BROADCASTING HOLDINGS INC	R.....		12,245,000	1,225,418	100.075	1,225,418	1,836,750	0	0	0	0	0	0	0	08/07/2018	
404129-ZD-3 ...	HC2 BROADCASTING \$130 10/24/2025	R.....		30,000,000	3,001,950	100.065	3,001,950	2,092,500	0	0	0	0	0	0	0	10/21/2021	
404129-ZO-9 ...	HC2 Broadcasting \$130 08/31/2026	R.....		45,000,000	1,161,900	25.820	1,161,900	3,384,450	0	0	0	0	0	0	0	10/21/2021	
45166Z-ZA-1 ...	IDEAL IMPLANTS 5.50 10/16/2023	R.....		276,137,000	(76,870)	1.000	(76,870)	0	0	0	0	76,870	597,851	(520,981)	0	10/20/2020	
462651-ZZ-6 ...	IRACORE INTERNATIONAL	R.....		1,176,000	359,565	518.753	359,565	237,552	0	0	0	0	0	0	0	04/11/2017	
477700-ZA-9 ...	JOBSON MEDICAL LLC - LP Shares	R.....		133,349,910	0	0.000	0	0	0	0	0	0	0	0	0	03/20/2012	
50118Z-MM-5 ...	KUDU INVESTMENT MANAGEMENT, LLC - Common	R.....		502,982,700	6,327,532	12.580	6,327,532	6,408,000	0	898,844	0	0	0	0	0	06/30/2022	
63733Z-ZZ-0 ...	NATIONAL REALTY	R.....		6,000,000	7,082,088	1,180.348	7,082,088	6,000,000	0	0	0	0	0	0	0	12/09/2020	
704881-SS-1 ...	Policy Services Company LLC Warrants Cla	R.....		477,000	0	0.000	0	0	0	0	0	0	0	0	0	01/31/2022	
704881-TT-8 ...	Policy Services Company LLC Warrants Cla	R.....		186,000	0	0.000	0	0	0	0	0	0	0	0	0	01/31/2022	
704881-UU-3 ...	Policy Services Company LLC Warrants Cla	R.....		1,807,000	0	0.000	0	2	0	0	0	0	0	0	0	01/31/2022	
704881-WW-7 ...	Policy Services Company LLC Warrants Cla	R.....		5,355,000	0	1.000	0	5	0	0	0	0	0	0	0	01/31/2022	
714239-ZA-1 ...	PERMIAN HOLDINGS INC.	R.....		28,050,000	(70,125)	1.000	(70,125)	0	0	0	0	0	0	0	0	11/01/2016	
715999-ZZ-4 ...	PHILADEPHIA ENERGY CLASS A	R.....		82,707,000	(703,010)	1.000	(703,010)	0	0	0	0	0	0	0	0	08/07/2018	
745999-ZZ-8 ...	Quick Med Holdings LLC	R.....		3,500,000,000	3,675,000	1.050	3,675,000	3,502,392	0	0	0	0	0	0	0	01/01/2019	
749999-ZA-9 ...	QUIBI LLC CLASS C	R.....		270,270,270	(500,000)	1.000	(500,000)	0	0	0	0	0	0	0	0	03/30/2020	
749999-ZZ-4 ...	Quibi LLC Class C	R.....		2,360,279,440	(1,534,183)	1.000	(1,534,182)	826,090	0	0	0	0	0	0	0	04/22/2020	
828166-ZZ-4 ...	Silac Inc Common Stock	R.....		14,224,829,000	12,723,229	0.894	12,723,229	7,800,000	0	0	0	4,923,229	0	4,923,229	0	11/01/2019	
87222Z-ZZ-0 ...	TS OPCO HOLDINGS LLC	R.....		5,300,810	7,967,117	1,503.000	7,967,117	5,452,117	0	0	0	2,515,000	0	2,515,000	0	11/09/2020	
09069Z-ZE-4 ...	Biowish Tech Intl Warrants	R.....	C.....	48,000,000	1,439	0.030	1,440	10,080	0	0	0	8,640	0	8,640	0	05/15/2020	
13499Z-ZA-4 ...	CRANEMERE UK HOLDINGS IV LIMITED - Votin	R.....	D.....	3,677,808,000	10,475,000	2.848	10,475,000	4,515,980	0	0	0	(5,959,020)	0	(5,959,020)	0	12/29/2020	
13499Z-ZB-2 ...	CRANEMERE UK HOLDINGS IV LIMITED - Non V	R.....	D.....	3,677,808,000	10,475,000	2.848	10,475,000	4,515,980	0	0	0	(2,829,594)	0	(2,829,594)	0	12/29/2020	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 2 - SECTION 2

Showing All COMMON STOCKS Owned December 31 of Current Year

1	2	Codes		5	6	Fair Value		9	Dividends			Change in Book/Adjusted Carrying Value				17	18
		3	4			7	8		10	11	12	13	14	15	16		
CUSIP Identi- fication	Description	Code	For- eign	Number of Shares	Book/ Adjusted Carrying Value	Rate Per Share Used to Obtain Fair Value	Fair Value	Actual Cost	Declared but Unpaid	Amount Received During Year	Nonadmitted Declared But Unpaid	Unrealized Valuation Increase/ (Decrease)	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in Book/Adjusted Carrying Value (13 - 14)	Total Foreign Exchange Change in Book/Adjusted Carrying Value	Date Acquired	NAIC Design- ation, NAIC Design- ation Modifier and SVO Admini- strative Symbol
212015-10-1 ...	CONTL RES INC/OK			0.000	0	0.000	0	0	0	950	0	0	0	0	0	12/29/2022 ..	
002125-20-2 ...	CAN NATURAL RES			0.000	0	1.000	0	0	0	9,405	0	(13,934)	0	(13,934)	0	12/29/2022 ..	
002478-90-6 ...	ENBRIDGE INC			0.000	0	0.000	0	0	0	5,389	0	0	0	0	0	12/29/2022 ..	
002788-71-3 ...	BUNGE LTD			0.000	0	1.000	0	0	0	3,000	0	(21,452)	0	(21,452)	0	12/29/2022 ..	
682680-10-3 ...	ONEOK INC			0.000	0	1.000	0	0	0	30,169	0	(21,872)	0	(21,872)	0	12/29/2022 ..	
697900-10-8 ...	PAN AMER SILVER			0.000	0	0.000	0	0	0	262	0	1	0	1	0	12/29/2022 ..	
822634-10-1 ...	SHELL MIDSTREAM			0.000	0	0.000	0	0	0	8,872	0	0	0	0	0	12/29/2022 ..	
878078-10-7 ...	TC ENERGY CORP			0.000	0	0.000	0	0	0	180	0	0	0	0	0	12/29/2022 ..	
B02026-7#-0 ...	ICL GROUP LTD			0.000	0	1.000	0	0	0	11,823	0	0	0	0	0	12/29/2022 ..	
B3NB0P-5#-0 ...	SUNCOR ENERGY			0.000	0	1.000	0	0	0	3,609	0	0	0	0	0	12/29/2022 ..	
5029999999. Subtotal - Common Stock - Industrial and Miscellaneous (Unaffiliated) Other					167,829,721	XXX	167,829,723	114,104,247	748,000	3,027,989	0	(1,322,132)	597,851	(1,919,983)	0	XXX	XXX
5109999999. Total - Common Stock - Industrial and Miscellaneous (Unaffiliated)					281,383,608	XXX	281,383,610	220,532,278	785,949	5,002,084	0	(9,186,827)	14,315,906	(23,502,733)	0	XXX	XXX
5409999999. Total - Common Stocks - Mutual Funds					0	XXX	0	0	0	0	0	0	0	0	0	XXX	XXX
5609999999. Total - Common Stocks - Unit Investment Trusts					0	XXX	0	0	0	0	0	0	0	0	0	XXX	XXX
5809999999. Total - Common Stocks - Closed-End Funds					0	XXX	0	0	0	0	0	0	0	0	0	XXX	XXX
03612*-10-4 ...	Annuity Investors Life (AILIC) Common St			20,000.000	384,752,913	19,237,646	384,752,913	175,055,121	0	0	0	14,678,283	0	14,678,283	0	11/13/1996 ..	
56418@-10-8 ...	MM ASCEND LIFE INV SVCS LLC Common Stock			100.000	1,002,782	10,027,820	1,002,782	1,271,839	0	0	0	(688,612)	0	(688,612)	0	05/28/2021 ..	
56313@-10-2 ...	Manhattan National Life (MNLIC) Common S			100.000	16,146,282	161,462,820	16,146,282	60,021,217	0	0	0	(1,946,376)	0	(1,946,376)	0	09/30/2008 ..	
5929999999. Subtotal - Common Stock - Parent, Subsidiaries and Affiliates Other					401,901,977	XXX	401,901,977	236,348,177	0	0	0	12,043,295	0	12,043,295	0	XXX	XXX
5979999999. Total - Common Stocks - Parent, Subsidiaries and Affiliates					401,901,977	XXX	401,901,977	236,348,177	0	0	0	12,043,295	0	12,043,295	0	XXX	XXX
5989999999 - Total Common Stocks					683,285,585	XXX	683,285,587	456,880,455	785,949	5,002,084	0	2,856,468	14,315,906	(11,459,438)	0	XXX	XXX
5999999999 - Total Preferred and Common Stocks					868,253,769	XXX	881,611,009	629,530,821	2,385,451	9,282,588	0	(39,905,962)	18,703,720	(58,609,682)	0	XXX	XXX

1. Line Book/Adjusted Carrying Value by NAIC Designation Category Footnote:
Number
1A 1A ..\$ 0 1B ..\$ 0 1C ..\$ 0 1D ..\$ 0 1E ..\$ 0 1F ..\$ 0 1G ..\$ 0
1B 2A ..\$ 0 2B ..\$ 0 2C ..\$ 0
1C 3A ..\$ 0 3B ..\$ 0 3C ..\$ 0
1D 4A ..\$ 0 4B ..\$ 0 4C ..\$ 0
1E 5A ..\$ 0 5B ..\$ 0 5C ..\$ 0
1F 6\$ 0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
313372-JH-#	FHLMC-GNMA-FHG 24 SY		08/31/2022	DIRECT		(237,908)	(8,954)	(9)
313372-JH-4	FHLMC-GNMA-FHG 24 SY		08/31/2022	DIRECT		237,908	0	9
36179X-NF-9	Ginnie Mae II Pool-POOL #MA8490		12/19/2022	NOMURA SECURITIES IN		25,035,156	25,000,000	69,444
38382F-BU-#	Government National Mort-GNR 2020-77 SU		12/31/2022	DIRECT		(2,555,539)	(11,357,950)	(17,026)
38382F-BU-7	Government National Mort-GNR 2020-77 SU		12/31/2022	DIRECT		2,555,539	0	17,026
38382F-BW-#	Government National Mort-GNR 2020-77 SQ		12/31/2022	DIRECT		(2,297,920)	(13,130,970)	(19,520)
38382F-BW-3	Government National Mort-GNR 2020-77 SQ		12/31/2022	DIRECT		2,297,920	0	19,520
0109999999. Subtotal - Bonds - U.S. Governments						25,035,156	502,126	69,444
085209-AG-9	Bermuda Government Inter-SENIOR UNSECURE	D.	03/31/2022	HSBC SECURITIES INC	1,080,000	997,920	1,080,000	3,135
30216J-AE-5	Export-Import Bank of In-SENIOR UNSECURE	D.	04/01/2022	GOLDMAN SACHS INTERN		736,416	785,000	5,669
445545-AF-3	HUNGARY-SR UNSECURED	D.	03/31/2022	CITIGROUP GLOBAL MAR		743,631	510,000	540
465410-BY-3	Republic of Italy Govern-SENIOR UNSECURE	D.	03/31/2022	HSBC SECURITIES INC		1,482,000	1,560,000	20,805
698299-AW-4	Panama Government Intern-SENIOR UNSECURE	D.	03/31/2022	SANTANDER INVESTMENT		744,000	600,000	7,593
698299-BF-0	Panama Government Intern-SENIOR UNSECURE	D.	03/31/2022	GOLDMAN		1,049,580	1,020,000	1,866
715638-DF-6	Peruvian Government Inte-SENIOR UNSECURE	D.	03/31/2022	BARCLAYS CAPITAL INC		891,966	940,000	5,159
715638-DU-3	Peruvian Government Inte-SENIOR UNSECURE	D.	03/31/2022	BARCLAYS CAPITAL INC		885,480	940,000	11,907
91087B-AK-6	Mexico Government Intern-SENIOR UNSECURE	D.	03/31/2022	SANTANDER INVESTMENT		1,666,398	1,570,000	32,523
917288-BA-9	REPUBLICA ORIENT URUGUAY-SENIOR UNSECURE	D.	03/31/2022	JEFFERIESLLC		987,965	710,000	12,270
0309999999. Subtotal - Bonds - All Other Governments						10,185,356	9,715,000	101,467
3133KP-Q2-7	Freddie Mac Pool-FR RA7673		12/19/2022	NOMURA SECURITIES IN		23,811,693	24,270,558	60,676
783186-UV-9	Rutgers The State Univ-REVENUE BONDS		03/03/2022	CITIGROUP GLOBAL MAR		3,516,240	4,000,000	37,534
0909999999. Subtotal - Bonds - U.S. Special Revenues						27,327,933	28,270,558	98,210
00110X-AD-6	AFN ABSPROPO01 LLC-SERIES 2021-1A CLASS		03/09/2022	CREDIT SUISSE SECURI		2,938,359	3,000,000	6,300
00206R-JC-7	AT&T Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		34,382,660	26,000,000	305,139
00206R-KF-8	AT&T Inc-SENIOR UNSECURED		03/16/2022	VARIOUS		14,476,430	17,500,000	79,965
00206R-KJ-0	AT&T Inc-SENIOR UNSECURED		03/16/2022	GOLDMAN		13,049,700	15,000,000	4,375
00206R-IM-1	AT&T Inc-SENIOR UNSECURED		01/24/2022	VARIOUS		14,209,346	15,040,000	57,879
002824-BH-2	ABBOTT LABORATORIES-SENIOR UNSECURED		01/20/2022	GOLDMAN		13,105,800	10,000,000	73,500
00287Y-CY-3	AbbVie Inc-SENIOR UNSECURED		01/20/2022	U. S. BANCORP		11,538,700	10,000,000	163,042
00440E-AH-0	CHUBB INA HOLDINGS INC-SENIOR UNSECURED		03/03/2022	DAIWA SECURITIES AIE		2,537,724	1,837,000	38,291
00751Y-AE-6	Advance Auto Parts Inc-SENIOR UNSECURED		07/26/2022	VARIOUS		14,684,350	15,000,000	228,042
00751Y-AG-1	Advance Auto Parts Inc-SENIOR UNSECURED		03/23/2022	BOFAMLSEC		14,920,415	15,500,000	30,674
007589-AC-8	Advocate Health & Hospit-SENIOR UNSECURE		03/16/2022	JP MORGAN SECURITIES		4,731,650	5,000,000	71,974
00834H-10-4	Affirm Asset Securitizat-2022-X1 CERT		02/04/2022	BARCLAYS CAPITAL INC		5,000,006	66,845	0
00834W-AA-9	Affirm Asset Securitizat-AFFRM 2022-A A		07/27/2022	VARIOUS		20,968,698	21,000,000	1,672
00834W-AC-5	Affirm Asset Securitizat-AFFRM 2022-A C		04/27/2022	BARCLAYS CAPITAL INC		7,998,268	8,000,000	0
00834W-AF-8	Affirm Asset Securitizat-AFFRM 2022-A 1A		09/08/2022	BARCLAYS CAPITAL INC		4,884,010	5,000,000	0
00846U-AN-1	Agilent Technologies Inc-SENIOR UNSECURE		03/04/2022	CITIGROUP GLOBAL MAR		5,299,734	5,651,000	63,542
008513-AA-1	Agree LP-SENIOR UNSECURED		07/26/2022	VARIOUS		21,941,622	23,525,000	214,090
008513-AB-9	Agree LP-SENIOR UNSECURED		11/04/2022	U. S. BANCORP		79,664	100,000	794
008513-AC-7	Agree LP-SENIOR UNSECURED		01/19/2022	MORGAN		9,480,996	9,910,000	25,766
00914A-AF-9	Air Lease Corp-SENIOR UNSECURED		01/20/2022	CREDIT SUISSE SECURI		22,980,520	22,939,000	253,540
00914A-AK-8	Air Lease Corp-SENIOR UNSECURED		02/25/2022	WELLS FARGO		8,601,570	9,000,000	70,313
00914A-AT-9	Air Lease Corp-SENIOR UNSECURED		12/05/2022	VARIOUS		10,003,921	10,000,000	3,250
010392-FJ-2	Alabama Power Co-SENIOR UNSECURED		01/20/2022	FIRST TENNESSEE		5,435,709	5,003,000	28,357
012873-AH-8	Ovintiv Inc-SENIOR UNSECURED		07/22/2022	GOLDMAN		11,525,400	10,000,000	295,660
012873-AK-1	Encana Corp-SENIOR UNSECURED		01/20/2022	GOLDMAN		3,890,580	3,000,000	51,010
015271-AY-5	Alexandria Real Estate E-SENIOR UNSECURE		03/22/2022	FTS		4,652,800	5,000,000	15,569
023135-BT-2	Amazon.com Inc-SENIOR UNSECURED		01/19/2022	BARCLAYS CAPITAL INC		8,983,800	10,000,000	33,333
023135-BX-3	Amazon.com Inc-SENIOR UNSECURED		11/22/2022	MORGAN		4,442,150	5,000,000	1,806
023135-CA-2	Amazon.com Inc-SENIOR UNSECURED		01/20/2022	WELLS FARGO		9,849,200	10,000,000	57,500
023135-CN-4	Amazon.com Inc-SENIOR UNSECURED		11/29/2022	JP MORGAN SECURITIES		9,999,400	10,000,000	0
02344A-AA-6	Amcor Flexibles North Am-SENIOR UNSECURE		03/10/2022	BARCLAYS CAPITAL INC		14,656,091	15,621,000	127,229
023771-S5-8	American Airlines Inc-FIRST LIEN		02/18/2022	DEUTSCHE BANK SECURI		2,407,500	2,000,000	24,806
02666T-AA-5	American Homes 4 Rent LP-SENIOR UNSECURE		12/05/2022	U. S. BANCORP		1,564,134	1,668,000	22,055
02666T-AB-3	American Homes 4 Rent LP-SENIOR UNSECURE		12/05/2022	VARIOUS		9,802,732	10,186,000	155,280

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
02666T-AE-7	American Homes 4 Rent LP-SENIOR UNSECURE		..03/31/2022	VARIOUS		40,022,590	41,000,000	0
03073E-AT-2	AmerisourceBergen Corp-SENIOR UNSECURED		..01/24/2022	VARIOUS		29,495,500	30,000,000	288,750
031162-CR-9	Amgen Inc-SENIOR UNSECURED		..02/25/2022	VARIOUS		7,290,982	8,000,000	6,118
032177-AJ-6	Amsted Industries Inc-SENIOR UNSECURED		..06/08/2022	BOFAMLSEC		1,790,000	2,000,000	6,424
032654-AN-5	Analog Devices Inc-SENIOR UNSECURED		..04/25/2022	JP MORGAN SECURITIES		15,072,750	15,000,000	207,083
032654-AW-5	Analog Devices Inc-SENIOR UNSECURED		..01/18/2022	VARIOUS		14,440,856	15,000,000	122,500
03464B-AA-6	Angel Oak Mortgage Trust-AOMT 2022-1 A1		..02/08/2022	BARCLAYS CAPITAL INC		6,999,893	7,000,000	22,408
03464B-AB-4	Angel Oak Mortgage Trust-AOMT 2022-1 A2		..02/08/2022	BARCLAYS CAPITAL INC		19,999,806	20,000,000	69,711
03464B-AC-2	Angel Oak Mortgage Trust-AOMT 2022-1 A3		..02/08/2022	BARCLAYS CAPITAL INC		19,999,672	20,000,000	73,111
03464P-AA-5	Angel Oak Mortgage Trust-AOMT 2022-2 A1		..03/10/2022	MORGAN		24,912,070	25,000,000	102,453
03464P-AB-3	Angel Oak Mortgage Trust-AOMT 2022-2 A2		..03/10/2022	MORGAN		14,976,833	15,000,000	68,970
03464P-AC-1	Angel Oak Mortgage Trust-AOMT 2022-2 A3		..03/10/2022	MORGAN		14,962,286	15,000,000	70,840
03464T-AA-7	Angel Oak Mortgage Trust-AOMT 2022-3 A1		..05/05/2022	GOLDMAN		11,871,546	12,000,000	52,000
03464T-AB-5	Angel Oak Mortgage Trust-AOMT 2022-3 A2		..05/05/2022	GOLDMAN		7,829,318	8,000,000	36,466
035229-CQ-4	ANHEUSER-BUSCH COS LLC-DEBENTURE		..03/10/2022	JP MORGAN SECURITIES		8,128,904	6,741,000	65,734
03690A-AF-3	Antero Midstream Partner-SENIOR UNSECURE		..02/22/2022	VARIOUS		3,031,689	3,000,000	18,448
03765H-AF-8	Apollo Management Holdin-SENIOR UNSECURE		..03/29/2022	JP MORGAN SECURITIES		11,554,320	12,424,000	106,087
037833-BY-5	APPLE INC-SENIOR UNSECURED		..11/29/2022	VARIOUS		12,070,350	12,500,000	107,882
03842V-AC-1	Aqua Finance Trust 2021--AQFIT 2021-A C		..03/04/2022	CREDIT SUISSE SECURI		6,052,109	6,500,000	11,906
03882L-AS-9	Arbor Multifamily Mortga-AMMST 2022-MF-4		..02/08/2022	JP MORGAN SECURITIES		9,830,130	10,000,000	11,893
04015K-AB-6	Ares Finance Co II LLC-SENIOR UNSECURED		..03/30/2022	VARIOUS		6,870,527	7,050,000	54,207
04018V-AA-1	ARES FINANCE CO-SUBORDINATED		..02/25/2022	GOLDMAN		1,801,438	1,850,000	12,931
04273W-AC-5	Arrow Electronics Inc-SENIOR UNSECURED		..01/20/2022	GOLDMAN		19,705,300	20,000,000	83,583
042855-AB-2	Arroyo Mortgage Trust 20-ARRW 2022-1 A2		..02/09/2022	CSAG		14,999,936	15,000,000	60,417
042855-AC-0	Arroyo Mortgage Trust 20-ARRW 2022-1 A3		..02/09/2022	CSAG		4,932,381	5,000,000	20,278
04285E-AC-1	Arroyo Mortgage Trust 20-ARRW 2022-2 A2		..07/07/2022	CREDIT SUISSE SECURI		5,034,475	5,200,000	30,030
04285E-AD-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A3		..07/07/2022	CREDIT SUISSE SECURI		4,984,434	5,200,000	30,030
04285E-AE-7	Arroyo Mortgage Trust 20-ARRW 2022-2 M1		..07/08/2022	CREDIT SUISSE SECURI		1,501,027	1,694,000	9,783
04285E-AM-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A1		..07/07/2022	CREDIT SUISSE SECURI		4,939,537	5,000,000	28,875
043671-AA-4	Aseko Inc-FIRST LIEN		..05/26/2022	GUGGENHEIM		7,440,000	7,440,000	0
045054-AL-7	Ashtead Capital Inc-SENIOR UNSECURED		..12/05/2022	VARIOUS		4,864,731	5,329,000	22,350
04685A-2V-2	Athene Global Funding-SECURED		..11/15/2022	GOLDMAN		4,232,550	5,000,000	18,403
04685A-2Y-6	Athene Global Funding-SECURED		..02/25/2022	VARIOUS		9,116,736	9,815,000	61,216
04685A-2Z-3	Athene Global Funding-SECURED		..04/25/2022	JP MORGAN SECURITIES		12,134,477	13,446,000	70,869
05329W-AS-1	AutoNation Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		9,407,900	10,000,000	114,000
05351K-AB-5	Avant Credit Card Master-AVCCT 2021-1A B		..01/20/2022	JP MORGAN SECURITIES		2,206,582	2,250,000	911
05351K-BH-5	Avant Credit Card Master AVCCMT Series 2		..09/20/2022	DIRECT		10,272,918	10,420,000	0
05351K-B*-9	Avant Credit Card Master AVCCMT Series 2		..09/20/2022	DIRECT		15,300,616	15,380,000	0
05351K-BH-7	Avant Credit Card Master AVCCMT Series 2		..09/20/2022	DIRECT		8,167,382	8,200,000	0
05359A-AG-8	Aventura Mall Trust-AVMT 2018-AVM C		..07/25/2022	BOFAMLSEC		9,246,875	10,000,000	30,690
05359A-AJ-2	Aventura Mall Trust-SERIES 2018 AVM CLAS		..07/15/2022	BOFAMLSEC		13,340,625	15,000,000	31,871
05377R-EK-6	Avis Budget Rental Car F-AESOP 2021-1A C		..03/02/2022	MITSUBISHI UFJ SEC I		4,503,694	4,785,000	3,964
05377R-ET-7	Avis Budget Rental Car F-AESOP 2021-2A C		..08/18/2022	CITIGROUP GLOBAL MAR		6,029,023	7,000,000	914
05377R-FB-5	Avis Budget Rental Car F-AESOP 2022-1A B		..04/07/2022	BARCLAYS CAPITAL INC		4,999,021	5,000,000	0
05377R-FR-0	Avis Budget Rental Car F-AESOP 2022-4A C		..07/12/2022	JP MORGAN SECURITIES		12,498,723	12,500,000	0
05377R-FV-1	Avis Budget Rental Car F-AESOP 2022-5A A		..11/18/2022	BOFAMLSEC		4,999,109	5,000,000	0
05377R-FW-9	Avis Budget Rental Car F-AESOP 2022-5A B		..11/18/2022	BOFAMLSEC		3,998,972	4,000,000	0
053807-AU-7	Avnet Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		9,704,300	10,000,000	54,167
054561-AJ-4	AXA Equitable Holdings I-SENIOR UNSECURE		..11/15/2022	GOLDMAN		3,763,306	3,962,000	12,926
05465C-AB-6	Axos Financial Inc-SUBORDINATED		..02/16/2022	STIFEL NICOLAUS		40,000,000	40,000,000	0
054976-AL-9	BBOMS Trust-BBOMS 2022-C17 C		..08/16/2022	BARCLAYS CAPITAL INC		4,489,610	4,500,000	4,769
054976-AR-6	BBOMS Trust-BBOMS 2022-C17 D		..08/16/2022	BARCLAYS CAPITAL INC		5,528,951	8,169,000	3,971
05550M-AC-8	Barclays Commercial Mort-BBOMS 2019-C3 D		..06/07/2022	PERFTRUSTOP		4,501,925	5,719,000	3,813
05552F-AE-7	BBOMS Trust-BBOMS 2022-C15 D		..03/23/2022	BARCLAYS CAPITAL INC		4,936,107	6,382,000	5,318
05552F-AG-2	BBOMS Trust-BBOMS 2022-C15 E		..03/23/2022	BARCLAYS CAPITAL INC		7,100,020	10,000,000	8,333

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
05552F-BG-1	BBOMS Trust-BBOMS 2022-C15 C		03/23/2022	BARCLAYS CAPITAL INC		19,531,500	20,000,000	25,543
05552X-AJ-7	BBOMS Mortgage Trust 202-BBOMS 2021-C12		06/08/2022	PERFTRUSTCP		9,121,875	14,000,000	8,750
05552Y-AL-0	BBOMS Mortgage Trust 202-BBOMS 2022-C16		08/05/2022	BOFAMLSEC		6,903,516	7,500,000	7,667
05552Y-AX-4	BBOMS Mortgage Trust 202-BBOMS 2022-C16		06/07/2022	BARCLAYS CAPITAL INC		12,988,350	19,472,000	36,510
05552Y-AZ-9	BBOMS Mortgage Trust 202-BBOMS 2022-C16		06/07/2022	BARCLAYS CAPITAL INC		9,065,491	14,745,000	27,647
05553D-AB-7	BHG Securitization Trust-BHG 2022-B B		05/25/2022	CREDIT SUISSE SECURI		9,999,741	10,000,000	0
05553D-AD-3	BHG Securitization Trust-BHG 2022-B D		05/25/2022	CREDIT SUISSE SECURI		4,854,499	5,000,000	0
05553L-AA-1	BCPE Ulysses Intermediat-USLBMH 7 3/4 04		07/07/2022	CITIGROUP GLOBAL MAR		344,720	556,000	11,969
05591U-AA-5	BSREP Commercial Mortgag-BSREP 2021-DC A		11/30/2022	JP MORGAN SECURITIES		5,600,250	5,895,000	13,434
05602N-AK-6	BMO 2022-C2 C-BMO 2022-C2 C		06/28/2022	BMO CAPITAL MARKETS		19,265,945	21,572,000	32,786
05605N-AA-5	BX Commercial Mortgage T-BX 2020-VIV2 C		07/12/2022	BAY VIEW FINANCIAL		41,934,966	49,680,000	70,720
05606D-AC-2	BX TRUST - BX 2022-PSB B-BX 2022-PSB B		08/04/2022	BOFAMLSEC		4,966,731	5,000,000	0
05608R-AL-9	BX Trust 2021-ARIA-BX 2021-ARIA E		12/20/2022	VARIOUS		19,911,338	21,830,000	19,653
05608W-AG-9	BX Commercial Mortgage T-BX 2021-SOAR B		11/15/2022	JP MORGAN SECURITIES		2,625,122	2,756,122	727
05609K-AL-3	BX Commercial Mortgage T-BX 2021-XL2 F		06/15/2022	PAYUP		0	0	0
05609M-BJ-3	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 D		02/10/2022	BMO CAPITAL MARKETS		10,815,577	14,000,000	21,000
05609M-BL-8	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 E		02/10/2022	BMO CAPITAL MARKETS		7,148,792	10,000,000	15,000
05609M-CH-6	BMO 2022-C1 Mortgage Tru-BMO 2022-C1 C		02/10/2022	BMO CAPITAL MARKETS		12,465,874	12,466,000	33,817
05609V-AG-0	BX Commercial Mortgage T-BX 2021-VOLT B		12/15/2022	DEUTSCHE BANK SECURI		8,011,656	8,450,000	4,946
05609V-AL-9	BX Commercial Mortgage T-BX 2021-VOLT D		11/07/2022	DEUTSCHE BANK SECURI		2,800,313	3,000,000	10,546
05682*-AE-4	Bain Capital Holdings LP Senior Notes Se		04/07/2022	DIRECT		7,500,000	7,500,000	0
05682*-AF-1	Bain Capital Holdings LP Senior Notes Se		04/07/2022	DIRECT		20,000,000	20,000,000	0
05723K-AF-7	Baker Hughes a GE Co LLC-SENIOR UNSECURE		01/20/2022	VARIOUS		17,424,011	16,132,000	66,257
05874W-AG-6	Ballyrock CLO 19 Ltd-BALLY 2022-19A B		03/03/2022	MORGAN		7,500,000	7,500,000	0
05874W-AJ-0	Ballyrock CLO 19 Ltd-BALLY 2022-19A C		03/03/2022	MORGAN		18,000,000	18,000,000	0
058931-AT-3	Banc of America Funding -BAFC 2006-3 4A1		01/10/2022	CREDIT SUISSE SECURI		1,375,655	1,408,965	2,926
05949C-PP-5	Banc of America Mortgage-BOAMS 2005-L 4A		04/01/2022	VARIOUS		0	30,389	0
05949T-AX-7	Banc of America Funding -BAFC 2006-1 1A2		01/10/2022	CREDIT SUISSE SECURI		2,022,846	1,853,243	3,848
05950P-AF-0	Banc of America Funding -BAFC 2006-H 2A3		04/01/2022	PAYUP		0	10,452	0
05950T-AC-9	Banc of America Mortgage-BOAMS 2006-B 2A		02/01/2022	PAYUP		0	1,234	0
059523-AX-8	Banc of America Funding -BAFC 2007-5 7A1		02/01/2022	VARIOUS		0	4,417	0
05952G-AT-8	Banc of America Funding -BAFC 2007-D 3A1		09/01/2022	PAYUP		0	8,007	0
05952G-AV-3	Banc of America Funding -BAFC 2007-D 3A3		09/01/2022	PAYUP		(1,732)	6,373	0
05969A-AA-3	Bancorp Bank/The-SENIOR UNSECURED		11/30/2022	PIPERJAFFRAY		9,550,000	10,000,000	101,597
06051G-FM-6	Bank of America Corp-SUBORDINATED		01/21/2022	BARCLAYS CAPITAL INC		10,580,300	10,000,000	3,333
06051G-KC-2	Bank of America Corp-SUBORDINATED		01/18/2022	GOLDMAN		9,313,000	10,000,000	82,044
06051G-KK-4	Bank of America Corp-SENIOR UNSECURED		02/24/2022	MORGAN		9,653,900	10,000,000	19,813
06051G-KL-2	Bank of America Corp-SUBORDINATED		03/03/2022	BOFAMLSEC		36,745,000	36,745,000	0
06051G-LA-5	Bank of America Corp-SENIOR UNSECURED		07/19/2022	BOFAMLSEC		8,000,000	8,000,000	0
06539L-AJ-9	BANK 2018-BNK13-BANK 2018-BN13 D		06/03/2022	VARIOUS		10,313,045	13,850,000	6,925
06539W-AA-4	BANK 2020-BNK25-BANK 2020-BN25 D		06/06/2022	PERFTRUSTCP		3,412,378	4,590,000	2,231
06539W-BG-0	BANK 2020-BNK25-BANK 2020-BN25 C		07/27/2022	WELLS FARGO		2,705,060	3,151,000	8,219
065402-AJ-8	BANK 2019-BNK18-BANK 2019-BN18 D		05/24/2022	PERFTRUSTCP		6,993,544	8,790,000	18,313
06540M-CA-1	BANK 2022-BNK41-BANK 2022-BNK41 C		04/25/2022	MORGAN		10,397,538	11,064,000	4,814
06541K-AJ-7	BANK 2018-BNK12-BANK 2018-BN12 D		05/19/2022	AMHERST SECURITIES		2,282,344	3,000,000	5,500
06541L-AJ-5	Bank-22-BNK40 D SUB		02/25/2022	WELLS FARGO		7,692,512	9,708,000	6,068
06541L-AL-0	Bank-SERIES 22-BNK40 CLASS E		02/25/2022	WELLS FARGO		3,771,361	5,156,000	3,223
06541L-BZ-8	Bank-2022-BNK40 C		02/25/2022	WELLS FARGO		22,025,411	22,870,000	20,050
06541M-CF-9	BANK-BANK 2022-BNK42 C		05/20/2022	BOFAMLSEC		7,556,960	8,000,000	8,394
06541Q-BQ-7	BANK 2022-BNK43-BANK 2022-BNK43 C		09/27/2022	VARIOUS		25,752,670	27,499,000	105,689
06541T-AJ-8	BANK 2020-BNK29-BANK 2020-BN29 D		07/27/2022	WELLS FARGO		2,067,723	2,900,000	5,639
06541U-BE-5	BANK 2020-BNK30-BANK 2020-BN30 MCDE		07/25/2022	BOFAMLSEC		1,245,542	1,575,000	3,319
06654D-AC-1	Banner Health-UNSECURED		03/03/2022	JP MORGAN SECURITIES		9,592,100	10,000,000	58,318
06744D-AA-7	Barclays Mortgage Loan T-BARC 2022-NQM1		08/29/2022	BARCLAYS CAPITAL INC		1,472,002	1,500,000	5,688
06744D-AB-5	Barclays Mortgage Loan T-BARC 2022-NQM1		08/29/2022	BARCLAYS CAPITAL INC		1,443,106	1,500,000	5,688

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
06744D-AC-3	Barclays Mortgage Loan T-BARC 2022-NQM1		..08/29/2022	BARCLAYS CAPITAL INC		4,003,920	4,218,000	15,993
06744D-AD-1	Barclays Mortgage Loan T-BARC 2022-NQM1		..08/29/2022	BARCLAYS CAPITAL INC		3,209,243	3,726,000	14,191
06744Y-AA-1	Barclays Mortgage Loan T-BARC 2022-INV1		..05/16/2022	BARCLAYS CAPITAL INC		14,999,796	15,000,000	89,320
07386X-AH-9	Bear Stearns ALT-A Trust-BALTA 2007-1 21		..06/01/2022	VARIOUS		0	42	0
08161Y-BL-6	Benchmark 2022-B34 Mortg-BMARK 2022-B34		..06/29/2022	VARIOUS		29,196,386	31,000,000	37,375
08163B-BH-3	Benchmark 2020-B22 Mortg-BMARK 2020-B22		..07/20/2022	BARCLAYS CAPITAL INC		766,836	1,000,000	1,573
08163N-AL-9	Benchmark 2022-B32 Mortg-BMARK 2022-B32		..02/01/2022	JP MORGAN SECURITIES		7,712,926	10,000,000	8,333
08163N-AN-5	Benchmark 2022-B32 Mortg-2022-B32		..02/01/2022	JP MORGAN SECURITIES		7,479,312	10,476,000	8,730
08163N-BQ-7	Benchmark 2022-B32 Mortg-BMARK 2022-B32		..02/01/2022	JP MORGAN SECURITIES		19,999,952	20,000,000	28,788
08163P-AL-4	Benchmark 2022-B33 Mortg-BMARK 2022-B33		..07/08/2022	VARIOUS		9,163,678	12,893,000	9,528
08163P-AN-0	Benchmark 2022-B33 Mortg-BMARK 2022-B33		..07/08/2022	VARIOUS		8,662,931	13,051,000	9,651
08163P-BN-9	Benchmark 2022-B33 Mortg-BMARK 2022-B33		..02/24/2022	GOLDMAN		25,819,223	26,680,000	38,764
08163R-BT-2	Benchmark 2022-B35 Mortg-BMARK 2022-B35		..05/04/2022	CITIGROUP GLOBAL MAR		9,908,299	10,000,000	14,037
08163R-BU-9	Benchmark 2022-B35 Mortg-BMARK 2022-B35		..05/04/2022	CITIGROUP GLOBAL MAR		7,257,748	7,500,000	10,528
08860D-AB-9	BHG Securitization Trust-BHG 2022-C B		..09/12/2022	CREDIT SUISSE SECURI		7,499,213	7,500,000	0
08860D-AC-7	BHG Securitization Trust-BHG 2022-C C		..09/12/2022	CREDIT SUISSE SECURI		9,996,527	10,000,000	0
08860D-AD-5	BHG Securitization Trust-BHG 2022-C D		..09/12/2022	CREDIT SUISSE SECURI		3,727,028	3,728,000	0
090572-AQ-1	Bio-Rad Laboratories Inc-SENIOR UNSECURE		..05/23/2022	VARIOUS		36,331,092	36,980,000	95,594
09062X-AH-6	Biogen Inc-SENIOR UNSECURED		..01/24/2022	VARIOUS		19,090,200	20,000,000	102,500
09261B-AH-3	Blackstone Holdings Fina-SENIOR UNSECURE		..03/08/2022	VARIOUS		22,067,260	24,000,000	65,778
09261H-AA-4	Blackstone Private Credi Senior Unsecure		..05/03/2022	BANK OF AMERICA CORP		49,377,000	49,377,000	0
09261H-AB-3	Blackstone Private Credi-SENIOR UNSECURE		..07/08/2022	EXCHANGE OFFER		8,965,371	9,129,000	63,459
09261H-AH-0	Blackstone Private Credi-SENIOR UNSECURE		..08/11/2022	EXCHANGE OFFER		7,459,267	7,500,000	38,677
09261H-AK-3	Blackstone Private Credi-SENIOR UNSECURE		..08/10/2022	EXCHANGE OFFER		4,784,119	5,000,000	65,451
09261X-AG-7	Blackstone Secured Lendi-SENIOR UNSECURE		..06/30/2022	EXCHANGE OFFER		9,987,433	10,000,000	71,250
09581J-AA-4	BLUE OIL FIN LLC-SENIOR UNSECURED		..01/18/2022	GOLDMAN		9,459,500	10,000,000	34,722
097023-CY-9	Boeing Co/The-SENIOR UNSECURED		..01/19/2022	VARIOUS		17,112,450	15,000,000	170,236
10112R-BA-1	Boston Properties LP-SENIOR UNSECURED		..11/15/2022	GOLDMAN		4,616,150	5,000,000	103,750
10112R-BG-8	Boston Properties LP-SENIOR UNSECURED		..11/15/2022	BNY CAPITAL		1,069,380	1,039,000	0
10568K-AA-6	BRAVO Residential Fundin-BRAVO 2022-NQM2		..05/25/2022	BOFAMLSEC		4,249,935	4,250,000	15,634
10568K-AB-4	BRAVO Residential Fundin-BRAVO 2022-NQM2		..05/25/2022	BOFAMLSEC		1,899,970	1,900,000	7,989
10569F-AC-2	BRAVO Residential Fundin-BRAVO 2022-NQM1		..03/15/2022	BARCLAYS CAPITAL INC		13,134,047	13,144,000	68,625
10569J-AB-6	BRAVO Residential Fundin-BRAVO 2022-NQM3		..08/29/2022	BOFAMLSEC		996,047	1,000,000	4,583
10569J-AD-2	BRAVO Residential Fundin-BRAVO 2022-NQM3		..08/29/2022	BOFAMLSEC		3,757,273	4,000,000	18,430
10922N-AG-8	Brighthouse Financial In-SENIOR UNSECURE		..03/23/2022	VARIOUS		35,310,288	31,277,000	497,225
10922N-AH-6	Brighthouse Financial In-SENIOR UNSECURE		..03/10/2022	BARCLAYS CAPITAL INC		2,248,416	2,757,000	33,023
110122-CN-6	Bristol-Myers Squibb Co-SENIOR UNSECURED		..11/22/2022	KEY CAPITAL MARKETS		5,333,495	5,550,000	78,933
110122-CR-7	Bristol-Myers Squibb Co-SENIOR UNSECURED		..01/19/2022	VARIOUS		41,175,400	35,000,000	351,215
11135E-AA-2	Broadstone Net Lease LLC-SENIOR UNSECURE		..03/18/2022	VARIOUS		9,790,148	10,524,000	51,083
11135F-AQ-4	Broadcom Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		10,754,400	10,000,000	74,931
115236-AC-5	Brown & Brown Inc-SENIOR UNSECURED		..01/21/2022	DAIWA SECURITIES AME		4,805,500	5,000,000	42,882
115236-AE-1	Brown & Brown Inc-SENIOR UNSECURED		..05/23/2022	VARIOUS		30,135,700	30,000,000	52,500
11750*-AA-7	Bryan Health (Kearney NE Senior Secured		..04/22/2022	USBANCORPLBR		14,250,000	14,250,000	0
12008R-AP-2	Builders FirstSource Inc-SENIOR UNSECURE		..03/29/2022	SEAPORT GROUP		4,681,250	5,000,000	35,417
120568-BC-3	Bunge Ltd Finance Corp-SENIOR UNSECURED		..05/23/2022	VARIOUS		24,171,000	25,266,000	106,022
12327A-AA-6	Business Jet Securities -BJETS 2022-1A A		..05/05/2022	DEUTSCHE BANK SECURI		9,701,564	10,000,000	0
12477B-AG-9	CAMB Commercial Mortgage-CAMB 2021-CX2 C		..04/27/2022	VARIOUS		3,014,375	3,500,000	7,795
12482H-AJ-3	CAMB 2019-LIFE C		..11/01/2022	JP MORGAN SECURITIES		6,678,438	7,000,000	17,962
1248EP-BT-9	CCO HLDGS LLC/CAP CORP-SENIOR UNSECURED		..02/24/2022	MORGAN		1,004,480	1,000,000	16,656
1248EP-CN-1	CCO Holdings LLC / CCO H-SENIOR UNSECURE		..10/20/2022	VARIOUS		389,122	512,000	10,006
1248EP-CQ-4	CCO Holdings LLC / CCO H-SENIOR UNSECURE		..03/15/2022	BARCLAYS CAPITAL INC		2,748,750	3,000,000	22,958
12510H-AF-7	Capital Automotive Reit-CAUTO 2020-1A A6		..09/02/2022	CREDIT SUISSE SECURI		2,122,204	2,335,802	5,439
12510H-AG-5	CARS-DB4 LP-CAUTO 2020-1A B1		..09/27/2022	CREDIT SUISSE SECURI		1,365,378	1,480,000	1,358
12510H-AM-2	CARS-DB5 LP-CAUTO 2021-1A A3		..06/01/2022	BARCLAYS CAPITAL INC		2,054,998	2,310,000	2,218
12510H-AN-0	Capital Automotive REIT-CAUTO 2021-1A A4		..03/04/2022	CANTOR		12,673,125	13,500,000	23,805

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
12510H-AQ-3	Capital Automotive REIT-CAUTO 2022-1A A2		..07/06/2022 ..	VARIOUS		51,191,357	51,488,750	10,611
12510H-AR-1	Capital Automotive REIT-CAUTO 2022-1A B		..03/08/2022 ..	DIRECT		999,584	1,000,000	0
125270-AD-3	CFMT 2022-EB02 LLC-CFMT 2022-EB02 M2		..04/12/2022 ..	JP MORGAN SECURITIES		12,600,990	12,601,000	0
12530M-AA-3	CF Hippolyta LLC-SORT 2020-1 A1		..11/09/2022 ..	CANTOR		4,790,325	5,486,168	7,469
12530M-AE-5	CF Hippolyta LLC-SORT 2021-1A A1		..11/15/2022 ..	CANTOR		5,736,143	6,706,488	570
12543X-AD-8	CHL Mortgage Pass-Through-CIHL 2006-19 1A		..12/01/2022 ..	PAYUP		0	24	0
12544D-AG-4	CHL Mortgage Pass-Through-CIHL 2007-14 A7		..11/01/2022 ..	VARIOUS		100,023	138,151	299
12545E-AK-2	CHL Mortgage Pass-Through-CIHL 2007-J2 2A		..11/01/2022 ..	VARIOUS		1,627,357	2,949,187	6,390
12546Y-AA-9	CHNGE Mortgage Trust-CHNGE 2022-2 A1		..02/22/2022 ..	CANTOR		52,080,552	52,081,000	125,010
12551S-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-4 A1		..09/20/2022 ..	PERFTRUSTCP		15,678,558	16,000,000	58,667
12551S-AB-2	CHNGE Mortgage Trust 202-CHNGE 2022-4 M1		..09/20/2022 ..	PERFTRUSTCP		7,119,380	7,500,000	32,145
125523-AG-5	Cigna Corp-SENIOR UNSECURED		..11/22/2022 ..	VARIOUS		14,579,209	14,683,000	103,908
12565K-AA-5	CLI Funding VIII LLC-CLIF 2021-1A A		..12/09/2022 ..	CREDIT SUISSE SECURI		2,873,771	3,356,995	3,823
12569C-AB-7	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		..08/19/2022 ..	BARCLAYS CAPITAL INC		4,789,068	4,800,000	17,848
12569C-AC-5	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		..08/19/2022 ..	BARCLAYS CAPITAL INC		9,857,776	10,000,000	37,183
12575A-AE-7	CMFT Net Lease-CIMNL 2021-1 A5		..03/25/2022 ..	CREDIT SUISSE SECURI		7,393,125	8,000,000	5,820
12575A-AF-4	CMFT Net Lease-CIMNL 2021-1 A6		..04/05/2022 ..	CREDIT SUISSE SECURI		4,633,008	5,000,000	8,122
12598E-AD-4	COMM 2020-SBX Mortgage T-COMM 2020-SBX B		..08/10/2022 ..	DEUTSCHE BANK SECURI		4,483,789	5,000,000	2,753
12598E-AD-9	COMM 2020-SBX Mortgage T-COMM 2020-SBX C		..10/13/2022 ..	DEUTSCHE BANK SECURI		4,703,254	5,400,000	4,146
12598E-AH-5	COMM 2020-SBX Mortgage T-COMM 2020-SBX D		..10/13/2022 ..	DEUTSCHE BANK SECURI		2,099,609	2,500,000	2,579
12598R-AA-1	COLT 2021-5 Mortgage Loa-COLT 2021-5 A1		..06/24/2022 ..	CITIGROUP GLOBAL MAR		5,345,628	5,898,624	7,636
126117-AW-0	CNA Financial Corp-SENIOR UNSECURED		..01/21/2022 ..	DAIWA SECURITIES AME		4,728,550	5,000,000	45,556
12621E-AL-7	CNO Financial Group Inc-SENIOR UNSECURED		..12/05/2022 ..	VARIOUS		14,573,606	15,059,000	63,060
126416-AB-2	CSMC 2022-NQM1-CSMC 2022-NQM1 A2		..01/24/2022 ..	CSAG		15,999,742	16,000,000	30,864
126416-AC-0	CSMC 2022-NQM1-CSMC 2022-NQM1 A3		..01/24/2022 ..	CSAG		39,182,313	39,182,450	78,610
12653V-AG-1	Credit Suisse Mortgage C-CSMC 2019-ICE4		..09/28/2022 ..	KEY CAPITAL MARKETS		9,640,625	10,000,000	18,408
12654Y-AJ-8	Century Plaza Towers 201-QPTS 2019-CPT D		..08/11/2022 ..	DEUTSCHE BANK SECURI		8,386,328	10,000,000	10,752
12655T-AG-4	COMM 2019-GC44 Mortgage -COMM 2019-GC44		..06/07/2022 ..	PERFTRUSTCP		4,631,638	6,155,000	3,419
12657N-AA-8	COP Holdco LP / BIP-V Ch-FIRST LIEN		..06/08/2022 ..	BARCLAYS CAPITAL INC		2,763,750	3,000,000	80,208
12659J-AE-7	COLEM 2021-HLNE Mortgage-COLEM 2022-HLNE		..03/01/2022 ..	BARCLAYS CAPITAL INC		6,707,605	7,000,000	6,923
12659J-AJ-6	COLEM 2021-HLNE Mortgage-COLEM 2022-HLNE		..04/05/2022 ..	BARCLAYS CAPITAL INC		19,584,081	22,000,000	17,801
12659Y-AB-0	COLT 2022-3 Mortgage Loa-COLT 2022-3 A2		..03/17/2022 ..	GOLDMAN		14,999,792	15,000,000	38,097
12659Y-AC-8	COLT 2022-3 Mortgage Loa-COLT 2022-3 A3		..03/17/2022 ..	GOLDMAN		11,993,749	12,000,000	31,027
12660B-AB-7	Credit Suisse Mortgage C-CSMC 2022-ATH1		..02/17/2022 ..	CSAG		17,683,033	17,683,300	35,123
12660B-AC-5	Credit Suisse Mortgage C-CSMC 2022-ATH1		..02/17/2022 ..	CSAG		26,286,262	26,286,499	54,573
12661N-AB-0	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3		..04/27/2022 ..	CREDIT SUISSE SECURI		13,172,422	13,388,100	44,411
12661N-AD-6	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3		..04/27/2022 ..	CREDIT SUISSE SECURI		4,804,705	5,000,000	16,586
12661N-AE-4	CREDIT SUISSE MORTGAGE T-CSMC 2022-NQM3		..04/27/2022 ..	CREDIT SUISSE SECURI		4,778,965	5,000,000	16,586
12662P-AD-0	CVR Energy Inc-SENIOR UNSECURED		..07/18/2022 ..	JEFFERIESLLC		1,760,000	2,000,000	49,514
12663G-AA-5	COLT 2022-7 Mortgage Loa-COLT 2022-7 A1		..07/25/2022 ..	BARCLAYS CAPITAL INC		4,999,956	5,000,000	20,074
12663G-AB-3	COLT 2022-7 Mortgage Loa-COLT 2022-7 A2		..07/25/2022 ..	BARCLAYS CAPITAL INC		4,749,991	4,750,000	22,266
12663G-AC-1	COLT 2022-7 Mortgage Loa-COLT 2022-7 A3		..07/25/2022 ..	BARCLAYS CAPITAL INC		2,482,982	2,500,000	12,153
12663G-AD-9	COLT 2022-7 Mortgage Loa-COLT 2022-7 M1		..07/25/2022 ..	BARCLAYS CAPITAL INC		3,209,584	3,400,000	16,657
12664A-AE-9	CSMC 2022-ATH3-CSMC 2022-ATH3 A2		..08/23/2022 ..	CREDIT SUISSE SECURI		6,620,406	6,620,473	25,732
12664A-AF-6	CSMC 2022-ATH3-CSMC 2022-ATH3 A3		..08/23/2022 ..	CREDIT SUISSE SECURI		6,899,981	6,900,000	29,403
12664V-AE-3	CSMC 2022-NQM2 Trust-CSMC 2022-NQM2 A3		..03/24/2022 ..	CSAG		3,826,318	3,933,650	12,675
12665E-AD-2	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 A2		..07/06/2022 ..	CREDIT SUISSE SECURI		4,865,625	5,000,000	24,764
12665E-AF-7	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 M1		..07/07/2022 ..	CREDIT SUISSE SECURI		16,565,576	18,761,250	94,432
12668A-AC-6	Alternative Loan Trust 2-CWALT 2005-IM1		..12/27/2022 ..	PAYUP		0	11,661	0
12668A-XL-4	Alternative Loan Trust 2-CWALT 2005-63 5		..01/01/2022 ..	PAYUP		0	33,791	0
126694-CS-5	CHL Mortgage Pass-Through-CIHL 2005-21 A1		..01/10/2022 ..	CREDIT SUISSE SECURI		3,310,834	4,029,606	8,003
126694-HP-6	CHL Mortgage Pass-Through-CIHL 2005-25 A1		..01/10/2022 ..	CREDIT SUISSE SECURI		968,082	968,737	1,924
126694-LC-0	CHL Mortgage Pass-Through-CIHL 2005-24 A3		..01/10/2022 ..	CREDIT SUISSE SECURI		1,623,748	2,128,359	4,227
12669G-3S-8	CHL Mortgage Pass-Through-CIHL 2005-16 A2		..01/10/2022 ..	CREDIT SUISSE SECURI		1,486,427	1,765,235	3,506
12669G-4K-4	CHL Mortgage Pass-Through-CIHL 2005-J3 1A		..01/10/2022 ..	CREDIT SUISSE SECURI		3,052,175	3,606,136	7,162

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
127097-AE-3	Coterra Energy Inc-SENIOR UNSECURED		12/02/2022	VARIOUS		9,492,650	10,000,000	22,750
12762*-AA-1	CDI Tuscany Intermediate Senior Secured		09/26/2022	RBC CAPITAL MARKETS		7,000,000	7,000,000	.0
134429-BJ-7	Campbell Soup Co-SENIOR UNSECURED		01/20/2022	U. S. BANCORP		9,717,000	10,000,000	59,375
14040H-BG-9	Capital One Financial Co-SENIOR UNSECURE		01/19/2022	CREDIT SUISSE SECURI		7,793,025	7,500,000	110,667
14040H-BK-0	Capital One Financial Co-SUBORDINATED		12/02/2022	RBC CAPITAL MARKETS		4,759,000	5,000,000	66,667
14040H-CG-8	Capital One Financial Co-SUBORDINATED		01/18/2022	GOLDMAN		9,264,100	10,000,000	112,053
14040H-CM-5	Capital One Financial Co-SENIOR UNSECURE		04/25/2022	CREDIT SUISSE SECURI		14,496,900	15,000,000	59,310
14040H-CU-7	Capital One Financial Co-SENIOR UNSECURE		07/26/2022	JP MORGAN SECURITIES		5,005,150	5,000,000	692
142339-AH-3	Carlisle Cos Inc-SENIOR UNSECURED		12/02/2022	MORGAN		6,808,134	7,234,000	3,768
142339-AL-4	Carlisle Cos Inc-SENIOR UNSECURED		03/22/2022	AMHERST SECURITIES		4,334,200	5,000,000	7,028
14318M-AH-2	Carmax Auto Owner Trust -CARMX 2022-3 D		07/12/2022	RBC CAPITAL MARKETS		7,497,647	7,500,000	.0
14445L-AA-5	Carriage Purchaser Inc-SENIOR UNSECURED		11/17/2022	VARIOUS		497,951	661,000	5,205
14575E-AA-3	Cars.com Inc-SENIOR UNSECURED		10/18/2022	GOLDMAN		1,439,833	1,709,000	51,145
14686G-AD-8	Carvana Auto Receivables-CRVNA 2022-N1 C		03/11/2022	CREDIT SUISSE SECURI		11,298,729	11,300,000	.0
14855J-AB-1	Castlelake Aircraft Secu-CLAST 2016-1 A		10/14/2022	BARINGSLLC		871,965	876,132	3,141
14913R-ZH-9	Caterpillar Financial Se-SENIOR UNSECURE		11/29/2022	BOFAMILSEC		8,976,100	10,000,000	4,000
14913R-2Y-2	Caterpillar Financial Se-SENIOR UNSECURE		11/22/2022	JP MORGAN SECURITIES		7,790,016	7,800,000	7,432
14989@-AA-2	CEAMER FINANCE II LLC Senior Secured Not		09/01/2022	GOLDMAN SACHS BANK U		25,000,000	25,000,000	.0
15089Q-AM-6	Celanese US Holdings LLC-SENIOR UNSECURE		12/05/2022	VARIOUS		14,849,955	15,250,000	335,736
15089Q-AN-4	Celanese US Holdings LLC-SENIOR UNSECURE		07/22/2022	VARIOUS		27,312,214	27,000,000	42,200
15135B-AT-8	Centene Corp-SENIOR UNSECURED		03/22/2022	VARIOUS		3,003,750	3,000,000	36,807
16162Y-AL-9	Chase Mortgage Finance T-CHASE 2006-S4 A		09/25/2022	PAYUP		(3)	343	.0
16300N-AA-2	Cheever Escrow Issuer LL-SECURED		08/25/2022	BOFAMILSEC		1,429,125	1,448,000	.0
170257-AE-9	CHL Mortgage Pass-Through-CIHL 2006-16 3A		12/01/2022	PAYUP		.0	32	.0
17025A-AH-5	CHL Mortgage Pass-Through-CIHL 2006-17 A8		01/10/2022	CREDIT SUISSE SECURI		1,224,114	1,966,449	6,227
17030J-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-1 A1		01/21/2022	CANTOR		14,999,889	15,000,000	32,576
171232-AQ-4	CHUBB CORP-SR UNSECURED		03/04/2022	WELLS FARGO		15,111,498	11,400,000	222,300
171239-AJ-5	Chubb INA Holdings Inc-SENIOR UNSECURED		01/20/2022	WELLS FARGO		19,280,000	20,000,000	111,833
172967-CC-3	CITIGROUP INC-SUBORDINATED		01/18/2022	GOLDMAN		12,518,700	10,000,000	133,333
172967-HB-0	CITIGROUP INC-SUBORDINATED		01/21/2022	BARCLAYS CAPITAL INC		10,067,670	9,000,000	181,500
172967-NA-5	Citigroup Inc-SENIOR UNSECURED		10/19/2022	CITIGROUP GLOBAL MAR		9,663,479	11,485,000	61,567
172967-NN-7	Citigroup Inc-SENIOR UNSECURED		03/16/2022	CITIGROUP GLOBAL MAR		32,161,600	32,000,000	3,364
17309B-AB-3	Citigroup Mortgage Loan -CMLT1 2006-WF2		01/10/2022	CREDIT SUISSE SECURI		241,765	503,678	1,155
17328R-AG-4	Citigroup Commercial Mor-CGOMT 2020-GC46		06/03/2022	WELLS FARGO		2,283,867	3,000,000	1,300
17328R-AJ-8	Citigroup Commercial Mor-CGOMT 2020-GC46		06/03/2022	WELLS FARGO		4,653,311	6,614,000	2,866
17858P-AB-7	City of Hope-SENIOR UNSECURED		03/31/2022	SOUTHWEST SEC.		21,986,617	19,130,000	131,543
185899-AK-7	Cleveland-Cliffs Inc-SENIOR UNSECURED		03/14/2022	VARIOUS		1,918,254	2,000,000	32,651
18685@-AA-0	Cliffwater Corporate Len Senior Secured		06/07/2022	DIRECT		109,000,000	109,000,000	.0
18972E-AB-1	Clydesdale Acquisition H-SENIOR UNSECURE		03/30/2022	MORGAN		3,432,826	3,657,000	.0
18977W-2C-3	CNO Global Funding-SECURED		12/02/2022	VARIOUS		15,621,774	18,226,000	149,014
191216-CY-4	Coca-Cola Co/The-SENIOR UNSECURED		01/20/2022	GOLDMAN		14,846,565	15,878,000	64,284
19424K-AD-5	College Ave Student Loan-CASL 2021-A C		07/25/2022	BARCLAYS CAPITAL INC		3,680,000	4,000,000	649
19685G-AA-4	COLT Funding LLC-COLT 2022-4 A1		09/01/2022	CANTOR		5,194,175	5,306,947	3,170
19685G-AC-0	COLT Funding LLC-COLT 2022-4 A3		04/14/2022	BARCLAYS CAPITAL INC		7,425,326	7,489,000	17,786
19688E-AA-6	COLT 2021-1 Mortgage Loa-COLT 2021-1 A1		07/06/2022	CANTOR		10,586,967	12,030,644	2,129
19688F-AA-3	COLT 2021-3 Mortgage Loa-COLT 2021-3 A1		07/12/2022	WELLS FARGO		6,295,407	7,330,896	2,531
19688H-AA-9	COLT 2022-1 Mortgage Loa-COLT 2022-1 A1		01/25/2022	BARCLAYS CAPITAL INC		39,999,604	40,000,000	65,982
19688L-AA-0	COLT 2022-5 Mortgage Loa-COLT 2022-5 A1		05/03/2022	BARCLAYS CAPITAL INC		8,997,210	9,000,000	44,363
19688L-AB-8	COLT 2022-5 Mortgage Loa-COLT 2022-5 A2		05/03/2022	BARCLAYS CAPITAL INC		14,781,489	15,000,000	73,938
19688M-AB-6	COLT 2022-8 Mortgage Loa-COLT 2022-8 A2		09/28/2022	BARCLAYS CAPITAL INC		5,157,504	5,201,000	30,989
19688M-AC-4	COLT 2022-8 Mortgage Loa-COLT 2022-8 A3		09/28/2022	BARCLAYS CAPITAL INC		5,303,006	5,386,000	32,092
20030N-DS-7	Comcast Corp-SENIOR UNSECURED		06/07/2022	EXCHANGE OFFER		18,464,077	20,000,000	57,740
200474-AE-4	COMM 2015-LC19 Mortgage -COMM 2015-LC19		07/08/2022	CITIGROUP GLOBAL MAR		6,611,485	7,610,000	6,667
20268J-AD-5	CommonSpirit Health-SECURED		03/30/2022	VARIOUS		11,150,535	11,325,000	109,850
20753Y-CH-3	Connecticut Avenue Secur-CAS 2022-R04 1M		08/31/2022	JP MORGAN SECURITIES		6,531,753	6,534,816	.0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
20755D-AA-4	Connecticut Avenue Secur-CAS 2022-R08 1M		..08/24/2022	VARIOUS		..21,721,560	..21,609,048	..1,072
20825C-AP-9	ConocoPhillips-SR UNSECURED		..01/19/2022	AMHERST SECURITIES		..2,934,585	..2,193,000	..23,721
20826F-AR-7	ConocoPhillips Co-SENIOR UNSECURED		..01/20/2022	VARIOUS		..28,687,800	..20,000,000	..426,417
20848V-AB-1	Consensus Cloud Solution-SENIOR UNSECURE		..04/07/2022	MARKETAXESS FINANCIA		..1,960,000	..2,000,000	..66,444
20903X-AF-0	Consolidated Communicati-FIRST LIEN		..12/12/2022	WELLS FARGO		..1,175,265	..1,476,000	..19,455
21871X-AA-7	Corebridge Financial Inc-SENIOR UNSECURE		..04/25/2022	JP MORGAN SECURITIES		..9,932,200	..10,000,000	..21,389
21871X-AC-3	SAFG Retirement Services-SENIOR UNSECURE		..10/19/2022	MORGAN		..7,884,677	..8,736,000	..14,172
21871X-AE-9	Corebridge Financial Inc-SENIOR UNSECURE		..07/22/2022	VARIOUS		..9,419,640	..10,000,000	..118,708
21871X-AG-4	SAFG Retirement Services-SENIOR UNSECURE		..05/20/2022	VARIOUS		..11,910,400	..12,500,000	..53,083
219350-BL-8	Corning Inc-SENIOR UNSECURED		..01/20/2022	JP MORGAN SECURITIES		..1,828,034	..1,300,000	..14,576
224044-CL-9	Cox Communications Inc-SENIOR UNSECURED		..01/25/2022	JP MORGAN SECURITIES		..9,158,900	..10,000,000	..58,000
224044-CN-5	Cox Communications Inc-SENIOR UNSECURED		..01/21/2022	VARIOUS		..33,748,862	..34,783,000	..92,602
225458-L5-5	Credit Suisse First Bost-CSFB 2005-7 1A1		..01/10/2022	CREDIT SUISSE SECURI		..608,038	..621,920	..1,179
22966R-AG-1	CubeSmart LP-SENIOR UNSECURED		..05/20/2022	JP MORGAN SECURITIES		..4,083,600	..5,000,000	..27,500
22966R-AH-9	CubeSmart LP-SENIOR UNSECURED		..12/05/2022	WELLS FARGO		..16,686,558	..19,250,000	..180,922
22966R-AJ-5	CubeSmart LP-SENIOR UNSECURED		..03/04/2022	CITIGROUP GLOBAL MAR		..5,002,504	..5,331,000	..36,280
22966R-AA-1	Wal-Mart (Greenville Pen Trust Certifica		..12/31/2022	DIRECT		..(4,630,874)	..(4,585,024)	..(6,276)
23110A-AA-4	Cumulus Media New Holdin-FIRST LIEN		..05/25/2022	INTLFCSTONE		..2,409,075	..2,490,000	..68,164
23345A-AE-3	DT Auto Owner Trust 2022-DTAOT 2022-2A C		..05/12/2022	DEUTSCHE BANK SECURI		..9,999,667	..10,000,000	..0
23802W-AC-5	DataBank Issuer-COLO 2021-1A B		..02/18/2022	VARIOUS		..6,831,084	..7,090,000	..14,613
23802W-AG-6	DataBank Issuer-COLO 2021-2A A2		..07/06/2022	DEUTSCHE BANK SECURI		..1,788,750	..2,000,000	..1,733
242247-AA-2	Deako Inc-SECURED		..12/27/2022	SWBC		..25,000,000	..25,000,000	..0
24382J-AB-2	Deephaven Residential Mo-DRMT 2022-1 A2		..01/24/2022	GOLDMAN		..10,296,707	..10,297,000	..22,867
244199-BH-7	Deere & Co-SENIOR UNSECURED		..11/22/2022	KEY CAPITAL MARKETS		..2,630,261	..2,744,000	..8,384
24422E-VB-2	John Deere Capital Corp-SENIOR UNSECURED		..04/25/2022	GOLDMAN		..4,226,890	..4,420,000	..11,879
24422E-VK-2	John Deere Capital Corp-SENIOR UNSECURED		..11/29/2022	BARCLAYS CAPITAL INC		..2,706,867	..3,036,000	..8,029
24703T-AG-1	Dell International LLC /-FIRST LIEN		..11/04/2022	GOLDMAN		..2,811,420	..3,000,000	..16,342
24703T-AJ-5	Dell International LLC /-FIRST LIEN		..01/20/2022	VARIOUS		..21,911,450	..15,000,000	..23,625
24765*-AA-3	Delta Epsilon Delaware, Senior Note Seri		..08/24/2022	GOLDMAN		..2,500,000	..2,500,000	..0
25273C-AB-6	Diamond Resorts Owner Tr-DROT 2021-1A B		..01/21/2022	DEUTSCHE BANK SECURI		..2,663,144	..2,679,472	..763
25389J-AV-8	Digital Realty Trust LP-SENIOR UNSECURED		..11/15/2022	VARIOUS		..6,851,136	..6,941,000	..42,300
25466A-AJ-0	Discover Bank-SENIOR UNSECURED		..12/05/2022	KEY CAPITAL MARKETS		..4,628,250	..5,000,000	..62,292
25466A-AP-6	Discover Bank-SENIOR UNSECURED		..11/04/2022	GOLDMAN		..3,277,236	..3,654,000	..25,959
25468P-DB-9	WALT DISNEY COMPANY/THE-SR UNSECURED		..01/19/2022	GOLDMAN		..22,485,200	..20,000,000	..114,583
25512D-AA-7	Diversified ABS Phase V Senior Secured N		..05/26/2022	CITIGROUP GLOBAL MAR		..61,710,500	..61,710,500	..0
256746-AJ-7	Dollar Tree Inc-SENIOR UNSECURED		..01/25/2022	VARIOUS		..38,421,114	..39,447,000	..152,261
25755T-AH-3	DOMINOS PIZZA MASTER ISS-SERIES 17-1A CL		..03/24/2022	BOFAMLSEC		..1,911,150	..1,920,000	..13,836
26078J-AE-0	DowDuPont Inc-SENIOR UNSECURED		..02/24/2022	BARCLAYS CAPITAL INC		..11,769,300	..10,000,000	..152,183
26209X-AF-8	DRIVEN BRANDS FUNDING LL-HONK 2022-1A A2		..09/28/2022	BARCLAYS CAPITAL INC		..35,000,000	..35,000,000	..0
26882P-BE-1	ERAC USA FINANCE LLC-UNSECURED SENIOR NO		..01/21/2022	U. S. BANCORP		..7,168,650	..5,000,000	..97,222
26884T-AP-7	ERAC USA Finance LLC-SENIOR UNSECURED		..04/25/2022	GOLDMAN		..6,178,917	..6,130,000	..113,882
26929H-AB-1	EWIC Master Issuer LLC-WAX 2022-1A A2		..03/28/2022	DIRECT		..7,206,142	..7,500,000	..0
278865-AV-2	Ecolab Inc-SENIOR UNSECURED		..11/22/2022	JP MORGAN SECURITIES		..2,273,157	..2,441,000	..4,394
278865-BN-9	Ecolab Inc-SENIOR UNSECURED		..01/20/2022	VARIOUS		..12,708,584	..13,620,000	..38,462
28368E-AD-8	KINDER MORGAN INC/DE-SENIOR UNSECURED		..01/25/2022	WELLS FARGO		..10,687,209	..7,789,000	..297,021
28368E-AE-6	Kinder Morgan Inc/DE-BOND		..01/18/2022	GOLDMAN		..13,757,500	..10,000,000	..10,764
28416L-AB-8	Elara HGV Timeshare Issu-EHGV 2021-A B		..01/21/2022	BOFAMLSEC		..2,988,497	..3,039,552	..0
28628C-AB-2	ELFI Graduate Loan Progr-ELFI 2022-A B		..06/09/2022	BMO CAPITAL MARKETS		..10,869,330	..13,450,000	..0
291011-BS-2	Emerson Electric Co-SENIOR UNSECURED		..03/08/2022	VARIOUS		..23,347,990	..26,000,000	..99,944
292505-AD-6	ENCANA CORP-BOND		..01/19/2022	CITIGROUP GLOBAL MAR		..6,342,650	..5,000,000	..140,833
292505-AE-4	ENCANA CORP-SENIOR UNSECURED NOTE		..01/19/2022	CITIGROUP GLOBAL MAR		..7,120,694	..5,567,000	..159,819
29272W-AF-6	Energizer Holdings Inc-SENIOR UNSECURED		..03/03/2022	BOFAMLSEC		..2,319,000	..2,319,000	..0
29273V-AP-5	Energy Transfer LP-SENIOR UNSECURED		..12/05/2022	BOFAMLSEC		..6,998,180	..7,000,000	..0
29278N-AN-3	Energy Transfer Operatin-SENIOR UNSECURE		..12/05/2022	SCOTIA CAPITAL MARKE		..6,257,268	..6,221,000	..5,703
29336T-AA-8	EnLink Midstream LLC-SENIOR UNSECURED		..02/18/2022	MILLENNIUM ADVISORS		..1,491,000	..1,500,000	..18,365

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
29336U-AD-9	EnLink Midstream Partner-SENIOR UNSECURE		..07/01/2022 ..	MORGAN		 435,550	 620,000	 8,262
29366M-AB-4	Entergy Arkansas LLC-SECURED		..01/19/2022 ..	VARIOUS		 13,824,887	 15,555,000	 40,959
29366M-AC-2	Entergy Arkansas LLC-FIRST LIEN		..01/20/2022 ..	VARIOUS		 8,468,569	 8,296,000	 30,108
293791-AF-6	Enterprise Products Oper-SENIOR UNSECURE		..01/18/2022 ..	GOLDMAN		 13,224,000	 10,000,000	 265,451
29426V-AJ-5	Citigroup Commercial Mor-GOINT 2022-GC48		..06/06/2022 ..	CITIGROUP GLOBAL MAR		 11,259,322	 12,080,000	 32,718
29717P-AT-4	Essex Portfolio LP-SENIOR UNSECURED		..12/05/2022 ..	CITIGROUP GLOBAL MAR		 1,567,060	 1,700,000	 18,133
29717P-AU-1	Essex Portfolio LP-SENIOR UNSECURED		..12/05/2022 ..	CITIGROUP GLOBAL MAR		 6,012,860	 7,000,000	 82,833
29717P-AY-3	Essex Portfolio LP-SENIOR UNSECURED		..11/04/2022 ..	VARIOUS		 10,838,903	 13,540,000	 34,811
30212P-AR-6	Expedia Group Inc-SENIOR UNSECURED		..01/18/2022 ..	GOLDMAN		 10,005,400	 10,000,000	 139,931
30212P-BK-0	Expedia Group Inc-SENIOR UNSECURED		..09/30/2022 ..	JP MORGAN SECURITIES		 1,887,840	 2,000,000	 16,188
30225V-AF-4	Extra Space Storage LP-SENIOR UNSECURED		..03/30/2022 ..	CITIGROUP GLOBAL MAR		 11,719,630	 13,000,000	 110,500
30225V-AG-2	Extra Space Storage LP-SENIOR UNSECURED		..03/30/2022 ..	WELLS FARGO		 20,011,041	 21,158,000	 156,564
30225V-AH-0	Extra Space Storage LP-SENIOR UNSECURED		..12/05/2022 ..	VARIOUS		 36,178,805	 36,614,000	 34,747
30231G-BF-8	Exxon Mobil Corp-SENIOR UNSECURED		..01/18/2022 ..	BARCLAYS CAPITAL INC		 5,061,214	 4,456,000	 63,308
302508-AQ-9	FMR LLC-UNSECURED		..10/28/2022 ..	JP MORGAN SECURITIES		 6,509,280	 6,000,000	 171,587
302520-AC-5	FNB Corp/PA-SENIOR UNSECURED		..08/18/2022 ..	MORGAN		 12,682,220	 12,700,000	 0
313747-AV-9	FEDERAL REALTY INVESTMEN-SR UNSECURED		..01/19/2022 ..	BARCLAYS CAPITAL INC		 2,164,374	 1,895,000	 11,844
313747-AZ-0	Federal Realty Investmen-SENIOR UNSECURE		..10/28/2022 ..	WELLS FARGO		 1,616,995	 1,900,000	 22,969
31572Y-AB-4	Ellington Financial Mort-EFMT 2022-2 A2		..04/14/2022 ..	CREDIT SUISSE SECURI		 4,924,161	 5,000,000	 10,748
31572Y-AC-2	Ellington Financial Mort-EFMT 2022-2 A3		..04/14/2022 ..	CREDIT SUISSE SECURI		 18,700,832	 19,052,000	 40,952
31572Y-AD-0	Ellington Financial Mort-EFMT 2022-2 M1		..04/14/2022 ..	CREDIT SUISSE SECURI		 6,017,297	 6,387,000	 13,739
31573E-AA-9	Ellington Financial Mort-EFMT 2022-3 A1		..07/22/2022 ..	NOMURA SECURITIES IN		 22,253,083	 22,500,000	 81,250
31573E-AB-7	Ellington Financial Mort-EFMT 2022-3 A2		..07/22/2022 ..	NOMURA SECURITIES IN		 10,076,947	 10,368,000	 37,440
31573E-AC-5	Ellington Financial Mort-EFMT 2022-3 A3		..07/22/2022 ..	NOMURA SECURITIES IN		 4,781,197	 5,000,000	 18,056
319383-AE-5	First Busey Corp-SUBORDINATED		..05/25/2022 ..	PIPERJAFFRAY		 12,500,000	 12,500,000	 0
33768D-AE-4	FirstKey Homes 2022-SFRA-FKH 2022-SFRA C		..03/10/2022 ..	MORGAN		 8,244,637	 8,250,000	 0
33768N-AC-6	FIRSTKEY HOMES TRUST-FKH 2022-SFR1 B		..04/05/2022 ..	MORGAN		 4,999,886	 5,000,000	 0
337738-BC-1	Fiserv Inc-SENIOR UNSECURED		..01/20/2022 ..	GOLDMAN		 19,708,700	 20,000,000	 75,083
33938M-AA-7	Flexential Issuer 2021-1		..07/25/2022 ..	VARIOUS		 20,925,117	 21,750,000	 11,917
33938M-AB-5	Flexential Issuer 2021-1		..07/08/2022 ..	GUGGENHEIM CAPITAL M		 3,104,609	 3,500,000	 6,148
33938M-AC-3	Flexential Issuer 2021-1-FLX 2021-1A C		..06/09/2022 ..	VARIOUS		 41,272,578	 43,000,000	 61,023
341081-EP-8	FLORIDA POWER & LIGHT CO-BOND		..02/25/2022 ..	GOLDMAN		 7,679,936	 6,150,000	 29,981
341081-FQ-5	Florida Power & Light Co-SECURED		..01/18/2022 ..	JP MORGAN SECURITIES		 18,953,642	 16,567,000	 252,670
345295-AG-4	Ford Credit Auto Owner T-FORDO 2022-D C		..11/17/2022 ..	JP MORGAN SECURITIES		 6,998,231	 7,000,000	 0
345370-CA-6	Ford Motor Co-SENIOR UNSECURED NOTE		..02/18/2022 ..	CITIGROUP GLOBAL MAR		 2,470,000	 2,000,000	 15,314
345397-ZY-2	Ford Motor Credit Co LLC-SENIOR UNSECURE		..07/25/2022 ..	BAMLINTLD		 778,451	 818,560	 12,750
35086@-AJ-0	Four Corners Property Tr Senior Unsecure		..03/17/2022 ..	BARCLAYS CAPITAL INC		 15,000,000	 15,000,000	 0
35564K-BZ-4	Freddie Mac Structured A-STACR 2022-HQA2		..07/26/2022 ..	VARIOUS		 12,560,156	 12,550,000	 0
35564K-E3-9	Freddie Mac STACR REMIC -STACR 2022-HQA3		..08/08/2022 ..	WELLS FARGO		 8,275,000	 8,275,000	 0
36143L-ZD-6	GA Global Funding Trust-SECURED		..10/19/2022 ..	VARIOUS		 9,902,564	 11,438,000	 68,336
36143L-ZH-7	GA Global Funding Trust-SECURED		..03/04/2022 ..	MORGAN		 19,942,020	 21,000,000	 104,883
36143L-ZJ-3	GA Global Funding Trust-SECURED		..04/25/2022 ..	VARIOUS		 12,440,875	 12,500,000	 21,389
361448-AW-3	GATX CORP-SR UNSECURED		..01/20/2022 ..	U. S. BANCORP		 5,182,200	 5,000,000	 51,458
361448-BF-9	GATX Corp-SENIOR UNSECURED		..05/20/2022 ..	CITIGROUP GLOBAL MAR		 14,392,350	 15,000,000	 240,000
361448-BG-7	GATX Corp-SENIOR UNSECURED		..03/04/2022 ..	CITIGROUP GLOBAL MAR		 3,670,525	 4,100,000	 20,990
36164Q-NA-2	GE CAPITAL INTL FUNDING-SENIOR UNSECURED		..02/25/2022 ..	VARIOUS		 36,304,244	 32,065,000	 320,353
36167K-AA-6	GCAT 2021-NQM6 Trust-GCAT 2021-NQM6 A1		..06/29/2022 ..	MIZUHO SECURITIES		 3,623,716	 4,031,951	 0
36168M-AD-5	GCAT 2022-NQM3 Trust-GCAT 2022-NQM3 M1		..06/03/2022 ..	CREDIT SUISSE SECURI		 7,482,720	 8,353,000	 36,319
36168V-AE-3	GCAT 2022-NQM1 Trust-GCAT 2022-NQM1 A2		..03/09/2022 ..	CSAG		 19,533,818	 19,534,000	 84,409
36168V-AF-0	GCAT 2022-NQM1 Trust-GCAT 2022-NQM1 A3		..03/09/2022 ..	CSAG		 23,519,893	 23,596,000	 104,871
36168X-AE-9	GCAT 2022-HX1 Trust-GCAT 2022-HX1 A1		..02/09/2022 ..	BARCLAYS CAPITAL INC		 9,999,785	 10,000,000	 43,475
36169K-AA-4	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A2		..04/28/2022 ..	CREDIT SUISSE SECURI		 2,986,042	 3,000,000	 9,823
36169K-AB-2	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A2		..04/28/2022 ..	CREDIT SUISSE SECURI		 10,783,680	 11,000,000	 36,019
361841-AK-5	GLP Capital LP / GLP Fin-SENIOR UNSECURE		..07/22/2022 ..	WELLS FARGO		 2,988,990	 3,000,000	 26,354
361841-AL-3	GLP Capital LP / GLP Fin-SENIOR UNSECURE		..07/22/2022 ..	WELLS FARGO		 9,766,500	 10,000,000	 16,194

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
36186C-BY-8	ALLY FINL INC SR GTD NT		.01/18/2022	GOLDMAN		13,736,100	10,000,000	175,556
362341-4F-3	GSR Mortgage Loan Trust -GSR 2006-AR1 3A		.08/01/2022	VARIOUS		0	8,127	0
36242D-VA-8	GSR Mortgage Loan Trust -GSR 2005-1F 1A6		.01/10/2022	CREDIT SUISSE SECURI		1,835,327	1,864,207	3,703
36250S-AR-0	GS Mortgage Securities C-GSMS 2018-GS10		.01/25/2022	GOLDMAN		8,784,097	10,165,125	22,024
36255N-AZ-8	GS Mortgage Securities C-GS MORTAGE SECU		.07/14/2022	PERFTRUSTCP		11,872,043	12,955,000	26,662
36257U-AA-5	GS Mortgage Securities T-GSMS 2019-GC42		.06/01/2022	WELLS FARGO		1,547,813	2,000,000	311
36264E-BD-5	GS Mortgage-Backed Secur-GSMBS 2022-NQM1		.03/03/2022	GOLDMAN		23,389,840	22,688,000	106,206
36264K-BB-5	GS Mortgage Securities T-GSMS 2020-GSA2		.09/09/2022	BOFAMILSEC		4,375,775	5,653,000	5,632
36440*-AA-0	Galveston Cruise Termina Senior Secured		.11/04/2022	DIRECT		4,818,448	4,818,448	0
37045V-AG-5	General Motors Co-SENIOR UNSECURED		.01/19/2022	JEFFERIESLLC		8,483,680	8,000,000	97,778
37045V-AY-6	General Motors Co-SENIOR UNSECURED		.12/02/2022	MORGAN		9,713,600	10,000,000	76,500
37045X-DS-2	General Motors Financial-SENIOR UNSECURE		.03/10/2022	VARIOUS		50,871,924	52,083,000	97,915
372460-AC-9	Genuine Parts Co-SENIOR UNSECURED		.03/17/2022	VARIOUS		26,365,446	28,300,000	140,120
37892A-AA-8	Global Net Lease Inc / G-SENIOR UNSECURE		.06/09/2022	SMBC NIKKO SECURITIE		3,695,843	4,141,000	76,781
37959G-AA-5	Global Atlantic Fin Co-SENIOR UNSECURED		.03/17/2022	GOLDMAN		15,169,950	15,000,000	286,000
37959G-AB-3	Global Atlantic Fin Co-SENIOR UNSECURED		.07/27/2022	VARIOUS		14,620,051	16,139,000	53,830
37960X-AB-3	Global Infrastructure So-SENIOR UNSECURE		.04/05/2022	BOFAMILSEC		3,745,000	3,745,000	0
380241-AA-7	Goddard Funding LLC-GORD 2022-1 A2		.08/17/2022	VARIOUS		16,904,922	16,900,000	0
38136*-AA-5	Golden Tree Asset Manage Senior Unsecure		.12/31/2022	DIRECT		20,000,000	20,000,000	0
38141G-XG-4	Goldman Sachs Group Inc/-SENIOR UNSECURE		.03/03/2022	MORGAN		8,632,620	9,000,000	19,500
38141G-ZM-9	Goldman Sachs Group Inc/-SENIOR UNSECURE		.03/11/2022	VARIOUS		67,158,837	68,600,000	50,476
38150Y-AD-5	Goldman Home Improvement-GHIT 2022-GRN1		.07/21/2022	GOLDMAN		10,016,273	10,236,000	0
38179E-AC-8	Golub Capital Partners A-GCPAF 2022-1A A		.08/24/2022	DIRECT		8,000,000	8,000,000	0
38179E-AE-4	Golub Capital Partners A-GCPAF 2022-1A B		.08/24/2022	DIRECT		2,000,000	2,000,000	0
38217U-AC-6	Goodgreen 2021-1 Trust-GOODG 2021-1A C		.05/13/2022	DEUTSCHE BANK SECURI		2,132,636	2,337,135	745
40054#-AA-5	Gryphon Mezzanine Partne Note		.08/24/2022	DIRECT		396,675	396,675	0
404119-BQ-1	HCA Inc-FIRST LIEN		.01/19/2022	DEUTSCHE BANK SECURI		8,228,475	7,500,000	105,000
404119-BU-2	HCA Inc-FIRST LIEN		.12/05/2022	VARIOUS		14,333,550	15,000,000	180,625
404119-CC-1	HCA Inc-FIRST LIEN		.01/19/2022	VARIOUS		18,997,600	20,000,000	7,257
404121-AJ-4	HCA Inc-SENIOR UNSECURED		.09/30/2022	BARCLAYS CAPITAL INC		1,922,000	2,000,000	10,313
406216-BG-5	HALLIBURTON COMPANY-SR UNSECURED		.04/25/2022	GOLDMAN		7,275,216	7,193,000	123,000
406216-BJ-9	HALLIBURTON CO-SR UNSECURED		.01/20/2022	MORGAN		19,766,250	17,128,000	158,359
406216-BK-6	HALLIBURTON CO-SR UNSECURED		.02/25/2022	BOFAMILSEC		2,916,136	2,648,000	38,984
40621P-AA-7	Halliburton Co-SENIOR UNSECURED		.12/05/2022	SEAPORT GROUP		3,249,268	3,118,000	73,663
416515-BE-3	Hartford Financial Servi-SENIOR UNSECURE		.12/02/2022	WELLS FARGO		1,860,629	2,125,000	17,685
417558-AA-1	Harvest Midstream I LP-SENIOR UNSECURED		.03/11/2022	MARKETAXESS FINANCIA		3,036,400	3,000,000	104,771
418056-AZ-0	Hasbro Inc-SENIOR UNSECURED		.09/30/2022	VARIOUS		11,165,780	12,000,000	102,917
419870-JF-8	Hawaiian Electric Indust Senior Unsecure		.11/01/2022	TDSECUSA		15,500,000	15,500,000	0
423452-AG-6	Helmerich & Payne Inc-SENIOR UNSECURED		.06/02/2022	EXCHANGE OFFER		17,866,222	18,450,000	93,634
42710#-AA-9	Hercules Capital Funding Trust 2022-1 -S		.06/22/2022	DIRECT		7,462,500	7,500,000	0
42806M-AE-9	Hertz Vehicle Financing -HERTZ 2021-2A A		.10/27/2022	DEUTSCHE BANK SECURI		5,066,419	5,974,000	1,673
42806M-AK-5	Hertz Vehicle Financing -HERTZ 2022-1A B		.11/30/2022	BARCLAYS CAPITAL INC		2,404,582	2,700,000	1,150
42806M-AM-1	Hertz Vehicle Financing -HERTZ 2022-1A D		.06/30/2022	DEUTSCHE BANK SECURI		8,944,066	10,000,000	0
42806M-BL-2	Hertz Vehicle Financing -HERTZ 2022-5A B		.03/25/2022	BARCLAYS CAPITAL INC		4,998,000	5,000,000	0
42806M-BN-8	Hertz Vehicle Financing -HERTZ 2022-5A C		.04/07/2022	VARIOUS		4,301,303	4,300,000	2,651
43132A-AA-6	Hildene Collateral Manag-SECURED		.12/31/2022	DIRECT		(6,018,804)	(6,018,804)	(920)
43283G-AD-4	Hilton Grand Vacations T-HGVT 2022-2A D		.08/01/2022	WELLS FARGO		6,699,094	6,700,000	0
43371H-AA-1	Hoag Memorial Hospital P-UNSECURED		.03/24/2022	JP MORGAN SECURITIES		30,319,300	30,294,000	0
437076-BM-3	Home Depot Inc/The-SENIOR UNSECURED		.11/22/2022	BOFAMILSEC		1,907,660	2,000,000	9,000
437076-BX-9	Home Depot Inc/The-SENIOR UNSECURED		.03/08/2022	CITIGROUP GLOBAL MAR		5,624,050	5,000,000	58,750
437076-BZ-4	Home Depot Inc/The-SENIOR UNSECURED		.01/20/2022	GOLDMAN		15,157,800	15,000,000	50,781
437076-CK-6	Home Depot Inc/The-SENIOR UNSECURED		.01/20/2022	VARIOUS		9,340,500	10,000,000	92,431
43942#-AA-7	Hope Gas Holdings, LLC Senior Unsecured		.08/31/2022	DIRECT		23,000,000	23,000,000	0
44107H-AF-9	NY Society for Relief of-SECURED		.01/21/2022	SOUTHWEST SEC.		4,561,950	5,000,000	42,228
44107T-BA-3	Host Hotels & Resorts LP-SENIOR UNSECURE		.01/18/2022	GOLDMAN		9,465,600	10,000,000	45,917

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
44891A-BG-1	Hyundai Capital America-SENIOR UNSECURED		..10/19/2022	BARCLAYS CAPITAL INC		8,671,800	10,000,000	59,167
44891A-BZ-9	Hyundai Capital America-SENIOR UNSECURED		..10/28/2022	MORGAN		4,171,050	5,000,000	10,083
44891A-CA-3	Hyundai Capital America-SENIOR UNSECURED		..11/15/2022	VARIOUS		5,430,538	6,990,000	22,393
44914E-AE-1	Hypertherm, Inc. Senior Secured Note Ser		..01/26/2022	DIRECT		8,380,136	8,380,136	0
451102-BT-3	Icahn Enterprises LP / I-SENIOR UNSECURE		..02/22/2022	BOFAMLSEC		5,062,500	5,000,000	85,938
45276Q-AA-2	Imperial Fund Mortgage T-IMPRL 2022-NQMS		..08/02/2022	BARCLAYS CAPITAL INC		14,999,817	15,000,000	74,113
45276Q-AB-0	Imperial Fund Mortgage T-IMPRL 2022-NQMS		..08/02/2022	VARIOUS		13,486,825	13,487,000	75,687
45276Q-AC-8	Imperial Fund Mortgage T-IMPRL 2022-NQMS		..08/02/2022	BANK OF AMERICA CORP		3,681,034	3,712,500	21,270
455434-BT-6	INDIANAPOLIS PIWR & LIGHT-SECURED		..01/18/2022	VARIOUS		15,547,157	13,747,000	122,176
458140-BV-1	Intel Corp-SENIOR UNSECURED		..01/20/2022	DEUTSCHE BANK SECURI		3,793,280	4,000,000	50,400
458140-BW-9	Intel Corp-SENIOR UNSECURED		..01/20/2022	WELLS FARGO		9,657,900	10,000,000	137,250
459200-JG-7	International Business M-SENIOR UNSECURE		..04/25/2022	VARIOUS		6,930,560	6,930,000	45,161
459200-KB-6	International Business M-SENIOR UNSECURE		..01/20/2022	VARIOUS		12,397,156	11,159,000	85,302
459200-KC-4	International Business M-SENIOR UNSECURE		..01/20/2022	GOLDMAN		17,262,300	15,000,000	122,188
459506-AP-6	International Flavors & -SENIOR UNSECURE		..12/02/2022	VARIOUS		8,738,103	10,586,000	19,537
459506-AQ-4	International Flavors & -SENIOR UNSECURE		..03/31/2022	VARIOUS		38,049,516	41,197,000	303,034
46124J-A*-3	InvenTrust Properties Co Senior Unsecure		..08/11/2022	JP MORGAN SECURITIES		5,000,000	5,000,000	0
46124J-A@-1	InvenTrust Properties Co Senior Unsecure		..08/11/2022	JP MORGAN SECURITIES		20,000,000	20,000,000	0
46188B-AD-4	Invitation Homes Operati-SENIOR UNSECURE		..03/25/2022	BOFAMLSEC		5,595,358	5,610,000	0
465972-AC-1	JP Morgan Chase Commerci-JPMCC 2022-DATA		..06/08/2022	JP MORGAN SECURITIES		4,614,461	5,000,000	8,158
465972-AG-2	JP Morgan Chase Commerci-JPMCC 2022-DATA		..06/08/2022	JP MORGAN SECURITIES		3,523,442	4,100,000	6,689
465972-AJ-6	JP Morgan Chase Commerci-JPMCC 2022-DATA		..06/08/2022	JP MORGAN SECURITIES		1,528,778	1,850,000	3,018
466247-J4-6	JP Morgan Mortgage Trust-JPMIT 2006-A2 2		..01/10/2022	CREDIT SUISSE SECURI		94,454	99,539	99
466247-ZP-1	JP Morgan Mortgage Trust-JPMIT 2005-S3 1		..01/10/2022	CREDIT SUISSE SECURI		625,781	970,202	2,015
46628V-AH-9	JP Morgan Alternative Lo-JPALT 2006-S3 A		..10/01/2022	VARIOUS		0	9,501	0
46630W-AL-4	JP Morgan Mortgage Trust-JPMIT 2007-S2 1		..08/01/2022	VARIOUS		587,045	932,532	2,020
466365-AC-7	Jack in the Box Funding -JACK 2019-1A A2		..09/09/2022	BAIRD		29,844,798	31,668,876	211,235
466365-AD-5	Jack in the Box Funding -JACK 2022-1A A2		..02/02/2022	GUGGENHEIM CAPITAL M		10,000,000	10,000,000	0
466365-AE-3	Jack in the Box Funding -JACK 2022-1A A2		..07/29/2022	CANTOR		4,564,154	5,119,275	39,406
46647P-BP-0	JPMorgan Chase & Co-SUBORDINATED		..02/28/2022	BARCLAYS CAPITAL INC		9,720,700	10,000,000	89,501
46647P-CU-8	JPMorgan Chase & Co-SENIOR UNSECURED		..03/11/2022	VARIOUS		32,367,629	33,500,000	114,899
46647P-CZ-7	JPMorgan Chase & Co-SENIOR UNSECURED		..04/25/2022	RBC CAPITAL MARKETS		10,029,300	10,000,000	1,133
46655H-AB-9	JCP Direct Lending CLO 2-JCPDL 2022-1I A		..12/05/2022	DIRECT		17,432,686	17,432,686	0
46655H-AD-5	JCP Direct Lending CLO 2-JCPDL 2022-1I B		..12/05/2022	DIRECT		2,103,945	2,103,945	0
46655H-AF-0	JCP Direct Lending CLO 2-JCPDL 2022-1I C		..12/05/2022	DIRECT		2,254,227	2,254,227	0
46655H-AH-6	JCP Direct Lending CLO 2-JCPDL 2022-1I D		..12/05/2022	DIRECT		3,005,636	3,005,636	0
46817M-AL-1	Jackson Financial Inc-SENIOR UNSECURED		..09/23/2022	EXCHANGE OFFER		79,207,393	83,853,000	873,469
46817M-AN-7	Jackson Financial Inc-SENIOR UNSECURED		..09/23/2022	EXCHANGE OFFER		4,261,767	5,000,000	66,667
46817M-AR-8	Jackson Financial Inc-SENIOR UNSECURED		..10/19/2022	VARIOUS		27,175,790	27,416,000	285,706
468223-AW-2	Jackson Laboratory/The-UNSECURED		..03/08/2022	WELLS FARGO		975,470	1,000,000	6,647
46849L-SQ-5	Jackson National Life GI-SECURED		..11/15/2022	U. S. BANCORP		2,905,952	3,123,000	4,763
472321-AH-1	Jefferies Resecuritizati-JMAC 2008-R2 2A		..11/01/2022	PAYUP		0	30,679	0
472321-AK-4	Jefferies Resecuritizati-JMAC 2008-R2 3A		..04/01/2022	PAYUP		0	5,879	0
47232A-AC-2	Jefferies Resecuritizati-JMAC 2008-R3 1A		..06/01/2022	PAYUP		0	491	0
47232A-AH-1	Jefferies Resecuritizati-JMAC 2008-R3 3A		..05/01/2022	PAYUP		0	6	0
47232C-AH-7	Jefferies Resecuritizati-JMAC 2009-R1 4A		..03/01/2022	PAYUP		0	13,907	0
478111-AC-1	Johns Hopkins Health Sys-UNSECURED		..03/24/2022	VARIOUS		21,472,585	21,109,000	276,281
48203R-AP-9	Juniper Networks Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		9,212,100	10,000,000	22,222
48252A-AA-9	KKR Group Finance Co VI -SENIOR UNSECURE		..03/31/2022	KEY CAPITAL MARKETS		1,054,483	1,027,000	9,949
48255B-AA-4	MULTIPLE GUARANTORS-SENIOR UNSECURED		..03/08/2022	VARIOUS		19,722,180	22,000,000	128,556
482598-AN-9	KNDL 2019-KNSQ Mortgage -KNDL 2019-KNSQ		..12/15/2022	JP MORGAN SECURITIES		1,639,050	1,680,000	1,142
48305Q-AE-3	Kaiser Foundation Hospit-UNSECURED		..02/07/2022	MORGAN		8,093,844	8,100,000	72,015
48305Q-AG-8	Kaiser Foundation Hospit-UNSECURED		..03/15/2022	WELLS FARGO		5,120,640	6,000,000	53,035
48555H-AA-8	Kapitus Asset Securitiza-KAPT 2022-1A A		..02/02/2022	GUGGENHEIM CAPITAL M		6,749,987	6,750,000	0
488401-AC-4	Kemper Corp-SENIOR UNSECURED		..03/18/2022	VARIOUS		32,848,276	37,175,000	424,607

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
488401-AD-2	Kemper Corp-SENIOR UNSECURED		.03/22/2022	BOFAMLSEC		9,610,600	10,000,000	32,722
49271V-AJ-9	Keurig Dr Pepper Inc-SENIOR UNSECURED		.03/17/2022	VARIOUS		20,170,500	20,000,000	199,111
49271V-AN-0	Keurig Dr Pepper Inc-SENIOR UNSECURED		.03/03/2022	MORGAN		7,777,100	8,300,000	89,225
49271V-AQ-3	Keurig Dr Pepper Inc-SENIOR UNSECURED		.05/20/2022	GOLDMAN		14,189,100	15,000,000	54,000
49446R-AX-7	Kimco Realty Corp-SENIOR UNSECURED		.11/04/2022	SUNTRUST CAPITAL MAR		3,233,000	4,000,000	14,144
49446R-AZ-2	Kimco Realty Corp-SENIOR UNSECURED		.03/01/2022	AMHERST SECURITIES		10,029,650	10,000,000	6,222
49446R-BA-6	Kimco Realty Corp-SENIOR UNSECURED		.08/10/2022	WELLS FARGO		14,914,500	15,000,000	0
50196@-AA-5	LQN North American Fund Term Loan		.09/14/2022	DIRECT		3,470,934	3,470,934	0
502175-E*-9	LTC Properties Inc Senior Unsecured Note		.05/17/2022	MITSUBISHI UFJ SEC I		22,500,000	22,500,000	0
505742-AM-8	Ladder Capital Finance H-SENIOR UNSECURE		.06/14/2022	MARKETAXESS FINANCIA		1,267,500	1,500,000	23,906
505742-AP-1	Ladder Capital Finance H-SENIOR UNSECURE		.03/10/2022	VARIOUS		2,472,215	2,600,000	23,605
51236J-AB-3	Lakeview Trust 2022-EB03-BVEBO 2022-3 M1		.06/06/2022	NOMURA SECURITIES IN		13,864,511	13,936,000	0
51236L-AC-6	BVEBO-BVEBO 2022-1 M2		.03/14/2022	JP MORGAN SECURITIES		6,776,992	6,777,000	0
512807-AS-7	Lam Research Corp-SENIOR UNSECURED		.04/25/2022	GOLDMAN		4,948,706	4,900,000	21,438
51805@-AH-1	LaSalle Property Fund, L Gtd Senior Note		.05/10/2022	DIRECT		10,000,000	10,000,000	0
52107Q-AH-8	LAZARD GROUP LLC-SENIOR UNSECURED		.10/28/2022	BARCLAYS CAPITAL INC		3,304,296	3,600,000	21,750
52107Q-AJ-4	Lazard Group LLC-SENIOR UNSECURED		.12/02/2022	VARIOUS		11,227,281	10,835,000	186,584
521865-BC-8	Lear Corp-SENIOR UNSECURED		.01/18/2022	GOLDMAN		9,571,800	10,000,000	52,000
525241-AL-9	Lehman XS Trust 2007-1-LXS 2007-1 WF1		.07/01/2022	PAYUP		(11,185)	(10,892)	0
52532X-AF-2	Leidos Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		10,895,100	10,000,000	78,993
526057-CR-3	Lennar Corp-SENIOR UNSECURED		.01/20/2022	MORGAN		18,474,173	16,866,000	189,918
52605A-AB-3	Lendingpoint 2022-A Asse-LENDINGPOINT 20		.01/20/2022	CREDIT SUISSE SECURI		17,999,037	18,000,000	0
53218D-AE-8	Life Mortgage Trust US-LIFE 2022-BMR2 B		.05/03/2022	DEUTSCHE BANK SECURI		19,899,991	20,000,000	0
53636C-AA-2	LiquiGlide Inc-SECURED		.02/23/2022	GUGGENHEIM		7,630,000	7,630,000	0
53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2		.09/22/2022	DIRECT		32,169,372	32,169,372	0
53946H-AB-4	Loan Asset Issuer LLC - Series 2022 NG-2		.09/22/2022	DIRECT		12,553,901	12,553,901	0
53946H-AC-2	Loan Asset Issuer LLC - Series 2022 NG-2		.09/22/2022	DIRECT		7,061,570	7,061,570	0
53946W-10-3	Loan Asset Issuer LLC - Series 2021 NG-1		.12/31/2022	DIRECT		(1,500,000)	11,768	0
53950T-10-5	Loan Asset Issuer LLC, Series 2021 M-2 -		.12/31/2022	DIRECT		1,500,000	150,000	117
53950T-AA-3	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		73,255,000	73,255,000	0
53950T-AB-1	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		29,800,000	29,800,000	0
53950T-AC-9	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		14,900,000	14,900,000	0
53950T-AD-7	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		11,920,000	11,920,000	0
53950T-AE-5	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		11,920,000	11,920,000	0
53950T-AF-2	Loan Asset Issuer LLC, Series 2021 M-2 -		.06/16/2022	DIRECT		1,480,000	1,480,000	0
53950X-AA-4	Loan Asset Issuer LLC - Series 2022 NG-1		.02/28/2022	DIRECT		21,914,052	21,914,052	0
53950X-AB-2	Loan Asset Issuer LLC - Series 2022 NG-1		.02/28/2022	DIRECT		13,774,547	13,774,547	0
53950X-AC-0	Loan Asset Issuer LLC - Series 2022 NG-1		.02/28/2022	DIRECT		8,139,505	8,139,505	0
539830-BU-2	Lockheed Martin Corp-SENIOR UNSECURED		.11/22/2022	TORONTO DOMINION SEC		10,071,600	10,000,000	42,625
541056-AA-5	GoTo Group Inc-SECURED		.08/22/2022	GOLDMAN		943,750	1,250,000	33,038
548661-EA-1	Lowe's Cos Inc-SENIOR UNSECURED		.01/21/2022	VARIOUS		19,903,800	20,000,000	166,250
548661-EG-8	Lowe's Cos Inc-SENIOR UNSECURED		.04/25/2022	RBC CAPITAL MARKETS		9,823,000	10,000,000	30,708
548661-EH-6	Lowe's Cos Inc-SENIOR UNSECURED		.05/23/2022	VARIOUS		19,735,970	21,000,000	131,979
552758-AA-2	MFRA Trust-MFRA 2022-CHM1 A1		.03/03/2022	CSAG		24,999,963	25,000,000	99,566
55283A-AA-7	MCA Fund Holding LLC-MCA 2020-1 A		.01/19/2022	BARCLAYS CAPITAL INC		4,583,248	4,537,870	32,774
55286E-AC-2	MFA 2022-NQM3 Trust-MFRA 2022-NQM3 A3		.09/16/2022	CREDIT SUISSE SECURI		6,819,614	7,000,000	22,744
55316P-AG-2	MKT 2020-525M Mortgage T-MKT 2020-525M C		.07/27/2022	JP MORGAN SECURITIES		8,219,922	10,000,000	22,463
55316P-AJ-6	MKT 2020-525M Mortgage T-SERIES 20-525M		.07/27/2022	JP MORGAN SECURITIES		9,535,859	12,000,000	27,037
55316P-AL-1	MKT 2020-525M Mortgage T-SERIES 20-525M		.02/28/2022	CITIGROUP GLOBAL MAR		4,342,773	5,000,000	408
55316T-AE-9	MFT 2020-B6 Mortgage Tru-MOFT 2020-B6 C		.08/24/2022	DEUTSCHE BANK SECURI		8,340,938	10,500,000	24,735
55317B-AG-2	MFT Trust 2020-ABC-SERIES 2020-ABC CLASS		.09/13/2022	JP MORGAN SECURITIES		3,305,399	4,039,000	5,332
55336V-BQ-2	MPLX LP-SENIOR UNSECURED		.07/25/2022	VARIOUS		31,820,580	35,000,000	314,319
55336V-BT-6	MPLX LP-SENIOR UNSECURED		.03/10/2022	CITIGROUP GLOBAL MAR		24,745,500	25,000,000	0
55342U-AL-8	MPT Operating Partnershi-SENIOR UNSECURE		.10/05/2022	VARIOUS		256,847	340,965	4,280
56400U-AB-9	MVII 2022-1 LLC-MVIIOT 2022-1A B		.05/12/2022	CREDIT SUISSE SECURI		10,485,831	10,487,000	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
55903V-AG-8	Magallanes Inc-SENIOR UNSECURED		12/05/2022	VARIOUS		28,169,440	30,000,000	360,897
55903V-AJ-2	Warnermedia Holdings Inc-SENIOR UNSECURE		11/04/2022	MORGAN		9,800,010	11,500,000	49,493
55903V-AL-7	Magallanes Inc-SENIOR UNSECURED		03/17/2022	BARCLAYS CAPITAL INC		15,111,600	15,000,000	10,698
55921Q-AA-0	Magna Imperio Systems Co-SECURED		06/23/2022	GUGGENHEIM		12,003,750	12,125,000	0
56585A-BD-3	Marathon Petroleum Corp-SENIOR UNSECURED		09/30/2022	JP MORGAN SECURITIES		1,799,440	2,000,000	633
56585A-BH-4	Marathon Petroleum Corp-SENIOR UNSECURED		01/20/2022	BARCLAYS CAPITAL INC		18,675,804	17,263,000	187,064
570535-AR-5	Markel Corp-SENIOR UNSECURED		11/15/2022	WELLS FARGO		2,002,431	2,178,000	3,388
570535-AU-8	Markel Corp-SENIOR UNSECURED		12/02/2022	VARIOUS		7,942,705	8,077,000	5,190
57109N-AB-5	Marlette Funding Trust 2-MFT 2022-3A B		09/12/2022	GOLDMAN		2,978,723	3,000,000	0
57109N-AC-3	Marlette Funding Trust 2-MFT 2022-3A C		09/12/2022	GOLDMAN		3,799,011	3,800,000	0
57109N-AD-1	Marlette Funding Trust 2-MFT 2022-3A D		09/12/2022	GOLDMAN		5,298,544	5,300,000	0
571676-AF-2	Mars Inc-SENIOR UNSECURED		01/19/2022	VARIOUS		21,877,931	18,975,931	229,018
571903-BF-9	Marriott International I-SENIOR UNSECURE		02/24/2022	VARIOUS		15,135,850	15,000,000	157,014
571903-BG-7	Marriott International I-SENIOR UNSECURE		01/21/2022	DEUTSCHE BANK SECURI		9,775,200	10,000,000	79,167
57778K-AC-9	Maxar Technologies Inc-FIRST LIEN		06/09/2022	BOFAMSEC		5,250,000	5,250,000	0
579063-AB-4	Condor Merger Sub Inc-SENIOR UNSECURED		07/14/2022	BOFAMSEC		5,595,165	6,668,000	203,634
58403Y-AR-7	Med Trust 2021-MDLN-MED 2021-MDLN D		05/11/2022	JP MORGAN SECURITIES		4,738,175	4,880,000	9,698
586054-AB-4	MEMORIAL SLOAN-KETTERING-SR UNSECURED		03/08/2022	JP MORGAN SECURITIES		11,258,200	10,000,000	79,063
58769J-AB-3	Mercedes-Benz Finance No-SENIOR UNSECURE		11/29/2022	VARIOUS		18,331,709	18,265,000	6,837
58933Y-BF-1	Merck & Co Inc-SENIOR UNSECURED		01/18/2022	CSAG		9,281,000	10,000,000	30,556
58933Y-BG-9	Merck & Co Inc-SENIOR UNSECURED		01/18/2022	CSAG		9,196,100	10,000,000	32,222
58989V-2E-3	Met Tower Global Funding-SECURED		11/29/2022	WELLS FARGO		6,770,330	7,000,000	120,867
59170J-AA-6	MetroNet Infrastructure -MNET 2022-1A A2		10/26/2022	DIRECT		10,550,451	11,250,000	0
59170J-AB-4	MetroNet Infrastructure -MNET 2022-1A B		10/26/2022	DIRECT		1,171,455	1,250,000	0
61033M-AB-0	Monroe Capital Income PI-MCIP 2022-1A A		03/16/2022	DIRECT		4,427,024	4,500,000	0
617446-BL-6	Morgan Stanley-SENIOR UNSECURED		02/25/2022	MORGAN		12,566,636	13,072,000	38,221
617446-BU-6	Morgan Stanley-SENIOR UNSECURED		03/03/2022	MORGAN		7,423,271	8,300,000	9,927
61744Y-AP-3	Morgan Stanley-SENIOR UNSECURED		09/30/2022	JP MORGAN SECURITIES		1,813,480	2,000,000	14,669
61747Y-ED-3	Morgan Stanley-SENIOR UNSECURED		03/16/2022	MORGAN		22,778,130	25,500,000	90,400
61747Y-EF-8	Morgan Stanley-SUBORDINATED		01/21/2022	VARIOUS		32,687,500	35,000,000	308,085
61747Y-EL-5	Morgan Stanley-SENIOR UNSECURED		03/11/2022	MORGAN		3,788,680	4,000,000	16,677
61747Y-ET-8	Morgan Stanley-SENIOR UNSECURED		07/18/2022	MORGAN		11,186,300	11,180,000	0
61747Y-EV-3	Morgan Stanley-SENIOR UNSECURED		12/02/2022	RBC CAPITAL MARKETS		10,447,800	10,000,000	83,947
61759X-AC-6	Morgan Stanley Re-REMIC -MSRR 2010-RB 1C		10/01/2022	PAYUP		0	19,917	0
61774A-A*-4	Morgan Stanley Direct Le Senior Unsecure		09/13/2022	SMBC NIKKO SECURITIE		10,000,000	10,000,000	0
61774L-AG-4	Morgan Stanley Capital I-MISC 2022-L8 D		03/25/2022	MORGAN		4,821,499	6,462,000	2,693
61774L-BY-4	Morgan Stanley Capital I-MISC 2022-L8 C		03/25/2022	MORGAN		20,986,465	22,105,000	13,983
61945C-AD-5	Mosaic Co/The-SENIOR UNSECURED		03/30/2022	VARIOUS		21,429,601	18,132,000	265,832
61946K-AA-2	Mosaic Solar Loan Trust -MSAIC 2022-3A A		12/12/2022	BNP PARIBAS		5,999,746	6,000,000	0
61946Q-AB-7	Mosaic Solar Loan Trust -MSAIC 2022-1A B		03/10/2022	RBC CAPITAL MARKETS		28,872,963	30,000,000	0
61946U-AB-8	Mosaic Solar Loan Trust -MSAIC 2022-2A B		08/16/2022	VARIOUS		6,422,888	6,490,000	1,699
62878H-AA-9	NATF AMERICA LLC-AUTO LOAN		05/18/2022	TORONTO DOMINION SEC		70,000,000	70,000,000	0
62878H-AB-7	NATF AMERICA LLC Senior Notes Series 9		07/15/2022	TDSECUA		28,000,000	28,000,000	0
637071-AM-3	National Oilwell Varco I-SENIOR UNSECURE		01/18/2022	GOLDMAN		10,321,700	10,000,000	49,000
637417-AK-2	National Retail Properti-SENIOR UNSECURE		11/04/2022	U. S. BANCORP		2,110,742	2,409,000	5,387
637417-AL-0	National Retail Properti-SENIOR UNSECURE		12/02/2022	VARIOUS		2,857,372	3,059,000	15,040
638612-AM-3	Nationwide Financial Ser-SENIOR UNSECURE		01/21/2022	CITIGROUP GLOBAL MAR		11,783,415	10,500,000	62,563
63902H-BF-5	Nature Conservancy/The-SENIOR UNSECURED		03/07/2022	VARIOUS		17,648,875	16,750,000	2,913
63940Q-AD-5	Navient Private Educatio-NAVSL 2018-BA B		05/27/2022	CANTOR		6,646,719	7,000,000	12,849
63940V-AC-6	Navient Private Educatio-NAVSL 2018-CA B		11/22/2022	CANTOR		2,044,000	2,240,000	2,626
63941F-AD-8	Navient Private Education Ref		06/01/2022	CREDIT SUISSE SECURI		970,063	1,100,000	1,738
63942A-AB-2	Navient Private Educatio-NAVSL 2020-IA A		12/14/2022	JP MORGAN SECURITIES		5,547,171	5,704,031	843
63942P-AB-9	Navient Private Educatio-NAVSL 2022-BA B		05/17/2022	JP MORGAN SECURITIES		9,997,504	10,000,000	0
63946T-AA-9	NB Direct Access Insuran Senior Secured		08/01/2022	VARIOUS		1,529,268	1,529,268	0
64016N-AA-5	Neighborly Issuer LLC-NBLY 2021-1A A2		08/17/2022	BAIRD		1,383,549	1,580,000	2,989

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
64016N-AC-1	Neighborly Issuer 2022-1-NBLY 2022-1A A2		..06/02/2022	BARCLAYS CAPITAL INC		3,527,721	3,990,000	14,743
64033N-AA-4	Nelnet Student Loan Trus-NSLT 2014-5A A		..12/06/2022	BOFAMLSEC		13,331,130	13,832,560	22,808
64033Q-AB-5	Nelnet Student Loan Trus-NSLT 2015-2A A2		..12/15/2022	CANTOR		6,727,127	6,962,098	21,425
64128X-AG-5	NEUBERGER BERMAN GRP/FIN-SENIOR UNSECURE		..11/15/2022	VARIOUS		7,586,757	8,085,000	55,414
644274-AG-7	New Enterprise Stone & L-SENIOR UNSECURE		..05/25/2022	JEFFERIESLLC		3,351,250	3,500,000	125,125
644274-AH-5	New Enterprise Stone & L-SECURED		..08/29/2022	SUNTRUST CAPITAL MAR		1,795,000	2,000,000	13,417
64831Q-AA-1	New Residential Mortgage-NRZT 2022-NQM3		..06/02/2022	MORGAN		38,899,907	39,480,870	97,214
64831Q-AB-9	New Residential Mortgage-NRZT 2022-NQM3		..04/27/2022	MORGAN		9,787,499	10,000,000	36,925
64831T-AA-5	New Residential Mortgage-NRZT 2021-NQM3		..05/03/2022	MIZUHO SECURITIES		9,957,084	10,706,484	1,375
64831V-AB-8	New Residential Mortgage-NRZT 2022-NQM5		..10/04/2022	MORGAN		4,934,769	5,000,000	36,111
64831V-AC-6	New Residential Mortgage-NRZT 2022-NQM5		..10/04/2022	MORGAN		6,844,880	7,000,000	50,556
64952W-CH-4	NEW YORK LIFE GLOBAL FDG-SECURED		..11/22/2022	WELLS FARGO		5,472,670	5,945,000	50,838
64952W-ED-1	New York Life Global Fun-SECURED		..04/25/2022	GOLDMAN		7,041,721	7,720,000	34,032
65339K-BZ-2	NextEra Energy Capital H-SENIOR UNSECURE		..03/01/2022	MORGAN		2,839,050	3,000,000	16,267
65473P-AL-9	NiSource Inc-SENIOR UNSECURED		..01/21/2022	VARIOUS		27,391,100	30,000,000	225,486
66415*-AA-8	Northeast Energy Center Senior Secured N		..01/06/2022	DIRECT		15,000,000	15,000,000	0
66815L-2F-5	Northwestern Mutual Glob-SECURED		..12/05/2022	BOFAMLSEC		8,941,600	10,000,000	70,972
67080L-AA-3	Nuveen LLC-SENIOR UNSECURED		..12/05/2022	VARIOUS		10,291,710	11,000,000	20,000
67103H-AK-3	O'Reilly Automotive Inc-SENIOR UNSECURED		..03/04/2022	CITIGROUP GLOBAL MAR		7,472,739	8,300,000	69,801
67116X-AD-9	OBX 2022-NQM4 Trust-OBX 2022-NQM4 A2		..04/29/2022	MORGAN		14,300,570	15,000,000	64,645
67117D-AA-8	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		..08/15/2022	MORGAN		5,499,998	5,500,000	17,175
67117D-AB-6	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		..08/15/2022	MORGAN		2,594,058	2,600,000	9,057
67117D-AC-4	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		..08/15/2022	MORGAN		2,594,058	2,625,000	9,144
67181@-AD-0	Oak Street Real Estate C Senior Secured		..10/31/2022	BOFAMLSEC		18,750,000	18,750,000	0
67181@-AE-8	Oak Street Real Estate C Senior Secured		..10/31/2022	BOFAMLSEC		5,000,000	5,000,000	0
67181D-AH-4	Oak Street Investment Gr-OAKIG 2020-1A B		..02/18/2022	CREDIT SUISSE SECURI		3,089,063	3,000,000	1,393
67190A-AA-4	Oak Street Investment Gr-OAKIG 2021-1A A		..12/07/2022	CANTOR		2,508,044	2,856,263	2,231
67190A-AC-0	Oak Street Investment Gr-OAKIG 2021-1A A		..08/18/2022	CREDIT SUISSE SECURI		8,192,750	8,800,000	4,853
67190A-AD-8	Oak Street Investment Gr-OAKIG 2021-1A A		..03/08/2022	CREDIT SUISSE SECURI		8,934,815	9,135,000	16,545
674135-EM-6	Oakwood Mortgage Investo-OAK 1999-A M2		..11/01/2022	PAYUP		0	4,281	0
674599-DF-9	Occidental Petroleum Cor-SENIOR UNSECURE		..02/17/2022	SUMRIDGE PARTNERS LL		4,680,000	4,000,000	108,754
675929-AA-1	OCTAGON 58 LTD-OCT58 2022-1A E		..04/21/2022	BOFAMLSEC		6,000,000	6,000,000	0
675932-AL-1	OCTAGON 58 LTD-OCT58 2022-1A D		..04/21/2022	BNP PARIBAS		12,750,000	12,750,000	0
677415-CR-0	Ohio Power Co-SENIOR UNSECURED		..01/18/2022	BARCLAYS CAPITAL INC		8,501,031	7,700,000	41,922
681639-AA-8	Olympus Water US Holding-SECURED		..04/18/2022	BOFAMLSEC		1,637,600	1,840,000	4,127
681936-BB-5	Omega Healthcare Investo-SENIOR UNSECURE		..01/20/2022	BARCLAYS CAPITAL INC		4,138,797	3,900,000	60,596
681936-BL-3	Omega Healthcare Investo-SENIOR UNSECURE		..01/18/2022	GOLDMAN		10,209,600	10,000,000	109,757
68267E-AD-6	OneMain Direct Auto Rece-ODART 2019-1A D		..08/16/2022	RBC CAPITAL MARKETS		4,398,930	4,600,000	2,392
68267H-AD-9	OneMain Financial Issuan-OMFIT 2022-S1 D		..09/27/2022	CITIGROUP GLOBAL MAR		3,089,750	3,400,000	7,367
682680-AU-7	ONEOK Inc-SENIOR UNSECURED		..10/19/2022	GOLDMAN		5,570,876	6,190,000	75,105
682680-AW-3	ONEOK Inc-SENIOR UNSECURED		..12/05/2022	VARIOUS		9,374,446	10,000,000	99,083
682687-AC-2	OneMain Direct Auto Rece-ODART 2021-1A C		..07/05/2022	SUNTRUST CAPITAL MAR		2,522,625	2,800,000	2,540
68268N-AP-8	ONEOK Partners LP-SENIOR UNSECURED		..01/20/2022	BARCLAYS CAPITAL INC		7,675,508	7,114,000	124,910
68268V-AB-1	OneMain Financial Issuan-OMFIT 2022-2A B		..08/31/2022	RBC CAPITAL MARKETS		9,997,337	10,000,000	0
68268V-AC-9	OneMain Financial Issuan-OMFIT 2022-2A C		..08/31/2022	RBC CAPITAL MARKETS		6,999,641	7,000,000	0
68268V-AD-7	OneMain Financial Issuan-OMFIT 2022-2A D		..08/31/2022	RBC CAPITAL MARKETS		20,904,758	20,910,000	0
682696-AD-1	OneMain Financial Issuan-OMFIT 2020-2A D		..03/01/2022	BARCLAYS CAPITAL INC		9,924,609	10,000,000	16,292
68269M-AE-4	OneMain Financial Issuan-OMFIT 2021-1A D		..10/12/2022	BARCLAYS CAPITAL INC		7,262,500	8,500,000	8,233
683720-AA-4	Open Text Holdings Inc-SENIOR UNSECURED		..05/31/2022	MORGAN		2,361,270	2,539,000	31,129
683720-AC-0	Open Text Holdings Inc-SENIOR UNSECURED		..03/16/2022	VARIOUS		1,317,590	1,400,000	15,652
68378N-AA-8	Oportun Issuance Trust 2-OPTN 2022-A A		..05/19/2022	JEFFERIESLLC		4,997,354	5,000,000	0
686514-AH-3	Orlando Health Obligated-SENIOR UNSECURE		..02/07/2022	VARIOUS		4,123,590	4,040,000	44,892
69120#-AA-4	Owl Rock Capital Corpora Senior Note		..12/31/2022	DIRECT		(25,805,000)	(26,000,000)	(27,444)
69122J-A@-5	Owl Rock Capital Corpora Senior Unsecure		..07/21/2022	GOLDMAN		5,000,000	5,000,000	0
69144A-AA-7	Oxford Finance Funding 2-OXFIN 2020-1A A		..06/01/2022	BARCLAYS CAPITAL INC		5,645,973	5,670,338	8,792

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
69145*-AG-6	Oxford Finance Funding XIII, LLC/Class A		..03/25/2022	DIRECT		6,603,000	6,603,000	0
69145*-AH-4	Oxford Finance Funding XIII, LLC/Class B		..03/25/2022	DIRECT		897,000	897,000	0
69145B-AA-4	OXFORD FINANCE FUNDING T-OXFIN 2022-1A A		..02/08/2022	BARCLAYS CAPITAL INC		18,000,000	18,000,000	0
69331C-AH-1	PG&E Corp-FIRST LIEN		..03/31/2022	CITIGROUP GLOBAL MAR		1,642,625	1,700,000	21,958
69335P-EQ-4	PFS Financing Corp-PFSFC 2022-D B		..08/02/2022	JP MORGAN SECURITIES		3,499,062	3,500,000	0
69354N-AC-0	PRA Group Inc-SENIOR UNSECURED		..03/28/2022	SUNTRUST CAPITAL MAR		4,169,550	3,990,000	23,704
69546V-AA-5	PAGAYA AI Debt Trust 202-PAID 2022-2 A		..05/03/2022	CREDIT SUISSE SECURI		10,000,000	10,000,000	0
70522#-AA-6	Peco Pallet Holdings Inc Senior Secured		..02/16/2022	MITSUBISHI UFJ SEC I		12,500,000	12,500,000	0
706874-AG-9	PenFed Auto Receivables -PMFED 2022-A D		..08/19/2022	JP MORGAN SECURITIES		1,899,636	1,900,000	0
709599-BM-5	Penske Truck Leasing Co -SENIOR UNSECURE		..12/05/2022	U. S. BANCORP		876,360	1,000,000	8,122
709599-BN-3	Penske Truck Leasing Co -SENIOR UNSECURE		..09/30/2022	FTS		1,886,920	2,000,000	28,111
71367#-AB-2	PERENfra Laguna LLC Senior Secured Notes		..12/16/2022	DIRECT		15,000,000	15,000,000	0
718546-AW-4	Phillips 66-SENIOR UNSECURED		..02/25/2022	RBC CAPITAL MARKETS		2,888,126	3,165,000	14,366
722844-AA-5	Pine Street Trust I-SENIOR UNSECURED		..07/22/2022	VARIOUS		26,469,260	27,000,000	497,840
72303#-AA-7	Pinebridge Private Credi Term Loan FAC		..05/03/2022	DIRECT		983,477	983,477	0
72346Q-AC-8	Pinnacle Financial Partn-SUBORDINATED		..03/28/2022	STIFEL NICOLAUS		20,000,000	20,000,000	34,375
72650R-BN-1	Plains All American Pipe-SENIOR UNSECURE		..02/25/2022	VARIOUS		7,858,519	7,902,000	138,461
74166M-AE-6	Prime Security Services -PRSESE 6 1/4 01		..09/29/2022	VARIOUS		1,251,336	1,318,000	10,096
74166Y-AC-4	Primose Funding LLC-PROSE 2022-1 A2		..05/25/2022	DIRECT		2,700,000	2,700,000	0
74319R-AA-9	PROG Holdings Inc-SENIOR UNSECURED		..03/31/2022	JEFFERIESLLC		1,502,880	1,616,000	34,475
743263-AE-5	Progress Energy Inc-SR UNSECURED		..03/24/2022	BARCLAYS CAPITAL INC		6,376,700	5,000,000	29,063
743315-AJ-2	Progressive Corp/The-SENIOR UNSECURED		..10/28/2022	VARIOUS		4,743,798	4,454,000	49,180
74331U-AC-2	PROG 2022-SFR3 B-PROG 2022-SFR3 B		..04/05/2022	RBC CAPITAL MARKETS		5,281,482	5,500,000	0
74332V-AE-5	Progress Residential 202-PROG 2022-SFR2		..03/14/2022	GOLDMAN		5,933,852	6,000,000	0
74332Y-AC-3	Progress Residential 202-PROG 2022-SFR5		..06/10/2022	DEUTSCHE BANK SECURI		2,484,454	2,500,000	0
74334D-AG-8	Progress Residential 202-PROG 2022-SFR6		..07/25/2022	RBC CAPITAL MARKETS		10,499,652	10,500,000	0
743674-BD-4	Protective Life Corp-SENIOR UNSECURED		..10/28/2022	GOLDMAN		8,285,490	9,000,000	33,325
74456Q-CA-2	Public Service Electric -SECURED		..03/09/2022	BARCLAYS CAPITAL INC		3,052,962	3,300,000	11,733
745332-CC-8	PUGET SOUND ENERGY INC-SECURED		..01/20/2022	GOLDMAN		2,485,917	1,890,000	2,723
745867-AP-6	PulteGroup Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		12,655,500	10,000,000	115,104
74834L-BC-3	Quest Diagnostics Inc-SENIOR UNSECURED		..01/24/2022	GOLDMAN		10,049,200	10,000,000	20,222
74958Y-AE-2	RFMSI Series 2007-S4 Tru-RFMSI 2007-S4 A		..01/10/2022	CREDIT SUISSE SECURI		374,944	400,343	1,268
749685-AY-9	RPM International Inc-SENIOR UNSECURED		..03/10/2022	VARIOUS		25,198,444	26,102,000	64,654
74970F-AA-5	RMF Proprietary Issuance-RPIT 2022-3 A		..08/04/2022	NOMURA SECURITIES IN		17,165,520	18,450,000	0
74970F-AC-1	RMF Proprietary Issuance-RPIT 2022-3 M2		..08/25/2022	NOMURA SECURITIES IN		11,451,188	15,700,000	36,633
75003#-AA-5	Renewable Energy Alterna Senior Secured		..12/31/2022	DIRECT		(12,500,000)	(3,889,171)	0
75606*-AC-4	Realterm Logistics Incom Senior Note Ser		..05/23/2022	JP MORGAN SECURITIES		36,100,000	36,100,000	0
75606*-AD-2	Realterm Logistics Incom Senior Note Ser		..05/23/2022	JP MORGAN SECURITIES		28,900,000	28,900,000	0
756109-AS-3	REALTY INCOME CORP-SENIOR UNSECURED		..10/28/2022	CITIGROUP GLOBAL MAR		4,518,950	5,000,000	44,167
756109-AW-4	Realty Income Corp-SENIOR UNSECURED		..12/02/2022	WELLS FARGO		3,390,938	3,750,000	57,891
756109-BJ-2	Realty Income Corp-SENIOR UNSECURED		..12/02/2022	WELLS FARGO		6,535,875	7,500,000	78,375
75884R-AX-1	Regency Centers LP-SENIOR UNSECURED		..12/02/2022	U. S. BANCORP		1,882,457	2,004,000	18,600
75884R-AZ-6	Regency Centers LP-SENIOR UNSECURED		..02/24/2022	CITIGROUP GLOBAL MAR		10,466,827	10,680,000	142,652
759509-AB-8	Reliance Steel & Aluminu-SENIOR UNSECURE		..01/20/2022	GOLDMAN		7,180,777	5,198,000	68,245
759509-AG-7	Reliance Steel & Aluminu-SENIOR UNSECURE		..01/18/2022	GOLDMAN		9,498,900	10,000,000	92,569
760759-AF-7	Republic Services Inc-SENIOR UNSECURED N		..01/20/2022	GOLDMAN		3,967,800	3,000,000	65,425
760759-BA-7	Republic Services Inc-SENIOR UNSECURED		..01/21/2022	DEUTSCHE BANK SECURI		9,680,400	10,000,000	50,799
76119L-AB-7	Resideo Funding Inc-SENIOR UNSECURED		..03/30/2022	JP MORGAN SECURITIES		2,458,275	2,694,000	8,980
76209P-AA-1	RGA Global Funding-SECURED		..10/28/2022	WELLS FARGO		3,594,474	4,113,000	34,504
78396*-AE-8	SCF Funding LLC Senior Note Series E		..06/29/2022	BANK OF AMERICA CORP		10,000,000	10,000,000	0
78396*-AF-5	SCF Funding LLC Senior Note Series F		..06/29/2022	BANK OF AMERICA CORP		50,000,000	50,000,000	0
78396*-AK-4	SCF Funding LLC Senior Unsecured Notes		..11/08/2022	BNP PARIBAS		10,000,000	10,000,000	0
78397W-AC-0	SCF Equipment Leasing 20-SCFET 2022-2A A		..11/08/2022	RBC CAPITAL MARKETS		7,974,469	8,000,000	0
78403D-AZ-3	SBA Tower Trust-SECURED		..11/15/2022	BARCLAYS CAPITAL INC		4,000,000	4,000,000	0
78409V-BA-1	S&P Global Inc-SENIOR UNSECURED		..04/25/2022	RBC CAPITAL MARKETS		4,741,250	5,000,000	13,271

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
78409V-BD-5	S&P Global Inc-SENIOR UNSECURED		03/08/2022	MORGAN		9,959,800	10,000,000	0
78409V-BE-3	S&P Global Inc-SENIOR UNSECURED		03/17/2022	GOLDMAN		5,901,350	5,760,000	1,872
78433X-AA-8	Stonepeak 2021-1 ABS-SALTT 2021-1A AA		07/06/2022	DEUTSCHE BANK SECURI		1,546,874	1,659,124	2,439
78433X-AC-4	Stonepeak 2021-1 ABS-SALTT 2021-1A B		07/06/2022	BOFAMILSEC		1,897,755	2,061,639	5,033
78449C-AC-2	SMB Private Education Lo-SMB 2022-C B		08/02/2022	RBC CAPITAL MARKETS		15,292,994	15,300,000	0
78449R-AL-9	SLG 2021-OVA E FIXED CO-SLG 2021-OVA E		10/18/2022	KEY CAPITAL MARKETS		5,116,406	7,400,000	11,133
78449R-AN-5	SLG 2021-OVA F		08/09/2022	VARIOUS		4,072,699	5,275,000	5,491
78449X-AA-0	SMB Private Education Lo-SMB 2020-B A1A		01/19/2022	BARCLAYS CAPITAL INC		6,791,414	6,923,391	1,489
78449X-AC-6	SMB Private Education Lo-SMB 2020-B B		04/27/2022	CANTOR		2,233,429	2,476,000	2,658
78449Y-AA-8	SMB Private Education Lo-SMB 2021-B A		06/16/2022	CANTOR		13,126,774	14,395,366	3,143
78450F-AD-9	SMB Private Education Lo-SMB 2022-A B		03/08/2022	GOLDMAN		4,870,018	4,930,000	0
78450F-AE-7	SMB Private Education Lo-SMB 2022-A C		03/08/2022	GOLDMAN		7,996,623	8,000,000	0
78472J-AA-1	SPS Servicer Advance Rec-SPART 2020-T1 A		11/15/2022	PAYUP		0	0	0
78486Q-AE-1	SVB Financial Group-SENIOR UNSECURED		01/21/2022	VARIOUS		24,489,709	23,742,000	103,047
78486Q-AH-4	SVB Financial Group-SENIOR UNSECURED		04/04/2022	DAIWA SECURITIES AME		6,370,280	7,000,000	57,575
78518F-AA-5	Saber Midstream LLC Senior Secured Notes		04/06/2022	DIRECT		39,650,625	39,750,000	0
78573N-AC-6	Sabre GLBL Inc-SECURED		09/07/2022	MARKETAXESS FINANCIA		493,125	500,000	18,500
78573N-AH-5	Sabre GLBL Inc-SECURED		11/21/2022	BOFAMILSEC		779,184	794,000	0
78646U-A*-0	Safehold Inc. Senior Unsecured Notes		03/28/2022	GOLDMAN		25,000,000	25,000,000	0
79588T-AC-4	Sammons Financial Group -SENIOR UNSECURE		07/26/2022	JEFFERIESLLC		6,815,870	7,000,000	65,514
79588T-AD-2	Sammons Financial Group -SENIOR UNSECURE		08/23/2022	VARIOUS		12,977,223	13,730,000	132,248
79588T-AE-0	Sammons Financial Group -SENIOR UNSECURE		08/18/2022	VARIOUS		59,032,207	61,297,000	411,259
800363-AC-7	Sandy Spring Bancorp Inc-SUBORDINATED		03/15/2022	PIPERJAFFRAY		25,000,000	25,000,000	0
80285U-AF-8	Santander Drive Auto Rec-SDART 2022-3 C		05/11/2022	CITIGROUP GLOBAL MAR		9,998,088	10,000,000	0
805564-EM-9	Saxon Asset Securities T-SAST 1999-3 BF1		08/01/2022	VARIOUS		0	4,967	0
808513-AQ-8	Charles Schwab Corp/The-SENIOR UNSECURED		04/25/2022	KEY CAPITAL MARKETS		4,936,900	5,000,000	24,444
81761T-AA-3	ServiceMaster Funding LL-SERV 2020-1 A2I		02/18/2022	BOFAMILSEC		2,808,158	2,970,000	5,391
81761T-AC-9	ServiceMaster Funding LL-SERIES 20-1 CLA		04/21/2022	INTLFCSTONE		4,343,625	4,950,000	39,001
81761T-AE-5	ServiceMaster Funding LL-SERV 2021-1 A2I		09/28/2022	VARIOUS		12,594,504	14,875,000	62,797
824348-AX-4	SHERWIN-WILLIAMS CO-SENIOR UNSECURED		03/10/2022	VARIOUS		7,691,057	7,409,000	95,391
82652R-AB-5	Sierra Timeshare 2021-2 -SRFC 2021-2A B		11/16/2022	CREDIT SUISSE SECURI		738,186	801,287	1,122
82669G-CK-8	Signature Bank/New York -SUBORDINATED		06/07/2022	STIFEL NICOLAUS		16,163,750	16,750,000	100,500
826934-AC-5	Sierra Timeshare 2022-3 -SRFC 2022-3A C		10/12/2022	CREDIT SUISSE SECURI		3,999,072	4,000,000	0
82808F-AA-6	Silver Point Specialty C Senior Unsecure		01/21/2022	DIRECT		20,000,000	20,000,000	0
828807-DF-1	Simon Property Group LP-SENIOR UNSECURED		11/04/2022	CITIGROUP GLOBAL MAR		1,192,775	1,490,000	5,572
828807-DQ-7	Simon Property Group LP-SENIOR UNSECURED		03/04/2022	VARIOUS		7,728,190	8,300,000	27,172
828807-DT-1	Simon Property Group LP-SENIOR UNSECURED		02/25/2022	WELLS FARGO		9,509,500	10,000,000	36,806
82967N-BL-1	Sirius XM Radio Inc-SENIOR UNSECURED		05/26/2022	RBC CAPITAL MARKETS		2,835,000	3,000,000	23,438
82967N-BM-9	Sirius XM Radio Inc-SENIOR UNSECURED		09/29/2022	BOFAMILSEC		387,500	500,000	1,722
832248-BC-1	Smithfield Foods Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		9,755,700	10,000,000	79,167
83545G-BD-3	Sonic Automotive Inc-SENIOR UNSECURED		03/29/2022	BOFAMILSEC		900,000	1,000,000	19,785
84861T-AC-2	Spirit Realty LP-SENIOR UNSECURED		11/15/2022	FTS		1,211,275	1,265,000	9,695
84861T-AD-0	Spirit Realty LP-SENIOR UNSECURED		11/04/2022	VARIOUS		12,131,408	11,921,000	81,755
84861T-AH-1	Spirit Realty LP-SENIOR UNSECURED		07/25/2022	WELLS FARGO		4,248,650	5,000,000	38,500
84861T-AJ-7	Spirit Realty LP-SENIOR UNSECURED		08/16/2022	VARIOUS		28,067,040	31,595,000	74,424
85172F-AP-4	OneMain Finance Corp-SENIOR UNSECURED		08/31/2022	FLOW		982,500	1,000,000	28,413
852060-AD-4	SPRINT CAPITAL CORP-SENIOR UNSECURED		02/23/2022	VARIOUS		3,575,639	3,045,000	57,235
852060-AT-9	Sprint Capital Corp-SENIOR UNSECURED		02/10/2022	VARIOUS		9,733,180	7,000,000	250,590
85236K-AC-4	Stack Infrastructure Iss-SIDC 2020-1A A2		07/11/2022	DEUTSCHE BANK SECURI		4,090,700	4,470,000	3,074
855244-BC-2	Starbucks Corp-SENIOR UNSECURED		02/25/2022	MORGAN		19,649,000	20,000,000	28,333
85571R-AA-8	Starwood Mortgage Reside-STAR 2022-3 A1		04/28/2022	CREDIT SUISSE SECURI		4,966,521	5,000,000	18,493
85571R-AB-6	Starwood Mortgage Reside-STAR 2022-3 A2		04/28/2022	CREDIT SUISSE SECURI		12,756,723	13,055,000	48,286
85571R-AC-4	Starwood Mortgage Reside-STAR 2022-3 A3		04/28/2022	CREDIT SUISSE SECURI		11,879,261	12,192,000	45,094
85573J-AA-4	Starwood Mortgage Reside-STAR 2021-3 A1		05/03/2022	INTLFCSTONE		5,789,774	6,250,768	783
85573T-AA-2	Starwood Mortgage Reside-STARWOOD MORTGA		01/26/2022	CSAG		49,999,170	50,000,000	91,763

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
85573T-AB-0	Starwood Mortgage Reside-STARWOOD MORTGA		.01/26/2022	CSAG		20,626,777	20,627,000	47,030
85573T-AC-8	Starwood Mortgage Reside-STARWOOD MORTGA		.01/26/2022	CSAG		10,999,665	11,000,000	27,151
85573U-AC-5	Starwood Mortgage Reside-STAR 2022-2 A3		.03/04/2022	CSAG		8,750,981	8,751,000	34,852
85855C-AD-2	Stellantis Finance US In-SENIOR UNSECURE		.12/05/2022	VARIOUS		37,118,164	38,500,000	348,799
862121-AA-8	STORE Capital Corp-SENIOR UNSECURED		.03/15/2022	BRILEY		13,192,746	12,625,000	3,156
862121-AB-6	STORE Capital Corp-SENIOR UNSECURED		.07/25/2022	WELLS FARGO		1,974,180	2,000,000	33,917
862121-AC-4	STORE Capital Corp-SENIOR UNSECURED		.07/22/2022	VARIOUS		13,891,400	15,000,000	73,333
86212V-AD-6	Store Master Funding I-V-STR 2018-1A A1		.12/08/2022	CANTOR		1,286,005	1,341,117	3,246
86669P-AA-3	Sun Country Pass Through Series 2022-1A		.09/15/2022	GOLDMAN		25,000,000	25,000,000	0
86669Q-AA-1	Sun Country Pass Through Series 2022-1B		.09/15/2022	GOLDMAN		7,000,000	7,000,000	0
86744V-AA-9	Helios Issuer LLC-SNVA 2022-B A		.08/12/2022	CREDIT SUISSE SECURI		8,143,193	8,200,000	0
86744V-AB-7	Helios Issuer LLC-SNVA 2022-B B		.08/12/2022	CREDIT SUISSE SECURI		9,489,582	10,000,000	0
86744W-AA-7	Sunnova Helios X Issuer -SNVA 2022-C A		.11/03/2022	CREDIT SUISSE SECURI		12,300,187	13,000,000	0
86772R-AA-3	Sunrun Jupiter Issuer 20-SUNRN 2022-1A A		.04/26/2022	CREDIT SUISSE SECURI		14,877,947	15,000,000	0
87161C-AN-5	Synovus Financial Corp-SENIOR UNSECURED		.08/10/2022	MORGAN		32,887,914	32,895,000	1,444
87165B-AR-4	Synchrony Financial-SENIOR UNSECURED		.03/17/2022	GOLDMAN		19,635,065	21,156,000	192,889
87222E-AB-4	TBW Mortgage-Backed Trus-TBW 2007-1 A2		.01/10/2022	CREDIT SUISSE SECURI		1,001,069	3,390,612	427
87222E-AC-2	TBW Mortgage-Backed Trus-TBW 2007-1 A3		.01/10/2022	CREDIT SUISSE SECURI		1,151,345	3,175,002	7,315
872635-AC-1	TRK 2022-INV1 Trust-TRK 2022-INV1 A3		.02/02/2022	MORGAN		4,700,831	4,701,000	17,872
87264A-BV-6	T-Mobile USA Inc-SENIOR UNSECURED		.12/05/2022	VARIOUS		5,949,582	6,597,000	32,011
87264A-CQ-6	T-Mobile USA Inc-FIRST LIEN		.07/01/2022	EXCHANGE OFFER		19,385,236	20,000,000	307,500
87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A		.06/28/2022	CREDIT SUISSE SECURI		22,753,637	26,065,831	19,484
87267T-AD-3	TRK 2021-INV2 Trust-TRK 2021-INV2 M1		.06/08/2022	VARIOUS		3,305,000	4,000,000	3,280
87329F-AA-5	TTGA SBIC FEEDER FUND LP 6.00 12/31/2035		.01/27/2022	BANK LOANS BABSON CA		2,013,624	2,013,624	0
87407R-AA-4	TAL Advantage VII LLC-TAL 2020-1A A		.12/08/2022	WELLS FARGO		6,901,249	7,848,600	9,833
87407R-AC-0	TAL Advantage VII LLC-TAL 2020-1A B		.02/24/2022	WELLS FARGO		3,580,786	3,617,813	2,645
875127-BF-8	Tampa Electric Co-SENIOR UNSECURED		.01/19/2022	BARCLAYS CAPITAL INC		12,117,538	9,970,000	44,367
875484-AL-1	Tanger Properties LP-SENIOR UNSECURED		.01/18/2022	GOLDMAN		9,378,600	10,000,000	122,222
87612B-BS-0	Targa Resources Partners-SENIOR UNSECURE		.12/05/2022	VARIOUS		9,258,758	10,000,000	170,625
87612K-AA-0	Targa Resources Corp-SENIOR UNSECURED		.12/05/2022	GOLDMAN		7,904,080	8,000,000	173,333
88033G-DP-2	Tenet Healthcare Corp-FIRST LIEN		.06/01/2022	BARCLAYS CAPITAL INC		2,403,000	2,403,000	0
880451-AZ-2	Tennessee Gas Pipeline C-SENIOR UNSECURE		.02/25/2022	CITIGROUP GLOBAL MAR		4,778,750	5,000,000	0
882384-AA-7	Texas Eastern Transmissi Senior Unsecure		.12/06/2022	PRUDENTIAL SECURITIE		20,000,000	20,000,000	0
883203-CB-5	Textron Inc-SENIOR UNSECURED		.03/18/2022	VARIOUS		19,835,300	20,000,000	138,333
883203-CC-3	Textron Inc-SENIOR UNSECURED		.03/10/2022	VARIOUS		18,809,200	20,000,000	206,889
886758-AB-3	Tiger Global Management Senior Note Seri		.04/13/2022	DIRECT		25,000,000	25,000,000	0
886758-AC-1	Tiger Global Management Senior Note Seri		.04/13/2022	DIRECT		30,000,000	30,000,000	0
886758-AD-9	Tiger Global Management Senior Note Seri		.04/13/2022	DIRECT		10,000,000	10,000,000	0
892231-AB-7	Townsquare Media Inc-SECURED		.02/23/2022	GOLDMAN		2,149,875	2,100,000	9,625
89236T-KK-0	Toyota Motor Credit Corp-SENIOR UNSECURE		.11/22/2022	BOFAMLSEC		5,053,050	5,000,000	11,250
893647-BE-6	TransDigm Inc-SECURED		.06/16/2022	MARKETAXESS FINANCIA		2,938,500	3,000,000	48,264
89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A		.05/19/2022	WELLS FARGO		9,997,986	10,000,000	0
89609M-AB-5	Tribute Rail LLC-TRP 2022-1 B		.05/19/2022	DIRECT		1,650,770	1,650,000	0
89656R-AA-8	Trinity Rail Leasing 202-TRL 2022-1 A		.04/20/2022	CREDIT SUISSE SECURI		7,999,656	8,000,000	0
89657B-AA-2	Trinity Rail Leasing 201-TRL 2019-1A A		.11/16/2022	CREDIT SUISSE SECURI		7,390,362	8,007,164	850
89679E-AE-2	Triumph Bancorp Inc-SUBORDINATED		.02/01/2022	EXCHANGE OFFER		6,000,000	6,000,000	90,417
89680H-AA-0	Triton Container Finance-TCF 2020-1A A		.11/16/2022	WELLS FARGO		6,581,085	7,764,219	12,742
89680H-AB-8	Triton Container Finance-TCF 2020-1A B		.07/28/2022	BARCLAYS CAPITAL INC		2,485,227	2,701,333	3,087
89682*-AA-6	TriplePoint Private Vent Senior Unsecure		.04/06/2022	GOLDMAN		30,000,000	30,000,000	0
89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A		.08/16/2022	WELLS FARGO		2,567,593	2,875,848	172
89787E-AA-9	Trustage Financial Group-SENIOR UNSECURE		.03/22/2022	WELLS FARGO		64,529,400	65,000,000	0
90265E-AM-2	UDR Inc-SENIOR UNSECURED		.10/28/2022	BARCLAYS CAPITAL INC		4,568,100	5,000,000	58,333
90265E-AR-1	UDR Inc-SENIOR UNSECURED		.01/24/2022	WELLS FARGO		10,163,200	10,000,000	134,167
90265E-AT-7	UDR Inc-SENIOR UNSECURED		.05/20/2022	CITIGROUP GLOBAL MAR		5,364,898	6,675,000	43,999
90265E-AU-4	UDR Inc-SENIOR UNSECURED		.03/01/2022	CITIGROUP GLOBAL MAR		5,315,700	6,000,000	53,200

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
90265E-AV-2	UDR Inc-SENIOR UNSECURED		..03/04/2022	U. S. BANCORP		11,243,375	12,500,000	60,521
90352W-AE-4	ITE Rail Fund Levered LP-STEAM 2021-2A B		..07/15/2022	CANTOR		6,622,688	7,800,000	13,559
90353T-AK-6	Uber Technologies Inc-SENIOR UNSECURED		..11/17/2022	MORGAN		1,725,000	2,000,000	24,000
911312-AJ-5	UNITED PARCEL SERVICE IN-SENIOR UNSECURE		..01/19/2022	CITIGROUP GLOBAL MAR		29,577,870	21,000,000	21,700
911312-BW-5	United Parcel Service In-SENIOR UNSECURE		..03/11/2022	CITIGROUP GLOBAL MAR		20,141,366	15,800,000	381,482
91159H-JB-7	US Bancorp-SUBORDINATED		..03/04/2022	U. S. BANCORP		4,475,929	4,755,000	41,127
91159H-JF-8	US Bancorp-SENIOR UNSECURED		..11/04/2022	VARIOUS		10,077,481	10,560,000	132,569
91324P-CV-2	UnitedHealth Group Inc-SENIOR UNSECURED		..11/22/2022	MORGAN		3,107,331	3,256,000	19,626
91324P-DL-3	UnitedHealth Group Inc-SENIOR UNSECURED		..03/17/2022	GOLDMAN		8,846,064	8,110,000	91,913
91324P-EE-8	UnitedHealth Group Inc-SENIOR UNSECURED		..01/18/2022	HSBC SECURITIES INC		19,851,400	20,000,000	110,139
91324P-EF-5	UnitedHealth Group Inc-SENIOR UNSECURED		..01/20/2022	BARCLAYS CAPITAL INC		11,603,053	11,379,000	70,882
91412N-BG-4	University of Chicago/Th-UNSECURED		..03/03/2022	SOUTHWEST SEC.		4,994,126	5,360,000	69,680
914886-AF-3	University of Southern C-SENIOR UNSECURE		..03/14/2022	VARIOUS		15,481,350	17,500,000	234,986
915271-AD-2	Univest Financial Corp-SUBORDINATED		..11/07/2022	U. S. BANCORP		15,000,000	15,000,000	0
918628-AA-2	Viva Capital 3 LS 2021 L Viva Term Note		..06/28/2022	DIRECT		61,777,210	65,116,410	94,961
91913Y-BC-3	Valero Energy Corp-SENIOR UNSECURED		..05/23/2022	MORGAN		8,617,300	10,000,000	136,889
919794-AG-2	Valley National Bancorp-SUBORDINATED		..09/15/2022	PIPERJAFFRAY		30,000,000	30,000,000	0
92212K-AB-2	Vantage Data Centers Iss-VDC 2020-1A A2		..11/22/2022	VARIOUS		8,266,668	9,400,000	6,018
92257B-AA-0	Velocity Commercial Capi-VCC 2022-3 A		..06/08/2022	CITIGROUP GLOBAL MAR		14,971,002	15,000,000	84,825
92257B-AC-6	Velocity Commercial Capi-VCC 2022-3 M2		..06/08/2022	CITIGROUP GLOBAL MAR		4,979,210	5,000,000	35,154
92257B-AD-4	Velocity Commercial Capi-VCC 2022-3 M3		..06/08/2022	CITIGROUP GLOBAL MAR		6,282,088	6,463,000	45,853
92257B-AE-2	Velocity Commercial Capi-VCC 2022-3 M4		..06/08/2022	CITIGROUP GLOBAL MAR		13,707,282	15,000,000	106,421
92257B-AF-9	Velocity Commercial Capi-VCC 2022-3 M5		..06/08/2022	CITIGROUP GLOBAL MAR		7,218,642	8,275,000	58,709
92257P-AC-5	Velocity Commercial Capi-VCC 2022-5 M3		..10/04/2022	CITIGROUP GLOBAL MAR		14,370,348	14,618,000	122,076
92257P-BA-8	Velocity Commercial Capi-VCC 2022-5 M2		..10/04/2022	CITIGROUP GLOBAL MAR		2,937,805	3,000,000	22,500
92258X-AA-1	Velocity Commercial Capi-VCC 2022-1 A		..02/14/2022	CITIGROUP GLOBAL MAR		1,986,304	2,000,000	8,262
92258X-AB-9	Velocity Commercial Capi-VCC 2022-1 M1		..02/14/2022	CITIGROUP GLOBAL MAR		13,138,182	13,250,000	60,891
92259K-AD-2	Velocity Commercial Capi-VCC 2022-4 M1		..08/05/2022	BARCLAYS CAPITAL INC		3,199,986	3,200,000	24,017
92259K-AG-5	Velocity Commercial Capi-VCC 2022-4 M2		..08/05/2022	BARCLAYS CAPITAL INC		6,337,004	6,338,000	50,311
92259U-AA-6	Velocity Commercial Capi-VCC 2022-2 A		..04/05/2022	BARCLAYS CAPITAL INC		4,999,115	5,000,000	23,999
92259U-AB-4	Velocity Commercial Capi-VCC 2022-2 M1		..04/05/2022	BARCLAYS CAPITAL INC		5,998,655	6,000,000	33,362
92259U-AC-2	Velocity Commercial Capi-VCC 2022-2 M2		..04/05/2022	BARCLAYS CAPITAL INC		5,199,705	5,200,000	30,143
92259U-AE-8	Velocity Commercial Capi-VCC 2022-2 M4		..04/05/2022	BARCLAYS CAPITAL INC		18,760,870	20,000,000	120,805
92259U-AF-5	Velocity Commercial Capi-VCC 2022-2 M5		..04/05/2022	BARCLAYS CAPITAL INC		5,359,852	6,000,000	36,242
92259U-AG-3	Velocity Commercial Capi-VCC 2022-2 M6		..04/05/2022	BARCLAYS CAPITAL INC		4,735,128	5,470,000	33,040
92277G-AL-1	Ventas Realty LP-SENIOR UNSECURED		..11/15/2022	U. S. BANCORP		1,721,308	1,829,000	8,998
92277G-AM-9	Ventas Realty LP-SENIOR UNSECURED		..10/28/2022	SUNTRUST CAPITAL MAR		4,542,400	5,000,000	33,333
92343V-EA-8	Verizon Communications I-SENIOR UNSECURE		..03/16/2022	GOLDMAN		10,787,700	10,000,000	47,500
92343V-GG-3	Verizon Communications I-SENIOR UNSECURE		..11/22/2022	BOFAMLSEC		4,513,300	5,000,000	13,090
92343V-GK-4	Verizon Communications I-SENIOR UNSECURE		..02/25/2022	VARIOUS		17,007,750	18,000,000	270,300
92343V-GN-8	Verizon Communications I-SENIOR UNSECURE		..04/28/2022	EXCHANGE OFFER		37,960,596	40,200,000	113,079
92346L-AE-3	Veritas US Inc / Veritas-SECURED		..03/28/2022	GOLDMAN		1,862,500	2,000,000	12,083
924921-AD-1	Verus Securitization Tru-VERUS 2022-5 M1		..06/03/2022	CREDIT SUISSE SECURI		6,931,828	8,024,000	30,796
92537M-AA-8	Verus Securitization Tru-VERUS 2019-INV3		..05/12/2022	CANTOR		12,675,940	12,820,166	14,380
92538N-AD-9	Verus Securitization Tru-VERUS 2022-4 M1		..04/22/2022	CREDIT SUISSE SECURI		6,236,826	6,485,000	23,307
92538Q-AA-8	Verus Securitization Tru-VERUS 2021-7 A1		..05/26/2022	CITIGROUP GLOBAL MAR		41,868,560	45,023,956	41,148
92539A-AA-2	Verus Securitization Tru-VERUS 2022-6 A1		..06/21/2022	CREDIT SUISSE SECURI		6,192,274	6,250,000	23,016
92539A-AB-0	Verus Securitization Tru-VERUS 2022-6 A2		..06/24/2022	VARIOUS		6,212,883	6,361,000	23,424
92539J-AA-3	Verus Securitization Tru-VERUS 2022-INV1		..08/18/2022	CREDIT SUISSE SECURI		4,999,907	5,000,000	17,503
92539J-AB-1	Verus Securitization Tru-VERUS 2022-INV1		..08/18/2022	CREDIT SUISSE SECURI		4,499,965	4,500,000	18,131
92539J-AC-9	Verus Securitization Tru-VERUS 2022-INV1		..08/18/2022	CREDIT SUISSE SECURI		4,948,185	5,000,000	20,243
92539J-AD-7	Verus Securitization Tru-VERUS 2022-INV1		..08/18/2022	CREDIT SUISSE SECURI		3,154,407	3,400,000	13,903
92539N-AA-4	Verus Securitization Tru-VERUS 2022-7 A1		..07/28/2022	CREDIT SUISSE SECURI		4,999,945	5,000,000	23,613
92539N-AB-2	Verus Securitization Tru-VERUS 2022-7 A2		..07/28/2022	CREDIT SUISSE SECURI		5,677,848	5,750,000	28,199
925524-AV-2	ViacomCBS Inc-SENIOR UNSECURED		..01/18/2022	GOLDMAN		12,139,400	10,000,000	99,306

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
92556H-AB-3	ViacomCBS Inc-SENIOR UNSECURED		.01/25/2022	VARIOUS		22,914,800	20,000,000	31,625
92556H-AC-1	ViacomCBS Inc-SENIOR UNSECURED		.03/10/2022	JP MORGAN SECURITIES		10,341,300	10,000,000	158,125
92556V-AD-8	Viatis Inc-SENIOR UNSECURED		.01/20/2022	GOLDMAN		17,431,062	17,894,000	39,946
927804-GF-5	Virginia Electric and Po-SENIOR UNSECURE		.01/20/2022	BAIRD		11,608,492	12,105,000	60,245
928668-AU-6	Volkswagen Group of Amer-SENIOR UNSECURE		.12/05/2022	VARIOUS		15,595,030	16,403,000	126,491
928668-BS-0	Volkswagen Group of Amer-SENIOR UNSECURE		.10/28/2022	CITIGROUP GLOBAL MAR		4,657,850	5,000,000	86,396
928668-BT-8	Volkswagen Group of Amer-SENIOR UNSECURE		.12/05/2022	VARIOUS		10,006,014	10,723,000	215,363
929043-AL-1	Vornado Realty LP-SENIOR UNSECURED		.01/18/2022	GOLDMAN		10,061,600	10,000,000	46,278
929089-AB-6	Voya Financial Inc-SENIOR UNSECURED		.04/25/2022	DEUTSCHE BANK SECURI		12,196,786	12,317,000	164,843
92928Q-AF-5	WEA Finance LLC-SENIOR UNSECURED		.03/22/2022	CITIGROUP GLOBAL MAR		34,567,805	35,500,000	309,284
92936U-AJ-8	WP Carey Inc-SENIOR UNSECURED		.03/17/2022	U. S. BANCORP		1,190,410	1,317,000	4,481
92940P-AG-9	WRKCo Inc-SENIOR UNSECURED		.03/03/2022	U. S. BANCORP		2,272,709	2,350,000	16,058
931108-AA-2	WakeMed Health & Hospita-UNSECURED		.03/08/2022	VARIOUS		32,395,850	32,500,000	19,625
931142-ER-0	Walmart Inc-SENIOR UNSECURED		.11/22/2022	U. S. BANCORP		8,855,700	10,000,000	19,833
95040Q-AD-6	Welltower Inc-SENIOR UNSECURED		.10/19/2022	BARCLAYS CAPITAL INC		4,575,950	5,000,000	3,542
95040Q-AH-7	Welltower Inc-SENIOR UNSECURED		.12/05/2022	CITIGROUP GLOBAL MAR		2,385,347	2,550,000	23,959
95040Q-AK-0	Welltower Inc-SENIOR UNSECURED		.10/28/2022	BARCLAYS CAPITAL INC		4,443,250	5,000,000	28,500
95040Q-AL-8	Welltower Inc-SENIOR UNSECURED		.01/21/2022	VARIOUS		10,005,500	10,000,000	7,639
95040Q-AM-6	Welltower Inc-SENIOR UNSECURED		.01/25/2022	U. S. BANCORP		4,981,250	5,000,000	21,778
95040Q-AN-4	Welltower Inc-SENIOR UNSECURED		.12/05/2022	CITIGROUP GLOBAL MAR		3,706,995	4,493,000	36,331
95040Q-AP-9	Welltower Inc-SENIOR UNSECURED		.02/24/2022	WELLS FARGO		4,727,300	5,000,000	37,813
958102-AR-6	Western Digital Corp-SENIOR UNSECURED		.01/18/2022	GOLDMAN		9,712,000	10,000,000	34,444
970648-AL-5	Willis North America Inc-SENIOR UNSECURE		.12/02/2022	VARIOUS		9,902,512	10,219,000	246,151
976656-CJ-5	WISCONSIN ELECTRIC POWER-SR UNSECURED		.01/20/2022	GOLDMAN		6,704,531	5,790,000	26,972
97988R-AN-2	WDMNT 2022-9A D-WDMNT 2022-9A D		.05/05/2022	NATIXIS CAP MKT		8,500,000	8,500,000	0
97988R-AQ-5	WDMNT 2022-9A E-WDMNT 2022-9A E		.05/05/2022	NATIXIS CAP MKT		7,840,000	8,000,000	0
98138H-AH-4	Workday Inc-SENIOR UNSECURED		.09/30/2022	JANE		1,811,820	2,000,000	617
98138H-AJ-0	Workday Inc-SENIOR UNSECURED		.03/30/2022	MORGAN		12,285,626	12,310,000	0
98920M-AA-0	ZAXBY'S FUNDING LLC-ZAXBY 2021-1A A2		.07/25/2022	VARIOUS		23,981,963	25,845,995	113,736
C7S90B-AC-2	Panther BF Aggregator 2 -SECURED		.07/28/2022	JEFFERIES INTL LTD		94,538	101,110	934
L7598*-AC-4	PILI 1 Portfolio SCSp Senior Unsecured N		.05/05/2022	GOLDMAN		22,000,000	22,000,000	0
N5269@-AE-8	Lineage Logistics, LLC Senior Guaranteed		.08/15/2022	JP MORGAN SECURITIES		23,078,250	23,078,249	0
U2203C-AF-8	Coty Inc-SECURED		.07/26/2022	VARIOUS		487,880	511,270	5,646
U4327B-AA-8	Hikma Finance USA LLC-SENIOR UNSECURED		.04/01/2022	CITIGMUK		984,711	1,018,000	7,904
U6203B-AB-0	MPT Operating Partnershi-SENIOR UNSECURE		.07/26/2022	VARIOUS		602,247	613,260	7,039
06368B-GS-1	Bank of Montreal-SUBORDINATED	A.	.02/28/2022	CITIGROUP GLOBAL MAR		14,887,730	14,500,000	117,946
06368F-AJ-8	Bank of Montreal-SENIOR UNSECURED	A.	.04/25/2022	BOFAMILSEC		5,919,232	6,264,000	22,594
064159-HB-5	BANK OF NOVA SCOTIA-SUBORDINATED	A.	.04/25/2022	GOLDMAN		7,641,000	7,500,000	122,813
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED	A.	.10/19/2022	GOLDMAN		5,924,962	6,664,000	62,086
11271L-AF-9	Brookfield Finance Inc-SENIOR UNSECURED	A.	.01/18/2022	VARIOUS		19,461,312	19,407,000	207,547
56501R-AC-0	Manulife Financial Corp-SENIOR UNSECURED	A.	.04/25/2022	GOLDMAN		4,430,892	4,349,000	26,571
576339-CY-9	Master Credit Card Trust-MCCT 2022-4A C	A.	.10/13/2022	JP MORGAN SECURITIES		9,268,420	9,269,000	0
58518N-ZB-7	MEGlobal Canada ULC-SENIOR UNSECURED	A.	.04/01/2022	SMBC NIKKO CAPITAL M		1,029,308	995,000	18,933
70137W-AG-3	Parkland Corp-SENIOR UNSECURED	A.	.06/08/2022	BOFAMILSEC		3,801,065	4,247,000	36,630
78016E-ZS-9	Royal Bank of Canada-SENIOR UNSECURED	A.	.04/25/2022	JP MORGAN SECURITIES		9,936,000	10,000,000	12,188
878742-BG-9	Teck Resources Ltd-SENIOR UNSECURED	A.	.01/18/2022	GOLDMAN		10,502,000	10,000,000	5,417
89115A-2A-9	Toronto-Dominion Bank/Th-SENIOR UNSECURE	A.	.11/22/2022	GOLDMAN		5,823,840	6,000,000	104,820
89115A-2H-4	Toronto-Dominion Bank/Th-SENIOR UNSECURE	A.	.12/02/2022	VARIOUS		19,578,700	20,000,000	165,559
00091R-AA-8	AGL CLO 20 Ltd-AGL 2022-20A E	D.	.06/30/2022	BNP PARIBAS		2,406,250	2,500,000	0
00119E-AA-5	AGL CLO 23 Ltd-AGL 2022-23A A	D.	.12/08/2022	DEUTSCHE BANK SECURI		7,700,000	7,700,000	5,802
00121G-AA-6	AGL Core CLO 15 Ltd-AGL 2021-15A A1	D.	.11/03/2022	RBC CAPITAL MARKETS		5,081,741	5,299,000	14,288
00140L-AJ-3	Aimco CLO 12 Ltd-AIMCO 2020-12A GR	D.	.05/26/2022	BOFAMILSEC		1,762,588	1,850,000	6,411
00140M-AC-6	Aimco CLO 12 Ltd-AIMCO 2020-12A ER	D.	.09/14/2022	BOFAMILSEC		920,800	1,000,000	14,301
00182Y-AA-3	ANZ Bank New Zealand Ltd-SUBORDINATED	D.	.08/02/2022	BOFAMILSEC		7,874,000	7,874,000	0
00401M-AB-2	Abu Dhabi Crude Oil Pipe-FIRST LIEN	D.	.04/01/2022	BNP PARIBAS		887,576	834,000	10,124
00652M-AG-7	Adani Ports & Special Ec-SENIOR UNSECURE	D.	.04/01/2022	WSIL		1,032,134	1,056,000	7,515
00652X-AB-4	Adani Transmission Ltd-FIRST LIEN	D.	.04/01/2022	CITIGMUK		917,589	1,006,360	15,920
00774M-AE-5	AerCap Ireland Capital D-SENIOR UNSECURE	D.	.12/05/2022	VARIOUS		9,061,257	10,000,000	144,236
00830Y-AC-5	Africa Finance Corp-SENIOR UNSECURED	D.	.12/15/2022	STIF NIC EURO LTD		3,790,000	4,000,000	30,139

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
00830Y-AD-3	Africa Finance Corp-SENIOR UNSECURED	D	04/01/2022	GOLDMAN SACHS INTERN		1,189,305	1,284,000	16,099
008511-AN-7	AGL CLO 7 Ltd-AGL 2020-7A BR	D	05/02/2022	MITSUBISHI UFJ SEC I		4,624,800	4,700,000	6,807
00889B-AC-5	Aimco CLO 15 Ltd-AIMCO 2021-15A C	D	05/26/2022	BOFAMLSEC		3,063,125	3,250,000	11,624
00900C-AQ-7	AIMCO CLO Series 2017-A-AIMCO 2017-AA CR	D	04/22/2022	WELLS FARGO		7,984,000	8,000,000	4,217
01749K-AA-7	Allegro CLO Ltd-ALLEG 2022-1A E	D	04/29/2022	CITIGROUP GLOBAL MAR		6,930,000	7,000,000	0
01749W-AG-8	Allegro CLO Ltd-ALLEG 2022-1A D	D	04/29/2022	CITIGROUP GLOBAL MAR		9,500,000	9,500,000	0
03328R-AL-3	Anchorage Capital CLO 6 -ANCHC 2015-6A E	D	04/08/2022	JP MORGAN SECURITIES		6,008,025	6,150,000	93,990
03329W-AJ-6	Anchorage Capital CLO 25-ANCHC 2022-25A	D	02/11/2022	JP MORGAN SECURITIES		15,000,000	15,000,000	0
03329X-AA-3	Anchorage Capital CLO 25-ANCHC 2022-25A	D	02/11/2022	JP MORGAN SECURITIES		9,846,000	10,000,000	0
03512T-AF-8	AngloGold Ashanti Holdin-SENIOR UNSECURE	D	04/01/2022	GOLDMAN SACHS INTERN		1,232,340	1,311,000	20,034
03665T-AN-6	Antares CLO 2018-2 Ltd-ANTR 2018-2A A2R	D	04/21/2022	DEUTSCHE BANK SECURI		9,000,000	9,000,000	0
03665T-AQ-9	Antares CLO 2018-2 Ltd-ANTR 2018-2A BR	D	04/21/2022	DEUTSCHE BANK SECURI		18,000,000	18,000,000	0
03665T-AU-0	Antares CLO 2018-2 Ltd-ANTR 2018-2A DR	D	04/21/2022	DEUTSCHE BANK SECURI		5,250,000	5,250,000	0
03768Q-AQ-1	Apidos CLO XXXII-APID 2019-32A E	D	04/18/2022	CREDIT SUISSE SECURI		2,222,550	2,250,000	0
03937L-AA-3	ARCH CAPITAL GROUP LTD-SENIOR UNSECURED	D	01/19/2022	VARIOUS		14,728,045	10,469,000	168,952
039937-AE-7	ARES CLO-ARES 2022-63A B1	D	03/10/2022	SG COWEN SECURITIES		10,000,000	10,000,000	0
039937-AG-2	ARES CLO-ARES 2022-63A C	D	03/10/2022	SG COWEN SECURITIES		4,850,000	4,850,000	0
039938-AA-3	ARES CLO-ARES 2022-63A E	D	03/10/2022	SG COWEN SECURITIES		8,415,000	8,500,000	0
04016P-AL-2	Ares XLIII CLO Ltd-ARES 2017-43A BR	D	04/25/2022	RBC CAPITAL MARKETS		3,967,200	4,000,000	3,659
04017A-AG-5	Ares XLIII CLO Ltd-ARES 2017-43A ER	D	04/22/2022	BARCLAYS CAPITAL INC		9,464,160	9,600,000	23,186
04017W-AE-2	Ares LIV CLO Ltd-ARES 2019-54A B	D	05/02/2022	WELLS FARGO		6,841,350	6,900,000	10,540
04017X-AA-8	Ares LIV CLO Ltd-ARES 2019-54A E	D	07/29/2022	VARIOUS		4,959,405	5,300,000	61,194
04019F-AE-7	Ares LXV CLO Ltd-ARES 2022-65A B	D	04/27/2022	GOLDMAN		10,000,000	10,000,000	0
04019G-AA-3	Ares LXV CLO Ltd-ARES 2022-65A E	D	04/27/2022	GOLDMAN		5,700,000	5,700,000	0
04019H-AN-3	Ares LXIV CLO Ltd-ARES 2022-64A D	D	03/25/2022	BARCLAYS CAPITAL INC		8,000,000	8,000,000	0
04019T-AA-5	ARES CLO-ARES 2022-66A E	D	07/15/2022	JP MORGAN SECURITIES		7,598,400	8,000,000	0
04342J-AA-5	ASB Bank Ltd-SUBORDINATED	D	06/08/2022	CITIGROUP GLOBAL MAR		10,714,000	10,714,000	0
04686J-AA-9	Athene Holding Ltd-SENIOR UNSECURED	D	11/04/2022	VARIOUS		39,941,743	38,830,000	271,626
04686J-AB-7	Athene Holding Ltd-SENIOR UNSECURED	D	07/21/2022	GOLDMAN		18,680,865	17,443,000	325,201
04686J-AC-5	Athene Holding Ltd-SENIOR UNSECURED	D	03/17/2022	VARIOUS		20,787,222	20,350,000	36,274
04965H-AA-5	Atrium XIV LLC-ATRM 14A E	D	08/31/2022	GOLDMAN		4,686,500	5,150,000	55,213
05401A-AG-6	Avolon Holdings Funding -SENIOR UNSECURE	D	02/25/2022	CREDIT SUISSE SECURI		15,389,550	15,000,000	218,750
05401A-AK-7	Avolon Holdings Funding -SENIOR UNSECURE	D	07/26/2022	WELLS FARGO		9,756,000	10,000,000	19,861
05523R-AD-9	BAE Systems PLC-SENIOR UNSECURED	D	01/19/2022	VARIOUS		20,802,800	20,000,000	180,389
05682G-AJ-7	Bain Capital Credit CLO-BCC 2022-2A C	D	03/11/2022	BOFAMLSEC		9,000,000	9,000,000	0
05682G-AL-2	Bain Capital Credit CLO-BCC 2022-2A D1	D	03/11/2022	BOFAMLSEC		5,000,000	5,000,000	0
05682L-AJ-6	Bain Capital Credit CLO -BCC 2019-2A AR	D	11/15/2022	WELLS FARGO		2,529,800	2,600,000	11,596
05682Q-AL-0	Bain Capital Credit CLO -BCC 2017-1A C2	D	04/26/2022	BREAN MURRAY		8,969,998	9,001,250	7,126
05682X-AE-1	Bain Capital Credit Clo -BCC 2019-4A ER	D	02/25/2022	CREDIT SUISSE SECURI		7,425,000	7,500,000	0
05684A-AW-9	Bain Capital Credit Clo -BCC 2019-4A DR	D	02/25/2022	CREDIT SUISSE SECURI		14,850,000	15,000,000	0
05684K-AN-7	Bain Capital Credit CLO -BCC 2020-4A B	D	07/07/2022	WELLS FARGO		2,491,320	2,600,000	17,842
05684U-AJ-4	Bain Capital Credit CLO -BCC 2022-1A D	D	02/03/2022	CITIGROUP GLOBAL MAR		15,000,000	15,000,000	0
05684W-AA-9	Bain Capital Credit CLO -BCC 2022-1A E	D	02/03/2022	CITIGROUP GLOBAL MAR		10,000,000	10,000,000	0
05685C-AA-2	Bain Capital Credit CLO -BCC 2022-4A E	D	05/19/2022	BARCLAYS CAPITAL INC		2,940,000	3,000,000	0
05685K-AA-4	BAIN CAPITAL CREDIT CLO -BCC 2022-5A E	D	06/03/2022	JEFFERIESLLC		7,680,000	8,000,000	0
05874R-AA-0	Ballyrock CLO 21 Ltd-BALLY 2022-21A D	D	09/27/2022	BOFAMLSEC		3,120,000	3,250,000	0
05875K-AE-6	Ballyrock CLO 2019-1 Ltd-BALLY 2019-1A D	D	08/19/2022	BOFAMLSEC		1,217,138	1,300,000	13,044
05876D-AA-9	BALLYROCK LTD-BALLY 2022-20A D	D	07/01/2022	JP MORGAN SECURITIES		7,194,750	7,500,000	0
05969B-AD-5	Banco Santander Mexico S-SENIOR UNSECURE	D	11/01/2022	VARIOUS		3,922,500	4,000,000	9,556
064227-AC-5	Bank of NT Butterfield &-SUBORDINATED	D	05/10/2022	PERFTRUSTCP		7,758,450	7,560,000	162,068
06744N-BG-1	Bardot CLO Ltd-BARDT 2019-2A AR	D	12/05/2022	MORGAN		10,284,750	10,500,000	69,487
06744N-BJ-5	Bardot CLO Ltd-BARDT 2019-2A BR	D	11/04/2022	CITIGROUP GLOBAL MAR		1,169,063	1,250,000	3,086
06761C-AL-3	Barings CLO Ltd 2016-II-BABSN 2016-2A AR	D	11/30/2022	BOFAMLSEC		19,570,000	20,000,000	126,911
07355V-AL-1	Beechwood Park CLO Ltd-BOHPK 2019-1A ER	D	02/11/2022	GOLDMAN		10,000,000	10,000,000	0
07403K-AA-1	Bear Mountain Park CLO L-BRMTN 2022-1A E	D	07/13/2022	CITIGROUP GLOBAL MAR		8,745,236	9,125,000	0
08186A-AG-1	Benefit Street Partners -BSP 2022-26A D	D	05/02/2022	NATIXIS CAP MKT		3,250,000	3,250,000	0
08186U-AS-1	Benefit Street Partners -BSP 2020-22A DR	D	02/18/2022	CITIGROUP GLOBAL MAR		11,000,000	11,000,000	0
09630Q-AS-0	BlueMountain CLO XXX Ltd-BLUEM 2020-30A	D	02/03/2022	RBC CAPITAL MARKETS		14,250,000	14,250,000	0
09631J-AJ-5	BlueMountain CLO Ltd-BLUEM 2022-34A D	D	03/23/2022	CITIGROUP GLOBAL MAR		15,000,000	15,000,000	0
09631R-AC-2	BlueMountain CLO XXXV Lt-BLUEM 2022-35A	D	05/10/2022	GOLDMAN		8,300,000	8,300,000	0
10554T-AE-5	Braskem Netherlands Fina-SENIOR UNSECURE	D	04/01/2022	MARKXEEULTD		1,028,820	1,040,000	11,032
11124T-AL-8	Broad River Bsl Funding -BDRVR 2020-1A B	D	07/12/2022	BOFAMLSEC		1,861,600	2,000,000	13,046
11124T-AN-4	Broad River Bsl Funding -BDRVR 2020-1A C	D	11/22/2022	BARCLAYS CAPITAL INC		2,954,240	3,200,000	19,976
12482Q-AA-2	CBAM 2019-10 Ltd-CBAM 2019-10A E	D	01/20/2022	JP MORGAN SECURITIES		6,444,750	6,500,000	5,239
12553B-AA-9	CIFC Funding 2019-I Ltd-CIFC 2019-1A E	D	08/18/2022	BOFAMLSEC		5,001,750	5,265,000	46,042

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
12556C-AA-4	CIFC Funding 2019-VI Ltd-CIFC 2019-6A E	D	.06/10/2022	BOFAMLSEC		2,853,338	2,925,000	39,108
12560E-AQ-9	CIFC Funding 2020-III LT-CIFC 2020-3A BR	D	.05/03/2022	RBC CAPITAL MARKETS		6,571,025	6,700,000	7,573
12563E-AA-1	CIFC Funding 2021-I Ltd-CIFC 2021-1A A1	D	.11/21/2022	MORGAN		4,902,500	5,000,000	22,026
12565E-AC-5	CIFC Funding 2021-V Ltd-CIFC 2021-5A B	D	.10/20/2022	MITSUBISHI UFJ SEC I		1,413,750	1,500,000	1,671
12567W-AJ-8	CIFC Funding 2022-IV Ltd-CIFC 2022-4A D	D	.04/20/2022	BOFAMLSEC		5,500,000	5,500,000	0
12567X-AA-5	CIFC Funding 2022-IV Ltd-CIFC 2022-4A E	D	.04/20/2022	BOFAMLSEC		4,250,000	4,250,000	0
12569B-AA-1	CIFC Funding 2022-VI Ltd-CIFC 2022-6A E	D	.08/01/2022	MORGAN		8,160,000	8,500,000	0
12572G-AE-7	CIFC Funding Ltd-CIFC 2022-5A C	D	.06/13/2022	MORGAN		5,000,000	5,000,000	0
12574H-AC-7	CIFC Funding 2022-VI Ltd-CIFC 2022-6A B1	D	.08/01/2022	MORGAN		10,000,000	10,000,000	0
12661P-AA-7	CSL Finance Plc-SENIOR UNSECURED	D	.04/25/2022	VARIOUS		14,778,818	14,750,000	0
12661P-AB-5	CSL Finance Plc-SENIOR UNSECURED	D	.12/02/2022	VARIOUS		16,597,430	17,000,000	43,875
12807C-AA-1	CAL Funding IV Ltd-CAI 2020-1A A	D	.09/01/2022	RBC CAPITAL MARKETS		6,096,894	6,825,578	4,630
13876G-AL-2	Canyon Capital CLO 2017-CANYC 2017-1A B	D	.03/01/2022	BOFAMLSEC		3,968,000	4,000,000	9,002
13876Q-AE-6	Canyon CLO 2020-2 Ltd-CANYC 2020-2A ER	D	.07/06/2022	BOFAMLSEC		1,292,250	1,500,000	27,772
13876R-AJ-3	Canyon CLO 2020-3 Ltd-CANYC 2020-3A D	D	.02/18/2022	MORGAN		4,000,800	4,000,000	15,765
13876T-AA-8	Canyon CLO 2020-3 Ltd-CANYC 2020-3A E	D	.07/06/2022	BOFAMLSEC		899,500	1,000,000	20,275
13877J-AC-5	Canyon Capital CLO 2022-CANYC 2022-1A B	D	.05/24/2022	RBC CAPITAL MARKETS		2,265,156	2,375,000	11,937
13877L-AC-0	Canyon Capital CLO 2022-CANYC 2022-2A B	D	.12/08/2022	BARCLAYS CAPITAL INC		7,500,000	7,500,000	0
13877P-AC-1	CANYC-2021-4A B	D	.11/28/2022	BAIRD		1,426,875	1,500,000	10,595
13887T-AJ-6	Canyon Capital CLO 2019-CANYC 2019-1A A	D	.12/08/2022	MORGAN		4,118,520	4,200,000	33,837
143113-AA-6	Carlyle Global Market St-CGMS 2022-2A D	D	.04/11/2022	CITIGROUP GLOBAL MAR		2,000,000	2,000,000	0
143119-AJ-4	Carlyle Global Market St-CGMS 2022-2A C	D	.04/11/2022	CITIGROUP GLOBAL MAR		12,000,000	12,000,000	0
143122-AA-7	CARLYLE US CLO 2021-11 L-CGMS 2021-11A A	D	.11/17/2022	RBC CAPITAL MARKETS		4,387,950	4,500,000	18,405
14316B-AA-8	CARLYLE US CLO 2019-1 LT-CGMS 2019-1A A2	D	.10/13/2022	BARCLAYS CAPITAL INC		7,555,000	8,000,000	85,239
16409T-AE-9	Chenango Park CLO Ltd-CHPRK 2018-1A A2	D	.04/28/2022	RBC CAPITAL MARKETS		5,928,000	6,000,000	7,350
17181T-AE-1	CIFC Funding 2018-IV Ltd-CIFC 2018-4A B	D	.05/24/2022	BOFAMLSEC		864,270	900,000	2,987
192714-AD-5	Colbun SA-SENIOR UNSECURED	D	.04/01/2022	GOLDMAN SACHS INTERN		1,041,948	1,124,000	2,852
20039F-AA-7	Cometa Energia SA de CV-SECURED	D	.04/01/2022	JEFFERIES INTL LTD		921,551	902,596	25,733
20752T-AA-2	Connect Finco SARL / Con-FIRST LIEN	D	.06/15/2022	WELLS FARGO SECURITI		2,805,000	3,000,000	42,750
20914U-AF-3	Consolidated Energy Fina-SENIOR UNSECURE	D	.03/08/2022	WELLS FARGO		2,745,000	3,000,000	71,719
210314-AB-6	Consortio Transmuntaro S-SENIOR UNSECURE	D	.04/01/2022	HSBC BANK PLC IN LON		1,019,060	1,015,000	22,395
26248E-AA-4	Dryden Senior Loan Fund-DRSLF 2022-94A E	D	.04/28/2022	RBC CAPITAL MARKETS		4,000,000	4,000,000	0
29001X-AC-9	ELM17 2022-4A B-ELM17 2022-4A B	D	.05/11/2022	RBC CAPITAL MARKETS		9,000,000	9,000,000	0
29002G-AB-7	Elmwood CLO IV Ltd-ELMW4 2020-1A A	D	.10/28/2022	DEUTSCHE BANK SECURI		9,700,000	10,000,000	22,163
29002U-AG-5	ELM16 2022-3A D-ELM16 2022-3A D	D	.03/16/2022	JP MORGAN SECURITIES		15,000,000	15,000,000	0
29002V-AA-6	Elmwood CLO X Ltd-ELM10 2021-3A A	D	.10/27/2022	VARIOUS		8,698,750	9,000,000	10,418
29003B-AL-5	Elmwood CLO V Ltd-ELMW5 2020-2A AR	D	.12/07/2022	CITIGROUP GLOBAL MAR		19,470,000	20,000,000	149,794
29003D-AA-5	ELMWOOD CLO 16 LTD-ELM16 2022-3A E	D	.03/16/2022	JP MORGAN SECURITIES		2,058,992	2,080,000	0
29003U-AA-7	Elmwood CLO IX Ltd-ELMW9 2021-2A A	D	.10/07/2022	RBC CAPITAL MARKETS		3,367,875	3,500,000	31,359
29004Y-AA-8	Elmwood CLO 19 Ltd-ELM19 2022-6A E	D	.08/19/2022	BOFAMLSEC		6,435,000	6,500,000	0
29135E-AA-4	Emirates Semb Corp Water-SECURED	D	.04/05/2022	STANDARD CHARTERED B		1,854,225	1,809,000	14,758
29278G-AW-8	Enel Finance Internation-SENIOR UNSECURE	D	.09/30/2022	VARIOUS		11,672,217	12,000,000	81,965
29359U-AB-5	Enstar Group Ltd-SENIOR UNSECURED	D	.01/19/2022	WELLS FARGO		11,407,820	10,473,000	72,002
29359U-AC-3	Enstar Group Ltd-SENIOR UNSECURED	D	.07/28/2022	VARIOUS		16,858,299	19,052,000	242,644
30260L-AA-3	FEL Energy VI Sarl-SECURED	D	.04/01/2022	GOLDMAN SACHS INTERN		983,820	1,093,133	21,650
30607F-AA-8	Falabella SA-SENIOR UNSECURED	D	.04/01/2022	GOLDMAN SACHS INTERN		1,029,214	1,099,000	17,515
316502-AA-1	Fidus Re Ltd-UNSECURED	D	.02/25/2022	GOLDMAN		24,375,000	25,000,000	44,000
316502-AC-7	Fidus Re Ltd-UNSECURED	D	.10/28/2022	GOLDMAN		20,000,000	20,000,000	0
33829W-AJ-8	522 Funding CLO 2019-5 L-MORGN 2019-5A	D	.02/09/2022	CITIGROUP GLOBAL MAR		13,550,000	13,550,000	0
36165R-AC-9	GCC SAB de CV-SENIOR UNSECURED	D	.04/01/2022	JEFFERIES INTL LTD		1,042,790	1,116,000	8,403
36319T-AJ-5	Galaxy XXIII CLO Ltd-GALXY 2017-23A B2	D	.06/22/2022	EXCHANGE OFFER		1,982,663	2,250,000	0
36319T-AL-0	Galaxy XXIII CLO Ltd-GALXY 2017-23A C2	D	.06/22/2022	EXCHANGE OFFER		9,913,298	11,250,000	0
36321P-AE-0	Galaxy Pipeline Assets B-SECURED	D	.04/01/2022	CITIGMUK		1,025,999	1,132,949	463
36830B-AD-7	GC Treasury Center Co Lt-SENIOR UNSECURE	D	.04/01/2022	CITIGMUK		986,464	981,000	600
37960J-AA-6	Global Aircraft Leasing -SR UNSECURED	D	.08/22/2022	WELLS FARGO		2,550,000	3,000,000	86,125
38136N-AQ-9	Goldentree Loan Manageme-GLM 2020-8A AR	D	.11/07/2022	WELLS FARGO		11,553,000	12,000,000	35,950
38137V-AA-5	Goldentree Loan Manageme-GLM 2022-14A E	D	.06/14/2022	BOFAMLSEC		4,356,000	4,400,000	0
38138F-AL-5	Goldentree Loan Manageme-GLM 2022-12A D	D	.03/31/2022	WELLS FARGO		5,000,000	5,000,000	0
38138T-AC-5	Goldentree Loan Manageme-GLM 2021-10A A	D	.10/11/2022	MORGAN		3,846,000	4,000,000	35,982
38178D-AJ-6	Golub Capital Partners C-GOBSL 2020-50A	D	.02/22/2022	JP MORGAN SECURITIES		13,000,000	13,000,000	0
38179J-AJ-2	Golub Capital Partners C-GOCAP 2016-30A	C	.02/15/2022	GREENSLUDGE CAPITAL		20,000,000	20,000,000	0
38218J-AA-4	Goodgreen 2022-1-GOODG 2022-1A A	D	.03/11/2022	DEUTSCHE BANK SECURI		21,992,610	22,000,000	0
38218J-AB-2	Goodgreen 2022-1-GOODG 2022-1A B	D	.12/15/2022	VARIOUS		5,107,762	5,115,000	62
38218J-AC-0	Goodgreen 2022-1-GOODG 2022-1A C	D	.03/11/2022	DEUTSCHE BANK SECURI		6,182,427	6,200,000	0
38411D-AD-6	GRACIE POINT INTERNATIONAL-GPIF 2022-3A B	C	.10/27/2022	CITIGROUP GLOBAL MAR		9,830,000	9,830,000	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
38411H-AA-3	GRACIE POINT INTERNATIONAL-GPIF 2022-1A A	D	11/29/2022	VARIOUS		28,684,057	28,815,738	0
40049J-BB-2	Grupo Televisa SAB-SENIOR UNSECURED	D	11/01/2022	VARIOUS		3,832,840	4,000,000	47,792
40639G-AA-7	Halseypoint Clo 6 Ltd-HLSY 2022-6A A1	D	08/19/2022	GOLDMAN		34,912,500	35,000,000	0
43103Q-AA-6	Highlands Holdings Bond -AHL 7 5/8 10/15		05/26/2022	JEFFERIESLLC		3,465,585	3,483,000	33,197
438127-AA-0	Honda Motor Co Ltd-SENIOR UNSECURED	D	11/29/2022	WELLS FARGO		4,738,350	5,000,000	25,549
45082D-AA-5	Iberia, Lineas Aereas De Senior Secured	D	06/21/2022	JP MORGAN SECURITIES		14,424,909	14,424,909	0
45082E-AA-3	Iberia, Lineas Aereas De Senior Secured	D	06/21/2022	JP MORGAN SECURITIES		4,676,830	4,676,830	0
456472-AB-5	Industrias Penoles SAB d-SENIOR UNSECURE	D	04/01/2022	BARCLAYS BANK PLC		1,047,832	1,039,000	2,755
456829-AA-8	Infraestructura Energeti-SENIOR UNSECURE	D	04/01/2022	HSBC BANK PLC IN LON		1,032,216	1,049,000	8,851
45853N-AA-0	Interconexion Electrica -SENIOR UNSECURE	D	04/01/2022	GOLDMAN SACHS INTERN		1,225,625	1,325,000	18,161
46146J-AC-0	Invesco CLO 2021-3 Ltd-INVCO 2021-3A B	D	11/01/2022	JP MORGAN SECURITIES		2,126,925	2,250,000	3,734
46146J-AG-1	Invesco CLO 2021-3 Ltd-INVCO 2021-3A D	D	03/15/2022	BOFAMLSEC		8,575,125	8,795,000	79,995
46146W-AA-5	Invesco CLO 2022-3 Ltd-INVCO 2022-3A E	D	09/06/2022	NATIXIS CAP MKT		8,000,000	8,000,000	0
465077-AL-9	Israel Electric Corp Ltd-SECURED	D	11/01/2022	VARIOUS		4,654,512	4,979,000	43,250
47216F-AA-5	Jazz Securities DAC-SECURED	D	03/14/2022	VARIOUS		1,010,800	1,036,000	5,394
481938-AA-6	KKR CLO 38 Ltd-KKR 38A E	D	03/07/2022	BNP PARIBAS		9,900,000	10,000,000	0
481940-AA-2	KKR Financial CLO Ltd-KKR 49A E	D	06/02/2022	DEUTSCHE BANK SECURI		5,760,000	6,000,000	0
48254G-AC-0	KKR CLO 29 Ltd-KKR 29A B	D	04/28/2022	RBC CAPITAL MARKETS		4,384,180	4,460,000	5,359
48254U-AD-7	KKR CLO 40 Ltd-KKR 40A D	D	03/28/2022	BOFAMLSEC		1,250,000	1,250,000	0
48255E-AC-4	KKR FINANCIAL CLO LTD-KKR 42A B	D	04/27/2022	CITIGROUP GLOBAL MAR		9,000,000	9,000,000	0
48255E-AE-0	KKR FINANCIAL CLO LTD-KKR 42A C	D	04/27/2022	CITIGROUP GLOBAL MAR		5,000,000	5,000,000	0
48255F-AA-5	KKR FINANCIAL CLO LTD-KKR 42A E	D	04/27/2022	CITIGROUP GLOBAL MAR		7,412,750	7,450,000	0
48255M-AA-0	KKR CLO 41 Ltd-KKR 2022-41A E	D	02/09/2022	CREDIT SUISSE SECURI		3,465,000	3,500,000	0
48255P-AG-0	KKR CLO 41 Ltd-KKR 2022-41A D	D	02/09/2022	CREDIT SUISSE SECURI		15,000,000	15,000,000	0
48255U-AA-2	KKR CLO 43 Ltd-KKR 2022-43A A1	D	11/16/2022	DEUTSCHE BANK SECURI		10,000,000	10,000,000	0
48259B-AL-6	KKR CLO 38 Ltd-KKR 38A C	D	04/19/2022	BNP PARIBAS		7,000,000	7,000,000	0
48259B-AN-2	KKR CLO 38 Ltd-KKR 38A D	D	03/07/2022	BNP PARIBAS		5,000,000	5,000,000	0
48661B-AA-2	Rad CLO 1 Ltd-RAD 2018-1A E	D	06/16/2022	BOFAMLSEC		3,460,000	4,000,000	49,612
48661F-AA-3	Rad CLO 7 Ltd-RAD 2020-7A E	D	09/06/2022	BOFAMLSEC		6,496,000	7,000,000	100,616
48661K-AA-2	Rad CLO 6 Ltd-RAD 2019-6A E	D	06/08/2022	BOFAMLSEC		7,407,330	7,500,000	91,298
48662A-AA-3	Rad CLO 4 Ltd-RAD 2019-4A E	D	08/30/2022	VARIOUS		3,553,950	4,000,000	65,601
540543-AA-3	Logan CLO I Ltd-LOGN1 2021-1A A	D	11/07/2022	BOFAMLSEC		5,870,848	6,080,000	18,249
55608J-AN-8	Macquarie Group Ltd-SENIOR UNSECURED	D	11/04/2022	DEUTSCHE BANK SECURI		3,586,389	3,964,000	21,011
55608J-AX-6	Macquarie Group Ltd-SENIOR UNSECURED	D	11/15/2022	VARIOUS		24,599,846	29,757,000	23,666
558189-AG-1	Madison Park Funding LII-MDPK 2022-53A D	D	02/11/2022	NATIXIS CAP MKT		15,250,000	15,250,000	0
55820E-AA-9	Madison Park Funding XXI-MDPK 2018-29A E	D	08/18/2022	BOFAMLSEC		3,731,200	4,000,000	32,823
55820R-AQ-5	Madison Park Funding XXV-MDPK 2017-25A C	D	03/09/2022	BARCLAYS CAPITAL INC		8,552,968	8,635,000	38,941
55954U-AA-1	Magnetite XXXV Ltd-MAGNE 2022-35A E	D	07/12/2022	MORGAN		11,700,000	12,000,000	0
588538-AC-8	Merchants Fleet Funding LLC / Series 202	C	10/18/2022	DIRECT		2,854,063	2,854,063	0
588628-AA-1	Merchants Mobility Funding LLC / Series	C	10/18/2022	DIRECT		9,645,937	9,645,937	0
59111R-AA-0	METAL 2017-1 LLC-METAL 2017-1 A	D	01/15/2022	PAYUP		(501)	(501)	0
592838-AA-4	Mexico Generadora de Ene-SECURED	D	04/01/2022	JEFFERIES INTL LTD		753,555	742,858	13,506
59801A-AA-2	MidOcean Credit CLO XI L-MIDO 2022-11A A	D	12/09/2022	VARIOUS		9,325,159	9,337,500	41,561
606822-CN-2	Mitsubishi UFJ Financial-SENIOR UNSECURE	D	11/15/2022	VARIOUS		15,095,760	15,500,000	118,160
60687Y-BP-3	Mizuho Financial Group I-SENIOR UNSECURE	D	12/02/2022	VARIOUS		16,351,534	19,092,000	51,235
60687Y-CL-1	Mizuho Financial Group I-SENIOR UNSECURE	D	11/15/2022	VARIOUS		14,020,394	14,333,000	109,831
607504-AA-8	MODEC, Inc. Senior Note Series A	D	08/31/2022	DIRECT		17,500,000	17,500,000	0
607504-AA-6	MODEC, Inc. Senior Note Series B	D	08/31/2022	DIRECT		7,500,000	7,500,000	0
61774K-AA-9	Morgan Stanley Eaton Van-MSEV 2022-16A E	D	09/15/2022	BOFAMLSEC		5,760,000	6,000,000	50,495
617923-AA-5	Morgan Stanley Eaton Van-MSEV 2022-17A E	D	06/30/2022	BARCLAYS CAPITAL INC		9,500,000	10,000,000	0
617925-AA-0	Morgan Stanley Eaton Van-MSEV 2022-18A E	D	09/09/2022	WELLS FARGO		6,860,000	7,000,000	0
62886H-BE-0	NCL Corp Ltd-SECURED	D	02/10/2022	JP MORGAN SECURITIES		1,446,000	1,446,000	0
62954H-AW-8	NXP BV / NXP Funding LLC-SENIOR UNSECURE	D	05/16/2022	EXCHANGE OFFER		16,653,303	16,328,000	18,369
64073K-AA-1	Neptune Energy Bondco PL-SENIOR UNSECURE	D	09/13/2022	VARIOUS		2,174,950	2,200,000	44,167
64130T-BA-2	Neuberger Berman CLO XX -NEUB 2015-20A A	D	12/07/2022	DEUTSCHE BANK SECURI		15,005,250	15,390,000	118,706
64131P-AA-0	Neuberger Berman Loan Ad-NEUB 2017-26A E	D	08/18/2022	BARCLAYS CAPITAL INC		3,734,000	4,000,000	33,601
64131T-AU-8	Neuberger Berman CLO XVI-NEUB 2017-16SA	D	03/09/2022	CITIGROUP GLOBAL MAR		8,531,157	8,815,000	39,997
64132E-AL-0	Neuberger Berman Loan Ad-NEUB 2019-32A E	D	09/07/2022	NOMURA SECURITIES IN		1,834,250	2,000,000	25,285
64132J-AN-5	Neuberger Berman Loan Ad-NEUB 2019-31A A	D	10/07/2022	MORGAN		3,896,000	4,000,000	34,999
64133J-AL-8	Neuberger Berman Loan Ad-NEUB 2020-36A E	D	06/22/2022	BOFAMLSEC		3,132,173	3,300,000	42,210
64134M-AC-0	Neuberger Berman Loan Ad-NEUB 2021-45A B	D	10/07/2022	MORGAN		2,829,000	3,000,000	30,998
64134Q-AC-1	Neuberger Berman Loan Ad-NEUB 2021-46A B	D	05/26/2022	WELLS FARGO		3,843,200	4,000,000	12,358
64134W-AA-2	Neuberger Berman Loan Ad-NEUB 2022-50A E	D	06/21/2022	MORGAN		9,652,500	9,750,000	0
64135D-AA-3	Neuberger Berman Loan Ad-NEUB 2022-47A A	D	10/07/2022	RBC CAPITAL MARKETS		3,832,000	4,000,000	35,982
64135D-AC-9	Neuberger Berman Loan Ad-NEUB 2022-47A B	D	05/02/2022	WELLS FARGO		6,085,300	6,200,000	21,867

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
64135J-AC-6	Neuberger Berman Loan Ad-NEUB 2022-49A B	D	05/03/2022	CITIGROUP GLOBAL MAR		8,800,000	8,800,000	0
64135J-AG-7	Neuberger Berman Loan Ad-NEUB 2022-49A D	D	05/03/2022	CITIGROUP GLOBAL MAR		8,000,000	8,000,000	0
64135K-AA-7	Neuberger Berman Loan Ad-NEUB 2022-49A E	D	05/03/2022	CITIGROUP GLOBAL MAR		5,500,000	5,500,000	0
67092B-AG-8	OCF CLO 2015-9 Ltd-OCF 2015-9A ER	D	02/02/2022	CITIGROUP GLOBAL MAR		6,812,500	6,812,500	0
67092B-AS-7	OCF CLO 2016-12 Ltd-OCF 2016-12A DR2	D	02/24/2022	CREDIT SUISSE SECURI		2,970,000	3,000,000	0
67092T-AG-9	OCF CLO 2016-12 Ltd-OCF 2016-12A ER2	D	02/24/2022	CREDIT SUISSE SECURI		14,700,000	15,000,000	0
67098W-AN-1	OHA Credit Funding 7 Ltd-OAKC 2020-7A AR	D	10/06/2022	DEUTSCHE BANK SECURI		3,841,320	4,000,000	35,963
67113G-AC-1	OHA Credit Funding 5 Ltd-OAKC 2020-5A A1	D	10/06/2022	BARCLAYS CAPITAL INC		2,918,250	3,000,000	27,698
67115V-AG-7	OHA Credit Funding 11 Lt-OAKC 2022-11A D	D	04/14/2022	BARCLAYS CAPITAL INC		7,500,000	7,500,000	0
67116D-AA-9	Oak Hill Credit Partners-OAKC 2022-13A E	D	07/28/2022	VARIOUS		5,995,850	6,150,000	0
67402L-AL-0	Oaktree CLO Ltd-OAKQL 2022-1A D	D	03/18/2022	MORGAN		17,325,000	17,500,000	0
67577N-AG-6	Octagon Investment Partn-OCT45 2019-1A E	D	02/01/2022	GOLDMAN		9,950,000	10,000,000	0
675930-AJ-0	Octagon 59 Ltd-OCT59 2022-1A D	D	03/18/2022	MORGAN		10,000,000	10,000,000	0
675931-AA-7	Octagon 59 Ltd-OCT59 2022-1A E	D	03/18/2022	MORGAN		4,950,000	5,000,000	0
67707A-AA-0	OHA Credit Partners XV L-OAKC 2017-15A E	D	09/13/2022	VARIOUS		4,081,063	4,375,000	23,801
69369E-AD-1	PERTAMINA PERSERO PT-SENIOR UNSECURED NO	D	04/01/2022	HSBC BANK PLC IN LON		729,800	656,000	16,619
69370P-AF-8	Pertamina Persero PT-SENIOR UNSECURED	D	04/01/2022	HSBC BANK PLC IN LON		1,043,403	1,094,000	6,971
69371M-AF-4	PTTEP Treasury Center Co-SENIOR UNSECURE	D	11/02/2022	VARIOUS		3,440,704	4,000,000	41,204
69375M-AA-1	Hutama Karya Persero PT-SENIOR UNSECURED	D	04/01/2022	JEFFERIES INTL LTD		738,131	733,000	10,995
69688K-AA-7	Palmer Square CLO Ltd-PLMRS 2022-2A E	D	05/19/2022	WELLS FARGO		5,938,307	6,000,000	0
69688N-AE-3	Palmer Square CLO Ltd-PLMRS 2022-2A C	D	05/19/2022	WELLS FARGO		7,500,000	7,500,000	0
69688Y-AG-4	Palmer Square CLO 2014-1-PLMRS 2014-1A D	D	06/02/2022	BOFAMLSEC		3,836,370	4,100,000	37,637
69700G-AL-6	Palmer Square CLO 2019-1-PLMRS 2019-1A A	D	10/11/2022	NETSCOUT SEC I		940,000	1,000,000	7,547
69702A-AA-1	Palmer Square CLO 2021-2-PLMRS 2021-2A E	D	07/06/2022	BOFAMLSEC		876,500	1,000,000	17,253
69702N-AA-3	Palmer Square CLO 2022-5-PLMRS 2022-5A E	D	08/23/2022	BOFAMLSEC		13,250,000	13,250,000	0
70016W-AA-2	Park Blue CLO 2022-1 Ltd-PKBLU 2022-1A A	D	11/29/2022	BOFAMLSEC		4,970,000	5,000,000	0
70018C-AA-4	Park Blue CLO 2022-1I Lt-PKBLU 2022-2A A	D	12/14/2022	MORGAN		9,950,000	10,000,000	0
70470M-AC-9	Peace Park CLO Ltd-PCEPK 2021-1A A	D	11/04/2022	MORGAN		4,332,375	4,500,000	12,760
70470M-AE-5	Peace Park CLO Ltd-PCEPK 2021-1A B1	D	05/10/2022	CITIGROUP GLOBAL MAR		4,139,152	4,275,100	6,956
71568P-AC-3	Perusahaan Perseroan Per-SENIOR UNSECURE	D	04/01/2022	HSBC BANK PLC IN LON		737,798	726,000	11,646
73052V-AA-3	Point Au Roche Park CLO -PARPK 2021-1A A	D	10/06/2022	BOFAMLSEC		3,361,400	3,500,000	29,108
74445P-AF-9	Indonesia Asahan Alumini-SENIOR UNSECURE	D	04/01/2022	JP MORGAN SECURITIES		1,030,117	980,000	20,771
74980P-AC-7	ALM Ltd/KY-SERIES 21-14A CLASS A2	D	10/07/2022	MORGAN		2,308,710	2,460,000	24,400
74980Q-AE-1	ALM Ltd/KY-RRAM 2021-17A A2	D	04/28/2022	NETSCOUT SEC I		3,945,400	4,000,000	5,089
74983A-AC-7	RR 19 Ltd-RRAM 2021-19A A2	D	07/12/2022	WELLS FARGO		2,545,560	2,700,000	18,186
74989U-AG-8	ALM Ltd/KY-RRAM 2022-20A C	D	04/06/2022	CREDIT SUISSE SECURI		5,000,000	5,000,000	0
75000F-AA-6	ALM Ltd/KY-RRAM 2022-22A D	D	06/30/2022	CITIGROUP GLOBAL MAR		7,312,500	7,500,000	0
75009K-AA-6	Rad CLO 17 Ltd-RAD 2022-17A E	D	09/15/2022	GREENSLEDGE CAPITAL		8,820,000	9,000,000	0
75009L-AA-4	Rad CLO 16 Ltd-RAD 2022-16A A1	D	08/04/2022	GOLDMAN		25,500,000	25,500,000	0
75009M-AA-2	Rad CLO 16 Ltd-RAD 2022-16A E	D	08/04/2022	GOLDMAN		9,262,500	9,750,000	0
75009R-AC-7	Rad CLO 14 Ltd-RAD 2021-14A B	D	10/19/2022	RBC CAPITAL MARKETS		2,097,000	2,250,000	1,432
78090G-AA-9	RR 21 Ltd-RRAM 2022-21A D	D	06/09/2022	NATIXIS CAP MKT		6,720,000	7,000,000	0
78110T-AG-4	RR 21 Ltd-RRAM 2022-21A B1	D	06/09/2022	NATIXIS CAP MKT		5,000,000	5,000,000	0
78111F-AA-6	RR 23 Ltd-RRAM 2022-23A D	D	07/22/2022	BNP PARIBAS		7,600,000	8,000,000	0
81254U-AK-2	Seaspan Corp-SENIOR UNSECURED	D	04/19/2022	VARIOUS		5,595,614	5,873,000	32,863
82650N-AA-0	Sigma Finance Netherland-SENIOR UNSECURE	D	04/01/2022	HSBC BANK PLC IN LON		745,802	721,000	781
82670Q-AE-9	Signal Peak CLO 9 Ltd-SPEAK 2021-9A B	D	05/02/2022	NETSCOUT SEC I		3,934,000	4,000,000	4,042
82671C-AC-3	Signal Peak CLO 10 Ltd-SPEAK 2021-10A B	D	03/01/2022	RBC CAPITAL MARKETS		13,899,200	14,000,000	54,556
83004M-AA-1	610 Funding CLO 2 Ltd-SIX10 2016-2RA DR2	D	02/07/2022	BOFAMLSEC		1,540,313	1,550,000	6,462
833636-AH-6	Sociedad Quimica y Miner-SENIOR UNSECURE	D	04/01/2022	JEFFERIES INTL LTD		1,031,076	994,000	17,367
83615F-AA-7	Sound Point CLO XXVIII L-SNDPT 2020-3A E	D	06/08/2022	BARCLAYS CAPITAL INC		1,895,600	2,000,000	20,659
84859B-AB-7	Spirit Loyalty Cayman Lt-FIRST LIEN	D	11/10/2022	BARCLAYS CAPITAL INC		2,203,058	2,233,000	13,398
85573L-AA-9	START Ireland-STARR 2019-1 A	D	12/15/2022	PAYUP		0	0	0
870674-AA-6	Sweihaan PV Power Co PJSC-SECURED	D	04/01/2022	CITIGMUK		1,057,963	1,104,000	8,226
87168B-AE-0	SYMP-SYMP 2021-28A B	D	12/09/2022	VARIOUS		5,848,668	6,215,000	61,256
87168V-AA-4	SYMPHONY CLO LTD-SYMP 2022-36A E	D	08/16/2022	BOFAMLSEC		1,980,000	2,000,000	0
87169E-AA-1	Symphony CLO 35 Ltd-SYMP 2022-35A E	D	07/18/2022	WELLS FARGO		11,280,000	11,750,000	0
87246M-AS-1	TICP CLO VI 2016-2 Ltd-TICP 2016-6A AR2	D	10/27/2022	DEUTSCHE BANK SECURI		4,818,750	5,000,000	10,109
87248K-AJ-3	TICP CLO V 2016-1 Ltd-TICP 2016-5A A1R	D	10/21/2022	MIZUHO SECURITIES		4,870,000	5,000,000	6,461
87249Q-AC-4	TICP CLO XI Ltd-TICP 2018-11A B	D	11/16/2022	BARCLAYS CAPITAL INC		8,230,750	8,500,000	45,707
87250C-AN-7	TICP CLO XIV Ltd-TICP 2019-14A A2R	D	12/20/2022	CITIGROUP GLOBAL MAR		6,728,750	7,000,000	72,184
89680Y-AA-3	Triton Container Interna-FIRST LIEN	D	12/05/2022	BARCLAYS CAPITAL INC		11,631,581	13,352,000	33,424
898324-AB-4	TRUST F/1401-SENIOR UNSECURED 144A	D	04/01/2022	CITIGMUK		1,043,145	971,000	12,185
913318-AJ-0	Unity-Peace Park CLO Ltd-UNPKX 2022-1A D	D	04/12/2022	BNP PARIBAS		5,000,000	5,000,000	0
91824X-AC-4	VCP RRL ABS II Ltd-VQRL 2022-1A A	C	06/15/2022	DIRECT		6,402,966	6,495,000	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
91824X-AE-0	VCP RRL ABS II Ltd-VCPRRL 2022-1A B	C	.06/15/2022	DIRECT		992,166	1,005,000	.0
92769V-AJ-8	Virgin Media Finance PLC-SENIOR UNSECURE	D	.03/15/2022	MORGAN		917,090	1,000,000	8,611
92769X-AP-0	Virgin Media Secured Fin-SECURED	D	.03/30/2022	BOFAMILSEC		2,475,000	2,500,000	51,944
92838*-AA-3	Vista Malta Finance P.L. Pass Through Ce	D	.08/18/2022	BANK OF AMERICA		40,000,000	40,000,000	.0
92842B-AA-5	Vista Malta Finance P.L. Pass Through Ce	D	.08/18/2022	BANK OF AMERICA		7,000,000	7,000,000	.0
92857W-AQ-3	VODAFONE GROUP PLC-UNSECURED BOND	D	.01/19/2022	DEUTSCHE BANK SECURI		6,821,757	5,203,000	127,994
92918G-AE-2	Voya CLO 2020-1 Ltd-VOYA 2020-1A ER	D	.08/11/2022	BOFAMILSEC		923,750	1,000,000	7,070
92918Y-AA-1	Voya CLO 2021-2 Ltd-VOYA 2021-2A E	D	.08/17/2022	CITIGROUP GLOBAL MAR		9,400,000	10,000,000	77,582
92919D-AC-2	Voya CLO 2021-3 Ltd-VOYA 2021-3A B	D	.05/17/2022	MITSUBISHI UFJ SEC I		3,792,000	4,000,000	8,580
92919P-AA-9	VOYA 2022-2A E-VOYA 2022-2A E	D	.07/12/2022	RBC CAPITAL MARKETS		7,125,000	7,500,000	.0
94949K-AA-0	Wellfleet CLO Ltd-WELF 2022-2A E	D	.08/12/2022	CITIGROUP GLOBAL MAR		2,400,000	2,500,000	.0
94949V-AE-8	Wellfleet CLO X LTD-WELF 2019-XA DR	D	.01/18/2022	BNP PARIBAS		2,031,563	2,062,500	.0
94950B-AE-8	Wellfleet CLO 2020-2 Ltd-WELF 2020-2A ER	D	.01/18/2022	BNP PARIBAS		2,950,695	2,970,000	1,236
94950U-AA-4	Wellfleet CLO 2022-1 Ltd-WELF 2022-1A E	D	.05/12/2022	JP MORGAN SECURITIES		3,429,300	3,500,000	.0
94952D-AA-0	Wellfleet CLO 2017-2A Lt-WELF 2017-2A D	D	.05/03/2022	MORGAN		4,219,235	4,363,000	8,540
97314E-AJ-5	THL Credit Wind River 20-WINDR 2019-2A	D	.02/04/2022	BOFAMILSEC		4,500,000	4,500,000	.0
97314F-AA-1	THL Credit Wind River 20-WINDR 2019-2A E	D	.02/04/2022	BOFAMILSEC		10,000,000	10,000,000	.0
97315M-AA-5	WIND RIVER CLO LTD-WINDR 2022-2A E	D	.06/03/2022	BOFAMILSEC		6,825,000	7,000,000	.0
97316G-AA-7	Wind River CLO LTD-WINDR 2022-1A E	D	.05/13/2022	CITIGROUP GLOBAL MAR		9,800,000	10,000,000	.0
984851-AF-2	Yara International ASA-SENIOR UNSECURED	D	.09/30/2022	VARIOUS		12,956,408	12,800,000	207,852
984851-AG-0	Yara International ASA-SENIOR UNSECURED	D	.03/30/2022	VARIOUS		26,671,560	28,000,000	263,558
D03783-AB-9	APCOA Parking Holdings G-SECURED	B	.07/28/2022	JP MORGAN SECURITIES		84,885	101,110	208
D1T1JZ-AA-1	Techem Verwaltungsgesell-FIRST LIEN	B	.07/26/2022	JP MORGAN CHASE		167,145	179,726	5,332
D3003*-AA-5	EnBW Energie Baden-Wuert Senior Note Ser	D	.11/09/2022	RBS SECURITIES INC		25,000,000	25,000,000	.0
D3003*-AC-1	EnBW Energie Baden-Wuert Senior Note Ser	D	.11/09/2022	RBS SECURITIES INC		5,000,000	5,000,000	.0
D3003*-AC-1	Nidda Healthcare Holding-FIRST LIEN	B	.11/02/2022	EXCHANGE OFFER		385,630	409,280	1,223
D6S03S-AF-5	ProGroup AG-FIRST LIEN	B	.07/26/2022	JEFFERIES INTL LTD		713,426	817,680	8,041
E7650V-AG-9	NH Hotel Group SA-SECURED	B	.07/26/2022	VARIOUS		188,028	204,420	591
E7S144-AA-6	Lorca Telecom Bondco SA-SECURED	B	.10/03/2022	VARIOUS		507,315	556,400	6,330
F0265P-BY-3	Altice France SA/France-FIRST LIEN	D	.07/25/2022	BARCLAYS CAPITAL INC		188,269	204,640	1,946
F2004B-AA-2	Compagnie Daher Senior Note Series A (US	D	.04/27/2022	DIRECT		8,750,000	8,750,000	.0
F2977F-AC-9	Elis SA Senior Unsecured Notes	D	.06/01/2022	CANEYANFILT D		88,000,000	88,000,000	.0
F71369-AC-0	Parts Europe SA-SECURED	B	.07/25/2022	BNP PARIBAS		196,454	204,640	159
F7163Q-AA-2	Chrome Bidco SASU-SECURED	B	.07/25/2022	HSBC SECURITIES INC		364,259	409,280	2,268
G0066R-AD-6	ABQ Finance Ltd-SENIOR UNSECURED	D	.11/01/2022	MERRILL LYNCH INTERN		3,573,200	4,000,000	11,458
G0369B-BH-8	Anglian Water Services F Senior Secured	B	.11/09/2022	DIRECT		18,206,400	18,206,397	.0
G0457J-AR-0	Ardagh Packaging Finance-FIRST LIEN	B	.10/03/2022	DEUTSCHE BANK AG		114,754	147,120	1,216
G1001F-AB-2	Artis LoanCo 1 PLC Senior Secured Fixed	D	.12/20/2022	HSBC SECURITIES INC		16,667,000	16,667,000	.0
G2019U-AY-7	CBQ Finance Ltd-SENIOR UNSECURED	D	.11/01/2022	MERRILL LYNCH INTERN		989,450	1,100,000	2,933
G2283F-MM-2	Colombo BidCo Limited Senior Secured Not	B	.09/20/2022	ROYAL BANK OF SCOTLA		5,692,000	5,691,999	.0
G2283F-NN-9	Colombo BidCo Limited Senior Secured Not	B	.09/20/2022	ROYAL BANK OF SCOTLA		19,352,800	19,352,797	.0
G2553Z-AH-5	CPUK FINANCE LTD-UNSECURED	B	.07/28/2022	HSBC SECURITIES INC		225,129	240,780	4,994
G2553Z-AN-2	CPUK Finance Ltd-CPKLN 4 1/2 08/28/27	B	.07/26/2022	VARIOUS		432,384	481,402	8,944
G2616F-BG-4	DCC Treasury 2014 Ltd Guaranteed Senior	D	.12/15/2022	BARCLAYS CAPITAL INC		25,000,000	25,000,000	.0
G29529-AE-7	eircom Finance DAC-SECURED	B	.07/25/2022	HSBC SECURITIES INC		357,097	409,280	2,149
G389AY-AA-2	Gatwick Airport Finance -SECURED	B	.10/03/2022	HSBC SECURITIES INC		139,541	169,140	3,659
G7113Z-AD-9	Pinewood Finance Co Ltd-SECURED	B	.10/03/2022	VARIOUS		2,187,672	2,581,941	11,029
G7334F-AC-5	Redding Ridge Holdings L Senior Note Ser	C	.09/13/2022	APOLLOGLOBAL		21,830,600	21,830,600	.0
G7334F-AD-3	Redding Ridge Holdings L Senior Note Ser	C	.09/13/2022	APOLLOGLOBAL		5,000,000	5,000,000	.0
G76311-AH-5	Rolls-Royce PLC-SENIOR UNSECURED	B	.08/18/2022	VARIOUS		536,271	601,820	3,328
G8664B-AB-4	TalkTalk Telecom Group L-SENIOR UNSECURE	B	.07/25/2022	GOLDMAN SACHS INTERN		214,593	240,440	4,063
G9372G-AX-6	Virgin Media Secured Fin-FIRST LIEN	B	.07/25/2022	CREDIT SUISSE INTERN		264,003	288,528	3,030
G9372G-AZ-1	Virgin Media Secured Fin-SECURED	B	.07/25/2022	CREDIT SUISSE INTERN		270,375	312,572	3,764
L1591Y-AB-1	Cidron Aida Finco Sarl-SECURED	B	.07/25/2022	HSBC SECURITIES INC		209,063	240,440	4,842
L6527F-AB-0	Motion Finco Sarl-SECURED	B	.07/25/2022	BARCLAYS CAPITAL INC		199,995	204,640	2,865
L8869T-AA-4	Summer BC Holdco B SARL-SECURED	B	.07/25/2022	HSBC SECURITIES INC		189,701	204,640	2,844
L8984J-AA-6	Telenet Finance Luxembou-FIRST LIEN	B	.07/26/2022	VARIOUS		461,678	511,270	613
M0153A-AA-6	Abu Dhabi Ports Co PJSC-SENIOR UNSECURED	D	.04/01/2022	MIZUHO INTL PLC		1,231,580	1,330,000	13,762
M2R53V-AB-6	Burgan Bank SAK-SUBORDINATED	D	.04/01/2022	MERRILL LYNCH INTERN		1,038,083	1,183,000	9,940
N7136F-ZZ-9	Pon Holdings BV Senior Unsecured Notes	D	.08/09/2022	DIRECT		30,000,000	30,000,000	.0
N8880B-AD-7	Trivium Packaging Financ-SECURED	B	.07/25/2022	CREDIT SUISSE INTERN		190,213	204,640	3,453
N8965N-AB-6	Energizer Gamma Acquisit-SENIOR UNSECURE	B	.07/25/2022	JP MORGAN CHASE		156,038	204,640	537
N9T19K-AB-5	VZ Secured Financing BV-SECURED	B	.07/25/2022	VARIOUS		343,795	409,280	477
R0000V-AB-8	Adevinta ASA-SECURED	B	.07/26/2022	HSBC SECURITIES INC		194,199	204,420	1,088
T0149B-AA-7	ASR Media and Sponsorshi Senior Secured	B	.10/26/2022	BOFAMILSEC		22,396,500	22,396,506	.0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
U2214W-AB-0	Ardagh Packaging Finance-FIRST LIEN .....	.....	..07/25/2022 ..	BARCLAYS CAPITAL INC .....	.....	.....517,995	613,920	2,609
V0055B-AK-1	Africa Finance Corp-SENIOR UNSECURED	D.....	..04/01/2022 ..	GOLDMAN SACHS INTERN .....	.....	.....1,038,720	1,082,000	17,470
V5000*-AB-1	Kalsoy Navigation, Inc. Gtd Senior Secur	D.....	..03/30/2022 ..	BOFAMLSEC .....	.....	.....1,250,000	1,250,000	0
V57338-AA-5	Luffield Navigation, Inc Gtd Senior Secu	D.....	..06/17/2022 ..	BOFAMLSEC .....	.....	.....13,750,000	13,750,000	0
W8000#-AB-0	Samh?llsbyggnadsbolaget i Norden AB	D.....	..07/21/2022 ..	BNP PARIBAS .....	.....	.....20,000,000	20,000,000	0
W9821D-AQ-7	Verisure Holding AB-SECURED	B.....	..07/26/2022 ..	DEUTSCHE BANK AG .....	.....	.....362,334	408,840	6,016
X0971F-AB-1	Canpack SA / Canpack US -SENIOR UNSECURE .....	.....	..07/28/2022 ..	VARIOUS .....	.....	.....697,316	815,700	4,708
Y0889V-AC-4	Bharti Airtel Ltd-SENIOR UNSECURED	D.....	..04/01/2022 ..	GOLDMAN SACHS INTERN .....	.....	.....1,026,637	1,118,000	12,314
Y5008*-AA-2	Knausen Holding LLC Senior Secured Notes	D.....	..06/14/2022 ..	GOLDMAN .....	.....	.....20,064,000	20,064,000	0
Y7072Q-AA-1	PLDT Inc-SENIOR UNSECURED	D.....	..04/01/2022 ..	CITIGMUK .....	.....	.....1,036,407	1,174,000	11,476
Y7563*-AE-7	Seaspan Holdco III, Ltd. Senior Secured .....	.....	..08/03/2022 ..	CITIGROUP .....	.....	.....25,000,000	25,000,000	0
Y7563*-AF-4	Seaspan Holdco III, Ltd. Senior Secured .....	.....	..08/03/2022 ..	CITIGROUP .....	.....	.....10,000,000	10,000,000	0
Y7563*-AG-2	Seaspan Holdco III, Ltd. Senior Secured .....	.....	..08/03/2022 ..	CITIGROUP .....	.....	.....45,000,000	45,000,000	0
1109999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)						12,462,661,590	12,743,296,071	50,449,708
020002-BB-6	ALLSTATE CORP-SUBORDINATED BOND .....	.....	..03/01/2022 ..	CREDIT SUISSE SECURI .....	.....	.....5,087,500	5,000,000	14,375
025816-CH-0	American Express Co-AMERICAN EXPRESS .....	.....	..08/24/2022 ..	VARIOUS .....	.....	.....13,168,650	15,000,000	101,076
03765H-AE-1	Apollo Management Holdin-SUBORDINATED .....	.....	..12/05/2022 ..	VARIOUS .....	.....	.....2,536,995	2,983,000	64,281
060505-FL-3	Bank of America Corp-BAC 5 7/8 PERP .....	.....	..02/25/2022 ..	BNP PARIBAS .....	.....	.....5,168,750	5,000,000	135,451
06055H-AB-9	Bank of America Corp-BAC 6 1/8 PERP .....	.....	..12/14/2022 ..	BNP PARIBAS .....	.....	.....9,850,000	10,000,000	83,368
14387R-40-1	Carolina First Mortgage -SUBORDINATED .....	.....	..12/31/2022 ..	DIRECT .....	.....	.....0	0	207,665
172967-MV-0	Citigroup Inc-C 3 7/8 PERP .....	.....	..06/02/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....4,512,500	5,000,000	9,688
19075Q-AE-2	CoBank ACB-COBKAC 6.45 PERP .....	.....	..08/16/2022 ..	JP MORGAN SECURITIES .....	.....	.....15,000,000	15,000,000	0
21871X-AN-9	Corebridge Financial Inc-CRBG 6 7/8 12/1 .....	.....	..08/19/2022 ..	VARIOUS .....	.....	.....34,930,240	35,047,000	0
25746U-DD-8	Dominion Energy Inc-D 4.65 PERP .....	.....	..06/15/2022 ..	CREDIT SUISSE SECURI .....	.....	.....2,775,000	3,000,000	775
25746U-DM-8	Dominion Energy Inc-D 4.35 PERP .....	.....	..11/16/2022 ..	BOFAMLSEC .....	.....	.....11,369,400	13,040,000	98,890
29273V-AM-2	Energy Transfer LP-ET 7 1/8 PERP .....	.....	..12/14/2022 ..	VARIOUS .....	.....	.....8,575,706	10,000,000	58,864
29379V-BN-2	Enterprise Products Oper-ENTERPRISE PROD .....	.....	..03/15/2022 ..	CREDIT SUISSE SECURI .....	.....	.....4,650,000	5,000,000	22,604
369604-BQ-5	General Electric Co-GE FLOAT PERP .....	.....	..12/01/2022 ..	VARIOUS .....	.....	.....16,397,500	17,000,000	216,100
48128B-AN-1	JPMorgan Chase & Co-JPM 3.65 PERP .....	.....	..02/25/2022 ..	CREDIT SUISSE SECURI .....	.....	.....4,750,000	5,000,000	0
534187-BR-9	Lincoln National Corp-SENIOR UNSECURED .....	.....	..11/15/2022 ..	BOFAMLSEC .....	.....	.....3,275,000	3,275,000	0
59156R-BT-4	MetLife Inc-MET 5 7/8 PERP .....	.....	..03/15/2022 ..	CREDIT SUISSE SECURI .....	.....	.....10,200,000	10,000,000	142,795
693475-BC-8	PNC Financial Services G-PNC FINANCIAL .....	.....	..02/24/2022 ..	MORGAN .....	.....	.....4,550,000	5,000,000	34,472
726503-AE-5	Plains All American Pipe-PAA FLOAT PERP .....	.....	..12/12/2022 ..	VARIOUS .....	.....	.....8,711,250	10,000,000	66,582
744320-BJ-0	Prudential Financial Inc-PRU 5 1/8 03/01 .....	.....	..02/23/2022 ..	MORGAN .....	.....	.....18,815,000	18,815,000	0
744320-BK-7	Prudential Financial Inc-PRU 6 09/01/52 .....	.....	..08/18/2022 ..	VARIOUS .....	.....	.....36,553,631	36,469,000	2,307
78486Q-AG-6	SVB Financial Group-SVB FINANCIAL GR .....	.....	..02/25/2022 ..	VARIOUS .....	.....	.....4,518,750	5,000,000	9,111
808513-BJ-3	Charles Schwab Corp/The-JR SUBORDINATED .....	.....	..08/11/2022 ..	BNP PARIBAS .....	.....	.....4,906,624	5,781,000	47,533
808513-CB-9	Charles Schwab Corp/The-CHARLES SCHWAB .....	.....	..03/02/2022 ..	BOFAMLSEC .....	.....	.....15,000,000	15,000,000	0
854502-AM-3	Stanley Black & Decker I-SIWK 4 03/15/60 .....	.....	..09/07/2022 ..	CREDIT SUISSE SECURI .....	.....	.....9,478,363	10,000,000	190,898
89832Q-AF-6	Truist Financial Corp-TFC 5.1 PERP .....	.....	..06/07/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....2,425,000	2,500,000	34,708
902973-AZ-9	US Bancorp-US BANCORP .....	.....	..02/24/2022 ..	GOLDMAN .....	.....	.....5,118,750	5,000,000	97,903
902973-BC-9	US Bancorp-USB 3.7 PERP .....	.....	..11/02/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....11,065,000	13,000,000	39,775
949746-TD-3	Wells Fargo & Co-WFC 3.9 PERP .....	.....	..08/11/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....9,539,338	10,285,000	66,853
29250N-AN-5	Enbridge Inc-SUBORDINATED	A.....	..08/09/2022 ..	BOFAMLSEC .....	.....	.....6,015,625	6,250,000	27,083
29250N-BC-8	Enbridge Inc-SUBORDINATED	A.....	..09/09/2022 ..	CREDIT SUISSE SECURI .....	.....	.....4,775,000	5,000,000	46,319
29250N-BN-4	Enbridge Inc-ENBGN 7 3/8 01/15/2083	A.....	..12/05/2022 ..	CIBC OPPENHEIMER .....	.....	.....9,706,250	10,000,000	157,743
29250N-BP-9	Enbridge Inc-ENBGN 7 5/8 01/15/2083	A.....	..09/15/2022 ..	JP MORGAN SECURITIES .....	.....	.....6,000,000	6,000,000	0
89117F-BZ-5	Toronto-Dominion Bank/Th-TD 8 1/8 10/31/	A.....	..10/06/2022 ..	TORONTO DOMINION SEC .....	.....	.....22,936,000	22,936,000	0
89356B-AG-3	Transcanada Trust-TRPCN 5.6 03/07/2082	A.....	..08/17/2022 ..	CREDIT SUISSE SECURI .....	.....	.....3,800,000	4,000,000	100,800
05565Q-DU-9	BP Capital Markets PLC-SUBORDINATED	D.....	..02/25/2022 ..	GOLDMAN .....	.....	.....4,076,325	4,026,000	77,794
05565Q-DV-7	BP Capital Markets PLC-SUBORDINATED	D.....	..09/12/2022 ..	BARCLAYS CAPITAL INC .....	.....	.....4,575,000	5,000,000	55,521
62582P-AA-8	Muenchener Rueckversiche-SUBORDINATED	D.....	..05/18/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....20,835,000	20,835,000	0
87089N-AA-8	Swiss Re Finance Luxembo-SUBORDINATED	D.....	..06/29/2022 ..	VARIOUS .....	.....	.....4,842,500	5,000,000	56,306
D07112-TU-5	Bayer AG-BAYNGR 3 1/8 11/12/2079	B.....	..10/04/2022 ..	VARIOUS .....	.....	.....1,050,552	1,214,890	29,668
G7540C-AG-8	Rothsay Life PLC-ROTHLF 4 7/8 PERP	D.....	..10/11/2022 ..	MORGAN .....	.....	.....11,725,000	15,000,000	193,646
X10001-AA-7	Allianz SE-ALVGR 3 1/2 PERP	D.....	..11/30/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....4,243,000	5,000,000	102,783
1309999999. Subtotal - Bonds - Hybrid Securities						387,509,199	406,456,890	2,593,737
06760D-AE-8	Barings CLO Ltd 2021-I-BABSN 2022-1A C .....	.....	..03/18/2022 ..	CITIGROUP GLOBAL MAR .....	.....	.....10,000,000	10,000,000	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
06760D-A6-3	Barings CLO Ltd 2021-I-BABSN 2022-1A D		.03/18/2022	CITIGROUP GLOBAL MAR		7,000,000	7,000,000	.0
06762A-A*-3	Barings Capital Investme Senior Unsecure		.02/22/2022	DIRECT		75,000,000	75,000,000	.0
06763A-A#-8	Barings Private Credit C Senior Unsecure		.01/31/2022	DIRECT		5,302,620	5,481,095	1,066
06763A-A*-2	Barings Private Credit C Senior Unsecure		.01/31/2022	DIRECT		10,167,452	10,505,432	2,043
06763A-A8-0	Barings Private Credit C Senior Unsecure		.01/31/2022	DIRECT		4,869,572	5,033,472	979
06759F-AC-0	BABSON CLO LTD 2015-II-SERIES 15-2A CLAS	D.	.06/02/2022	EXCHANGE OFFER		4,084,340	5,465,000	.0
06759F-AE-6	BABSON CLO LTD 2015-II-SERIES 15-2A CLAS	D.	.06/02/2022	EXCHANGE OFFER		10,276,259	13,750,000	.0
06759U-AA-1	Barings Clo Ltd 2022-II-BABSN 2022-2A A	D.	.08/03/2022	BARCLAYS CAPITAL INC		14,685,000	15,000,000	5,344
06759U-AC-7	Barings Clo Ltd 2022-II-BABSN 2022-2A B1	D.	.06/21/2022	BARCLAYS CAPITAL INC		10,000,000	10,000,000	.0
06759U-AE-3	Barings Clo Ltd 2022-II-BABSN 2022-2A C	D.	.06/21/2022	BARCLAYS CAPITAL INC		5,000,000	5,000,000	.0
06759U-AG-8	Barings Clo Ltd 2022-II-BABSN 2022-2A D	D.	.06/21/2022	BARCLAYS CAPITAL INC		5,000,000	5,000,000	.0
06762Q-AA-5	Babson CLO Ltd/Cayman Is-BABSN LP-3A A	D.	.07/22/2022	BOFAMLSEC		8,955,000	9,000,000	.0
06762Q-AC-1	Babson CLO Ltd/Cayman Is-BABSN LP-3A B	D.	.07/22/2022	BOFAMLSEC		4,500,000	4,500,000	.0
06762Q-AE-7	Babson CLO Ltd/Cayman Is-BABSN LP-3A C	D.	.07/22/2022	BOFAMLSEC		26,250,000	26,250,000	.0
06762Q-AG-2	Babson CLO Ltd/Cayman Is-BABSN LP-3A D	D.	.07/22/2022	BOFAMLSEC		25,000,000	25,000,000	.0
06762R-AA-3	Babson CLO Ltd/Cayman Is-BABSN LP-3A E	D.	.07/22/2022	BOFAMLSEC		13,250,000	13,250,000	.0
06762R-AC-9	Babson CLO Ltd/Cayman Is-BABSN LP-3A F	D.	.07/22/2022	BOFAMLSEC		500,000	500,000	.0
06762V-AC-0	Barings Loan Partners CL-BABSN 2022-3A B	D.	.09/01/2022	BOFAMLSEC		10,000,000	10,000,000	.0
250608-34-9	Barings Euro Clo 2022-1 -BABSE 2022-1A A	B.	.10/24/2022	GOLDMAN		14,732,468	14,806,494	.0
250608-36-5	Barings Euro Clo 2022-1 -BABSE 2022-1A B	B.	.10/24/2022	GOLDMAN		4,812,113	4,935,498	.0
250608-38-1	Barings Euro Clo 2022-1 -BABSE 2022-1A B	B.	.10/24/2022	GOLDMAN		4,812,113	4,935,498	.0
1509999999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates						274,196,937	280,412,489	9,432
00216C-AG-8	AQ SUNSHINE INC. - TRANCHE C DELAYED DR		.12/31/2022	DIRECT		39,892	41,557	.0
00216C-AH-6	AQ SUNSHINE INC. - TRANCHE C TERM LOAN		.02/23/2022	VARIOUS		6,805	6,805	.0
00452#-AA-7	Accommodations Plus Technologies LLC/Ter		.09/30/2022	VARIOUS		21,384	21,384	.0
004538-AB-6	Accurus Aerospace Corporation - 2022 A-1		.04/05/2022	BANK LOANS BABSON CA		3,998,766	3,998,748	.0
00777Y-AD-8	Adviser Investments - 2022 1st Lien Term		.08/31/2022	BANK LOANS BABSON CA		429,216	437,975	.0
00910#-AG-0	Air Comm Corporation LLC - 2021 Incremen		.07/05/2022	BANK LOANS BABSON CA		574,943	574,943	.0
02124T-AA-1	Qatar Airways Senior Term Loa		.01/31/2022	BANK LOANS BABSON CA		23,826,175	23,921,575	.0
02254G-AE-3	ALVOGN TL B-EXT 1L USD		.12/31/2022	DIRECT		8,622	9,076	.0
03272*-AB-1	ANAQUA PARENT HOLDINGS INC. - DELAYED D		.07/06/2022	BANK LOANS BABSON CA		8,082	8,082	.0
04019V-MO-7	ARES PBN FINANCE CO. II LLC - Class A Te		.09/12/2022	BANK LOANS BABSON CA		7,333,333	7,333,333	.0
05351K-A#-6	Avant Credit Card Master Avant Master Tr		.12/29/2022	BANK LOANS BABSON CA		4,746,874	4,746,874	.0
05351K-A*-0	Avant Cr Card Master Tr 2021-VFN1 C1 A		.12/29/2022	BANK LOANS BABSON CA		63,500,400	63,500,400	.0
05351K-A8-8	Avant Credit Card Master Avant Master Tr		.12/29/2022	BANK LOANS BABSON CA		7,370,060	7,370,060	.0
05564Z-MM-8	BREDIF MM LSA LLC - Term Loan Series 202		.10/21/2022	BANK LOANS BABSON CA		3,964,125	3,964,125	.0
05564Z-MN-6	BREDIF MM LSA LLC - Term Loan Series 202		.10/21/2022	BANK LOANS BABSON CA		7,213,019	7,213,019	.0
05564Z-MO-4	BREDIF MM LSA LLC - Term Loan Series 202		.12/08/2022	BANK LOANS BABSON CA		9,610,402	9,610,402	.0
05629*-AA-8	BR DSCO I INVESTCO, LLC - Senior Secured		.10/12/2022	BANK LOANS BABSON CA		8,080,000	8,080,000	.0
066838-AB-5	BANYAN SOFTWARE HOLDINGS LLC - DELAYED		.04/19/2022	BANK LOANS BABSON CA		133,476	133,476	.0
08123A-MM-1	BORED MERIDIAN PEAK FUNDING LLC - Secure		.10/28/2022	BANK LOANS BABSON CA		17,000,000	17,000,000	.0
088908-AB-0	Beyond Risk - Delayed Draw Term Loan		.06/22/2022	VARIOUS		87,310	151,320	.0
103119-CL-5	NEFCO Holding Company, LLC - Delayed Dra		.08/19/2022	BANK LOANS BABSON CA		5,738	5,738	.0
103119-CM-3	NEFCO Holding Company, LLC - Delayed Dra		.08/19/2022	BANK LOANS BABSON CA		95,107	95,107	.0
103119-CN-1	NEFCO Holding Company, LLC - Term Loan		.08/05/2022	BANK LOANS BABSON CA		512,629	523,090	.0
10475Z-ZZ-6	Fortis Payment Systems LLC - 2022 Term L		.10/31/2022	BANK LOANS BABSON CA		1,220,462	1,251,756	.0
113004-QO-1	Armstrong Transport Group - 2022 Increme		.10/14/2022	BANK LOANS BABSON CA		2,443,750	2,500,000	.0
12125B-AE-0	BBB Industries LLC - 2022 2nd Lien Term		.07/28/2022	BANK LOANS BABSON CA		2,181,818	2,272,727	.0
124648-AA-0	CAI Software - Term Loan		.01/31/2022	DIRECT		(3,870,390)	(3,949,378)	.0
12499#-MN-6	CCOF II & CARLYLE CREDIT OPPORTUNITIES C		.11/03/2022	BANK LOANS BABSON CA		21,535,875	21,535,875	.0
12575Z-MN-9	CMFT RE Lending Sub MM, LLC - Term Loan		.12/01/2022	BANK LOANS BABSON CA		24,748,101	24,748,101	.0
12575Z-MQ-2	CMFT RE Lending Sub MM, LLC - Term Loan		.09/14/2022	BANK LOANS BABSON CA		4,584,000	4,584,000	.0
12625Z-MO-7	CRE II LENDER SUB I, LLC - Term Loan Ser		.08/24/2022	BANK LOANS BABSON CA		3,234,950	3,234,950	.0
12625Z-MP-4	CRE II LENDER SUB I, LLC - Term Loan Ser		.11/07/2022	BANK LOANS BABSON CA		2,741,120	2,741,120	.0
12625Z-MQ-2	CRE II LENDER SUB I, LLC - Term Loan Ser		.12/02/2022	BANK LOANS BABSON CA		2,315,250	2,315,250	.0
12721#-AC-3	CVP HOLDCO INC. - DELAYED DRAW TERM LOA		.05/23/2022	VARIOUS		136,281	136,281	.0
150311-RR-1	Cogency Global - Term Loan		.02/14/2022	BANK LOANS BABSON CA		4,360,008	4,448,987	.0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
12758#-AA-3	CMFT RE Lending Sub MM, LLC - Term Loan		..03/16/2022 ..	BANK LOANS BABSON CA		22,010,870	22,010,870	0
12758#-AB-1	CMFT RE Lending Sub MM, LLC - Term Loan		..06/13/2022 ..	BANK LOANS BABSON CA		13,919,400	13,919,400	0
12758#-AC-9	CMFT RE Lending Sub MM, LLC - Term Loan		..07/11/2022 ..	BANK LOANS BABSON CA		6,075,000	6,075,000	0
12759#-AA-2	CELF SPV LLC - Revolving Senior Secured		..11/23/2022 ..	BANK LOANS BABSON CA		6,454,676	6,454,676	0
14314Z-MM-3	CARLYLE SECURED LENDING III SPV, - Senio		..11/30/2022 ..	BANK LOANS BABSON CA		8,160,000	8,160,000	0
148450-Y#-#	OSP HAMILTON PURCHASER LLC INITIAL TERM		..12/31/2022 ..	DIRECT		0	0	0
14855T-XX-6	Castlake Aircraft Secu Class A Loans		..12/31/2022 ..	DIRECT		131,254	131,402	0
14886M-AM-3	Checkout Holding Corp-CHKOUT TL EXIT 1L		..12/31/2022 ..	DIRECT		(4,169)	(4,254)	0
14886M-AN-1	Checkout Holding Corp-CHKOUT PIK-TERM EX		..11/30/2022 ..	VARIOUS		82,309	30,127	0
14979Z-MM-9	CAZ GP OWNERSHIP CD AGGREGATOR - Secured		..12/07/2022 ..	BANK LOANS BABSON CA		22,916,667	22,916,667	0
14979Z-MM-7	CAZ GP OWNERSHIP EF AGGREGATOR, L.P. - S		..12/07/2022 ..	BANK LOANS BABSON CA		18,750,000	18,750,000	0
150311-RR-1	BDP International Inc. - 2021 Tranche B4		..12/31/2022 ..	DIRECT		527,014	(2,730)	0
.....	FHA/VA Residential Whole Loans Lakeview		..01/31/2022 ..	DIRECT		(20,000,000)	(20,000,000)	0
15644G-A#-1	CENTRIC BRANDS 1LEXIT TL L+1000 10/09/20		..11/22/2022 ..	VARIOUS		476,256	476,256	0
15674#-AA-9	Cerberus SMC II		..09/21/2022 ..	BANK LOANS BABSON CA		330,000	330,000	0
171435-AA-8	CHURCHILL CFO 2022-1 LTD. - Class A Revo		..06/30/2022 ..	BANK LOANS BABSON CA		40,000,000	40,000,000	0
171435-AC-4	CHURCHILL CFO 2022-1 LTD. - Class B Revo		..06/30/2022 ..	BANK LOANS BABSON CA		10,000,000	10,000,000	0
18502#-AA-1	Clearinghouse CDFI - INITIAL LN 1ST TRAN		..05/25/2022 ..	BANK LOANS BABSON CA		10,000,000	10,000,000	0
19076*-AB-5	COBALT BUYER SUB INC. - DELAYED DRAW TE		..09/14/2022 ..	BANK LOANS BABSON CA		85,313	85,313	0
22458#-AC-1	Crash Champions LLC - 2021 Delayed Draw		..12/31/2022 ..	DIRECT		(73,993)	747	0
23345U-AB-5	Disa Holdings Corp. - Delayed Draw Term		..12/09/2022 ..	BANK LOANS BABSON CA		46,476	46,476	0
24360#-AC-6	DECOPAC INC. - TERM B LOAN		..09/30/2022 ..	VARIOUS		8,715	8,715	0
25403#-AW-6	Diligent Corporation - 2022 Delayed Draw		..09/30/2022 ..	BANK LOANS BABSON CA		60,894	60,894	0
26745L-AC-2	Dwyer Instruments Inc - Term Loan		..07/01/2022 ..	BANK LOANS BABSON CA		1,320,432	1,347,380	0
26869#-AB-9	Standard Elevator Systems - Delayed Draw		..12/19/2022 ..	VARIOUS		(1,370,134)	(1,324,576)	0
26888*-AB-8	EPS Nass Parent Inc. - Delayed Draw Term		..04/26/2022 ..	BANK LOANS BABSON CA		25,589	25,589	0
28888Z-ZA-1	Gutter Buyer, Inc.		..01/31/2022 ..	DIRECT		(854,275)	(854,275)	0
29251#-AB-9	Encina Business Credit SPV LLC Revolving		..10/21/2022 ..	BANK LOANS BABSON CA		9,280,000	9,280,000	0
30034#-AA-3	EVERLAKE PRIVATE FUND BORROWER, LLC - Se		..09/28/2022 ..	BANK LOANS BABSON CA		5,000,000	5,000,000	0
30210#-AA-7	EXOS COLLATERALIZED SPAC HOLDINGS FUND L		..11/14/2022 ..	BANK LOANS BABSON CA		23,000,000	23,000,000	0
30301*-AA-1	FS CREIT FINANCE MM-1 LLC - Secured Term		..09/28/2022 ..	BANK LOANS BABSON CA		61,604,054	61,604,054	0
32013#-AA-2	FIRST EAGLE DIRECT LENDING V-B, LLC - Se		..12/19/2022 ..	BANK LOANS BABSON CA		29,989,565	29,989,565	0
35042#-AA-2	Foundation Finance Trust - Fixed Class A		..08/23/2022 ..	BANK LOANS BABSON CA		105,632,098	105,951,000	0
35042#-AB-0	Foundation Finance Trust - Fixed Class B		..08/23/2022 ..	BANK LOANS BABSON CA		6,322,628	6,371,000	0
35042#-AC-8	Foundation Finance Trust - Fixed Class C		..08/23/2022 ..	BANK LOANS BABSON CA		8,478,064	8,541,000	0
35042#-AD-6	Foundation Finance Trust - Fixed Class D		..08/23/2022 ..	BANK LOANS BABSON CA		8,594,315	8,656,000	0
36255#-AB-8	GSO Facility TL L+200 10/11/2023		..01/31/2022 ..	DIRECT		(58,800,000)	(58,800,000)	0
36457W-AC-5	Galway Borrower LLC-1L SR SEC0		..10/03/2022 ..	VARIOUS		65,899	66,008	0
36457W-AD-3	GALWAY BORROWER LLC - CLOSING DATE TERM		..12/31/2022 ..	DIRECT		748	762	0
38870#-AH-6	GraphPad Software Inc. DDTL		..01/31/2022 ..	DIRECT		(1,721,739)	(1,739,130)	0
40348#-AA-1	Gutter Buyer Inc.		..01/31/2022 ..	DIRECT		(845,722)	(858,601)	0
40420Z-MM-9	HL Private Assets Holdings LP - Term Loa		..09/21/2022 ..	BANK LOANS BABSON CA		18,000,000	18,000,000	0
40476#-AC-3	Hanley Wood LLC - 2021 Delayed Draw Term		..01/10/2022 ..	VARIOUS		(604,555)	(604,555)	0
40481#-AB-6	HH - STELLA INC. - DELAYED DRAW TERM LO		..12/27/2022 ..	BANK LOANS BABSON CA		31,070	31,070	0
40487*-AA-6	HV Voyage L.P. - 1st Lien Term Loan (Las		..03/30/2022 ..	BANK LOANS BABSON CA		3,078,947	3,078,947	0
40487*-AB-4	HV Voyage L.P. - 1st Lien Term Loan (Par		..03/30/2022 ..	BANK LOANS BABSON CA		1,421,053	1,421,053	0
40489#-AA-2	HPS Mezzanine Partners 2019, L.P., MP 20		..09/14/2022 ..	BANK LOANS BABSON CA		45,499,382	45,499,382	0
41049#-TT-0	Hanley Wood LLC		..01/31/2022 ..	DIRECT		(3,875,155)	(3,964,803)	0
42981#-AA-9	HIGH STREET BUYER INC. - DELAYED DRAW T		..03/01/2022 ..	BANK LOANS BABSON CA		59,438	59,438	0
44961*-AB-1	Implus Footcare LLC/Initial Term Loan 0		..12/30/2022 ..	PIK NOTE BUY UP		3,535	3,535	0
45321*-AA-5	Implus Footcare LLC/Spenco Incremental		..12/30/2022 ..	PIK NOTE BUY UP		550	550	0
45608Z-MM-2	INDUSTRY VENTURES MM HOLDCO, LLC, - Seni		..07/12/2022 ..	BANK LOANS BABSON CA		10,000,000	10,000,000	0
45672Z-BB-2	HTI Technology & Industries - 2022 Delay		..07/27/2022 ..	BANK LOANS BABSON CA		1,772	118,130	0
45686#-AC-8	InfraStripe LLC Delayed Draw		..01/31/2022 ..	DIRECT		12,500	12,500	0
46139Z-MM-8	Invesco Private Credit Opportunities Hol		..10/18/2022 ..	BANK LOANS BABSON CA		5,500,000	5,500,000	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
462043-VW-7	Helios Software Holdings EUR TLB (Mar'21		09/26/2022	BANK LOANS BABSON CA		894,846	962,200	0
47231#-MQ-8	JEFFERIES DIRECT LENDING OFFSHORE FUND I		12/16/2022	BANK LOANS BABSON CA		4,747,500	4,747,500	0
47231#-MR-6	JEFFERIES DIRECT LENDING OFFSHORE FUND I		12/14/2022	BANK LOANS BABSON CA		1,937,930	1,937,930	0
47231#-MS-4	JEFFERIES DIRECT LENDING OFFSHORE FUND I		12/14/2022	BANK LOANS BABSON CA		9,361,913	9,361,913	0
47231#-MT-2	JEFFERIES DIRECT LENDING FUND II C SPE L		12/08/2022	BANK LOANS BABSON CA		6,413,672	6,413,672	0
47231#-MU-9	JEFFERIES DIRECT LENDING FUND II SPE LLC		12/08/2022	BANK LOANS BABSON CA		32,307,494	32,307,494	0
48600*-AA-1	Kaila Ventures Trust - Revolver		03/21/2022	BANK LOANS BABSON CA		1,873,748	1,873,748	0
48773#-AC-4	KELLERMAYER BERGENSONS SERVICES LLC - 2		12/31/2022	DIRECT		175,513	175,513	0
500056-AA-4	Technosylva - Tranche A Term Loan		12/19/2022	BANK LOANS BABSON CA		585,710	597,664	0
500500-XX-6	RedSail Technologies - 2022 Incremental		06/17/2022	BANK LOANS BABSON CA		2,450,000	2,500,000	0
50541#-AE-7	LABORATORIES BIDCO LLC - DELAYED DRAW TE		07/21/2022	BANK LOANS BABSON CA		157,979	157,979	0
515095-MP-9	LANDMARK EQUITY PARTNERS XV-D, LLC - Cla		07/14/2022	BANK LOANS BABSON CA		40,000,000	40,000,000	0
52172*-AA-1	LeadsOnline - Term Loan		02/07/2022	BANK LOANS BABSON CA		2,114,052	2,151,707	0
53173#-AB-2	LIDO ADVISORS LLC - DELAYED DRAW TERM L		08/12/2022	BANK LOANS BABSON CA		101,611	101,611	0
533021-CC-3	HTI Technology & Industries - 2022 Term		07/27/2022	BANK LOANS BABSON CA		543,003	551,272	0
	Cleaver-Brooks Inc - 2022 Term Loan		07/18/2022	BANK LOANS BABSON CA		3,673,209	3,748,173	0
	Cleaver-Brooks Inc - 2022 Fixed PIK Term		09/30/2022	VARIOUS		790,119	807,905	0
54288#-AC-2	Illinois St Sales Tax Revenue - 2022 Inc		04/05/2022	BANK LOANS BABSON CA		328,743	335,452	0
55183*-AC-7	Lynx Franchising LLC - 2021-09 Increment		12/31/2022	DIRECT		(7,231)	(7,378)	0
552000-CC-3	National Auto Care - 2022 Incremental De		12/08/2022	BANK LOANS BABSON CA		720,651	720,651	0
55343#-AF-5	MUX Venture Mgmt III LLC Senior TL		09/30/2022	DIRECT		24,777,483	24,777,500	0
55371*-AU-9	MRI Software LLC/Term Loan 2/20		01/31/2022	DIRECT		2,096	2,096	0
55371*-AX-3	MRI SOFTWARE LLC - TRANCHE 2 DELAYED DRA		12/31/2022	DIRECT		3,559	3,632	0
55371*-AY-1	MRI SOFTWARE LLC - SECOND AMENMENT TERM		12/31/2022	DIRECT		(6,138)	(6,138)	0
55371*-AZ-8	MRI SOFTWARE LLC - TRANCHE 3 DELAYED DRA		06/21/2022	VARIOUS		75,645	75,645	0
55417#-AA-5	M360 MM Series LLC - Series 2022-1 Secur		10/25/2022	BANK LOANS BABSON CA		4,875,795	4,875,795	0
564232-CC-8	ASC Communications LLC 2022 Term Loan		07/15/2022	BANK LOANS BABSON CA		921,666	936,747	0
57233#-AB-1	Marshall Excelsior - Term Loan		05/13/2022	BANK LOANS BABSON CA		449,628	457,636	0
57780#-AB-0	MAVERICK ACQUISITION INC. - DELAYED DRA		12/31/2022	DIRECT		39,167	40,689	0
59*666-W8-3	Lord Capital Green Commercial Purchase F		05/24/2022	BANK LOANS BABSON CA		1,290,891	1,290,891	0
59*666-X9-0	Lord Capital Green Commercial Purchase F		06/22/2022	BANK LOANS BABSON CA		1,383,333	1,383,333	0
59*666-Y9-9	Lord Capital Green Commercial Purchase F		07/27/2022	BANK LOANS BABSON CA		1,550,084	1,550,084	0
59576#-AA-4	Middle Market Credit Fund II SPV, LLC-CI		06/30/2022	BANK LOANS BABSON CA		13,299,180	13,299,180	0
60510M-AF-5	Mission Lane Credit Card Master Trust -		12/20/2022	BANK LOANS BABSON CA		1,466,667	1,466,667	0
60510M-AB-7	Mission Lane Credit Card Master Trust -		12/20/2022	BANK LOANS BABSON CA		6,966,667	6,966,667	0
60510M-B*-8	Mission Lane Credit Card Master Trust -		12/20/2022	BANK LOANS BABSON CA		733,333	733,333	0
62879W-MQ-7	NB SOF V ISPV 2022 LLC - Class A Term Lo		12/19/2022	BANK LOANS BABSON CA		3,948,629	3,948,629	0
62879X-AB-1	NB Select Opportunities ISPV 2022 LLC -		11/21/2022	BANK LOANS BABSON CA		6,849,862	6,849,862	0
62879X-AC-9	NB Select Opportunities ISPV 2022 LLC -		11/21/2022	BANK LOANS BABSON CA		1,588,332	1,588,332	0
62901#-AA-6	National Auto Care - Term Loan		01/31/2022	DIRECT		896,096	907,439	0
62901#-AB-4	National Auto Care - Delayed Draw Term L		09/01/2022	BANK LOANS BABSON CA		699,804	699,804	0
62929#-AA-2	MM GRC Holdco LLC/Term Loan 1/18		03/31/2022	PIK NOTE BUY UP		358	358	0
62929#-AB-0	MM GRC Holdco LLC/Delayed Draw Term Loa		12/31/2022	VARIOUS		(930)	(930)	0
63155Y-AB-2	NASSAU CFO 2022 LLC - Class A Term Loan		09/30/2022	BANK LOANS BABSON CA		30,000,000	30,000,000	0
65172Z-MM-6	NEWPOINT JV SUB MM, LLC, - Term Loan Ser		09/08/2022	BANK LOANS BABSON CA		8,565,750	8,565,750	0
65172Z-MN-4	NEWPOINT JV SUB MM, LLC, - Term Loan Ser		10/27/2022	BANK LOANS BABSON CA		7,875,000	7,875,000	0
65658#-AB-0	NORTH HAVEN FALCON BUYER LLC - DELAYED		02/28/2022	BANK LOANS BABSON CA		41,718	41,718	0
65716*-AB-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		03/29/2022	VARIOUS		97,848	97,848	0
67080B-MM-6	NXT Capital Structured Note I, LLC - Cla		12/19/2022	BANK LOANS BABSON CA		16,393,352	16,393,352	0
67100#-AA-2	OC III LVS XXVI LP - Secured Loan Facili		10/07/2022	BANK LOANS BABSON CA		48,378,008	48,378,008	0
67102*-AA-4	ORCC FINANCING II LLC		04/08/2022	EXCHANGE OFFER		80,000,000	80,000,000	254,400
67115E-AC-4	Omega Holdings - Senior Term Loan		03/31/2022	BANK LOANS BABSON CA		397,863	405,983	0
67117*-AA-7	OA BUYER INC INITIAL TERM LN		01/31/2022	DIRECT		3,669,669	3,744,560	0
67117#-AA-5	OR Opportunistic DL (C) Funding LLC - Te		12/21/2022	VARIOUS		27,644,444	27,644,444	0
68144#-AD-2	Olympia Acquisition, Inc-2022 Rolled Ter		11/30/2022	VARIOUS		14,615	14,615	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
68687@-AA-3	ORO Funding I LLC - Term Loan		..05/25/2022 ..	BANK LOANS BABSON CA		30,000,000	30,000,000	0
68877Z-MM-8	OT-MM REDF3 Seller, LLC - Series 2022-1		..08/01/2022 ..	BANK LOANS BABSON CA		14,833,560	14,833,560	0
68877Z-MM-6	OT-MM REDF3 Seller, LLC - Series 2022-2		..08/16/2022 ..	BANK LOANS BABSON CA		23,250,000	23,250,000	0
70216*-AA-1	PARTNERS GROUP PRIVATE EQUITY II, LLC -		..12/28/2022 ..	BANK LOANS BABSON CA		50,500,000	50,500,000	0
70466@-AA-6	Polymer Solutions Group Holdings LLC - T		..12/31/2022 ..	DIRECT		(17,524)	(17,524)	0
70476X-AJ-4	PetVet Care Centers, LLC - 2020 Incremen		..12/31/2022 ..	DIRECT		370,313	370,313	0
70559@-AF-3	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC		..03/29/2022 ..	BANK LOANS BABSON CA		109,500	109,500	0
71384P-A#-8	Perimeter Master Note Business Trust - S		..10/17/2022 ..	BANK LOANS BABSON CA		18,548,793	18,548,793	0
71384P-A*-2	Perimeter Master Note Business Trust - S		..10/17/2022 ..	BANK LOANS BABSON CA		68,911,360	68,911,360	0
71384P-A@-0	Perimeter Master Note Business Trust - S		..10/17/2022 ..	BANK LOANS BABSON CA		13,019,172	13,019,172	0
71384P-B*-1	Perimeter Master Note Business Trust - S		..10/17/2022 ..	BANK LOANS BABSON CA		21,415,436	21,415,436	0
71384P-B@-9	Perimeter Master Note Business Trust - S		..10/17/2022 ..	BANK LOANS BABSON CA		7,532,011	7,532,011	0
71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		..12/31/2022 ..	DIRECT		(38,030)	(38,028)	0
73103@-AB-7	Polara - 2022 Incremental Term Loan		..04/28/2022 ..	BANK LOANS BABSON CA		1,309,989	1,336,723	0
73112@-AB-6	Policy Services Company, 1L PIK Toggle T		..12/22/2022 ..	VARIOUS		14,598,143	15,040,248	0
73112@-AC-4	Policy Services Company, 1L PIK Toggle D		..12/22/2022 ..	VARIOUS		3,862,520	4,033,572	0
74273J-AE-3	Pro Mach Inc. First Lien Term		..08/11/2022 ..	VARIOUS		289,505	289,794	0
74273J-AF-0	Pro Mach Inc. Delayed Draw Te		..01/31/2022 ..	DIRECT		(289,394)	(289,794)	0
74309#-AB-5	PRG 9/20 Last Out		..12/21/2022 ..	PIK NOTE BUY UP		84,757	84,757	0
74309#-AC-3	PRODUCTION RESOURCE GROUP L.L.C. - DELA		..12/31/2022 ..	PIK NOTE BUY UP		(244)	(244)	0
74309#-AD-1	PRODUCTION RESOURCE GROUP L.L.C. - SECO		..07/27/2022 ..	VARIOUS		(6,326)	(6,326)	0
74588B-AB-6	Puma Buyer TL 2029		..07/29/2022 ..	DIRECT		18,600,000	20,000,000	0
74719#-AA-1	Pyramid Management Advisors LLC/Term Lo		..11/30/2022 ..	VARIOUS		12,727	12,727	0
74719#-AB-9	Pyramid Management Advisors LLC/Delayed		..11/30/2022 ..	VARIOUS		3,075	3,075	0
74719#-AC-7	Pyramid Management Advisors LLC/Delayed		..11/30/2022 ..	VARIOUS		1,100	1,100	0
74741@-AA-5	Olympia Acquisition Inc./Term Loan 9/19		..02/28/2022 ..	PIK NOTE BUY UP		830	830	0
749329-MM-5	RCC REAL ESTATE SPE 9 LLC -Series 2022-1		..12/22/2022 ..	BANK LOANS BABSON CA		140,438	140,438	0
749329-MO-3	RCC REAL ESTATE SPE 9 LLC -Series 2022-2		..12/22/2022 ..	BANK LOANS BABSON CA		14,069	14,069	0
75333*-AA-8	RFS ASSET SECURITIZATION III, LLC - 1st		..10/14/2022 ..	BANK LOANS BABSON CA		4,506,881	4,506,881	0
75333*-AB-6	RFS ASSET SECURITIZATION III, LLC - 1st		..10/14/2022 ..	BANK LOANS BABSON CA		523,017	523,017	0
75812R-MM-9	Red Cedar Holdings B, L.P. - Series 2022		..08/10/2022 ..	BANK LOANS BABSON CA		24,519,610	24,519,610	0
78494*-AA-7	SPC RECEIVABLES FDG II TR SECQ REV LN FA		..05/06/2022 ..	VARIOUS		70,887,530	71,225,755	0
809000-XX-5	Standard Elevator Systems		..01/31/2022 ..	DIRECT		(2,378,475)	(2,420,508)	0
809000-ZZ-8	Standard Elevator Systems		..01/31/2022 ..	DIRECT		(2,425,085)	(2,474,576)	0
816307-A@-1	SelectQuote Inc./Term Loan 10/19		..11/30/2022 ..	VARIOUS		130,036	130,036	0
83218#-TT-7	Atreides Funding Trust - Pass-Through In		..05/27/2022 ..	BANK LOANS BABSON CA		45,491,449	45,491,449	0
84724@-AA-5	Spatial Business Systems - Senior Term L		..10/03/2022 ..	BANK LOANS BABSON CA		990,234	1,015,625	0
84967#-AB-7	SPRING INSURANCE SOLUTIONS LLC - DELAYE		..08/08/2022 ..	BANK LOANS BABSON CA		59,089	59,089	0
85789#-AB-0	STEALTH HOLDING LLC - DELAYED DRAW TERM		..03/09/2022 ..	VARIOUS		10,266	10,266	0
86662#-AB-0	SUN ACQUIRER CORP		..10/14/2022 ..	VARIOUS		257,048	257,048	0
86822@-AA-1	SUPERJET BUYER LLC INITIAL TERM LN		..01/31/2022 ..	DIRECT		6,909	7,050	0
87264Z-MM-9	TPG TIGER HOLDCO, LLC, - Class A Term Lo		..12/19/2022 ..	BANK LOANS BABSON CA		5,318,724	5,318,724	0
87264Z-MM-7	TPG TIGER HOLDCO, LLC, - Class B Term Lo		..12/19/2022 ..	BANK LOANS BABSON CA		1,772,908	1,772,908	0
87326#-AC-4	TA/WEG HOLDINGS LLC - AUGUST 2021 DELAY		..08/12/2022 ..	BANK LOANS BABSON CA		87,487	87,487	0
87583F-AN-8	Tank Holding Corp. - 2022 Term Loan		..03/31/2022 ..	BANK LOANS BABSON CA		4,631,597	4,738,207	0
88167#-AA-8	Tetragon Financial Group (Delaware) LLC		..12/15/2022 ..	BANK LOANS BABSON CA		11,500,000	11,500,000	0
88676Z-MM-9	TIKEHAU GREEN DIAMOND CFO LLC - Class A		..12/22/2022 ..	DIRECT		13,777,778	13,777,778	0
88676Z-MM-7	TIKEHAU GREEN DIAMOND CFO LLC - Class B		..12/22/2022 ..	DIRECT		3,444,444	3,444,444	0
89617*-AB-4	Trident Maritime Systems Inc. - 2021 Ter		..09/30/2022 ..	BANK LOANS BABSON CA		2,462,500	2,500,000	0
89989#-AG-9	TURBO BUYER INC AMEND NO 4 DDTL		..04/12/2022 ..	VARIOUS		464,973	485,989	0
89989#-AH-7	TURBO BUYER INC AMEND NO 5 - Delayed Dra		..11/30/2022 ..	BANK LOANS BABSON CA		210,157	210,157	0
901399-MX-0	Twin Brook Capital Funding XIV WSPV, LLC		..10/18/2022 ..	BANK LOANS BABSON CA		6,100,000	6,100,000	0
901399-MY-8	Twin Brook Capital Funding XIII WSPV, LL		..10/18/2022 ..	BANK LOANS BABSON CA		7,025,000	7,025,000	0
903666-ZY-4	US SFE Asset - Term Loan		..01/31/2022 ..	DIRECT		20,271,523	20,271,523	0
905301-ZZ-3	RMA Companies - Term Loan		..01/25/2022 ..	BANK LOANS BABSON CA		674,207	687,966	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
91831Z-M0-1	VPC LEGAL FINANCE FUND HOLDINGS - Secure		12/22/2022	BANK LOANS BABSON CA		4,814,286	4,814,286	0
918340-Q0-6	Van Pool Transportation LLC - 2022 Delay		10/07/2022	BANK LOANS BABSON CA		5,000,000	5,000,000	0
91839*-AE-6	VPROP OPERATING LLC - TRANCHE A		09/01/2022	VARIOUS		161,932	163,411	0
91839*-AF-3	VPROP OPERATING LLC - TRANCHE B LOAN		09/01/2022	VARIOUS		13,058	13,058	0
91839*-AG-1	VPROP OPERATING LLC - TRANCHE C LOAN		09/01/2022	VARIOUS		59,354	59,354	0
92943H-AB-5	W.R. Grace & Co. TL B		01/31/2022	DIRECT		(347,965)	(347,965)	0
94184#-AB-3	WATERMILL EXPRESS LLC - DELAYED DRAW TE		12/29/2022	BANK LOANS BABSON CA		20,217	20,217	0
94979@-AA-6	WELLNESS ACQUISITIONCO INC. - TERM LOAN		01/01/2022	EXCHANGE OFFER		426,481	426,481	0
956525-ZZ-5	Kings III - 1st Lien Term Loan		08/31/2022	BANK LOANS BABSON CA		1,783,740	1,820,143	0
96525Z-MN-3	WHITEHORSE LIQUIDITY PARTNERS V-R LP, -C		12/22/2022	BANK LOANS BABSON CA		7,323,429	7,323,429	0
97959@-AA-3	Woodland Foods Inc - Term Loan		01/31/2022	DIRECT		(130,886)	(133,557)	0
98876*-AA-3	ZB Holdco LLC - Term Loan		02/09/2022	BANK LOANS BABSON CA		469,467	479,467	0
	Scaled Agile Inc		01/31/2022	DIRECT		(815,729)	(832,377)	0
	Opendoor Property Trust I		01/31/2022	DIRECT		(15,000,000)	(15,000,000)	0
	Opendoor Property Trust I		01/31/2022	DIRECT		(16,120,380)	(20,000,000)	0
	Hanley Wood LLC		01/31/2022	DIRECT		(1,014,493)	(1,035,197)	0
	BDP International Inc. (BDP Buyer LLC)		01/31/2022	DIRECT		(1,075,519)	(1,091,897)	0
	Litmos - Term Loan		12/01/2022	BANK LOANS BABSON CA		2,204,122	2,260,638	0
	ATL II MRO Holdings Inc. - Senior Term L		11/01/2022	BANK LOANS BABSON CA		1,241,207	1,273,033	0
	JFK Airport Terminal 6 - Term Loan		12/23/2022	BANK LOANS BABSON CA		19,900,000	20,000,000	0
	Applied Aerospace Structures Corp. - Ter		12/01/2022	BANK LOANS BABSON CA		2,033,871	2,096,774	0
	RWA Holding Company - First Lien Term Lo		11/01/2022	BANK LOANS BABSON CA		1,605,031	1,654,671	0
	Disa Holdings Corp. - Term Loan A		11/07/2022	BANK LOANS BABSON CA		413,441	426,228	0
	Technosylva - Tranche A Term Loan		12/19/2022	BANK LOANS BABSON CA		38,714	39,504	0
BO6548-73-1	WIEC Holdings II Corp - Term Loan		10/03/2022	BANK LOANS BABSON CA		1,756,211	1,801,242	0
	Cerberus SWC II		01/31/2022	DIRECT		(1,965,000)	(1,965,000)	0
	Infrastripe LLC		01/31/2022	DIRECT		(2,898,375)	(2,947,500)	0
	ORCC Financing IV LLC		01/31/2022	DIRECT		(12,400,000)	(12,400,000)	0
	LendingClub Bank		01/31/2022	DIRECT		(16,997,415)	(16,997,415)	0
	Henderson Park Real Estate Fund Entities		01/31/2022	DIRECT		(50,000,000)	(50,000,000)	0
	eShipping DDTL		01/31/2022	DIRECT		(609,964)	(622,412)	0
	Polara (VSC Polara LLC)		01/31/2022	DIRECT		(1,424,427)	(1,453,497)	0
CB4569-87-0	Sparus Holdings LLC - 1st Lien Term Loan		11/15/2022	BANK LOANS BABSON CA		1,253,610	1,282,466	0
G3165#-AB-0	COO I CREDIT BACKED LOANS LTD. - Senior		12/09/2022	BANK LOANS BABSON CA		34,256,047	34,256,047	0
G7740#-AA-7	SQL XL I FUND L.P. - Senior Secured Revo		04/28/2022	BANK LOANS BABSON CA		5,789,474	5,789,474	0
	Pro Mach Inc.		01/31/2022	DIRECT		(57,959)	(57,959)	0
C4921#-AA-9	Keats 506, Limited Partnership-Term Loan		09/28/2022	BANK LOANS BABSON CA		5,000,000	5,000,000	0
CB655*-AA-6	Syntax Systems Ltd - Senior Term Loan	A.	01/31/2022	DIRECT		(3,339)	(3,373)	0
001292-SU-6	Aenova Holding GmbH EUR TLB2 (Jul'2	B.	10/12/2022	BANK LOANS BABSON CA		859,455	968,400	0
0421UA-YY-2	Auris Luxembourg III S.A EUR TLB1 (Jul'1	B.	09/26/2022	BANK LOANS BABSON CA		890,035	962,200	0
533027-QC-0	Energy Exemplar Pty Ltd - 2022 USD Term	D.	08/25/2022	BANK LOANS BABSON CA		943,229	957,593	0
655941-TB-8	Fugue Finance B.V. EUR TL (Dec'17)	B.	11/03/2022	BANK LOANS BABSON CA		923,528	974,700	0
85914#-HM-1	STEPSTONE GROUP EUROPE ALTERNATIVE INVES	C.	04/12/2022	BANK LOANS BABSON CA		7,000,253	7,000,253	0
878391-TH-4	Tech 8 SASU EUR TLB (Jul'22	B.	09/29/2022	BANK LOANS BABSON CA		909,168	977,600	0
923459-XX-4	Veritas Bermuda Ltd Inc USD TLB (Aug 21)	C.	12/31/2022	DIRECT		(1,194,000)	(1,200,000)	0
G0567@-AA-4	Arqiva Broadcast Parent Limited - GBP Su	B.	11/02/2022	BANK LOANS BABSON CA		5,664,794	5,736,497	0
G3166*-AA-5	CIP VIII Holdings SPV L.P - Term Loan		06/06/2022	VARIOUS		25,000,000	25,000,000	0
G4301U-AF-1	Harbour Aircraft Investm Series 2017-1 C	C.	12/31/2022	DIRECT		42,757	43,035	0
G4604*-AA-3	HORIZON BIDCO CAYMAN LTD USD TERM LOAN	D.	05/03/2022	BANK LOANS BABSON CA		4,850,000	5,000,000	0
G4700#-AC-8	IVC Acquisition Ltd GBP TLB3 (Apr'2	B.	12/05/2022	BANK LOANS BABSON CA		1,016,836	1,109,781	0
G6684@-AA-9	OHA Credit Solutions Master Fund I SPV, ...	C.	12/15/2022	BANK LOANS BABSON CA		39,544,883	39,544,883	0
G7741#-AA-6	SSG CREDIT STRATEGIES VII ICAV - Senior	D.	07/08/2022	BANK LOANS BABSON CA		12,900,000	12,900,000	0
G9368P-AZ-7	Virgin Media SFA Finance GBP TL L (Nov'1	B.	11/16/2022	BANK LOANS BABSON CA		1,091,366	1,189,501	0
89836#-ZZ-#	Amherst Libor		12/31/2022			(50,000,000)	0	0
12564E-AA-0	CIM Trust 2021-J2		12/31/2022			(68,172)	0	0
40348#-AA-9	Gutter Buyer Inc		12/31/2022			(845,722)	0	0
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans						1,574,611,958	1,626,023,579	254,400

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
2509999997. Total - Bonds - Part 3						14,761,528,129	15,094,676,713	53,576,398
2509999998. Total - Bonds - Part 5						1,620,389,428	1,627,868,728	7,355,775
2509999999. Total - Bonds						16,381,917,557	16,722,545,441	60,932,173
534187-88-5	Lincoln National Corp-PREFERRED STOCK		11/15/2022	BOFAMLSEC	600,000.000	15,000,000	0.00	0
4019999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Perpetual Preferred						15,000,000	XXX	0
127668-12-3	Cogency Global - Preferred		02/14/2022	DIRECT	138.000	137,753	0.00	0
759351-88-5	Reinsurance Group of Ame-REINSURANCE GRO		09/15/2022	WELLS FARGO	200,000.000	5,000,000	0.00	0
4029999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Redeemable Preferred						5,137,753	XXX	0
4509999997. Total - Preferred Stocks - Part 3						20,137,753	XXX	0
4509999998. Total - Preferred Stocks - Part 5							XXX	0
4509999999. Total - Preferred Stocks						20,137,753	XXX	0
001084-10-2	AGCO CORP-COMMON STOCK		07/26/2022	BLOOMBERG TRADEBOOK	1,000.000	100,726		0
00773T-10-1	ADVANSIX INC-COMMON STOCK		09/13/2022	BLOOMBERG TRADEBOOK	2,155.000	76,436		0
03743Q-10-8	APA Corp-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	6,000.000	207,449		0
039483-10-2	Archer-Daniels-Midland C-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	3,000.000	234,350		0
047649-10-8	Atkore Inc-COMMON STOCK		09/12/2022	BLOOMBERG TRADEBOOK	3,200.000	277,685		0
057226-10-0	Baker Hughes Co-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	3,900.000	96,253		0
09739D-10-0	BOISE CASCADE CO-COMMON STOCK		12/23/2022	BLOOMBERG TRADEBOOK	470.000	33,264		0
125269-10-0	CF INDUSTRIES HOLDINGS I-COMMON STOCK		09/16/2022	BLOOMBERG TRADEBOOK	5,100.000	485,585		0
127097-10-3	CABOT OIL & GAS CORP-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	8,600.000	229,480		0
150870-10-3	Celanese Corp-COMMON STOCK		09/08/2022	BLOOMBERG TRADEBOOK	1,100.000	123,254		0
16411Q-10-1	CHENIERE ENERGY PARTNERS-COMMON STOCK		11/02/2022	BLOOMBERG TRADEBOOK	46,906.000	2,477,593		0
16411R-20-8	CHENIERE ENERGY INC-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	18,630.000	2,398,294		0
166764-10-0	CHEVRON CORP-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	2,200.000	320,576		0
185899-10-1	CLIFFS NATURAL RESOURCES-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	3,600.000	58,538		0
201723-10-3	COMMERCIAL METALS CO-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	3,200.000	113,057		0
20825C-10-4	ConocoPhillips-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	3,600.000	317,335		0
21037T-10-9	Constellation Energy Cor-COMMON STOCK		09/15/2022	BLOOMBERG TRADEBOOK	17,700.000	1,549,530		0
22052L-10-4	CORTEVA INC-COMMON STOCK		07/26/2022	BLOOMBERG TRADEBOOK	4,200.000	226,236		0
23311P-10-0	DCP MIDSTREAM PARTNERS LP COMMON UNIT		10/31/2022	BLOOMBERG TRADEBOOK	80,849.000	2,604,362		0
23345M-10-7	DT Midstream Inc-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	4,300.000	218,363		0
244199-10-5	Deere & Co-COMMON STOCK		07/27/2022	BLOOMBERG TRADEBOOK	600.000	187,262		0
24664T-10-3	Delek Logistics Partners-COMMON STOCK		06/29/2022	BLOOMBERG TRADEBOOK	387.000	19,222		0
25179M-10-3	DEVON ENERGY CORP-COMMON STOCK		07/26/2022	BLOOMBERG TRADEBOOK	4,000.000	225,576		0
25278X-10-9	DIAMONDBACK ENERGY INC-COMMON STOCK		07/26/2022	BLOOMBERG TRADEBOOK	1,800.000	217,379		0
26875P-10-1	EOG Resources Inc-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	2,000.000	223,062		0
26884L-10-9	EQT CORP-COMMON STOCK		07/27/2022	BLOOMBERG TRADEBOOK	6,200.000	245,161		0
29273V-10-0	ENERGY TRANSFER EQUITY L P LTD PARTNERSH		09/16/2022	BLOOMBERG TRADEBOOK	711,900.000	7,614,590		0
29336T-10-0	ENLINK MIDSTREAM LLC COMMON UNIT		11/03/2022	BLOOMBERG TRADEBOOK	523,813.000	4,989,181		0
293792-10-7	ENTERPRISE PRODS PARTNERS L P COMMON UNI		12/23/2022	BLOOMBERG TRADEBOOK	318,000.000	8,040,730		0
294600-10-1	Equitrans Midstream Corp-COMMON STOCK		09/13/2022	BLOOMBERG TRADEBOOK	25,200.000	244,732		0
302491-30-3	FMC CORP-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	1,000.000	110,510		0
35671D-85-7	FREEMPORT-MCMORAN INC-COMMON STOCK		08/09/2022	BLOOMBERG TRADEBOOK	16,000.000	469,061		0
371927-10-4	GENESIS ENERGY L P LTD PARTNERSHIP UNIT		09/15/2022	BLOOMBERG TRADEBOOK	9,604.000	115,438		0
403949-10-0	HF Sinclair Corp-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	5,000.000	215,070		0
426216-10-1	HALLIBURTON CO-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	7,200.000	207,065		0
42809H-10-7	HESS CORP-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	2,000.000	205,953		0
428103-10-5	Hess Midstream LP-COMMON STOCK		07/27/2022	BLOOMBERG TRADEBOOK	12,300.000	360,046		0
49456B-10-1	Kinder Morgan Inc/DE-KINDER MORGAN INC		09/15/2022	BLOOMBERG TRADEBOOK	38,700.000	682,140		0
55336V-10-0	MPLX LP COMMON UNIT		09/16/2022	BLOOMBERG TRADEBOOK	223,741.000	6,815,591		0
559080-10-6	MAGELLAN MIDSTREAM PARTNERS LP COMMON UN		09/15/2022	BLOOMBERG TRADEBOOK	133,700.000	6,601,953		0
565849-10-6	MARATHON OIL CORP-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	9,800.000	219,138		0
56585A-10-2	MARATHON PETROLEUM CORP-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	3,800.000	324,978		0
61945C-10-3	MOSAIC CO/THE-COMMON STOCK		07/26/2022	BLOOMBERG TRADEBOOK	4,600.000	216,210		0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
624756-10-2	MUELLER INDUSTRIES INC-COMMON STOCK		12/23/2022	BLOOMBERG TRADEBOOK	1,513.000	90,379		0
636180-10-1	National Fuel Gas Co-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	1,600.000	106,403		0
637071-10-1	National Oilwell Varco I-COMMON STOCK		08/01/2022	BLOOMBERG TRADEBOOK	6,800.000	115,801		0
651639-10-6	Newmont Corp-COMMON STOCK		09/12/2022	BLOOMBERG TRADEBOOK	10,900.000	509,196		0
670346-10-5	NUCOR CORP-COMMON STOCK		09/29/2022	BLOOMBERG TRADEBOOK	5,023.000	632,906		0
67058H-10-2	NUSTAR ENERGY LP-COMMON STOCK LTD PART		09/15/2022	BLOOMBERG TRADEBOOK	47,562.000	704,015		0
674599-10-5	Occidental Petroleum Cor-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	3,800.000	229,531		0
682680-10-3	ONEOK INC COMMON STK		12/22/2022	BLOOMBERG TRADEBOOK	10,000.000	635,128		0
684023-30-2	Oragenics Inc-COMMON STOCK		10/03/2022	IN-KIND TRANSFER	20,311.000	4,873		0
718546-10-4	PHILLIPS 66-COMMON STOCK		11/16/2022	BLOOMBERG TRADEBOOK	2,270.000	251,464		0
723787-10-7	PIONEER NATURAL RESOURCE-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	500.000	113,744		0
726503-10-5	PLAINS ALL AMERICAN PIPELINE L.P. LTD PA		11/16/2022	BLOOMBERG TRADEBOOK	574,341.000	6,376,204		0
74017N-10-5	Precigen Inc-COMMON STOCK		10/03/2022	IN-KIND TRANSFER	99,171.000	200,325		0
75513E-10-1	Raytheon Technologies Co-COMMON STOCK		09/16/2022	BLOOMBERG TRADEBOOK	3,100.000	264,247		0
759509-10-2	Reliance Steel & Aluminu-COMMON STOCK		08/08/2022	BLOOMBERG TRADEBOOK	1,000.000	181,102		0
780287-10-8	ROYAL GOLD INC-COMMON STOCK		08/04/2022	BLOOMBERG TRADEBOOK	800.000	79,177		0
858119-10-0	STEEL DYNAMICS INC-COMMON STOCK		09/29/2022	BLOOMBERG TRADEBOOK	5,437.000	396,878		0
86722A-10-3	SunCoke Energy Inc-COMMON STOCK		09/08/2022	BLOOMBERG TRADEBOOK	19,200.000	126,156		0
87612G-10-1	TARGA RES CORP COMMON STK		09/13/2022	BLOOMBERG TRADEBOOK	37,700.000	2,396,890		0
887399-10-3	TIMKENSTEEL CORP-COMMON STOCK		09/13/2022	BLOOMBERG TRADEBOOK	900.000	15,230		0
892356-10-6	TRACTOR SUPPLY CO-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	400.000	79,770		0
912909-10-8	UNITED STATES STEEL CORP-COMMON STOCK		08/11/2022	BLOOMBERG TRADEBOOK	11,700.000	298,301		0
91913Y-10-0	VALERO ENERGY CORP-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	2,000.000	212,765		0
958669-10-3	Western Midstream Partne-COMMON STOCK		11/16/2022	BLOOMBERG TRADEBOOK	216,703.000	5,626,296		0
960413-10-2	WESTLAKE CHEMICAL CORP-COMMON STOCK		09/13/2022	BLOOMBERG TRADEBOOK	1,600.000	155,893		0
962166-10-4	Weyerhaeuser Co-COMMON STOCK		07/25/2022	BLOOMBERG TRADEBOOK	3,400.000	116,034		0
969457-10-0	WILLIAMS COS INC COMMON STK		07/27/2022	BLOOMBERG TRADEBOOK	24,900.000	785,638		0
008474-10-8	Agnico Eagle Mines Ltd-COMMON STOCK		07/29/2022	BLOOMBERG TRADEBOOK	2,400.000	108,801		0
067901-10-8	Barrick Gold Corp-COMMON STOCK		08/05/2022	BLOOMBERG TRADEBOOK	12,400.000	204,360		0
136385-10-1	CANADIAN NATURAL RESOURC-COMMON STOCK		07/28/2022	BLOOMBERG TRADEBOOK	4,200.000	219,293		0
351858-10-5	Franco-Nevada Corp-COMMON STOCK		07/19/2022	BLOOMBERG TRADEBOOK	400.000	49,942		0
67077M-10-8	NUTRIEN LTD-COMMON STOCK		09/16/2022	BLOOMBERG TRADEBOOK	8,000.000	686,672		0
867224-10-7	SUNCOR ENERGY INC-COMMON STOCK		07/21/2022	BLOOMBERG TRADEBOOK	6,400.000	207,570		0
878742-20-4	TECK RESOURCES LTD-COMMON STOCK		09/16/2022	BLOOMBERG TRADEBOOK	27,100.000	855,524		0
98462Y-10-0	Yamana Gold Inc-COMMON STOCK		08/05/2022	BLOOMBERG TRADEBOOK	24,200.000	118,959		0
03485P-30-0	Anglo American PLC-ADR	C	07/22/2022	BLOOMBERG TRADEBOOK	9,200.000	149,408		0
03938L-20-3	ArcelorMittal-ADR	C	07/22/2022	BLOOMBERG TRADEBOOK	4,800.000	113,127		0
088606-10-8	BHP Billiton Ltd-ADR	C	09/14/2022	BLOOMBERG TRADEBOOK	9,000.000	473,379		0
373737-10-5	Gerdau SA-ADR	C	07/29/2022	BLOOMBERG TRADEBOOK	26,400.000	116,170		0
767204-10-0	RIO TINTO PLC-ADR	C	09/14/2022	BLOOMBERG TRADEBOOK	8,200.000	473,693		0
82575P-10-7	Sibanye Stillwater Ltd-ADR	C	06/28/2022	BLOOMBERG TRADEBOOK	5,600.000	58,673		0
833635-10-5	Sociedad Quimica y Miner-ADR	C	09/08/2022	BLOOMBERG TRADEBOOK	3,700.000	362,851		0
91912E-10-5	VALE SA-ADR	C	07/29/2022	BLOOMBERG TRADEBOOK	7,800.000	106,701		0
G16962-10-5	Bunge Ltd-COMMON STOCK	C	07/27/2022	BLOOMBERG TRADEBOOK	2,400.000	217,996		0
G9456A-10-0	Golar LNG Ltd-COMMON STOCK	C	09/15/2022	BLOOMBERG TRADEBOOK	9,500.000	257,443		0
M53213-10-0	ICL Group Ltd-COMMON STOCK	C	07/26/2022	BLOOMBERG TRADEBOOK	25,000.000	227,186		0
5019999999	Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded					76,410,508	XXX	0
50118Z-MM-5	KUDU INVESTMENT MANAGEMENT, LLC - Common		06/30/2022	DIRECT	502,983.000	6,408,000		0
704881-SS-1	Policy Services Company LLC Warrants Cla		01/31/2022	DLB ACCOUNTING ONLY	477.000	0		0
704881-TT-8	Policy Services Company LLC Warrants Cla		01/31/2022	DLB ACCOUNTING ONLY	186.000	0		0
704881-UU-3	Policy Services Company LLC Warrants Cla		01/31/2022	DLB ACCOUNTING ONLY	1,807.000	2		0
704881-WW-7	Policy Services Company LLC Warrants Cla		01/31/2022	DLB ACCOUNTING ONLY	5,355.000	5		0
5029999999	Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Other					6,408,007	XXX	0
5929999999	Subtotal - Common Stocks - Parent, Subsidiaries and Affiliates Other					0	XXX	0
5989999997	Total - Common Stocks - Part 3					82,818,515	XXX	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
5989999998. Total - Common Stocks - Part 5						6,277,759	XXX	0
5989999999. Total - Common Stocks						89,096,274	XXX	0
5999999999. Total - Preferred and Common Stocks						109,234,027	XXX	0
6009999999 - Totals						16,491,151,584	XXX	60,932,173

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
313372-JH-4	FHLMC-GNMA-FHG 24 SY		12/28/2021	DIRECT	0	0	0	0	0	0	237,909	0	237,909	0	0	0	0	0	0	11/25/2023
313372-JH-4	FHLMC-GNMA-FHG 24 SY		12/25/2022	PAYDOWN	0	0	0	170,878	0	0	(170,878)	0	(170,878)	0	0	0	0	0	490	11/25/2023
31358N-H3-9	Fannie Mae REMICS-FNR G92-29 J		03/01/2022	PAYDOWN	376	376	380	374	374	0	2	0	2	0	376	0	0	0	5	07/01/2022
31358Q-ZE-8	Fannie Mae REMICS-FNR G92-59 D		08/01/2022	PAYDOWN	188	188	201	188	188	0	0	0	0	0	188	0	0	0	2	10/01/2022
31358R-V7-2	Fannie Mae REMICS-FNR G92-66 KB		09/01/2022	PAYDOWN	4,533	4,533	4,919	4,523	4,523	0	10	0	10	0	4,533	0	0	0	101	12/01/2022
36296J-FT-7	Ginnie Mae I Pool-POOL #692378		01/19/2022	VARIOUS	25,010	23,489	23,779	23,615	23,615	0	(1)	0	(1)	0	23,614	0	1,396	1,396	147	02/01/2039
36296T-DP-5	Ginnie Mae I Pool-POOL #700410		01/19/2022	VARIOUS	29,697	28,362	29,124	28,933	28,933	0	(126)	0	(126)	0	28,807	0	890	890	180	03/01/2039
38375B-AZ-2	Government National Mort-GNR 2013-H16 FI		12/01/2022	PAYDOWN	0	0	556,386	140,766	140,766	0	(498)	0	(498)	0	0	0	0	0	34,958	07/01/2063
38375U-BQ-2	Government National Mort-GNR 2013-H24 BI		12/01/2022	PAYDOWN	0	0	834,409	330,395	330,395	0	(46,551)	0	(46,551)	0	0	0	0	0	100,393	09/01/2063
38375U-CG-3	Government National Mort-GNR 2014-H02 AI		12/01/2022	PAYDOWN	0	0	615,863	176,973	176,973	0	(3,790)	0	(3,790)	0	0	0	0	0	42,911	12/01/2063
38375U-DC-1	Government National Mort-GNR 2014-H01 AI		12/01/2022	PAYDOWN	0	0	806,445	390,928	390,928	0	(17,414)	0	(17,414)	0	0	0	0	0	55,687	01/01/2064
38375U-EF-3	Government National Mort-GNR 2014-H03 IS		12/01/2022	PAYDOWN	0	0	166,346	102,993	102,993	0	(2,927)	0	(2,927)	0	0	0	0	0	8,427	02/01/2064
38375U-MV-9	Government National Mort-GNR 2014-H16 BI		12/01/2022	PAYDOWN	0	0	797,677	378,194	378,194	0	(13,287)	0	(13,287)	0	0	0	0	0	44,667	07/01/2064
38375U-NQ-9	Government National Mort-GNR 2014-H17 DI		12/01/2022	PAYDOWN	0	0	648,316	278,975	278,975	0	(10,408)	0	(10,408)	0	0	0	0	0	35,082	08/01/2064
38375U-PT-1	Government National Mort-GNR 2014-H19 EI		12/01/2022	PAYDOWN	0	0	694,791	307,641	307,641	0	(12,510)	0	(12,510)	0	0	0	0	0	44,944	09/01/2064
38375U-RD-4	Government National Mort-GNR 2014-H23 AI		12/01/2022	PAYDOWN	0	0	797,189	381,404	381,404	0	(4,811)	0	(4,811)	0	0	0	0	0	35,047	11/01/2064
38375U-UY-4	Government National Mort-GNR 2015-H08 BI		12/01/2022	PAYDOWN	0	0	691,321	286,270	286,270	0	(6,599)	0	(6,599)	0	0	0	0	0	35,367	03/01/2065
38382A-3P-8	Government National Mort-GNR 2019-140 SE		12/20/2022	PAYDOWN	0	0	447,312	601,900	601,900	0	(48,563)	0	(48,563)	0	0	0	0	0	56,619	11/20/2049
38382C-K5-9	Government National Mort-GNR 2020-17 PS		12/20/2022	PAYDOWN	0	0	812,486	992,249	992,249	0	(89,491)	0	(89,491)	0	0	0	0	0	106,950	01/20/2050
38382C-M3-2	Government National Mort-GNR 2020-17 OS		12/20/2022	PAYDOWN	0	0	367,321	426,411	426,411	0	(39,143)	0	(39,143)	0	0	0	0	0	48,610	01/20/2050
38382C-YR-6	Government National Mort-GNR 2020-18 SIW		12/20/2022	PAYDOWN	0	0	1,598,265	2,176,140	2,176,140	0	(167,712)	0	(167,712)	0	0	0	0	0	177,911	02/20/2050
38382D-UT-4	Government National Mort-GNR 2020-31 ST		12/20/2022	PAYDOWN	0	0	550,120	702,087	702,087	0	(55,953)	0	(55,953)	0	0	0	0	0	64,902	03/20/2050
38382D-VF-3	Government National Mort-GNR 2020-31 HS		12/20/2022	PAYDOWN	0	0	411,522	572,941	572,941	0	(214,804)	0	(214,804)	0	0	0	0	0	62,053	05/20/2046
38382F-BU-#	Government National Mort-GNR 2020-77 SU		12/28/2021	DIRECT	0	0	0	0	0	0	285,430	0	285,430	0	0	0	0	0	0	09/20/2047
38382F-BU-7	Government National Mort-GNR 2020-77 SU		12/20/2022	PAYDOWN	0	0	488,359	0	0	0	(91,648)	0	(91,648)	0	0	0	0	0	56,405	09/20/2047
38382F-BW-#	Government National Mort-GNR 2020-77 SQ		12/28/2021	DIRECT	0	0	0	0	0	0	(1,467,722)	0	(1,467,722)	0	0	0	0	0	0	08/20/2049
38382F-BW-3	Government National Mort-GNR 2020-77 SQ		12/20/2022	PAYDOWN	0	0	586,021	0	0	0	292,487	0	292,487	0	0	0	0	0	81,114	08/20/2049
38382F-NZ-3	Government National Mort-GNR 2020-62 JS		12/20/2022	PAYDOWN	0	0	570,036	557,714	557,714	0	(48,679)	0	(48,679)	0	0	0	0	0	51,218	05/20/2050
38382G-BE-1	Government National Mort-GNR 2020-86 US		12/20/2022	PAYDOWN	0	0	901,226	1,439,502	1,439,502	0	(125,776)	0	(125,776)	0	0	0	0	0	130,486	01/20/2050
38382G-BH-4	Government National Mort-GNR 2020-86 KS		12/20/2022	PAYDOWN	0	0	553,878	538,925	538,925	0	(46,736)	0	(46,736)	0	0	0	0	0	49,779	06/20/2050
38382G-CT-7	Government National Mort-GNR 2020-86 SK		12/20/2022	PAYDOWN	0	0	844,328	866,443	866,443	0	(67,150)	0	(67,150)	0	0	0	0	0	82,033	06/20/2050
38382H-YB-0	Government National Mort-GNR 2020-116 EI		12/01/2022	PAYDOWN	0	0	398,417	367,334	367,334	0	(21,578)	0	(21,578)	0	0	0	0	0	34,198	08/01/2050
38382K-WY-1	Government National Mort-GNR 2020-146 LI		12/01/2022	PAYDOWN	0	0	697,305	630,782	630,782	0	(35,262)	0	(35,262)	0	0	0	0	0	66,086	10/01/2050
38382L-JB-8	Government National Mort-GNR 2020-176 SO		12/20/2022	PAYDOWN	0	0	373,515	337,542	337,542	0	(17,749)	0	(17,749)	0	0	0	0	0	26,322	11/20/2050
38382L-R7-8	Government National Mort-GNR 2020-185 YI		12/01/2022	PAYDOWN	0	0	566,160	531,019	531,019	0	(30,281)	0	(30,281)	0	0	0	0	0	51,025	12/01/2050
38382M-CJ-6	Government National Mort-GNR 2020-189 SN		12/20/2022	PAYDOWN	0	0	246,306	223,465	223,465	0	(19,873)	0	(19,873)	0	0	0	0	0	24,227	12/20/2050
38382M-E8-8	Government National Mort-GNR 2021-9 DI		12/01/2022	PAYDOWN	0	0	489,105	447,792	447,792	0	(26,800)	0	(26,800)	0	0	0	0	0	46,420	01/01/2051
38382M-Z6-9	Government National Mort-GNR 2021-15 SQ		12/20/2022	PAYDOWN	0	0	290,408	270,690	270,690	0	(24,370)	0	(24,370)	0	0	0	0	0	28,278	10/20/2050
0109999999 Subtotal - Bonds - U.S. Governments						59,804	56,948	18,030,114	14,515,108	0	(2,113,252)	0	(2,113,252)	0	57,518	0	2,286	2,286	1,683,044	XXX
74815H-CJ-9	Province of Quebec Canad-UNSECURED	A	05/11/2022	TORONTO DOMINION SEC		11,488,400	10,000,000	12,432,600	10,704,508	0	(51,123)	0	(51,123)	0	10,653,385	0	835,015	835,015	589,679	07/22/2026
0309999999 Subtotal - Bonds - All Other Governments						11,488,400	10,000,000	12,432,600	10,704,508	0	(51,123)	0	(51,123)	0	10,653,385	0	835,015	835,015	589,679	XXX
20772G-AZ-8	State of Connecticut-GENERAL OBLIGATION		03/17/2022	SOUTHWEST SEC.		1,385,452	1,215,000	1,459,276	1,347,844	0	(3,223)	0	(3,223)	0	1,344,621	0	40,831	40,831	20,909	12/01/2029
20772J-AC-6	State of Connecticut-GENERAL OBLIGATION		03/10/2022	MARKETAXESS FINANCIA		6,860,125	6,250,000	7,228,060	6,749,707	0	(9,479)	0	(9,479)	0	6,740,227	0	119,898	119,898	144,040	10/01/2030
544646-XT-4	Los Angeles Unified Scho-GENERAL OBLIGAT		01/19/2022	WELLS FARGO		4,985,500	5,000,000	2,805,300	4,217,430	0	10,428	0	10,428	0	4,227,858	0	757,642	757,642	7,700	09/15/2025
546415-E7-1	State of Louisiana-GENERAL OBLIGATION UN		08/01/2022	CALL 100		12,915,000	12,915,000	12,411,315	12,635,306	0	279,694	0	279,694	0	12,915,000	0	0	0	516,600	08/01/2029
546415-E8-9	State of Louisiana-GENERAL OBLIGATION UN		08/01/2022	CALL 100		16,160,000	16,160,000	15,775,003	15,932,298	0	227,702	0	227,702	0	16,160,000	0	0	0	646,400	08/01/2030
57582P-JD-0	Commonwealth of Massachu-GENERAL OBLIGAT		01/19/2022	MARKETAXESS FINANCIA		27,991,690	23,000,000	25,090,920	24,227,568	0	(7,774)	0	(7,774)	0	24,219,794	0	3,771,896	3,771,896	677,989	01/01/2030
57582P-UT-5	Commonwealth of Massachu-GENERAL OBLIGAT		03/17/2022	GOLDMAN		19,887,725	17,875,000	19,630,949	18,798,154	0	(24,176)	0	(24,176)	0	18,773,978	0	1,113,747	1,113,747	341,313	05/01/2029
57582P-VH-9	Commonwealth of Massachu-GENERAL OBLIGAT		03/21/2022	GOLDMAN		2,114,742	1,935,000	2,152,997	2,063,977	0	(2,600)	0	(2,600)	0	2,061,377	0	53,365	53,365	56,115	08/01/2031

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
604129-6U-5	State of Minnesota-GENERAL OBLIGATION UN		.08/01/2022	CALL 100		265,000	265,000	225,539	259,139	0	5,861	0	5,861	0	265,000	0	0	0	7,950	.08/01/2032
604129-7N-0	State of Minnesota-GENERAL OBLIGATION UN		.09/12/2022	CALL 100		5,630,000	5,630,000	4,791,637	5,060,816	0	30,263	0	30,263	0	5,091,079	0	538,921	538,921	188,136	.08/01/2032
605580-50-8	State of Mississippi-GENERAL OBLIGATION		.10/01/2022	CALL 100		1,448,000	1,448,000	1,612,087	1,542,687	0	(7,692)	0	(7,692)	0	1,534,995	0	(86,995)	(86,995)	80,205	.10/01/2029
605580-6K-0	State of Mississippi-GENERAL OBLIGATION		.11/01/2022	MATURITY		1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0	1,000,000	0	0	0	41,310	.11/01/2022
605580-6T-1	State of Mississippi-GENERAL OBLIGATION		.10/01/2022	MATURITY		2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	2,000,000	0	0	0	67,860	.10/01/2022
68583R-BR-2	Oregon Community College-GENERAL OBLIGAT		.06/30/2022	SINKING PAYMENT		2,359,339	2,359,339	2,829,838	2,434,547	0	(75,208)	0	(75,208)	0	2,359,339	0	0	0	64,174	.06/30/2023
686053-GG-8	Oregon School Boards Ass-GENERAL OBLIGAT		.06/30/2022	VARIOUS		10,638,324	10,316,486	11,414,573	10,912,038	0	(91,428)	0	(91,428)	0	10,820,611	0	(182,287)	(182,287)	138,998	.06/30/2028
68607L-XQ-5	State of Oregon-GENERAL OBLIGATION UNLTD		.03/07/2022	WELLS FARGO		58,831,901	52,355,000	62,000,381	56,492,729	0	(121,747)	0	(121,747)	0	56,370,982	0	2,460,919	2,460,919	800,459	.06/01/2027
70914P-ME-9	PENNSYLVANIA ST-BUILD AMERICA GEN OBLIG		.02/15/2022	CALL 100		800,000	800,000	839,656	815,380	0	(385)	0	(385)	0	814,995	0	(14,995)	(14,995)	18,600	.02/15/2026
882722-4A-6	State of Texas-GENERAL OBLIGATION UNLTD		.08/01/2022	CALL 100		770,000	770,000	650,134	712,804	0	5,347	0	5,347	0	718,150	0	51,850	51,850	23,100	.08/01/2027
882722-4B-4	State of Texas-GENERAL OBLIGATION UNLTD		.08/01/2022	CALL 100		1,855,000	1,855,000	1,555,009	1,697,122	0	12,188	0	12,188	0	1,709,310	0	145,690	145,690	57,969	.08/01/2028
882722-4C-2	State of Texas-GENERAL OBLIGATION UNLTD		.08/01/2022	CALL 100		1,735,000	1,735,000	1,445,029	1,569,855	0	10,762	0	10,762	0	1,580,617	0	154,383	154,383	56,388	.08/01/2029
93974C-4A-5	State of Washington-GENERAL OBLIGATION U		.07/01/2022	CALL 100		2,380,000	2,380,000	1,982,968	2,173,088	0	13,853	0	13,853	0	2,186,941	0	193,059	193,059	71,400	.07/01/2028
93974C-L7-3	State of Washington-GENERAL OBLIGATION U		.07/01/2022	CALL 100		6,500,000	6,500,000	6,305,000	6,399,533	0	6,786	0	6,786	0	6,406,319	0	93,681	93,681	260,000	.07/01/2028
0509999999 Subtotal - Bonds - U.S. States, Territories and Possessions						188,512,798	173,763,825	185,205,671	179,042,022	0	259,172	0	259,172	0	179,301,193	0	9,211,605	9,211,605	4,287,615	XXX
057507-HU-2	Bakersfield City School -GENERAL OBLIGAT		.05/01/2022	CALL 100		255,000	255,000	255,000	255,000	0	0	0	0	0	255,000	0	0	0	5,587	.05/01/2026
084154-TX-1	Berkeley Unified School -GENERAL OBLIGAT		.08/01/2022	MATURITY		515,000	515,000	523,698	515,595	0	(595)	0	(595)	0	515,000	0	0	0	26,780	.08/01/2022
134141-ZE-3	Campbell Union School Di-GENERAL OBLIGAT		.08/01/2022	CALL 100		530,000	530,000	530,000	530,000	0	0	0	0	0	530,000	0	0	0	28,652	.08/01/2027
214489-BE-5	Cook County School Distr-GENERAL OBLIGAT		.01/18/2022	CALL 100		205,000	205,000	205,000	205,000	0	0	0	0	0	205,000	0	0	0	6,160	.01/15/2023
442331-QM-9	HOUSTON TX-GENERAL OBLIGATION LTD		.03/01/2022	CALL 100		975,000	975,000	1,210,940	1,137,106	0	(2,065)	0	(2,065)	0	1,135,040	0	(160,040)	(160,040)	30,664	.03/01/2032
528828-4E-3	Lewisville Independent S-GENERAL OBLIGAT		.08/15/2022	CALL 100		7,000,000	7,000,000	7,117,250	7,009,815	0	(9,815)	0	(9,815)	0	7,000,000	0	0	0	297,500	.08/15/2030
544646-XY-3	LOS ANGELES CA UNIF SCH-BUILD AMERICA GE		.01/19/2022	RAYMOND JAMES		1,183,760	1,000,000	1,086,000	1,048,947	0	(335)	0	(335)	0	1,048,612	0	135,148	135,148	31,972	.07/01/2029
56781R-DP-9	Marin Community College -GENERAL OBLIGAT		.08/01/2022	CALL 100		6,945,000	6,945,000	5,405,710	6,016,662	0	928,338	0	928,338	0	6,945,000	0	0	0	208,350	.08/01/2030
592112-DR-4	MET GOVT NASHVILLE & DAVIDSON GEN OBLIG		.03/17/2022	WELLS FARGO		6,778,958	5,675,000	6,897,517	6,510,832	0	(11,856)	0	(11,856)	0	6,498,776	0	280,182	280,182	233,900	.07/01/2034
602245-UM-2	County of Milwaukee WI-GENERAL OBLIGATIO		.12/01/2022	SINKING PAYMENT		186,668	186,668	258,731	222,998	0	(36,330)	0	(36,330)	0	186,668	0	0	0	12,768	.12/01/2028
718814-ZZ-2	PHOENIX AZ-BUILD AMERICA GENERAL OBLIGAT		.07/01/2022	CALL 100		1,150,000	1,150,000	1,365,303	1,305,716	0	(4,896)	0	(4,896)	0	1,300,821	0	(150,821)	(150,821)	60,594	.07/01/2034
801495-C9-1	Santa Clara Unified Scho-GENERAL OBLIGAT		.07/01/2022	MATURITY		2,850,000	2,850,000	2,850,000	2,850,000	0	0	0	0	0	2,850,000	0	0	0	131,100	.07/01/2022
0709999999 Subtotal - Bonds - U.S. Political Subdivisions of States, Territories and Possessions						28,574,386	27,286,668	27,705,149	27,607,471	0	862,446	0	862,446	0	28,469,917	0	104,469	104,469	1,074,045	XXX
041083-VB-9	Arkansas Development Fin-REVENUE BONDS		.12/01/2022	CALL 100		327,849	327,849	327,849	327,849	0	0	0	0	0	327,849	0	0	0	4,628	.07/01/2043
071239-CV-7	Consolidated Government -REVENUE BONDS		.01/15/2022	MATURITY		1,565,000	1,565,000	1,565,000	1,565,000	0	0	0	0	0	1,565,000	0	0	0	25,752	.01/15/2022
071239-CW-5	Consolidated Government -REVENUE BONDS		.01/15/2022	CALL 100		2,640,000	2,640,000	2,640,000	2,640,000	0	0	0	0	0	2,640,000	0	0	0	46,081	.01/15/2023
071239-CX-3	Consolidated Government -REVENUE BONDS		.01/15/2022	CALL 100		1,300,000	1,300,000	1,300,000	1,300,000	0	0	0	0	0	1,300,000	0	0	0	23,992	.01/15/2024
071239-CY-1	Consolidated Government -REVENUE BONDS		.01/15/2022	CALL 100		2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	2,000,000	0	0	0	39,410	.01/15/2025
071239-DA-2	Consolidated Government -REVENUE BONDS		.01/15/2022	CALL 100		1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0	1,000,000	0	0	0	20,955	.01/15/2026
130795-Z6-7	California Statewide Com-REVENUE BONDS		.05/15/2022	CALL 100		280,000	280,000	387,450	369,611	0	(1,114)	0	(1,114)	0	368,497	0	(88,497)	(88,497)	10,570	.05/15/2040
167725-AC-4	Chicago Transit Authorit-REVENUE BONDS		.01/19/2022	JP MORGAN SECURITIES		5,397,141	3,915,000	4,492,422	4,353,860	0	(838)	0	(838)	0	4,353,022	0	1,044,119	1,044,119	37,513	.12/01/2040
196479-F9-5	Colorado Housing and Fin-REVENUE BONDS		.12/01/2022	CALL 100		1,812,620	1,812,620	1,866,599	1,846,975	0	(1,991)	0	(1,991)	0	1,844,984	0	(32,364)	(32,364)	28,029	.11/01/2048
196479-V4-8	Colorado Housing and Fin-REVENUE BONDS		.10/01/2022	CALL 100		2,908,508	2,908,508	2,993,872	2,967,552	0	(2,829)	0	(2,829)	0	2,964,724	0	(56,216)	(56,216)	52,299	.11/01/2048
196479-XM-6	Colorado Housing and Fin-REVENUE BONDS		.03/01/2022	CALL 100		135,000	135,000	135,000	134,999	0	0	0	0	0	134,999	0	1	1	1,256	.11/01/2027
196480-EX-1	Colorado Housing and Fin-REVENUE BONDS		.10/03/2022	CALL 100		1,370,250	1,370,250	1,370,250	1,370,250	0	0	0	0	0	1,370,250	0	0	0	13,411	.01/01/2050
20281P-B0-4	Commonwealth Financing A-REVENUE BONDS		.06/01/2022	CALL 100		525,000	525,000	611,977	563,565	0	(2,647)	0	(2,647)	0	560,917	0	(35,917)	(35,917)	15,068	.06/01/2027
20775C-YF-5	Connecticut Housing Fina-REVENUE BONDS		.11/17/2022	CALL 100		220,000	220,000	220,000	220,000	0	0	0	0	0	220,000	0	0	0	4,566	.05/15/2035
231266-FD-4	CURATORS OF THE UNIV OF -REVENUE BONDS		.11/01/2022	CALL 100		610,000	610,000	791,878	750,993	0	(4,520)	0	(4,520)	0	746,474	0	(136,474)	(136,474)	36,356	.11/01/2039
25477P-NF-8	District of Columbia Hou-REVENUE BONDS		.09/01/2022	CALL 100		122,379	122,379	122,379	122,379	0	0	0	0	0	122,379	0	0	0	1,930	.06/15/2045
29270C-YQ-2	Energy Northwest-REVENUE BONDS		.07/01/2022	MATURITY		2,500,000	2,500,000	2,500,000	2,500,000	0	0	0	0	0	2,500,000	0	0	0	73,825	.07/01/2022
296122-UT-9	Escambia County Housing -REVENUE BONDS		.09/01/2022	CALL 100		697,703	697,703	697,703	697,703	0	0	0	0	0	697,703	0	0	0	7,633	.11/01/2038
312909-3W-2	Freddie Mac REMICS-FHR 1250 J		.05/01/2022	VARIOUS		179	179	184	178	0	1	0	1	0	179	0	0	0	3	.05/01/2022
312915-QG-9	Freddie Mac REMICS-FHR 1491 I		.12/01/2022	PAYDOWN		7,013	7,013	7,436	7,019	0	(6)	0	(6)	0	7,013	0	0	0	263	.04/01/2023
312931-A6-5	Freddie Mac Gold Pool-FG A84529		.12/01/2022	PAYDOWN		4,939	4,939	5,005	4,969	0	(30)	0	(30)	0	4,939	0	0	0	83	.02/01/2039

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
313398-P7-8	Freddie Mac REMICS-FHR 2334 TD		12/01/2022	PAYDOWN		9,207	9,207	9,632	9,298	0	(92)	0	(92)	0	9,207	0	0	0	342	07/01/2031
313399-B9-7	Freddie Mac REMICS-FHR 2344 SN		12/15/2022	PAYDOWN		0	0	93,018	93,018	0	(93,018)	0	(93,018)	0	0	0	0	0	64	08/15/2031
31339D-2V-9	Freddie Mac REMICS-FHR 2418 MB		02/01/2022	VARIOUS		268	268	285	268	0	0	0	0	0	268	0	0	0	2	02/01/2022
31339D-Q2-4	Freddie Mac REMICS-FHR 2416 PG		02/01/2022	VARIOUS		2,838	2,838	3,045	2,834	0	4	0	4	0	2,838	0	0	0	17	02/01/2022
31339G-HQ-7	Freddie Mac REMICS-FHR 2367 SA		12/15/2022	PAYDOWN		0	0	184,763	0	0	0	0	0	0	0	0	0	0	325	06/15/2031
3133JL-UE-7	Freddie Mac Pool-FREDDIE MAC POOL-FR QJ7		12/01/2022	PAYDOWN		800,640	800,640	806,895	806,479	0	(5,839)	0	(5,839)	0	800,640	0	0	0	8,661	03/01/2051
3133N3-U9-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		12/01/2022	PAYDOWN		1,215,381	1,215,381	1,235,619	1,230,006	0	(14,626)	0	(14,626)	0	1,215,381	0	0	0	10,236	11/01/2049
3133N3-V6-6	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		12/01/2022	PAYDOWN		1,196,701	1,196,701	1,214,091	1,209,398	0	(12,697)	0	(12,697)	0	1,196,701	0	0	0	16,787	09/01/2049
3133N3-X2-5	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		03/01/2022	VARIOUS		102,421,476	108,872,703	108,649,337	108,653,560	0	3,915	0	3,915	0	108,657,475	0	(6,235,999)	(6,235,999)	538,137	05/01/2051
3133N3-X3-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		12/01/2022	PAYDOWN		3,151,033	3,151,033	3,226,855	3,222,183	0	(71,150)	0	(71,150)	0	3,151,033	0	0	0	28,415	05/01/2051
3133N3-XX-7	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		03/01/2022	VARIOUS		91,921,644	97,681,876	96,929,479	96,962,785	0	16,023	0	16,023	0	96,978,807	0	(5,057,163)	(5,057,163)	482,871	04/01/2051
3133T3-BU-1	Freddie Mac REMICS-FHR 1644 K		12/01/2022	PAYDOWN		5,530	5,530	6,047	5,559	0	(29)	0	(29)	0	5,530	0	0	0	186	12/01/2023
3133TB-4G-2	Freddie Mac REMICS-FHR 1991 PG		12/01/2022	PAYDOWN		12,626	12,626	13,092	12,688	0	(62)	0	(62)	0	12,626	0	0	0	393	09/01/2027
3133TC-HE-1	Freddie Mac REMICS-FHR 2018 PG		12/01/2022	PAYDOWN		6,872	6,872	7,251	6,965	0	(93)	0	(93)	0	6,872	0	0	0	194	01/01/2028
3133TD-3A-2	Freddie Mac REMICS-FHR 2037 HB		12/01/2022	PAYDOWN		12,153	12,153	13,291	12,476	0	(324)	0	(324)	0	12,153	0	0	0	593	03/01/2028
3133TH-S8-1	Freddie Mac REMICS-FHR 2118 PE		12/01/2022	PAYDOWN		27,167	27,167	28,523	27,569	0	(402)	0	(402)	0	27,167	0	0	0	944	01/01/2029
3133TK-EB-2	Freddie Mac REMICS-FHR 2145 S		12/15/2022	PAYDOWN		0	0	331,017	331,017	0	(331,017)	0	(331,017)	0	0	0	0	0	733	04/15/2029
3133TR-YA-7	Freddie Mac REMICS-FHR 2292 SI		12/15/2022	PAYDOWN		0	0	145,893	0	0	0	0	0	0	0	0	0	0	127	11/15/2030
3133TS-F2-4	Freddie Mac REMICS-FHR 2303 OK		12/01/2022	PAYDOWN		14,490	14,490	14,964	14,657	0	(167)	0	(167)	0	14,490	0	0	0	328	04/01/2031
3133TU-HJ-0	Freddie Mac REMICS-FHR 2322 SC		12/15/2022	PAYDOWN		0	0	80,884	80,884	0	(80,884)	0	(80,884)	0	0	0	0	0	447	05/15/2031
3133TU-S7-4	Freddie Mac REMICS-FHR 2357 QH		12/01/2022	PAYDOWN		9,158	9,158	9,604	9,345	0	(187)	0	(187)	0	9,158	0	0	0	373	09/01/2031
31358N-M5-8	Fannie Mae REMICS-FNR 1992-119 Z		07/01/2022	VARIOUS		2,233	2,233	2,252	(11)	0	(11)	0	(11)	0	2,233	0	0	0	49	07/01/2022
31358P-EE-3	Fannie Mae REMICS-FNR 1992-117 M		07/01/2022	VARIOUS		2,914	2,914	3,127	2,848	0	65	0	65	0	2,914	0	0	0	56	07/01/2022
31359D-H5-5	Fannie Mae REMICS-FNR 1993-155 PJ		12/01/2022	PAYDOWN		27,392	27,392	30,325	27,485	0	(94)	0	(94)	0	27,392	0	0	0	938	09/01/2023
31359H-NW-0	Fannie Mae REMICS-FNR 1994-63 PK		12/01/2022	PAYDOWN		6,715	6,715	7,420	(38)	0	(38)	0	(38)	0	6,715	0	0	0	231	04/01/2024
31359H-OP-2	Fannie Mae REMICS-FNR 1994-76 KA		12/01/2022	PAYDOWN		1,459	1,459	1,471	1,414	0	45	0	45	0	1,459	0	0	0	47	04/01/2024
31359L-ZF-5	Fannie Mae REMICS-FNR 1995-19 ED		01/01/2022	MATURITY		50	50	54	50	0	0	0	0	0	50	0	0	0	0	01/01/2022
31359N-2W-0	Fannie Mae REMICS-FNR 1997-19 PG		12/01/2022	PAYDOWN		12,346	12,346	13,303	12,419	0	(73)	0	(73)	0	12,346	0	0	0	465	04/01/2027
31359V-GF-4	Fannie Mae REMICS-FNR 1999-1 PJ		12/01/2022	PAYDOWN		38,274	38,274	40,704	38,958	0	(683)	0	(683)	0	38,274	0	0	0	1,151	02/01/2029
3136AC-FK-2	Fannie Mae REMICS-FNR 2013-4 GI		12/01/2022	PAYDOWN		0	0	180,555	44,980	0	(5,004)	0	(5,004)	0	0	0	0	0	7,430	02/01/2043
31371K-LU-3	Fannie Mae Pool-POOL #254239		12/01/2022	PAYDOWN		648	648	750	(58)	0	(58)	0	(58)	0	648	0	0	0	22	03/01/2032
3137A9-6Y-7	Freddie Mac REMICS-FHR 3850 LS		10/01/2022	PAYDOWN		0	0	341,162	19,393	0	(1,497)	0	(1,497)	0	0	0	0	0	5,050	05/01/2039
3137AC-TN-9	Freddie Mac REMICS-FHR 3897 LI		11/01/2022	PAYDOWN		0	0	353,953	70,589	0	(5,755)	0	(5,755)	0	0	0	0	0	7,954	01/01/2037
3137FA-NH-7	Freddie Mac REMICS-FHR 4709 WI		11/01/2022	PAYDOWN		0	0	199,840	160,798	0	(14,756)	0	(14,756)	0	0	0	0	0	24,375	10/01/2038
3137FIW-WC-0	Freddie Mac REMICS-FHR 5020 AI		12/01/2022	PAYDOWN		0	0	168,352	148,468	0	(5,486)	0	(5,486)	0	0	0	0	0	17,920	09/01/2050
31388T-QZ-9	Fannie Mae Pool-POOL #614372		12/01/2022	PAYDOWN		1,595	1,595	1,825	1,729	0	(134)	0	(134)	0	1,595	0	0	0	61	01/01/2032
313921-JK-5	Fannie Mae REMICS-FNR 2001-57 PD		12/01/2022	PAYDOWN		12,355	12,355	13,028	(268)	0	(268)	0	(268)	0	12,355	0	0	0	483	10/01/2031
31392B-SC-1	Fannie Mae REMICS-FNR 2002-6 L		12/01/2022	PAYDOWN		6,895	6,895	7,170	6,996	0	(101)	0	(101)	0	6,895	0	0	0	223	02/01/2032
31392C-EM-2	Fannie Mae REMIC Trust 2-FNW 2002-W2 AF5		12/01/2022	PAYDOWN		24,316	24,316	23,352	23,314	0	1,002	0	1,002	0	24,316	0	0	0	918	06/01/2032
31392E-PC-8	Fannie Mae REMICS-FNR 2002-58 PG		12/01/2022	PAYDOWN		47,736	47,736	50,312	(1,005)	0	(1,005)	0	(1,005)	0	47,736	0	0	0	1,569	09/01/2032
31392H-FC-2	Fannie Mae REMICS-FNR 2002-97 SR		12/25/2022	PAYDOWN		0	0	250,630	0	0	0	0	0	0	0	0	0	0	888	01/25/2033
31392K-SC-6	Freddie Mac REMICS-FHR 2455 GK		12/01/2022	PAYDOWN		46,543	46,543	49,495	47,780	0	(1,237)	0	(1,237)	0	46,543	0	0	0	1,619	05/01/2032
31392K-LR-5	Freddie Mac REMICS-FHR 2450 PH		05/01/2022	VARIOUS		26,823	26,823	28,626	26,795	0	28	0	28	0	26,823	0	0	0	320	05/01/2022
31392M-SR-9	Freddie Mac REMICS-FHR 2448 TX		12/01/2022	PAYDOWN		69,995	69,995	73,524	71,339	0	(1,344)	0	(1,344)	0	69,995	0	0	0	1,806	05/01/2032
31393Y-ED-3	Fannie Mae REMICS-FNR 2004-28 SB		12/25/2022	PAYDOWN		0	0	64,721	12,795	0	(1,713)	0	(1,713)	0	0	0	0	0	3,689	05/25/2034
31394D-JJ-5	Fannie Mae REMIC Trust 2-FNW 2005-W2 A6		12/25/2022	PAYDOWN		0	0	101,103	0	0	0	0	0	0	0	0	0	0	8,901	05/25/2035
31396W-BR-6	Fannie Mae REMICS-FNR 2007-56 SN		12/25/2022	PAYDOWN		0	0	141,372	0	0	0	0	0	0	0	0	0	0	1,460	06/25/2037
31397W-F3-4	Freddie Mac REMICS-FHR 3457 ES		12/15/2022	PAYDOWN		0	0	63,748	0	0	0	0	0	0	0	0	0	0	180	06/15/2038
31398M-EL-6	Fannie Mae REMICS-FNR 2010-14 SJ		12/25/2022	PAYDOWN		0	0	464,716	16,177	0	(3,516)	0	(3,516)	0	0	0	0	0	6,920	03/25/2040

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
3140HN-LY-6	Fannie Mae Pool-POOL #BK8442		12/01/2022	PAYDOWN		2,557,703	2,557,703	2,564,097	2,563,441	0	(5,738)	0	(5,738)	0	2,557,703	0	0	0	22,848	01/01/2051
3140JS-EP-0	Fannie Mae Pool-POOL #BN9141		12/01/2022	PAYDOWN		2,426,875	2,426,875	2,418,533	2,418,872	0	8,003	0	8,003	0	2,426,875	0	0	0	24,692	04/01/2051
3140JX-EE-4	Fannie Mae Pool-POOL #B02832		12/01/2022	PAYDOWN		27,449	27,449	28,032	27,924	0	(475)	0	(475)	0	27,449	0	0	0	429	09/01/2049
3140KO-EL-8	Fannie Mae Pool-POOL #B04638		12/01/2022	PAYDOWN		603,899	603,899	604,937	604,413	0	(514)	0	(514)	0	603,899	0	0	0	4,047	11/01/2049
3140K2-LK-8	Fannie Mae Pool-POOL #B06629		12/01/2022	PAYDOWN		2,877,898	2,877,898	2,891,838	2,890,741	0	(12,843)	0	(12,843)	0	2,877,898	0	0	0	31,901	04/01/2051
3140K2-PV-0	Fannie Mae Pool-POOL #B06735		12/01/2022	PAYDOWN		2,777,291	2,777,291	2,783,583	2,782,966	0	(5,675)	0	(5,675)	0	2,777,291	0	0	0	29,483	05/01/2051
3140OB-N5-3	Fannie Mae Pool-POOL #CA4011		12/01/2022	PAYDOWN		596,766	596,766	606,175	603,206	0	(6,440)	0	(6,440)	0	596,766	0	0	0	6,500	08/01/2049
3140OC-DT-0	Fannie Mae Pool-POOL #CA4613		12/01/2022	PAYDOWN		1,020,602	1,020,602	1,036,762	1,031,303	0	(10,701)	0	(10,701)	0	1,020,602	0	0	0	10,620	11/01/2049
3140OC-PN-0	Fannie Mae Pool-POOL #CA4928		12/01/2022	PAYDOWN		802,696	802,696	820,255	816,421	0	(13,726)	0	(13,726)	0	802,696	0	0	0	9,771	01/01/2050
3140QH-NJ-0	Fannie Mae Pool-POOL #CA9392		12/01/2022	PAYDOWN		3,811,227	3,811,227	3,848,148	3,845,009	0	(33,782)	0	(33,782)	0	3,811,227	0	0	0	38,637	03/01/2051
31416K-WP-9	Fannie Mae Pool-POOL #AA2453		12/01/2022	PAYDOWN		1,217	1,217	1,233	1,230	0	(13)	0	(13)	0	1,217	0	0	0	35	02/01/2039
31418D-JM-3	Fannie Mae Pool-POOL #MA3876		12/01/2022	PAYDOWN		607,258	607,258	608,776	608,129	0	(871)	0	(871)	0	607,258	0	0	0	6,209	12/01/2049
31418D-YR-7	Fannie Mae Pool-POOL #MA4319		03/01/2022	VARIOUS		94,286,298	100,266,886	99,892,493	99,907,687	0	6,932	0	6,932	0	99,914,619	0	(5,628,321)	(5,628,321)	497,953	04/01/2051
31418D-YS-5	Fannie Mae Pool-POOL #MA4320		12/01/2022	PAYDOWN		1,820,252	1,820,252	1,855,519	1,852,806	0	(32,554)	0	(32,554)	0	1,820,252	0	0	0	17,835	04/01/2051
34074M-KA-8	Florida Housing Finance -REVENUE BONDS		07/01/2022	CALL 100		670,000	670,000	670,000	670,000	0	0	0	0	0	670,000	0	0	0	25,612	07/01/2027
34074M-LW-9	Florida Housing Finance -REVENUE BONDS		07/01/2022	CALL 100		145,000	145,000	145,000	145,000	0	0	0	0	0	145,000	0	0	0	3,294	07/01/2030
34074M-ND-9	Florida Housing Finance -REVENUE BONDS		10/01/2022	CALL 100		969,614	969,614	969,614	969,614	0	0	0	0	0	969,614	0	0	0	14,249	07/01/2037
34074M-PF-2	Florida Housing Finance -REVENUE BONDS		09/01/2022	CALL 100		473,049	473,049	473,049	473,069	0	(1)	0	(1)	0	473,068	0	(19)	(19)	4,612	01/01/2043
41980U-AB-7	State of Hawaii Departme-REVENUE BONDS		07/01/2022	CALL 100		418,503	418,503	418,483	418,503	0	0	0	0	0	418,503	0	0	0	10,203	01/01/2031
442435-SB-5	HOUSTON TX UTILITY SYS R-REVENUE BONDS		03/10/2022	WELLS FARGO		15,624,750	15,000,000	15,000,000	15,000,000	0	0	0	0	0	15,000,000	0	624,750	624,750	189,805	05/15/2028
443730-FT-8	Hudson County Improvemen-REVENUE BONDS		02/01/2022	CALL 100		155,000	155,000	162,626	156,621	0	(51)	0	(51)	0	156,570	0	(1,570)	(1,570)	5,146	02/01/2024
45129W-KA-7	Idaho Housing & Finance -REVENUE BONDS		07/15/2022	MATURITY		2,545,000	2,545,000	2,545,000	2,545,000	0	0	0	0	0	2,545,000	0	0	0	141,986	07/15/2022
45201L-VE-2	Illinois Housing Develop-REVENUE BONDS		07/01/2022	VARIOUS		525,000	525,000	525,000	525,000	0	0	0	0	0	525,000	0	0	0	12,706	07/01/2022
45201L-VP-7	Illinois Housing Develop-REVENUE BONDS		06/01/2022	CALL 100		545,000	545,000	545,000	545,000	0	0	0	0	0	545,000	0	0	0	20,570	07/01/2027
45201Y-E8-6	Illinois Housing Develop-REVENUE BONDS		02/01/2022	CALL 100		725,000	725,000	725,000	725,000	0	0	0	0	0	725,000	0	0	0	13,884	02/01/2026
45201Y-E9-4	Illinois Housing Develop-REVENUE BONDS		02/01/2022	CALL 100		500,000	500,000	500,000	500,000	0	0	0	0	0	500,000	0	0	0	9,700	08/01/2026
45201Y-X6-9	Illinois Housing Develop-REVENUE BONDS		10/01/2022	CALL 100		1,075,000	1,075,000	1,075,000	1,075,004	0	13	0	13	0	1,075,017	0	(17)	(17)	23,941	10/01/2038
45201Y-L6-0	ILLINOIS ST HSG DEV AUTH REV PROG SER B		09/01/2022	CALL 100		138,315	138,315	134,026	134,713	0	33	0	33	0	134,745	0	3,570	3,570	1,335	06/01/2043
45203L-CT-8	Illinois Housing Develop-REVENUE BONDS		09/27/2022	CALL 100		112,671	112,671	112,671	112,568	0	2	0	2	0	112,570	0	101	101	1,922	09/01/2034
454624-U5-4	Indiana Bond Bank-REVENUE BONDS		07/15/2022	CALL 100		3,180,000	3,180,000	3,251,455	3,194,717	0	(2,150)	0	(2,150)	0	3,192,567	0	(12,567)	(12,567)	97,925	01/15/2024
47770V-AY-6	JobsOhio Beverage System-REVENUE BONDS		02/28/2022	WELLS FARGO		6,407,940	6,000,000	6,000,000	6,000,000	0	0	0	0	0	6,000,000	0	407,940	407,940	160,064	01/01/2029
49130T-UP-9	Kentucky Housing Corp-REVENUE BONDS		10/01/2022	CALL 100		200,000	200,000	200,000	200,007	0	(7)	0	(7)	0	200,000	0	0	0	8,755	07/01/2031
49130T-UQ-7	Kentucky Housing Corp-REVENUE BONDS		10/03/2022	CALL 100		410,000	410,000	410,000	410,027	0	(16)	0	(16)	0	410,012	0	(12)	(12)	11,850	01/01/2034
52518R-BE-5	Lehman Structured Securi-LSSC 2002-GE1 A		12/01/2022	PAYDOWN		4,757	4,757	4,542	(134)	0	(134)	0	(134)	0	4,757	0	0	0	0	07/01/2024
56052F-BC-8	Maine State Housing Auth-REVENUE BONDS		02/24/2022	CALL 100		2,960,000	2,960,000	2,960,000	2,959,946	0	(29)	0	(29)	0	2,959,917	0	83	83	29,214	11/15/2030
57419R-D6-9	Maryland Community Devel-REVENUE BONDS		07/01/2022	CALL 100		1,055,000	1,055,000	1,092,463	1,065,177	0	(692)	0	(692)	0	1,064,485	0	(9,485)	(9,485)	22,041	09/01/2047
57419R-L6-0	Maryland Community Devel-REVENUE BONDS		07/05/2022	CALL 100		175,000	175,000	175,000	174,996	0	4	0	4	0	175,000	0	0	0	6,063	09/01/2032
57419R-L7-8	Maryland Community Devel-REVENUE BONDS		07/05/2022	CALL 100		9,400,000	9,400,000	9,400,000	9,400,000	0	0	0	0	0	9,400,000	0	0	0	256,295	09/01/2037
57419R-PL-3	Maryland Community Devel-REVENUE BONDS		07/01/2022	CALL 100		610,000	610,000	610,000	610,000	0	0	0	0	0	610,000	0	0	0	10,388	09/01/2040
57429L-AL-0	Maryland State Transport-REVENUE BONDS		07/01/2022	MATURITY		1,030,000	1,030,000	1,125,991	1,034,531	0	(4,531)	0	(4,531)	0	1,030,000	0	0	0	66,744	07/01/2022
575832-P4-6	Massachusetts State Coll-REVENUE BONDS		05/01/2022	SINKING PAYMENT		200,000	200,000	200,000	200,000	0	0	0	0	0	200,000	0	0	0	5,788	05/01/2025
575832-R2-8	Massachusetts State Coll-REVENUE BONDS		05/01/2022	CALL 100		200,000	200,000	200,000	200,000	0	0	0	0	0	200,000	0	0	0	5,788	05/01/2025
57583R-R9-8	Massachusetts Development-REVENUE BONDS		03/01/2022	CALL 100		160,000	160,000	185,200	173,733	0	(315)	0	(315)	0	173,417	0	(13,417)	(13,417)	4,689	03/01/2028
57586N-MT-5	Massachusetts Housing Fi-REVENUE BONDS		06/15/2022	CALL 100		15,000	15,000	15,000	15,000	0	0	0	0	0	15,000	0	0	0	293	06/01/2023
57586N-MU-2	Massachusetts Housing Fi-REVENUE BONDS		06/15/2022	CALL 100		15,000	15,000	15,000	15,000	0	0	0	0	0	15,000	0	0	0	301	12/01/2023
57586N-MW-8	Massachusetts Housing Fi-REVENUE BONDS		06/15/2022	CALL 100		70,000	70,000	70,000	70,000	0	0	0	0	0	70,000	0	0	0	1,520	12/01/2027
57604P-5P-5	Massachusetts Clean Wate-REVENUE BONDS		08/01/2022	SINKING PAYMENT		435,000	435,000	519,782	504,903	0	(69,903)	0	(69,903)	0	435,000	0	0	0	22,585	08/01/2040
590545-TC-3	City of Mesa AZ Utility -REVENUE BONDS		07/01/2022	MATURITY		1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0	1,000,000	0	0	0	35,690	07/01/2022
590545-TE-9	City of Mesa AZ Utility -REVENUE BONDS		07/01/2022	CALL 100		1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0	1,000,000	0	0	0	39,190	07/01/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
59164G-DS-8	Metro Wastewater Reclama-REVENUE BONDS		.04/01/2022	CALL 100		5,415,000	5,415,000	4,600,638	5,010,501	0	404,499	0	404,499	0	5,415,000	0	0	0	81,225	.04/01/2028
59334H-FU-4	Miami-Dade County Housin-REVENUE BONDS		.12/01/2022	CALL 100		238,357	238,357	238,357	238,357	0	0	0	0	0	238,357	0	0	0	3,667	.11/01/2038
59465M-C8-6	Michigan State Housing D-REVENUE BONDS		.04/01/2022	CALL 100		3,305,000	3,305,000	3,305,000	3,305,000	0	0	0	0	0	3,305,000	0	0	0	88,772	.10/01/2028
59465M-F9-1	Michigan State Housing D-REVENUE BONDS		.04/01/2022	CALL 100		1,000,000	1,000,000	835,000	873,435	0	126,565	0	126,565	0	1,000,000	0	0	0	19,750	.10/01/2037
59465M-W9-2	Michigan State Housing D-REVENUE BONDS		.06/01/2022	CALL 100		1,650,000	1,650,000	1,650,000	1,649,996	0	(2,099)	0	(2,099)	0	1,647,897	0	2,103	2,103	36,084	.10/01/2033
60416Q-FW-9	Minnesota Housing Financ-REVENUE BONDS		.09/01/2022	CALL 100		165,897	165,897	161,749	162,425	0	37	0	37	0	162,461	0	3,436	3,436	1,616	.09/01/2041
60416Q-GK-4	Minnesota Housing Financ-REVENUE BONDS		.09/01/2022	CALL 100		267,004	267,004	267,004	267,004	0	0	0	0	0	267,004	0	0	0	2,432	.08/01/2046
60416Q-GM-0	Minnesota Housing Financ-REVENUE BONDS		.12/01/2022	CALL 100		98,881	98,881	86,225	86,880	0	127	0	127	0	97,006	0	11,875	11,875	1,095	.10/01/2046
60416Q-HA-5	Minnesota Housing Financ-REVENUE BONDS		.10/01/2022	CALL 100		1,457,470	1,457,470	1,457,471	1,457,470	0	0	0	0	0	1,457,470	0	0	0	20,834	.03/01/2048
60416Q-HE-7	Minnesota Housing Financ-REVENUE BONDS		.10/01/2022	CALL 100		1,077,633	1,077,633	1,077,633	1,077,634	0	0	0	0	0	1,077,633	0	0	0	13,813	.09/01/2048
60416Q-HG-2	Minnesota Housing Financ-REVENUE BONDS		.10/01/2022	CALL 100		1,173,978	1,173,978	1,173,978	1,173,978	0	0	0	0	0	1,173,978	0	0	0	17,392	.11/01/2048
60416Q-HJ-6	Minnesota Housing Financ-REVENUE BONDS		.09/01/2022	CALL 100		680,491	680,491	680,491	680,491	0	0	0	0	0	680,491	0	0	0	7,008	.01/01/2049
60416Q-HL-1	Minnesota Housing Financ-REVENUE BONDS		.09/01/2022	CALL 100		1,223,056	1,223,056	1,223,056	1,223,056	0	0	0	0	0	1,223,056	0	0	0	15,037	.03/01/2049
60416Q-HN-7	Minnesota Housing Financ-REVENUE BONDS		.12/01/2022	CALL 100		562,349	562,349	562,349	562,349	0	0	0	0	0	562,349	0	0	0	1,627	.06/01/2049
60416Q-HS-6	Minnesota Housing Financ-REVENUE BONDS		.10/01/2022	CALL 100		1,164,737	1,164,737	1,164,737	1,164,737	0	0	0	0	0	1,164,737	0	0	0	13,150	.12/01/2049
60416S-5C-0	Minnesota Housing Financ-REVENUE BONDS		.10/01/2022	CALL 100		160,000	160,000	160,000	160,000	0	0	0	0	0	160,000	0	0	0	3,329	.01/01/2035
606092-ER-1	Missouri Joint Municipal-REVENUE BONDS		.01/01/2022	MATURITY		3,040,000	3,040,000	3,040,000	3,040,000	0	0	0	0	0	3,040,000	0	0	0	89,346	.01/01/2022
60636Y-HL-8	Missouri Housing Develop-REVENUE BONDS		.12/05/2022	CALL 100		355,000	355,000	355,000	355,000	0	0	0	0	0	355,000	0	0	0	12,911	.07/01/2028
60636Y-HM-6	Missouri Housing Develop-REVENUE BONDS		.04/01/2022	CALL 100		240,000	240,000	240,000	240,000	0	0	0	0	0	240,000	0	0	0	7,744	.07/01/2033
60636Y-MJ-7	Missouri Housing Develop-REVENUE BONDS		.09/01/2022	CALL 100		26,471	26,471	26,471	26,471	0	0	0	0	0	26,471	0	0	0	466	.01/01/2040
60636Y-ML-2	Missouri Housing Develop-REVENUE BONDS		.04/01/2022	CALL 100		501,821	501,821	501,821	501,821	0	0	0	0	0	501,821	0	0	0	6,445	.10/01/2036
60637B-FA-3	MISSOURI ST HSG DEV COMM-TAXABLE-REF-SPL		.08/01/2022	CALL 100		90,302	90,302	90,302	90,302	0	0	0	0	0	90,302	0	0	0	1,015	.08/01/2036
60637B-ML-1	Missouri Housing Develop-REVENUE BONDS		.10/01/2022	CALL 100		997,881	997,881	965,450	970,668	0	252	0	252	0	970,920	0	26,961	26,961	8,683	.06/01/2044
610763-PF-5	Monroe County Water Auth-REVENUE BONDS		.08/01/2022	CALL 100		330,000	330,000	330,000	330,000	0	0	0	0	0	330,000	0	0	0	19,450	.08/01/2025
613549-KM-5	County of Montgomery OH-REVENUE BONDS		.05/01/2022	CALL 100		105,000	105,000	107,547	105,797	0	(131)	0	(131)	0	105,666	0	(666)	(666)	2,756	.05/01/2029
64613A-BC-5	New Jersey Housing & Mor-REVENUE BONDS		.10/01/2022	CALL 100		245,000	245,000	245,000	245,008	0	10	0	10	0	245,018	0	(18)	(18)	6,080	.10/01/2032
647200-2G-8	New Mexico Mortgage Fina-REVENUE BONDS		.09/01/2022	CALL 100		130,187	130,187	130,187	130,187	0	0	0	0	0	130,187	0	0	0	1,176	.08/01/2035
647200-4S-0	New Mexico Mortgage Fina-REVENUE BONDS		.10/01/2022	CALL 100		455,000	455,000	455,000	455,000	0	0	0	0	0	455,000	0	0	0	5,020	.09/01/2040
64972C-BD-4	New York City Housing De-REVENUE BONDS		.09/15/2022	CALL 100		29,352	29,352	29,352	29,352	0	0	0	0	0	29,352	0	0	0	376	.06/15/2036
64972C-M6-7	New York City Housing De-REVENUE BONDS		.09/01/2022	CALL 100		169,399	169,399	169,399	169,604	0	(2)	0	(2)	0	169,602	0	(203)	(203)	2,204	.10/01/2046
649883-3Y-9	State of New York Mortga-REVENUE BONDS		.04/01/2022	CALL 100		5,470,000	5,470,000	5,470,000	5,470,082	0	2	0	2	0	5,470,084	0	(84)	(84)	47,865	.04/01/2029
649883-SJ-5	State of New York Mortga-REVENUE BONDS		.10/01/2022	VARIOUS		2,675,000	2,675,000	2,675,000	2,675,000	0	0	0	0	0	2,675,000	0	0	0	68,255	.10/01/2022
649883-UK-9	State of New York Mortga-REVENUE BONDS		.04/08/2022	CALL 100		5,530,000	5,530,000	5,530,000	5,530,000	0	0	0	0	0	5,530,000	0	0	0	118,233	.04/01/2028
649883-UM-5	State of New York Mortga-REVENUE BONDS		.04/08/2022	CALL 100		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	100,487	.10/01/2025
649902-S7-9	New York State Dormitory-REVENUE BONDS		.03/15/2022	MATURITY		8,000,000	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	0	0	190,000	.03/15/2022
650035-VA-3	New York State Urban Dev-REVENUE BONDS		.03/15/2022	MATURITY		3,000,000	3,000,000	3,000,000	3,000,000	0	0	0	0	0	3,000,000	0	0	0	75,150	.03/15/2022
658909-SU-1	North Dakota Housing Fin-REVENUE BONDS		.07/01/2022	CALL 100		990,000	990,000	987,228	987,561	0	4	0	4	0	997,565	0	2,435	2,435	29,068	.07/01/2038
67178K-AA-8	Oak Ridge Industrial Dev-REVENUE BONDS		.12/15/2022	SINKING PAYMENT		82,521	82,521	77,422	79,137	0	3,385	0	3,385	0	82,521	0	0	0	3,594	.12/15/2032
677377-2P-7	Ohio Housing Finance Age-REVENUE BONDS		.11/01/2022	CALL 100		2,045,000	2,045,000	2,045,000	2,045,001	0	0	0	0	0	2,045,001	0	(1)	(1)	23,901	.11/01/2041
67756A-2P-6	Ohio Higher Educational -REVENUE BONDS		.01/01/2022	MATURITY		1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0	1,000,000	0	0	0	19,245	.01/01/2027
67756Q-XK-8	Ohio Housing Finance Age-REVENUE BONDS		.06/01/2022	CALL 100		185,000	185,000	185,000	185,002	0	2	0	2	0	185,003	0	(3)	(3)	4,608	.09/01/2038
68428T-AT-4	Orange County Sanitation-REVENUE BONDS		.02/01/2022	CALL 100		10,420,000	10,420,000	9,660,695	9,908,205	0	3,296	0	3,296	0	9,911,501	0	508,499	508,499	208,400	.02/01/2033
68607D-NC-5	State of Oregon Departme-REVENUE BONDS		.11/15/2022	MATURITY		3,000,000	3,000,000	3,000,000	3,000,000	0	0	0	0	0	3,000,000	0	0	0	146,490	.11/15/2022
686087-MP-9	State of Oregon Housing -REVENUE BONDS		.11/01/2022	CALL 100		1,315,000	1,315,000	1,315,000	1,315,000	0	0	0	0	0	1,315,000	0	0	0	39,980	.07/01/2033
686087-ZL-4	State of Oregon Housing -REVENUE BONDS		.06/01/2022	CALL 100		655,000	655,000	655,000	654,984	0	(17)	0	(17)	0	654,968	0	32	32	23,286	.07/01/2038
690353-RX-7	United States Internatio-UNSECURED		.01/18/2022	WELLS FARGO		1,399,608	1,301,961	1,301,960	1,302,303	0	12	0	12	0	1,302,315	0	97,293	97,293	22,962	.02/27/2027
690353-XM-4	United States Internatio-SENIOR UNSECURE		.07/28/2022	VARIOUS		4,126,337	4,114,286	4,114,286	4,114,340	0	(23)	0	(23)	0	4,114,317	0	12,020	12,020	90,650	.12/15/2030
70869P-FQ-5	Pennsylvania Economic De-REVENUE BONDS		.06/15/2022	MATURITY		1,745,000	1,745,000	1,745,000	1,745,000	0	0	0	0	0	1,745,000	0	0	0	47,124	.06/15/2022
708797-AN-5	Pennsylvania Housing Fin-REVENUE BONDS		.09/26/2022	CALL 100		78,168	78,168	78,168	78,123	0	1	0	1	0	78,124	0	44	44	1,211	.08/01/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
70917R-A9-6	Pennsylvania Higher Educ-REVENUE BONDS		.04/01/2022	MATURITY		1,500,000	1,500,000	1,500,000	1,500,000	0	0	0	0	0	1,500,000	0	0	0	40,260	.04/01/2022
76221T-AN-9	Rhode Island Housing and-REVENUE BONDS		.06/15/2022	CALL 100		3,545,000	3,545,000	3,545,000	3,545,000	0	0	0	0	0	3,545,000	0	0	0	93,223	.10/01/2023
76221T-DF-3	Rhode Island Housing and-REVENUE BONDS		.04/01/2022	CALL 100		125,000	125,000	125,000	125,000	0	0	0	0	0	125,000	0	0	0	2,648	.10/01/2029
76221T-DH-9	Rhode Island Housing and-REVENUE BONDS		.11/21/2022	CALL 100		285,000	285,000	285,000	285,000	0	0	0	0	0	285,000	0	0	0	6,302	.10/01/2039
835574-BT-0	County of Sonoma CA-REVENUE BONDS		.12/01/2022	MATURITY		115,000	115,000	123,195	115,857	0	(857)	0	(857)	0	115,000	0	0	0	5,831	.12/01/2022
835574-CB-8	County of Sonoma CA-REVENUE BONDS		.03/10/2022	JP MORGAN SECURITIES		9,589,176	8,525,000	9,169,064	8,888,741	0	(7,919)	0	(7,919)	0	8,880,822	0	708,354	708,354	146,346	.12/01/2029
83755N-EY-4	South Dakota Housing Dev-REVENUE BONDS		.10/01/2022	CALL 100		620,000	620,000	620,000	620,000	0	0	0	0	0	620,000	0	0	0	8,082	.11/01/2031
83756C-ML-6	South Dakota Housing Dev-REVENUE BONDS		.02/10/2022	CALL 100		95,000	95,000	95,000	95,000	0	0	0	0	0	95,000	0	0	0	993	.05/01/2031
88275F-NU-9	Texas Department of Hous-REVENUE BONDS		.09/01/2022	CALL 100		315,000	315,000	315,000	315,328	0	(33)	0	(33)	0	315,295	0	(295)	(295)	6,295	.09/01/2039
88275F-PA-1	Texas Department of Hous-REVENUE BONDS		.09/01/2022	CALL 100		211,962	211,962	199,906	200,978	0	91	0	91	0	201,069	0	10,893	10,893	2,772	.09/01/2047
913366-D6-2	Regents of the Universit-REVENUE BONDS		.05/15/2022	CALL 100		270,000	270,000	335,597	304,793	0	(1,485)	0	(1,485)	0	303,307	0	(33,307)	(33,307)	8,718	.05/15/2029
914119-4F-6	University of Cincinnati-REVENUE BONDS		.12/01/2022	CALL 100		3,985,000	3,985,000	3,589,489	3,814,780	0	170,220	0	170,220	0	3,985,000	0	0	0	159,400	.06/01/2031
914119-4P-4	University of Cincinnati-REVENUE BONDS		.12/01/2022	CALL 100		15,000	15,000	13,511	14,057	0	75	0	75	0	14,132	0	868	868	600	.06/01/2031
914126-GX-7	University of California-REVENUE BONDS		.05/15/2022	CALL 100		80,000	80,000	84,333	82,568	0	(80)	0	(80)	0	82,488	0	(2,488)	(2,488)	1,919	.05/15/2031
91743P-DD-4	Utah Housing Corp-REVENUE BONDS		.10/01/2022	CALL 100		840,940	840,940	877,857	876,479	0	(210)	0	(210)	0	876,268	0	(35,328)	(35,328)	10,042	.02/21/2050
91743P-DE-2	Utah Housing Corp-REVENUE BONDS		.11/01/2022	CALL 100		653,059	653,059	677,242	676,413	0	(113)	0	(113)	0	676,301	0	(23,242)	(23,242)	6,958	.03/21/2050
927781-L4-4	Virginia College Buildin-REVENUE BONDS		.02/01/2022	CALL 100		13,500,000	13,500,000	13,162,500	13,493,308	0	6,692	0	6,692	0	13,500,000	0	0	0	270,000	.02/01/2027
92812U-Q3-5	Virginia Housing Develop-REVENUE BONDS		.09/25/2022	CALL 100		843,151	843,151	843,151	842,583	0	4	0	4	0	842,587	0	564	564	14,053	.12/25/2043
92812U-Q4-3	Virginia Housing Develop-REVENUE BONDS		.11/25/2022	CALL 100		1,027,771	1,027,771	1,027,771	1,027,771	0	0	0	0	0	1,027,771	0	0	0	17,299	.10/25/2037
92812U-Q6-8	Virginia Housing Develop-REVENUE BONDS		.09/26/2022	CALL 100		544,708	544,708	544,708	544,599	0	1	0	1	0	544,600	0	108	108	6,637	.06/25/2041
92812U-Q7-6	Virginia Housing Develop-REVENUE BONDS		.10/25/2022	CALL 100		1,241,975	1,241,975	1,241,975	1,241,975	0	0	0	0	0	1,241,975	0	0	0	12,181	.10/25/2049
92812U-Q8-4	Virginia Housing Develop-REVENUE BONDS		.10/25/2022	CALL 100		1,921,657	1,921,657	1,921,657	1,921,657	0	0	0	0	0	1,921,657	0	0	0	21,536	.10/25/2049
92812U-XA-1	Virginia Housing Develop-REVENUE BONDS		.09/25/2022	CALL 100		266,794	266,794	287,470	281,312	0	(184)	0	(184)	0	281,128	0	(14,334)	(14,334)	6,551	.03/25/2038
92812U-XB-9	Virginia Housing Develop-REVENUE BONDS		.08/01/2022	VARIOUS		131,138	131,138	141,301	138,258	0	(78)	0	(78)	0	138,180	0	(7,042)	(7,042)	2,886	.03/25/2038
92813T-EE-6	Virginia Housing Develop-REVENUE BONDS		.11/25/2022	CALL 100		1,369,606	1,369,606	1,369,606	1,368,921	0	9	0	9	0	1,368,930	0	676	676	19,608	.08/25/2042
93730P-AB-2	Washington Biomedical Re-REVENUE BONDS		.07/01/2022	MATURITY		1,665,000	1,665,000	1,665,000	1,665,000	0	0	0	0	0	1,665,000	0	0	0	90,426	.07/01/2022
93978X-EQ-9	Washington State Housing-REVENUE BONDS		.09/01/2022	CALL 100		920,000	920,000	920,000	914,006	0	1,464	0	1,464	0	915,469	0	4,531	4,531	10,935	.09/01/2040
93978X-ER-7	Washington State Housing-REVENUE BONDS		.10/01/2022	CALL 100		1,980,000	1,980,000	1,971,090	1,980,000	0	0	0	0	0	1,980,000	0	0	0	29,898	.05/01/2041
940093-R4-1	Washington State Univers-REVENUE BONDS		.10/01/2022	CALL 100		1,850,000	1,850,000	2,393,493	2,093,923	0	(29,064)	0	(29,064)	0	2,064,858	0	(214,858)	(214,858)	110,815	.10/01/2027
97689Q-EL-6	Wisconsin Housing & Econ-REVENUE BONDS		.09/01/2022	CALL 100		505,000	505,000	499,953	500,136	0	93	0	93	0	500,229	0	4,771	4,771	13,125	.09/01/2046
0909999999. Subtotal - Bonds - U.S. Special Revenues						527,009,921	541,513,263	543,824,607	541,767,155	0	(157,880)	0	(157,880)	0	541,173,801	0	(14,163,880)	(14,163,880)	6,470,962	XXX
000366-AA-2	AASET 2017-1 TRUST-SERIES 17-1A CLASS A		.12/16/2022	PAYDOWN		1,903,913	1,903,913	1,903,904	1,903,913	0	0	0	0	0	1,903,913	0	0	0	56,948	.05/16/2042
00038R-AA-4	Aaset 2019-2 Trust-AASET 2019-2 A		.12/16/2022	PAYDOWN		733,319	733,319	733,314	733,326	0	(7)	0	(7)	0	733,319	0	0	0	13,903	.10/16/2039
00077B-4W-0	ABN Amro Mortgage Corp-AMAC 2002-9 A30		.12/01/2022	PAYDOWN		2,847	2,847	2,871	2,762	0	85	0	85	0	2,847	0	0	0	142	.12/01/2032
000780-NL-6	ABN Amro Mortgage Corp-AMAC 2003-12 2A		.12/01/2022	PAYDOWN		336	336	340	329	0	7	0	7	0	336	0	0	0	10	.12/01/2033
001055-AM-4	Aflac Inc-SENIOR UNSECURED		.03/16/2022	GOLDMAN SACHS		10,272,000	10,000,000	9,989,900	9,997,094	0	141	0	141	0	9,997,235	0	274,765	274,765	123,854	.11/15/2024
001055-BJ-0	Aflac Inc-SENIOR UNSECURED		.06/06/2022	WELLS FARGO		9,642,200	10,000,000	9,974,200	9,978,131	0	1,009	0	1,009	0	9,979,140	0	(336,940)	(336,940)	247,000	.04/01/2030
0010EP-AN-8	AEP TEXAS CENTRAL CO-SR UNSECURED		.09/22/2022	U. S. BANCORP		4,813,200	5,000,000	4,951,050	4,979,630	0	3,933	0	3,933	0	4,983,562	0	(170,362)	(170,362)	189,826	.10/01/2025
00110X-AD-6	AFN ABSPROPO01 LLC-SERIES 2021-1A CLASS		.07/20/2022	PAYDOWN		297	297	291	0	0	6	0	6	0	297	0	0	0	4	.05/20/2051
00164T-AA-6	AMC East Communities LLC-SECURED		.07/15/2022	SINKING PAYMENT		515,262	515,262	540,440	528,143	0	(12,881)	0	(12,881)	0	515,262	0	0	0	22,283	.01/15/2028
00180A-AA-7	AMSR 2020-SFR1 Trust-AMSR 2020-SFR1 A		.08/01/2022	MORGAN		22,053,449	22,977,953	22,977,107	22,984,254	0	(1,120)	0	(1,120)	0	22,983,134	0	(929,685)	(929,685)	280,968	.04/01/2037
00184Q-AA-4	Amazon (Euclid Oh) Trust Certificate		.12/31/2022	SINKING PAYMENT		122,863	122,863	122,863	122,863	0	0	0	0	0	122,863	0	0	0	2,648	.06/30/2039
00191H-AA-3	Amazon (Tucson Az) Trust Certificate		.12/31/2022	SINKING PAYMENT		255,048	255,048	255,048	254,596	0	258	0	258	0	255,048	0	0	0	2,958	.08/31/2039
00191Q-AA-5	Amazon (Oklahoma City Ok Trust Certifica		.12/31/2022	SINKING PAYMENT		255,061	255,061	255,061	255,061	0	0	0	0	0	255,061	0	0	0	5,845	.09/30/2039
00192J-AA-4	APS Resecuritization Tru-APS 2016-1 1A		.12/01/2022	PAYDOWN		1,307,092	1,307,092	1,164,946	1,269,854	0	37,238	0	37,238	0	1,307,092	0	0	0	4,900	.07/01/2057
00193*-AA-5	Amazon (Tulsa Ok) Trust Certificate		.12/31/2022	SINKING PAYMENT		266,685	266,685	266,685	266,657	0	28	0	28	0	266,685	0	0	0	5,947	.09/30/2039
00195H-AA-9	Amazon (Toledo Oh) Trust Certificate		.12/31/2022	SINKING PAYMENT		446,671	446,671	446,671	446,671	0	0	0	0	0	446,671	0	0	0	8,606	.10/31/2040
00206R-DC-3	AT&T Inc-SENIOR UNSECURED		.05/11/2022	CALL 102.611143		5,130,557	5,000,000	4,981,500	4,993,705	0	1,017	0	1,017	0	4,994,722	0	135,835	135,835	135,972	.04/01/2024
00206R-GL-0	AT&T Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		5,798,005	5,334,000	5,336,507	5,335,755	0	57	0	57	0	5,335,813	0	462,192	462,192	94,160	.02/15/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
00206R-G0-9	AT&T Inc-SENIOR UNSECURED		10/31/2022	JP MORGAN SECURITIES		17,470,414	19,125,000	19,213,549	19,188,421	0	(6,010)	0	(6,010)	0	19,182,412	0	(1,711,998)	(1,711,998)	997,675	02/15/2030
00206R-HJ-4	AT&T Inc-SENIOR UNSECURED		10/28/2022	HSBC SECURITIES INC		9,310,700	10,000,000	9,950,800	9,963,114	0	3,669	0	3,669	0	9,966,782	0	(656,082)	(656,082)	507,500	03/01/2029
00213R-AB-9	ARL FIRST LLC-SECD RAIL CAR EQUIP NT CLA		12/15/2022	CALL 100		18,118,000	18,118,000	17,907,517	18,086,711	0	31,289	0	31,289	0	18,118,000	0	0	0	690,296	12/15/2042
00225F-AA-3	Amazon (Grand Rapids, MI Trust Certifica		12/31/2022	SINKING PAYMENT		125,590	125,590	125,590	125,590	0	0	0	0	0	125,590	0	0	0	2,711	09/30/2039
00255U-AA-3	AASET 2020-1 Trust-AASET 2020-1A A		11/15/2022	PAYDOWN		2,669,938	2,669,938	2,669,891	2,669,930	0	8	0	8	0	2,669,938	0	0	0	41,656	01/16/2040
00256D-AA-0	Aaset 2019-1 Trust-AASET 2019-1 A		12/15/2022	PAYDOWN		1,820,640	1,820,640	1,450,399	1,820,673	0	370,205	370,238	(33)	0	1,820,640	0	0	0	43,354	05/15/2039
002824-BF-6	ABBOTT LABORATORIES-SENIOR UNSECURED		03/28/2022	BOFAMLSEC		4,678,816	4,534,000	4,500,267	4,516,025	0	756	0	756	0	4,516,781	0	162,035	162,035	56,675	11/30/2026
002824-BM-1	ABBOTT LABORATORIES-SENIOR UNSECURED		03/28/2022	SUMRIDGE PARTNERS LL		2,061,360	2,000,000	1,992,320	1,994,487	0	401	0	401	0	1,994,888	0	66,472	66,472	41,979	09/15/2025
00287Y-BF-5	AbbVie Inc-SENIOR UNSECURED		06/22/2022	SG COWEN SECURITIES		14,740,550	15,000,000	14,777,950	14,841,346	0	9,592	0	9,592	0	14,850,938	0	(110,388)	(110,388)	387,813	11/14/2028
00432C-CW-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3		10/25/2022	PAYDOWN		380,791	380,791	351,280	360,638	0	20,153	0	20,153	0	380,791	0	0	0	2,152	07/25/2035
00436M-AA-3	Accelerated Assets 2018-AALLC 2018-1 A		12/02/2022	PAYDOWN		841,520	841,520	841,307	841,370	0	150	0	150	0	841,520	0	0	0	17,050	12/02/2033
004375-FG-1	ACCREDITED MORTGAGE LOAN-ACCR 2006-1 A4		12/27/2022	PAYDOWN		4,552,308	4,552,308	3,902,242	4,402,174	0	150,133	0	150,133	0	4,552,308	0	0	0	17,599	04/25/2036
006346-AS-9	ADAMS OUTDOOR ADV SECD REV NT SER 2018-1		12/15/2022	PAYDOWN		851,320	851,320	852,753	852,222	0	(901)	0	(901)	0	851,320	0	0	0	22,180	11/15/2048
007036-GS-9	Adjustable Rate Mortgage-ARMT 2005-2 2A1		12/01/2022	PAYDOWN		296,249	296,249	277,178	276,929	0	19,321	0	19,321	0	296,249	0	0	0	5,060	06/01/2035
007036-SE-7	Adjustable Rate Mortgage-ARMT 2005-9 5A1		12/27/2022	PAYDOWN		197,656	197,656	137,882	165,044	0	32,613	0	32,613	0	197,656	0	0	0	1,311	11/25/2035
00703Q-AD-4	Adjustable Rate Mortgage-ARMT 2006-3 4A1		12/27/2022	PAYDOWN		653,831	653,831	464,833	343,707	0	310,124	0	310,124	0	653,831	0	0	0	2,636	08/25/2036
008252-AM-0	Affiliated Managers Grou-SENIOR UNSECURE		05/11/2022	MILLENNIUM ADVISORS		1,078,995	1,066,000	1,095,827	1,074,855	0	(1,500)	0	(1,500)	0	1,073,355	0	5,640	5,640	33,727	02/15/2024
00833M-AA-2	Affirm Asset Securitizat-AFFM 2021-A A		10/15/2022	PAYDOWN		5,000,000	5,000,000	4,999,262	4,990,207	0	9,793	0	9,793	0	5,000,000	0	0	0	35,530	08/15/2025
00846U-AJ-0	Agilent Technologies Inc-SENIOR UNSECURE		02/10/2022	DIRECT		17,410,550	17,000,000	16,922,480	16,986,284	0	816	0	816	0	16,987,100	0	423,450	423,450	382,441	07/15/2023
009098-A*-5	Air Cargo Logistics Ft W Lease-Collatera		12/10/2022	SINKING PAYMENT		94,349	94,349	94,349	94,349	0	0	0	0	0	94,349	0	0	0	2,229	11/10/2039
00910G-A*-4	Air Cargo Logistics Ctl Trust Certificat		12/10/2022	SINKING PAYMENT		(114,747)	(114,747)	(114,747)	(114,747)	0	0	0	0	0	(114,747)	0	0	0	4,249	02/10/2041
00912X-BF-0	Air Lease Corp-SENIOR UNSECURED		11/07/2022	MORGAN		7,966,350	9,000,000	8,864,720	8,902,896	0	10,792	0	10,792	0	8,913,687	0	(947,337)	(947,337)	460,188	10/01/2028
009818-AA-9	Akron Childrens Hospital Trust Certifica		12/15/2022	SINKING PAYMENT		99,908	99,908	100,907	100,868	0	(960)	0	(960)	0	99,908	0	0	0	2,075	08/15/2050
015271-AN-9	Alexandria Real Estate E-SENIOR UNSECURE		08/15/2022	WELLS FARGO		5,069,850	5,000,000	4,995,800	4,997,184	0	(87)	0	(87)	0	4,997,096	0	72,754	72,754	265,028	07/01/2030
017175-AC-4	Alleghany Corp-SENIOR UNSECURED		06/27/2022	MATURITY		4,000,000	4,000,000	3,995,920	3,999,742	0	258	0	258	0	4,000,000	0	0	0	99,000	06/27/2022
01882Y-AB-2	Alliant Energy Finance L-SENIOR UNSECURE		01/18/2022	GOLDMAN		16,350,450	15,000,000	14,970,900	14,980,772	0	(120)	0	(120)	0	14,980,653	0	1,369,797	1,369,797	61,979	06/15/2028
021441-AF-7	Altera Corp-SENIOR UNSECURED		09/06/2022	CALL 100.388		10,038,800	10,000,000	9,874,300	9,972,562	0	9,479	0	9,479	0	9,982,041	0	56,759	56,759	331,417	11/15/2023
02146P-AF-2	Alternative Loan Trust 2-CWALT 2006-HY12		12/01/2022	PAYDOWN		293,142	293,142	188,038	196,664	0	96,477	0	96,477	0	293,142	0	0	0	4,338	08/01/2036
02146T-AL-1	Alternative Loan Trust 2-CWALT 2006-24CB		12/01/2022	PAYDOWN		67,970	74,388	50,103	39,414	0	32,878	0	32,878	0	67,970	0	0	0	1,751	08/01/2036
02147W-AT-6	Alternative Loan Trust 2-CWALT 2006-26CB		12/01/2022	PAYDOWN		33,645	42,923	30,361	30,420	0	9,790	0	9,790	0	33,645	0	0	0	949	09/01/2036
02147X-AR-8	Alternative Loan Trust 2-CWALT 2006-32CB		12/01/2022	PAYDOWN		72,919	93,793	71,920	72,199	0	16,680	263	16,417	0	72,919	0	0	0	2,422	11/01/2036
02150V-AA-3	Alternative Loan Trust 2-CWALT 2007-HY7C		12/27/2022	PAYDOWN		123,796	119,522	96,575	101,266	0	19,327	0	19,327	0	123,796	0	0	0	542	08/25/2037
02152A-AS-8	Alternative Loan Trust 2-CWALT 2007-16CB		12/25/2022	PAYDOWN		501,415	532,912	338,399	323,477	0	198,551	0	198,551	0	501,415	0	0	0	2,803	08/25/2037
023135-BN-5	Amazon.com Inc-SENIOR UNSECURED		01/20/2022	GOLDMAN		11,208,800	10,000,000	10,001,760	9,996,260	0	(192)	0	(192)	0	9,996,068	0	1,212,732	1,212,732	73,667	02/03/2025
02343U-AH-8	Amcort Finance USA Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		8,903,680	8,000,000	7,984,720	7,989,993	0	(13)	0	(13)	0	7,989,981	0	913,699	913,699	65,000	05/15/2028
02376X-AA-7	AMER AIRLN 14-1 B PTT-SECURED NOTE		10/01/2022	VARIOUS		1,045,775	1,045,775	1,045,775	1,045,990	0	(215)	0	(215)	0	1,045,775	0	0	0	43,623	10/01/2022
02377A-AA-6	American Airlines 2014-1-SECURED NOTE		10/01/2022	SINKING PAYMENT		446,711	446,711	446,711	446,835	0	(124)	0	(124)	0	446,711	0	0	0	12,354	10/01/2026
02377U-AB-0	AMERICAN AIRLINES 2013-2-FIRST LIEN		07/15/2022	SINKING PAYMENT		126,893	126,893	126,893	126,931	0	(38)	0	(38)	0	126,893	0	0	0	4,734	01/15/2023
024836-AG-3	American Campus Communit-SENIOR UNSECURE		08/24/2022	CALL 104.241		9,381,690	9,000,000	8,965,520	8,970,390	0	1,744	0	1,744	0	8,972,134	0	409,556	409,556	372,000	01/30/2031
025816-CA-5	American Express Co-SENIOR UNSECURED		05/03/2022	TORONTO DOMINION SEC		10,212,950	10,000,000	9,977,800	9,987,455	0	1,458	0	1,458	0	9,988,912	0	224,038	224,038	208,833	11/06/2025
02660L-AA-8	American Home Mortgage A-AHMA 2006-4 1A1		12/27/2022	PAYDOWN		46,401	46,401	34,801	23,956	0	22,444	0	22,444	0	46,401	0	0	0	173	10/25/2046
02660T-AR-4	American Home Mortgage I-AHM 2004-1 4A		12/01/2022	PAYDOWN		331,537	331,537	327,807	322,539	0	8,999	0	8,999	0	331,537	0	0	0	4,856	04/01/2044
02660T-CS-0	American Home Mortgage I-AHM 2004-4 4A		07/01/2022	PAYDOWN		288,615	288,615	246,946	263,001	0	25,614	0	25,614	0	288,615	0	0	0	2,819	02/01/2045
02660T-DH-3	American Home Mortgage I-AHM 2005-1 6A		12/01/2022	PAYDOWN		182,769	182,769	159,237	168,582	0	14,187	0	14,187	0	182,769	0	0	0	2,198	06/01/2045
02660T-EK-5	American Home Mortgage I-AHM 2005-2 1A1		12/27/2022	PAYDOWN		363,518	363,518	340,230	341,351	0	22,168	0	22,168	0	363,518	0	0	0	2,563	09/25/2045
02660T-EQ-2	American Home Mortgage I-AHM 2005-2 4A1		06/01/2022	PAYDOWN		89,681	89,681	76,917	43,595	0	46,086	0	46,086	0	89,681	0	0	0	630	09/01/2045
02660V-AE-8	American Home Mortgage A-AHMA 2005-1 3A1		12/27/2022	PAYDOWN		19,591	19,591	15,979	17,644	0	1,948	0	1,948	0	19,591	0	0	0	51	11/25/2035
02665U-AA-3	AMERICAN HOMES 4 RENT-SERIES 2014-SFR2 C		12/01/2022	VARIOUS		6,336,392	6,390,340	6,535,703	6,430,177	0	(8,381)	0	(8,381)	0	6,421,796	0	(85,404)	(85,404)	169,271	10/01/2036
02665X-AA-7	American Homes 4 Rent 20-AHAR 2014-SFR3		03/22/2022	VARIOUS		29,644,605	29,686,100	29,993,407	29,758,865	0	(5,861)	0	(5,861)	0	29,753,005	0	(108,400)	(108,400)	341,665	12/01/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
02666A-AA-6	American Homes 4 Rent 20-AHAR 2015-SFR1		01/19/2022	VARIOUS		39,189,853	38,018,624	38,343,052	38,105,751	0	(646)	0	(646)	0	38,105,105	0	1,084,748	1,084,748	182,945	04/01/2052
02666B-AA-4	AMERICAN HOMES 4 RENT-SERIES 2015-SFR2 C		01/19/2022	VARIOUS		8,383,664	8,027,980	8,027,725	8,022,937	0	72	0	72	0	8,023,009	0	360,655	360,655	41,586	10/01/2052
02666B-AG-1	American Homes 4 Rent 20-AHAR 2015-SFR2		12/01/2022	PAYDOWN	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	10/01/2052
02666T-AA-5	American Homes 4 Rent LP-SENIOR UNSECURE		01/18/2022	GOLDMAN		27,159,804	25,033,000	24,757,059	24,849,943	0	1,742	0	1,742	0	24,851,684	0	2,308,120	2,308,120	458,069	02/15/2028
026874-DD-6	American International G-SENIOR UNSECURE		07/25/2022	VARIOUS		19,903,494	20,000,000	19,867,700	19,948,258	0	6,856	0	6,856	0	19,955,114	0	(51,620)	(51,620)	706,688	07/10/2025
026929-AA-7	American Home Mortgage I-AHM 2006-3 11A1		12/27/2022	PAYDOWN		262,251	262,251	205,539	210,101	0	52,150	0	52,150	0	262,251	0	0	0	1,119	12/25/2046
03072S-RC-1	Ameriquest Mortgage Secu-AMSI 2004-FR1W		12/01/2022	PAYDOWN		247,431	247,431	240,008	242,620	0	4,812	0	4,812	0	247,431	0	0	0	4,596	05/01/2034
03076C-AF-3	AMERIPRISE FINANCIAL INC-SR UNSECURED		03/17/2022	VARIOUS		42,071,625	40,873,000	41,068,828	40,915,233	0	(6,088)	0	(6,088)	0	40,909,144	0	1,162,481	1,162,481	604,154	10/15/2023
03076C-AG-1	AMERIPRISE FINANCIAL INC-SR UNSECURED		03/18/2022	BARCLAYS CAPITAL INC		8,186,960	8,000,000	7,972,480	7,991,581	0	803	0	803	0	7,992,384	0	194,576	194,576	129,089	10/15/2024
03209S-AH-4	Amphenol Corp-SENIOR UNSECURED		07/19/2022	JANE		9,857,900	10,000,000	9,990,400	9,992,834	0	295	0	295	0	9,993,129	0	(135,229)	(135,229)	277,917	06/01/2029
03215P-DM-8	Amresco Residential Secu-AMRES 1998-1 A5		12/01/2022	PAYDOWN		218,069	218,069	218,206	217,148	0	921	0	921	0	218,069	0	0	0	8,632	10/01/2027
03235T-AA-5	Amur Finance VI LLC-ACEF 2014-1A A		12/20/2022	PAYDOWN		10,253	10,253	10,253	3,917	0	6,336	0	6,336	0	10,253	0	0	0	574	12/20/2024
03464B-AA-6	Angel Oak Mortgage Trust-AOMT 2022-1 A1		12/01/2022	PAYDOWN		890,836	890,836	890,823	0	0	14	0	14	0	890,836	0	0	0	9,514	12/01/2066
03464B-AB-4	Angel Oak Mortgage Trust-AOMT 2022-1 A2		12/01/2022	PAYDOWN		2,545,247	2,545,247	2,545,222	0	0	25	0	25	0	2,545,247	0	0	0	29,972	12/01/2066
03464B-AC-2	Angel Oak Mortgage Trust-AOMT 2022-1 A3		12/01/2022	PAYDOWN		2,545,247	2,545,247	2,545,205	0	0	42	0	42	0	2,545,247	0	0	0	31,042	12/01/2066
03464P-AA-5	Angel Oak Mortgage Trust-AOMT 2022-2 A1		12/01/2022	PAYDOWN		2,684,806	2,684,806	2,675,363	0	0	9,443	0	9,443	0	2,684,806	0	0	0	35,782	01/01/2067
03464P-AB-3	Angel Oak Mortgage Trust-AOMT 2022-2 A2		12/01/2022	PAYDOWN		1,610,884	1,610,884	1,608,396	0	0	2,488	0	2,488	0	1,610,884	0	0	0	24,088	01/01/2067
03464P-AC-1	Angel Oak Mortgage Trust-AOMT 2022-2 A3		12/01/2022	PAYDOWN		1,610,884	1,610,884	1,606,834	0	0	4,050	0	4,050	0	1,610,884	0	0	0	24,741	01/01/2067
03464T-AA-7	Angel Oak Mortgage Trust-AOMT 2022-3 A1		12/01/2022	PAYDOWN		667,391	667,391	660,247	0	0	7,144	0	7,144	0	667,391	0	0	0	8,379	01/01/2067
03464T-AB-5	Angel Oak Mortgage Trust-AOMT 2022-3 A2		12/01/2022	PAYDOWN		444,927	444,927	435,435	0	0	9,493	0	9,493	0	444,927	0	0	0	5,849	01/01/2067
035240-AQ-3	Anheuser-Busch InBev Wor-SENIOR UNSECURE		06/17/2022	BARCLAYS CAPITAL INC		20,210,000	20,000,000	19,937,000	19,953,590	0	2,426	0	2,426	0	19,956,016	0	253,984	253,984	868,194	01/23/2029
037411-BE-4	Apache Corp-SENIOR UNSECURED		03/21/2022	CA CASH_CLOSE		14,073,750	13,500,000	13,479,075	13,486,816	0	761	0	761	0	14,061,327	0	12,423	12,423	829,688	10/15/2028
03765H-AA-9	Apollo Management Holdin-SENIOR UNSECURE		09/29/2022	BOFAMLSEC		1,125,796	1,158,000	1,154,781	1,157,154	0	229	0	229	0	1,157,383	0	(31,587)	(31,587)	38,986	05/30/2024
03765H-AB-7	Apollo Management Holdin-SENIOR UNSECURE		07/27/2022	VARIOUS		12,386,755	12,289,000	12,295,318	12,292,936	0	(308)	0	(308)	0	12,292,628	0	94,127	94,127	268,190	05/27/2026
03765H-AD-3	Apollo Management Holdin-SENIOR UNSECURE		10/24/2022	AMHERST SECURITIES		4,584,992	5,000,000	4,999,950	5,000,221	0	(127)	0	(127)	0	5,000,094	0	(415,102)	(415,102)	291,643	02/15/2028
038222-AJ-4	Applied Materials Inc-SENIOR UNSECURED		03/31/2022	TORONTO DOMINION SEC		3,090,840	3,000,000	2,989,140	2,995,545	0	411	0	411	0	2,995,956	0	94,884	94,884	59,475	10/01/2025
038370-AA-0	Aqua Finance Trust 2019-AQFIT 2019-A A		12/15/2022	PAYDOWN		1,997,910	1,997,910	1,997,600	1,997,629	0	281	0	281	0	1,997,910	0	0	0	30,921	07/16/2040
038413-AA-8	Aqua Finance Trust 2020-AQFIT 2020-AA A		12/17/2022	PAYDOWN		1,918,206	1,918,206	1,917,851	1,917,884	0	321	0	321	0	1,918,206	0	0	0	17,692	07/17/2046
038923-AP-3	Arbor Realty Trust Inc-SENIOR UNSECURED		11/01/2022	MATURITY		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	237,500	11/01/2022
03939C-AA-1	ARCH CAPITAL FINANCE LLC-SENIOR UNSECURE		01/20/2022	BARCLAYS CAPITAL INC		13,504,250	12,500,000	12,513,325	12,507,748	0	(316)	0	(316)	0	12,507,432	0	996,818	996,818	54,316	12/15/2026
04249B-AD-3	Army & Air Force Exchang Senior Note		12/15/2022	SINKING PAYMENT		168,242	168,242	168,242	0	0	0	0	0	0	168,242	0	0	0	3,956	10/15/2024
042735-BF-6	ARROW ELECTRONICS INC-SENIOR UNSECURED		11/02/2022	SEAPORT GROUP		7,112,400	8,000,000	7,966,000	7,979,489	0	2,304	0	2,304	0	7,981,793	0	(869,393)	(869,393)	406,444	01/12/2028
04285E-AC-1	Arroyo Mortgage Trust 20-ARRW 2022-2 A2		12/01/2022	PAYDOWN		251,032	251,032	243,041	0	0	7,991	0	7,991	0	251,032	0	0	0	4,807	07/01/2057
04285E-AD-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A3		12/01/2022	PAYDOWN		251,032	251,032	240,625	0	0	10,407	0	10,407	0	251,032	0	0	0	3,462	07/01/2057
04285E-AM-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A1		12/01/2022	PAYDOWN		241,390	241,390	238,471	0	0	2,919	0	2,919	0	241,390	0	0	0	4,651	07/01/2057
04539W-AB-7	Assabet Valley Bancorp-SUBORDINATED		08/01/2022	CALL 100		4,250,000	4,250,000	4,250,000	4,249,772	0	228	0	228	0	4,250,000	0	0	0	0	08/01/2027
04544P-AD-1	Asset Backed Securities -ABSHE 2006-HE5		12/27/2022	PAYDOWN		2,129,115	2,129,115	1,383,522	1,813,863	0	315,251	0	315,251	0	2,129,115	0	0	0	10,038	07/25/2036
045487-AB-1	ASSOC BANC-CORP-SUBORDINATED NOTE		08/23/2022	MARKETAXESS FINANCIA		494,450	500,000	498,235	499,414	0	106	0	106	0	499,520	0	(5,070)	(5,070)	23,611	01/15/2025
04621X-AJ-7	Assurant Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		8,966,160	8,000,000	7,969,360	7,979,718	0	180	0	180	0	7,979,898	0	986,262	986,262	123,044	03/27/2028
04650Y-AA-8	Ambience Merger Sub Inc-SECURED		07/01/2022	JEFFERIESLLC		1,750,000	2,500,000	2,500,000	0	0	0	0	0	0	2,500,000	0	(750,000)	(750,000)	119,844	07/15/2034
04685A-2B-6	ATHENE GLOBAL FUNDING-SECURED		01/25/2022	MATURITY		22,000,000	22,000,000	22,017,580	22,000,263	0	(263)	0	(263)	0	22,000,000	0	0	0	440,000	01/25/2022
048677-AA-6	Atlantic Marine Corps Co-UNSECURED		06/01/2022	MATURITY		85,500	85,500	93,195	85,946	0	(446)	0	(446)	0	85,500	0	0	0	2,966	06/01/2022
05178T-AA-9	Aurora Military Housing -SECURED		07/15/2022	SINKING PAYMENT		35,678	35,678	35,678	0	0	(4)	0	(4)	0	35,678	0	0	0	1,508	07/15/2034
052769-AD-8	Autodesk Inc-SENIOR UNSECURED		01/19/2022	FTS		3,229,950	3,000,000	2,989,110	2,995,889	0	4	0	4	0	2,995,893	0	234,057	234,057	13,125	06/15/2025
05279B-AA-9	Autoliv ASP, Inc. Trust Certificate Tran		12/15/2022	SINKING PAYMENT		253,354	253,354	253,354	253,354	0	0	0	0	0	253,354	0	0	0	6,115	05/15/2034
05329W-AQ-5	AutoNation Inc-SENIOR UNSECURED		11/22/2022	CITIGROUP GLOBAL MAR		4,470,450	5,000,000	4,973,950	4,977,645	0	2,119	0	2,119	0	4,979,763	0	(509,313)	(509,313)	233,542	06/01/2030
05333Z-AZ-5	AutoZone Inc-SENIOR UNSECURED		06/13/2022	JP MORGAN SECURITIES		13,098,540	14,000,000	13,990,620	13,992,223	0	393	0	393	0	13,992,617	0	(894,077)	(894,077)	373,333	04/15/2030
05348E-AV-1	AYALONBAY COMMUNITIES-SENIOR UNSECURED		04/18/2022	CITIGROUP GLOBAL MAR		4,994,450	5,000,000	4,950,500	4,980,566	0	1,591	0	1,591	0	4,982,158	0	12,292	12,292	66,604	06/01/2025
05348E-AW-9	AYALONBAY COMMUNITIES IN-SR UNSECURED		03/29/2022	WELLS FARGO		5,030,250	5,000,000	4,983,700	4,993,175	0	408	0	408	0	4,993,583	0	36,667	36,667	66,111	11/15/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
05351W-AB-9	Avangrid Inc-SENIOR UNSECURED		12/13/2022	CITIGROUP GLOBAL MAR		8,359,920	9,000,000	8,987,220	8,990,494	0	1,163	0	1,163	0	8,991,657	0	(631,737)	(631,737)	355,300	06/01/2029
05379B-AP-2	Avista Corp-FIRST LIEN		04/01/2022	MATURITY		4,000,000	4,000,000	3,990,800	3,999,776	0	224	0	224	0	4,000,000	0	0	0	102,500	04/01/2022
053807-AS-2	Avnet Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		12,953,880	12,000,000	11,921,820	11,962,793	0	388	0	388	0	11,963,181	0	990,699	990,699	146,458	04/15/2026
054561-AJ-4	AXA Equitable Holdings I-SENIOR UNSECURE		01/18/2022	GOLDMAN		50,575,620	46,000,000	43,745,080	44,356,527	0	11,578	0	11,578	0	44,368,105	0	6,207,515	6,207,515	500,250	04/20/2028
05523U-AK-6	BAE Systems Holdings Inc-SENIOR UNSECURE		06/23/2022	JP MORGAN SECURITIES		6,922,930	7,000,000	6,979,210	6,993,625	0	1,028	0	1,028	0	6,994,653	0	(71,723)	(71,723)	192,111	10/07/2024
05523U-AP-5	BAE Systems Holdings Inc-SENIOR UNSECURE		01/18/2022	GOLDMAN		7,434,560	7,000,000	6,917,400	6,963,775	0	345	0	345	0	6,964,120	0	470,440	470,440	26,201	12/15/2025
05525C-AA-6	BAMLL Re-REMIC Trust 201-BAMLL 2013-FRR2		09/01/2022	MATURITY		8,000,000	8,000,000	6,050,000	7,778,680	0	221,320	0	221,320	0	8,000,000	0	0	0	0	09/01/2022
05532E-CE-3	BCAP LLC 2009-RR10 Trust-BCAP 2009-RR10		12/01/2022	PAYDOWN		94,529	100,830	29,006	29,006	0	67,181	0	67,181	0	94,529	0	0	0	2,883	06/01/2037
05532M-AG-2	BCAP LLC 2009-RR15 Trust-BCAP 2009-RR15		10/01/2022	PAYDOWN		133,994	198,715	107,606	76,210	0	92,831	0	92,831	0	133,994	0	0	0	1,384	05/01/2036
05532T-AF-9	BCAP LLC 2010-RR1 Trust-BCAP 2010-RR1 2A		12/01/2022	PAYDOWN		1,650,157	1,650,157	717,818	717,818	0	932,339	0	932,339	0	1,650,157	0	0	0	19,844	06/01/2045
05533N-AJ-3	BCAP LLC 2010-RR12 Trust-BCAP 2010-RR12		12/01/2022	PAYDOWN		284,688	279,240	244,644	267,167	0	10,938	0	10,938	0	284,688	0	0	0	3,621	06/01/2037
05541C-AZ-1	BCAP LLC 2012-RR7 Trust-BCAP 2012-RR7 5A		04/25/2022	CALL 100		0	0	0	0	0	0	0	0	0	0	0	0	0	0	03/01/2047
05541D-AU-0	BCAP LLC 2012-RR8 Trust-BCAP 2012-RR8 4A		12/20/2022	PAYDOWN		1,145,811	1,145,811	946,726	1,107,894	0	37,917	0	37,917	0	1,145,811	0	0	0	3,241	11/20/2036
05545J-AJ-8	BCAP LLC 2015-RR3 Trust-BCAP 2015-RR3 4A		08/29/2022	PAYDOWN		613,032	613,032	547,131	605,810	0	7,222	0	7,222	0	613,032	0	0	0	1,187	02/27/2037
05553D-AB-7	BHG Securitization Trust-BHG 2022-B B		09/17/2022	PAYDOWN		11,055	11,055	11,055	0	0	0	0	0	0	11,055	0	0	0	146	06/18/2035
05553D-AD-3	BHG Securitization Trust-BHG 2022-B D		09/17/2022	PAYDOWN		5,527	5,527	5,367	5,367	0	161	0	161	0	5,527	0	0	0	101	06/18/2035
05565E-BE-4	BMW US Capital LLC-SENIOR UNSECURED		06/21/2022	VARIOUS		16,876,940	17,000,000	16,973,480	16,981,758	0	788	0	788	0	16,982,547	0	(105,607)	(105,607)	509,440	08/14/2028
05565E-BJ-3	BMW US Capital LLC-SENIOR UNSECURED		03/29/2022	WELLS FARGO		10,137,000	10,000,000	9,983,400	9,987,311	0	624	0	624	0	9,987,935	0	149,065	149,065	164,132	04/18/2029
05565E-BL-8	BMW US Capital LLC-SENIOR UNSECURED		06/06/2022	BOFAMLSEC		2,984,790	3,000,000	2,995,620	2,996,266	0	177	0	177	0	2,996,443	0	(11,653)	(11,653)	82,654	04/09/2030
05567Y-AA-7	Burlington Northern and -SECURED		10/01/2022	SINKING PAYMENT		223,293	223,293	223,293	223,481	0	(188)	0	(188)	0	223,293	0	0	0	5,652	04/01/2023
05568D-AA-2	BNSF Railway Co 2006-3 P-FIRST LIEN		04/01/2022	SINKING PAYMENT		187,753	187,753	181,482	179,672	0	8,082	0	8,082	0	187,753	0	0	0	5,015	04/01/2024
05584A-AA-8	BRE Grand Islander Times-HGVGI 2017-1A A		12/25/2022	PAYDOWN		346,294	346,294	346,206	346,240	0	54	0	54	0	346,294	0	0	0	5,216	05/25/2029
05586*-AA-9	BGS Spartanburg 2017 Trust Certificate		12/15/2022	SINKING PAYMENT		419,382	419,382	419,382	419,382	0	0	0	0	0	419,382	0	0	0	9,031	07/15/2032
05587*-AA-8	BGS Fedex Series 2017A Trust Certificate		12/15/2022	SINKING PAYMENT		373,284	373,284	373,284	373,297	0	(13)	0	(13)	0	373,284	0	0	0	8,826	03/15/2037
05588*-AA-7	BGS Huntersville 2017 Trust Certificate		12/15/2022	SINKING PAYMENT		331,778	331,778	331,778	331,779	0	0	0	0	0	331,778	0	0	0	8,104	05/15/2038
05590*-AA-9	BPHQ 2017 Trust Certificate BP Corp Nort		12/15/2022	SINKING PAYMENT		188,354	188,354	188,354	188,354	0	0	0	0	0	188,354	0	0	0	3,482	11/15/2032
05606D-AC-2	BX TRUST - BX 2022-PSB B-BX 2022-PSB B		12/15/2022	PAYDOWN		57,185	57,185	56,805	0	0	381	0	381	0	57,185	0	0	0	1,076	08/15/2039
05607Y-AC-5	B2R Mortgage Trust 2015-B2R 2015-1 A2		04/01/2022	PAYDOWN		3,656,868	3,656,868	3,666,768	3,656,318	0	550	0	550	0	3,656,868	0	0	0	148,174	05/01/2048
05607Y-AJ-0	B2R Mortgage Trust 2015-B2R 2015-1 B		12/01/2022	PAYDOWN		3,626,757	3,626,757	3,735,316	3,658,548	0	(31,792)	0	(31,792)	0	3,626,757	0	0	0	147,704	05/01/2048
05608V-AA-4	BX 2021-MFM1-BX 2021-MFM1 A		06/15/2022	JP MORGAN SECURITIES		8,181,250	8,500,000	8,500,000	8,500,000	0	0	0	0	0	8,500,000	0	(318,750)	(318,750)	47,115	01/15/2034
05608W-AN-4	BX Trust-BX 2021-SOAR E		06/15/2022	PAYDOWN		75,183	75,183	75,183	75,183	0	0	0	0	0	75,183	0	0	0	826	06/15/2038
05609K-AJ-8	BX Commercial Mortgage T-BX 2021-XL2 E		10/15/2022	PAYDOWN		366,425	366,425	364,592	364,615	0	1,810	0	1,810	0	366,425	0	0	0	3,071	10/15/2038
05609K-AL-3	BX Commercial Mortgage T-BX 2021-XL2 F		10/15/2022	PAYDOWN		916,062	916,062	911,478	911,558	0	4,504	0	4,504	0	916,062	0	0	0	9,047	10/15/2038
05609K-AN-9	BX Commercial Mortgage T-BX 2021-XL2 G		10/15/2022	PAYDOWN		1,099,274	1,099,274	1,093,774	1,093,844	0	5,431	0	5,431	0	1,099,274	0	0	0	13,325	10/15/2038
05723K-AG-5	Baker Hughes a GE Co LLC-SENIOR UNSECURE		06/13/2022	GOLDMAN		8,910,800	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(1,089,200)	(1,089,200)	190,023	11/07/2029
058927-AG-9	Banc of America Funding -BAFC 2006-A 3A2		12/01/2022	PAYDOWN		102,399	102,733	89,686	93,996	0	8,665	0	8,665	0	102,399	0	0	0	2,130	02/01/2036
058931-AD-8	Banc of America Funding -BAFC 2006-3 2A1		12/01/2022	PAYDOWN		79,119	95,084	77,547	70,989	0	20,843	0	20,843	0	79,119	0	0	0	2,601	03/01/2036
058931-AT-3	Banc of America Funding -BAFC 2006-3 4A1		12/01/2022	PAYDOWN		145,149	145,149	141,684	0	0	3,459	28	3,431	0	145,149	0	0	0	1,355	03/01/2036
058931-BL-9	Banc of America Funding -BAFC 2006-3 5A8		12/01/2022	PAYDOWN		15,977	16,854	17,107	15,018	0	1,791	0	1,791	0	15,977	0	0	0	527	03/01/2036
058933-AN-2	Banc of America Funding -BAFC 2006-D 5A1		12/01/2022	PAYDOWN		94,645	94,864	90,950	7,535	0	7,535	0	7,535	0	94,645	0	0	0	1,058	05/01/2036
05946X-R7-0	Banc of America Funding -BAFC 2005-7 2A2		12/25/2022	PAYDOWN		0	0	149,986	0	0	0	0	0	0	0	0	0	0	11,514	11/25/2035
05946X-XP-3	Banc of America Funding -BAFC 2005-E 3A1		12/01/2022	PAYDOWN		68,737	100,986	99,028	98,059	0	1,077	0	1,077	0	68,737	0	0	0	1,167	05/01/2035
05946X-Y7-2	Banc of America Funding -BAFC 2005-8 2A8		12/01/2022	PAYDOWN		31,722	42,475	42,075	(1,840)	0	(1,250)	590	(1,840)	0	31,722	0	0	0	1,141	01/01/2036
05946X-YV-9	Banc of America Funding -BAFC 2005-F 2A1		12/01/2022	PAYDOWN		271,654	269,271	250,922	272,099	0	(1,064)	0	(1,064)	0	271,654	0	0	0	3,294	09/01/2035
05948X-T2-7	Banc of America Mortgage-BOAMS 2004-A 2A		12/01/2022	PAYDOWN		62,574	62,574	61,635	59,824	0	2,750	0	2,750	0	62,574	0	0	0	919	02/01/2034
05949A-H8-6	Banc of America Mortgage-BOAMS 2005-A 2A		12/01/2022	PAYDOWN		175,213	175,213	169,409	169,825	0	5,389	0	5,389	0	175,213	0	0	0	1,442	02/01/2035
05949A-H9-4	Banc of America Mortgage-BOAMS 2005-A 2A		12/01/2022	PAYDOWN		218,811	218,811	213,067	214,498	0	4,312	0	4,312	0	218,811	0	0	0	1,807	02/01/2035
05949C-GW-0	Banc of America Mortgage-BOAMS 2005-8 A9		12/01/2022	PAYDOWN		79,849	94,928	92,427	86,668	0	6,742	0	6,742	0	79,849	0	0	0	2,655	09/01/2035
05949C-HM-1	Banc of America Mortgage-BOAMS 2005-I 1A		12/01/2022	PAYDOWN		118,641	126,687	110,768	122,160	0	12,353	9,769	2,584	0	118,641	0	0	0	1,879	10/01/2035

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
05949C-KS-4	Banc of America Mortgage-BOAMS 2005-J 2A		12/01/2022	PAYDOWN		2,491	2,493	2,436	2,556	0	(63)	0	(63)	0	2,491	0	0	0	31	11/01/2035
05949C-KX-3	Banc of America Mortgage-BOAMS 2005-J 4A		12/01/2022	PAYDOWN		333,310	333,833	289,346	299,887	0	49,839	16,001	33,838	0	333,310	0	0	0	6,783	11/01/2035
05949C-PP-5	Banc of America Mortgage-BOAMS 2005-L 4A		12/01/2022	PAYDOWN		1,067,590	954,491	903,186	899,524	0	67,411	0	67,411	0	1,067,590	0	0	0	9,652	01/01/2036
05949T-AX-7	Banc of America Funding -BAFC 2006-1 1A2		12/01/2022	PAYDOWN		580,811	580,811	633,965	0	0	(53,154)	0	(53,154)	0	580,811	0	0	0	21,148	01/01/2036
05950F-AD-7	Banc of America Funding -BAFC 2006-4 A4		12/25/2022	PAYDOWN		0	0	87,732	0	0	0	0	0	0	0	0	0	0	622	07/25/2036
05950M-AJ-9	Banc of America Funding -BAFC 2006-G 3A3		12/01/2022	PAYDOWN		1,229,791	1,229,791	1,179,062	1,106,929	0	122,862	0	122,862	0	1,229,791	0	0	0	17,968	07/01/2036
05950P-AF-0	Banc of America Funding -BAFC 2006-H 2A3		12/01/2022	PAYDOWN		290,247	301,849	264,408	230,919	0	69,797	0	69,797	0	290,247	0	0	0	3,455	09/01/2046
05950R-BG-3	Banc of America Funding -BAFC 2006-6 3A2		12/25/2022	PAYDOWN		0	0	11,576	0	0	0	0	0	0	0	0	0	0	107	08/25/2036
05950T-AC-9	Banc of America Mortgage-BOAMS 2006-B 2A		12/01/2022	PAYDOWN		104,556	110,534	107,399	108,170	0	(771)	0	(771)	0	86,269	0	18,287	18,287	1,938	11/01/2046
05951F-AB-0	Banc of America Funding -BAFC 2007-1 TA1		12/01/2022	PAYDOWN		8,375	8,478	8,054	6,603	0	1,877	0	1,877	0	8,375	0	0	0	255	01/01/2037
05951K-AN-3	Banc of America Funding -BAFC 2006-7 1A1		12/01/2022	PAYDOWN		38,449	71,338	63,749	66,318	0	6,686	3,927	2,759	0	38,449	0	0	0	3,116	09/01/2036
05951U-AC-5	Banc of America Funding -BAFC 2006-8T2 A		12/01/2022	PAYDOWN		4,137	4,097	3,876	3,085	0	1,020	0	1,020	0	4,137	0	0	0	98	10/01/2036
05951V-AV-1	Banc of America Funding -BAFC 2006-1 6A1		12/20/2022	PAYDOWN		154,364	148,367	122,322	121,573	0	28,036	0	28,036	0	154,364	0	0	0	941	12/20/2046
059522-AA-0	Banc of America Funding -BAFC 2007-C 6A1		12/20/2022	PAYDOWN		476,739	476,739	409,996	449,826	0	26,913	0	26,913	0	476,739	0	0	0	2,962	05/20/2047
059522-AU-6	Banc of America Funding -BAFC 2007-C 1A2		12/01/2022	PAYDOWN		619,865	637,410	587,864	581,281	0	54,249	0	54,249	0	619,865	0	0	0	7,178	05/01/2036
059523-AN-0	Banc of America Funding -BAFC 2007-5 4A3		12/25/2022	PAYDOWN		0	0	1,544,992	291,876	0	(25,590)	0	(25,590)	0	0	0	0	0	91,367	07/25/2037
059523-AX-8	Banc of America Funding -BAFC 2007-5 7A1		12/01/2022	PAYDOWN		82,143	116,427	67,927	73,527	0	28,208	0	28,208	0	82,143	0	0	0	505	07/01/2047
059526-AT-8	Banc of America Funding -BAFC 2007-D 3A1		12/01/2022	PAYDOWN		6,133	11,706	11,472	11,190	0	410	0	410	0	6,133	0	0	0	188	06/01/2037
059526-AV-3	Banc of America Funding -BAFC 2007-D 3A3		12/01/2022	PAYDOWN		7,599	11,696	11,462	11,181	0	612	0	612	0	7,599	0	0	0	208	06/01/2037
05953Y-AH-4	Banc of America Funding -BAFC 2007-4 TA1		12/01/2022	PAYDOWN		43,611	42,657	37,278	34,937	0	7,904	0	7,904	0	43,611	0	0	0	975	05/01/2037
05954D-AL-0	Banc of America Funding -BAFC 2007-E 6A1		12/01/2022	PAYDOWN		91,894	91,333	79,174	74,069	0	17,624	0	17,624	0	91,894	0	0	0	866	09/01/2037
05956E-AB-8	Banc of America Funding -BAFC 2010-R6 1A		12/01/2022	PAYDOWN		325,526	325,526	320,643	323,974	0	1,553	0	1,553	0	325,526	0	0	0	6,632	02/01/2035
05971J-AA-0	BancorpSouth Bank-SUBORDINATED		11/22/2022	VARIOUS		9,436,380	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(563,620)	(563,620)	413,073	11/20/2029
05990E-AD-2	Banc of America Funding -BAFC 2012-R6 2A		12/28/2022	PAYDOWN		491,893	465,840	405,401	448,397	0	22,962	0	22,962	0	491,893	0	0	0	1,488	07/26/2036
05990H-AH-6	Banc of America Funding -BAFC 2010-R2 1A		12/01/2022	PAYDOWN		276,321	276,313	174,830	156,047	0	116,183	0	116,183	0	276,321	0	0	0	7,370	08/01/2037
05990H-AQ-6	Banc of America Funding -BAFC 2010-R2 3A		12/01/2022	PAYDOWN		244,841	244,841	238,031	233,080	0	11,761	0	11,761	0	244,841	0	0	0	2,751	07/01/2035
05990H-AT-0	Banc of America Funding -BAFC 2010-R2 4A		12/01/2022	PAYDOWN		42,900	66,404	53,159	55,403	0	5,887	0	5,887	0	42,900	0	0	0	2,171	08/01/2036
06051G-GC-7	BANK OF AMERICA CORP-SUBORDINATED		10/28/2022	BOFAMLSEC		16,514,460	18,000,000	17,981,890	17,988,459	0	854	0	854	0	17,989,313	0	(1,474,853)	(1,474,853)	702,744	11/25/2027
06051G-HM-4	Bank of America Corp-SENIOR UNSECURED		10/28/2022	BOFAMLSEC		22,730,000	25,000,000	24,918,050	24,938,703	0	5,619	0	5,619	0	24,944,323	0	(2,214,323)	(2,214,323)	1,358,415	07/23/2029
06406H-CQ-0	Bank of New York Mellon -SENIOR UNSECURE		04/05/2022	VARIOUS		28,069,059	27,337,000	27,631,221	27,451,495	0	(6,587)	0	(6,587)	0	27,444,909	0	624,150	624,150	403,761	11/18/2025
06424@-AA-1	Bank Of America (Houston Pass-Thru Certi		12/15/2022	SINKING PAYMENT		359,687	359,687	361,897	361,475	0	(1,788)	0	(1,788)	0	359,687	0	0	0	6,777	12/31/2029
06652K-AA-1	BankUnited Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		16,318,500	15,000,000	14,853,900	14,935,740	0	591	0	591	0	14,936,331	0	1,382,169	1,382,169	127,969	11/17/2025
06652K-AB-9	BankUnited Inc-SUBORDINATED		12/16/2022	JEFFERIESLLC		7,535,620	8,000,000	7,922,960	7,933,010	0	6,355	0	6,355	0	7,939,365	0	(403,745)	(403,745)	414,840	06/11/2030
06652V-AA-7	Banner Corp-SUBORDINATED		10/28/2022	PIPERJAFFRAY		5,640,000	6,000,000	6,000,000	6,000,000	0	0	0	0	0	6,000,000	0	(360,000)	(360,000)	400,833	06/30/2030
06744D-AA-7	Barclays Mortgage Loan T-BARC 2022-NQM1		12/01/2022	PAYDOWN		70,486	70,486	69,170	0	0	1,316	0	1,316	0	70,486	0	0	0	629	07/01/2052
06744D-AB-5	Barclays Mortgage Loan T-BARC 2022-NQM1		12/01/2022	PAYDOWN		70,486	70,486	67,812	0	0	2,673	0	2,673	0	70,486	0	0	0	629	07/01/2052
06744D-AC-3	Barclays Mortgage Loan T-BARC 2022-NQM1		12/01/2022	PAYDOWN		198,206	198,206	188,147	10,060	0	10,060	0	10,060	0	198,206	0	0	0	1,119	07/01/2052
06744Y-AA-1	Barclays Mortgage Loan T-BARC 2022-INV1		12/01/2022	PAYDOWN		707,880	707,880	707,870	0	0	10	0	10	0	707,880	0	0	0	11,054	02/01/2062
07177M-AB-9	BAXALTA INC-SENIOR UNSECURED		01/18/2022	GOLDMAN		1,584,370	1,489,000	1,478,934	1,485,102	0	29	0	29	0	1,485,131	0	99,239	99,239	4,467	06/23/2025
071813-BY-4	Baxter International Inc-SENIOR UNSECURE		08/09/2022	JANE		7,275,600	7,500,000	7,508,575	(483)	0	(483)	0	(483)	0	7,507,006	0	(231,406)	(231,406)	255,104	04/01/2030
07274N-AL-7	Bayer US Finance II LLC-SENIOR UNSECURED		09/20/2022	JEFFERIESLLC		8,440,380	9,000,000	8,686,080	8,769,056	0	20,239	0	20,239	0	8,789,295	0	(348,915)	(348,915)	302,969	12/15/2028
07325D-AF-1	Bayview Financial Mortga-BAYV 2006-C 1A5		12/01/2022	PAYDOWN		97,852	97,852	93,356	101,844	0	504	4,496	(3,992)	0	97,852	0	0	0	1,548	11/01/2036
07325V-AE-4	Bayview Financial Acquis-BAYV 2007-A 1A4		12/01/2022	PAYDOWN		628,176	628,176	527,668	564,041	0	64,135	0	64,135	0	628,176	0	0	0	40,848	05/01/2037
07330M-AA-5	Branch Banking & Trust C-SUBORDINATED		03/29/2022	SUNTRUST CAPITAL MAR		12,227,280	12,000,000	11,970,720	11,987,310	0	755	0	755	0	11,988,065	0	239,215	239,215	190,000	10/30/2026
07330M-AB-3	BRANCH BANKING & TRUST-SUBORDINATED		04/06/2022	VARIOUS		38,295,960	38,000,000	37,974,540	37,990,762	0	1,403	0	1,403	0	37,992,166	0	303,794	303,794	767,090	09/16/2025
07331Q-AJ-6	Bayview Opportunity Mast-BOMFT 2016-SPL2		03/28/2022	PAYDOWN		7,000,000	7,000,000	6,160,000	6,323,484	0	676,516	0	676,516	0	7,000,000	0	0	0	96,250	06/28/2053
07331Q-AM-9	Bayview Opportunity Mast-BOMFT 2016-SPL2		03/28/2022	PAYDOWN		11,078,900	11,078,900	8,752,331	9,056,927	0	2,021,973	0	2,021,973	0	11,078,900	0	0	0	152,335	06/28/2053
07331U-AM-0	Bayview Opportunity Mast-BOMFT 2017-SPL5		08/30/2022	CALL 99.08		7,728,240	7,800,000	5,850,000	6,185,203	0	67,363	0	67,363	0	6,252,567	0	1,475,673	1,475,673	275,275	06/28/2057
07332H-AJ-5	Bayview Opportunity Mast-BOMFT 2016-SPL1		03/28/2022	PAYDOWN		10,978,200	10,978,200	9,880,380	10,091,375	0	886,825	0	886,825	0	10,978,200	0	0	0	150,950	04/28/2055

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
07332H-AL-0	Bayview Opportunity Mast-BOMFT 2016-SPL1		..03/28/2022	PAYDOWN		5,374,150	5,374,150	4,541,157	4,663,478	0	710,672	0	710,672	0	5,374,150	0	0	0	73,895	..04/28/2055
07384M-4K-5	Bear Stearns ARM Trust 2-BSARM 2004-10		..12/01/2022	PAYDOWN		130,951	130,951	122,112	123,120	0	7,831	0	7,831	0	130,951	0	0	0	2,499	..01/01/2035
07384M-Q8-8	Bear Stearns ARM Trust 2-BSARM 2004-3 2A		..12/01/2022	PAYDOWN		132,723	132,723	133,140	132,155	0	568	0	568	0	132,723	0	0	0	1,785	..07/01/2034
07384M-S7-8	Bear Stearns ARM Trust 2-BSARM 2004-5 2A		..12/01/2022	PAYDOWN		372,150	372,150	373,773	367,787	0	4,363	0	4,363	0	372,150	0	0	0	3,877	..07/01/2034
07384Y-KF-2	Bear Stearns Asset Backe-BSABS 2003-AC4		..12/01/2022	PAYDOWN		322,199	322,199	325,622	319,193	0	3,006	0	3,006	0	322,199	0	0	0	5,807	..09/01/2033
07384Y-TL-0	Bear Stearns Asset Backe-BSABS 2004-SD2		..12/01/2022	PAYDOWN		468,913	468,913	474,188	474,069	0	(5,156)	0	(5,156)	0	468,913	0	0	0	7,154	..03/01/2044
07386H-PD-7	Bear Stearns ALT-A Trust-BALTA 2004-12 2		..12/01/2022	PAYDOWN		77,284	77,284	70,908	70,494	0	6,790	0	6,790	0	77,284	0	0	0	809	..01/01/2035
07386H-QZ-7	Bear Stearns ALT-A Trust-BALTA 2005-2 2A		..12/01/2022	PAYDOWN		324,418	317,754	272,383	249,198	0	70,453	0	70,453	0	324,418	0	0	0	5,111	..04/01/2035
07386H-UG-4	Bear Stearns ALT-A Trust-BALTA 2005-5 21		..12/01/2022	PAYDOWN		364	364	331	334	0	30	0	30	0	364	0	0	0	6	..07/01/2035
07386X-AH-9	Bear Stearns ALT-A Trust-BALTA 2007-1 21		..12/01/2022	PAYDOWN		113,313	100,596	66,982	70,210	0	37,812	2,962	34,850	0	113,313	0	0	0	2,279	..01/01/2047
07386Y-AE-4	Bear Stearns ARM Trust 2-BSARM 2007-5 3A		..12/01/2022	PAYDOWN		556,956	528,908	510,396	510,285	0	19,683	0	19,683	0	556,956	0	0	0	7,246	..08/01/2047
073870-AG-2	Bear Stearns ALT-A Trust-BALTA 2007-2 2A		..10/01/2022	PAYDOWN		6,781	6,413	3,397	2,765	0	3,897	0	3,897	0	6,781	0	0	0	67	..04/01/2037
073877-CS-9	Bear Stearns Asset Backe-BSABS 2005-SD3		..12/27/2022	PAYDOWN		3,075,455	3,075,455	2,472,377	3,063,571	0	11,883	0	11,883	0	3,075,455	0	0	0	22,676	..07/01/2035
073879-GN-2	Bear Stearns Asset Backe-BSABS 2004-AC5		..12/25/2022	PAYDOWN		137,958	137,958	103,124	110,860	0	27,098	0	27,098	0	137,958	0	0	0	197	..10/25/2034
073880-AD-8	Bear Stearns ARM Trust 2-BSARM 2007-1 2A		..12/01/2022	PAYDOWN		116,323	125,505	121,607	124,375	0	3,904	3,417	487	0	116,323	0	0	0	1,743	..02/01/2047
073880-AG-1	Bear Stearns ARM Trust 2-BSARM 2007-1 3A		..12/01/2022	PAYDOWN		284,804	277,117	233,571	214,183	0	64,662	0	64,662	0	284,804	0	0	0	3,196	..02/01/2047
07389N-AC-9	Bear Stearns Asset Backe-BSABS 2006-SD4		..11/01/2022	PAYDOWN		133,482	133,482	119,842	104,004	0	29,478	0	29,478	0	133,482	0	0	0	1,930	..10/01/2036
07401C-AS-2	Bear Stearns ARM Trust 2-BSARM 2007-4 21		..12/01/2022	PAYDOWN		1,266,439	1,317,638	1,251,752	1,273,303	0	45,325	0	45,325	0	1,266,439	0	0	0	28,359	..06/01/2047
084423-AP-7	BERKLEY (WR) CORPORATION-SR UNSECURED		..09/20/2022	AMHERST SECURITIES		3,172,740	3,000,000	3,459,630	3,385,403	0	(12,609)	0	(12,609)	0	3,372,794	0	(200,054)	(200,054)	206,771	..02/15/2037
084659-AT-8	Berkshire Hathaway Energ-SENIOR UNSECURE		..03/17/2022	GOLDMAN		23,692,530	23,000,000	22,970,330	22,981,080	0	1,729	0	1,729	0	22,982,810	0	709,720	709,720	403,650	..04/15/2025
084659-AV-3	Berkshire Hathaway Energ-SENIOR UNSECURE		..06/06/2022	CITIGROUP GLOBAL MAR		8,757,270	9,000,000	8,998,560	9,000,609	0	(171)	0	(171)	0	9,000,437	0	(243,167)	(243,167)	298,775	..07/15/2030
09062X-AF-0	BIODEN INC-SR UNSECURED		..01/21/2022	DEUTSCHE BANK SECURI		10,659,000	10,000,000	9,976,400	9,990,562	0	234	0	234	0	9,990,796	0	668,204	668,204	146,250	..09/15/2025
09256B-AD-9	Blackstone Holdings Fina-SENIOR UNSECURE		..09/13/2022	JP MORGAN SECURITIES		34,139,438	34,225,000	35,723,610	34,442,185	0	(135,987)	0	(135,987)	0	34,306,199	0	(166,761)	(166,761)	1,761,161	..02/15/2023
09257W-AC-4	Blackstone Mortgage Trus-SENIOR UNSECURE		..08/16/2022	ODEON CAPITAL GROUP		1,997,500	2,000,000	1,970,000	1,992,070	0	4,081	0	4,081	0	1,996,152	0	1,348	1,348	87,875	..03/15/2023
09261L-AD-0	Blackstone Secured Lendi-SENIOR UNSECURE		..08/23/2022	BARCLAYS CAPITAL INC		11,834,040	12,000,000	11,948,520	11,972,886	0	11,001	0	11,001	0	11,983,887	0	(149,847)	(149,847)	487,883	..07/14/2023
09261X-AF-9	Blackstone Secured Lendi-SENIOR UNSECURE		..06/30/2022	EXCHANGE OFFER		9,987,433	10,000,000	9,986,100	9,986,545	0	889	0	889	0	9,987,433	0	0	0	213,750	..09/30/2028
093662-AG-9	Block Financial LLC-SENIOR UNSECURED		..01/18/2022	GOLDMAN		9,878,040	9,000,000	8,973,000	8,988,776	0	167	0	167	0	8,988,943	0	889,097	889,097	143,063	..10/01/2025
093662-AH-7	Block Financial LLC-SENIOR UNSECURED		..12/21/2022	JEFFERIESLLC		8,873,863	10,000,000	9,968,700	9,972,706	0	2,584	0	2,584	0	9,975,291	0	(1,101,428)	(1,101,428)	525,278	..08/15/2030
096630-AF-5	Boardwalk Pipelines LP-SENIOR UNSECURED		..01/18/2022	GOLDMAN		3,228,630	3,000,000	2,989,770	2,994,213	0	82	0	82	0	2,994,294	0	234,336	234,336	68,604	..07/15/2027
096630-AG-3	Boardwalk Pipelines LP-SENIOR UNSECURED		..10/28/2022	SUNTRUST CAPITAL MAR		8,212,950	9,000,000	8,992,170	8,994,086	0	1,050	0	1,050	0	8,995,135	0	(782,185)	(782,185)	429,600	..05/03/2029
09748R-AA-6	Bojangles Issuer LLC-BOJA 2020-1A A2		..10/20/2022	PAYDOWN		60,000	60,000	60,000	60,000	0	0	0	0	0	60,000	0	0	0	1,724	..10/20/2050
09774X-AU-6	BOMSC Trust 1999-A-BOM 1999-A A3		..12/01/2022	PAYDOWN		22,948	22,948	21,993	22,861	0	87	0	87	0	22,948	0	0	0	752	..03/01/2029
10112R-BA-1	Boston Properties LP-SENIOR UNSECURED		..10/28/2022	GOLDMAN		6,339,200	7,000,000	6,974,870	6,981,990	0	1,858	0	1,858	0	6,983,848	0	(644,648)	(644,648)	288,750	..12/01/2028
10510K-AC-1	BRAIMBLES USA INC-SR UNSECURED		..10/04/2022	DEUTSCHE BANK SECURI		23,616,905	24,700,000	24,774,003	24,731,017	0	(5,737)	0	(5,737)	0	24,725,280	0	(1,108,375)	(1,108,375)	970,761	..11/15/2032
10568K-AA-6	BRAVO Residential Fundin-BRAVO 2022-NQM2		..12/01/2022	PAYDOWN		584,480	584,480	584,471	584,471	0	9	0	9	0	584,480	0	0	0	5,191	..11/01/2061
10568K-AB-4	BRAVO Residential Fundin-BRAVO 2022-NQM2		..12/01/2022	PAYDOWN		261,297	261,297	261,293	261,293	0	4	0	4	0	261,297	0	0	0	3,026	..11/01/2061
10569F-AC-2	BRAVO Residential Fundin-BRAVO 2022-NQM1		..12/01/2022	PAYDOWN		2,607,503	2,607,503	2,605,529	2,605,529	0	1,974	0	1,974	0	2,607,503	0	0	0	37,442	..09/01/2061
10569J-AB-6	BRAVO Residential Fundin-BRAVO 2022-NQM3		..12/01/2022	PAYDOWN		39,228	39,228	39,072	39,072	0	155	0	155	0	39,228	0	0	0	358	..07/01/2062
110122-CP-1	Bristol-Myers Squibb Co-SENIOR UNSECURED		..05/19/2022	BNP PARIBAS		13,555,570	14,000,000	13,884,500	13,911,772	0	3,767	0	3,767	0	13,915,539	0	(359,969)	(359,969)	390,717	..07/26/2029
110122-DC-9	Bristol-Myers Squibb Co-SENIOR UNSECURED		..01/20/2022	GOLDMAN		7,032,640	6,595,000	6,324,143	6,438,730	0	2,654	0	2,654	0	6,441,383	0	591,261	591,261	112,871	..08/15/2025
110122-DE-5	Bristol-Myers Squibb Co-SENIOR UNSECURED		..01/18/2022	GOLDMAN		10,936,100	10,000,000	9,553,300	9,688,267	0	2,460	0	2,460	0	9,690,727	0	1,245,373	1,245,373	162,500	..02/20/2028
11042A-AA-2	BRITISH AIR 13-1 A PTT-FIRST LIEN		..09/20/2022	SINKING PAYMENT		1,256,509	1,256,509	1,257,959	1,257,119	0	(610)	0	(610)	0	1,256,509	0	0	0	29,168	..06/20/2024
11044M-AA-4	BRITISH AIR 20-1 A PPT-FIRST LIEN		..11/15/2022	SINKING PAYMENT		147,947	147,947	147,947	147,924	0	23	0	23	0	147,947	0	0	0	3,930	..11/15/2032
11133T-AD-5	Broadridge Financial Sol-SENIOR UNSECURE		..08/11/2022	JP MORGAN SECURITIES		5,483,825	6,097,000	5,176,787	5,315,043	0	51,136	0	51,136	0	5,366,179	0	117,646	117,646	124,751	..12/01/2029
11134L-AH-2	Broadcom Corp / Broadcom-SENIOR UNSECURE		..01/20/2022	GOLDMAN		8,536,212	8,039,000	7,718,568	7,831,219	0	2,380	0	2,380	0	7,833,598	0	702,614	702,614	163,543	..01/15/2027
11135F-BD-2	Broadcom Inc-SENIOR UNSECURED		..08/22/2022	BOFAILSEC		9,846,200	10,000,000	9,955,500	9,962,461	0	2,482	0	2,482	0	9,964,943	0	(118,743)	(118,743)	429,167	..04/15/2030
114259-AT-1	Brooklyn Union Gas Co/Th-SENIOR UNSECURE		..12/16/2022	JEFFERIESLLC		9,121,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(879,000)	(879,000)	500,303	..03/04/2029
115236-AA-9	BROWN & BROWN INC-SENIOR UNSECURED NOTE		..09/22/2022	WELLS FARGO		4,912,150	5,000,000	4,984,250	4,995,269	0	1,368	0	1,368	0	4,996,638	0	(84,488)	(84,488)	216,417	..09/15/2024
115236-AB-7	Brown & Brown Inc-SENIOR UNSECURED		..11/01/2022	GOLDMAN		9,172,000	10,000,000	9,984,000	9,988,013	0	1,262	0	1,262	0	9,989,275	0	(817,275)	(817,275)	510,000	..03/15/2029

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Iden-tification	Description	For-ign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con-sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor-tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date
11750*-AA-7 ..	Bryan Health (Kearney NE Senior Secured		.12/15/2022 ..	SINKING PAYMENT		..61,451	..61,451	..61,451	0	0	0	0	0	0	61,451	0	0	0	904	.12/15/2046 ..
118230-AN-1 ..	Buckeye Partners LP-SENIOR UNSECURED		.01/04/2022 ..	VARIOUS		..526,470	..505,000	..504,116	504,739	0	1	0	1	0	504,740	0	21,730	21,730	4,943	.10/15/2024 ..
120568-AZ-3 ..	Bunge Ltd Finance Corp-SENIOR UNSECURED		.01/18/2022 ..	GOLDMAN		..16,013,100	..15,000,000	..14,867,400	14,917,280	0	725	0	725	0	..14,918,005	0	..1,095,095	..1,095,095	..179,688	.09/25/2027 ..
120568-BA-7 ..	Bunge Ltd Finance Corp-SENIOR UNSECURED		.03/10/2022 ..	CALL 104.799337		..13,623,914	..13,000,000	..12,941,190	12,975,042	0	2,678	0	2,678	0	..12,977,720	0	646,194	646,194	..274,896	.03/15/2024 ..
12189L-AY-7 ..	Burlington Northern Sant-SENIOR UNSECURE		.03/30/2022 ..	CITIGROUP GLOBAL MAR		..10,235,300	..10,000,000	..9,978,200	9,991,520	0	659	0	659	0	..9,992,178	0	243,122	243,122	..212,917	.09/01/2025 ..
12189P-AJ-1 ..	Burlington Northern and -FIRST LIEN		.07/15/2022 ..	MATURITY		61,348	61,348	72,263	63,509	0	(2,162)	0	(2,162)	0	61,348	0	0	0	4,127	.07/15/2022 ..
12189P-AL-6 ..	BURLINGTN NO SF 02-1 TR-PASS THRU CERTS		.01/15/2022 ..	MATURITY		9,707	9,707	9,707	9,718	0	(11)	0	(11)	0	9,707	0	0	0	288	.01/15/2022 ..
12201P-AN-6 ..	BURLINGTON RESOURCES FIN-SR UNSECURED		.06/13/2022 ..	MARKETAXESS FINANCIA		..4,825,126	..4,055,000	..5,349,559	..5,001,371	0	(34,680)	0	(34,680)	0	..4,966,692	0	(141,566)	(141,566)	160,871	.12/01/2031 ..
12325J-AB-7 ..	Business Development Cor-SENIOR UNSECURE		.12/30/2022 ..	MATURITY		..22,500,000	..22,500,000	..22,375,350	22,472,934	0	27,066	0	27,066	0	..22,500,000	0	0	0	534,375	.12/30/2022 ..
12326Q-AA-2 ..	Business Jet Securities -BJETS 2019-1 A		.05/15/2022 ..	PAYDOWN		..5,130,548	..5,130,548	..5,130,370	5,130,554	0	(7)	0	(7)	0	..5,130,548	0	0	0	244,301	.07/15/2034 ..
12327A-AA-6 ..	Business Jet Securities -BJETS 2022-1A A		.12/15/2022 ..	PAYDOWN		856,459	856,459	830,899	0	0	25,560	0	25,560	0	856,459	0	0	0	12,673	.06/15/2037 ..
12327F-AA-5 ..	Business Jet Securities -BJETS 2020-1A A		.12/15/2022 ..	PAYDOWN		..2,134,129	..2,134,129	..2,134,098	2,134,108	0	21	0	21	0	..2,134,129	0	0	0	41,261	.11/15/2035 ..
12479R-AD-9 ..	CAPITAL AUTOMOTIVE REIT-SERIES 17-1A CLA		.03/15/2022 ..	PAYDOWN		..7,235,823	..7,235,823	..7,233,726	7,234,477	0	1,347	0	1,347	0	..7,235,823	0	0	0	71,499	.04/15/2047 ..
12479R-AE-7 ..	CAPITAL AUTOMOTIVE REIT-SERIES 17-1A CLA		.12/15/2022 ..	PAYDOWN		55,597	55,597	55,733	55,647	0	(50)	0	(50)	0	55,597	0	0	0	1,230	.04/15/2047 ..
124857-AQ-6 ..	ViacomCBS Inc-SENIOR UNSECURED		.01/18/2022 ..	GOLDMAN		..10,663,000	..10,000,000	..9,818,800	9,921,400	0	1,036	0	1,036	0	..9,922,436	0	740,564	..740,564	..205,556	.01/15/2026 ..
124857-AX-1 ..	ViacomCBS Inc-SENIOR UNSECURED		.01/18/2022 ..	GOLDMAN		..10,603,900	..10,000,000	..9,830,000	9,889,020	0	698	0	698	0	..9,889,718	0	714,182	714,182	..50,361	.06/01/2028 ..
12489W-EL-4 ..	Credit-Based Asset Servi-CBASS 2002-CB1		.01/25/2022 ..	PAYDOWN		7,146	7,146	6,288	7,155	0	(9)	0	(9)	0	7,146	0	0	0	0	.08/25/2030 ..
12489W-JQ-8 ..	Credit-Based Asset Servi-CBASS 2004-CB4		.12/01/2022 ..	PAYDOWN		6,646	6,646	6,629	6,590	0	56	0	56	0	6,646	0	0	0	112	.05/01/2035 ..
12505B-AD-2 ..	CBRE Services Inc-SENIOR UNSECURED		.01/18/2022 ..	GOLDMAN		..19,867,500	..18,000,000	..17,863,200	17,938,990	0	932	0	932	0	..17,939,922	0	1,927,578	1,927,578	..338,813	.03/01/2026 ..
12510H-AB-6 ..	CARS-DB4 LP-CAUTO 2020-1A A2		.12/15/2022 ..	PAYDOWN		..34,772	..34,772	..34,767	34,767	0	5	0	5	0	..34,772	0	0	0	473	.02/15/2050 ..
12510H-AC-4 ..	Capital Automotive Reit-CAUTO 2020-1A A3		.12/15/2022 ..	PAYDOWN		..36,221	..36,221	..36,196	36,192	0	29	0	29	0	..36,221	0	0	0	528	.02/15/2050 ..
12510H-AF-7 ..	Capital Automotive Reit-CAUTO 2020-1A A6		.12/15/2022 ..	PAYDOWN		3,917	3,917	3,559	358	0	358	0	358	0	3,917	0	25	0	25	.02/15/2050 ..
12510H-AM-2 ..	CARS-DB5 LP-CAUTO 2021-1A A3		.12/15/2022 ..	PAYDOWN		3,369	3,369	2,997	0	0	372	0	372	0	3,369	0	0	0	20	.08/15/2051 ..
12510H-AN-0 ..	Capital Automotive REIT-CAUTO 2021-1A A4		.12/15/2022 ..	PAYDOWN		26,250	26,250	25,042	6,560	0	1,208	0	1,208	0	26,250	0	0	0	437	.08/15/2051 ..
12510H-AQ-3 ..	Capital Automotive REIT-CAUTO 2022-1A A2		.12/15/2022 ..	PAYDOWN		375,000	375,000	373,437	1,563	0	1,563	0	1,563	0	375,000	0	0	0	4,960	.03/15/2052 ..
12527G-AH-6 ..	CF Industries Inc-FIRST LIEN		.01/20/2022 ..	BARCLAYS CAPITAL INC		..19,819,800	..18,200,000	..18,138,440	18,167,874	0	49	0	49	0	..18,167,924	0	1,651,876	1,651,876	..120,575	.12/01/2026 ..
12529L-AA-8 ..	CFMT 2020-HB4 LLC-CFMT 2020-HB4 A		.12/25/2022 ..	PAYDOWN		..14,863,770	..14,863,770	..14,863,762	14,754,451	0	109,319	0	109,319	0	..14,863,770	0	0	0	68,130	.12/26/2030 ..
12530M-AA-3 ..	CF Hippolyta LLC-SORT 2020-1 A1		.12/15/2022 ..	PAYDOWN		158,373	158,373	153,745	121,993	0	4,634	0	4,634	0	158,373	0	0	0	1,866	.07/15/2060 ..
12530M-AB-1 ..	CF Hippolyta Issuer LLC-SERIES 20-1 CLAS		.12/15/2022 ..	PAYDOWN		190,976	190,976	190,887	190,880	0	96	0	96	0	190,976	0	0	0	2,742	.07/15/2060 ..
12530M-AE-5 ..	CF Hippolyta LLC-SORT 2021-1A A1		.12/15/2022 ..	PAYDOWN		133,938	133,938	127,491	89,478	0	6,447	0	6,447	0	133,938	0	0	0	1,243	.03/15/2061 ..
12531W-BA-9 ..	CFCRE 2016-3 MTG TR PASS THRU CTF CL A-2		.12/01/2022 ..	PAYDOWN		502,887	502,887	507,910	504,723	0	(1,836)	0	(1,836)	0	502,887	0	0	0	10,764	.01/01/2048 ..
12541W-AA-8 ..	CH Robinson Worldwide In-SENIOR UNSECURE		.01/18/2022 ..	GOLDMAN		..13,240,320	..12,000,000	..11,928,240	11,951,985	0	333	0	333	0	..11,952,318	0	1,288,002	1,288,002	133,000	.04/15/2028 ..
125431-AH-9 ..	CHL Mortgage Pass-Through-CIHL 2006-HYB4		.12/01/2022 ..	PAYDOWN		138,406	137,868	134,858	75,772	0	62,131	0	62,131	0	138,406	0	0	0	1,956	.06/01/2036 ..
12543X-AD-8 ..	CHL Mortgage Pass-Through-CIHL 2006-19 1A		.11/01/2022 ..	PAYDOWN		157,539	156,496	143,937	103,250	0	53,407	0	53,407	0	157,539	0	0	0	3,600	.01/01/2037 ..
12544B-AE-3 ..	CHL Mortgage Pass-Throug-CIHL 2007-HY5 3		.12/01/2022 ..	PAYDOWN		108,887	110,313	85,855	86,648	0	23,299	0	23,299	0	108,887	0	0	0	1,399	.09/01/2037 ..
12544D-AG-4 ..	CHL Mortgage Pass-Through-CIHL 2007-14 A7		.12/01/2022 ..	PAYDOWN		7,334	8,783	6,136	0	0	2,160	198	1,962	0	7,334	0	0	0	232	.09/01/2037 ..
12544H-BF-6 ..	CHL Mortgage Pass-Through-CIHL 2007-HY7 A		.12/01/2022 ..	PAYDOWN		30,936	12,411	15,514	15,514	0	12,125	0	12,125	0	30,936	0	0	0	264	.11/01/2037 ..
12545E-AK-2 ..	CHL Mortgage Pass-Throug-CIHL 2007-J2 2A		.10/01/2022 ..	PAYDOWN		46,341	46,353	24,888	0	0	21,114	344	20,770	0	46,341	0	0	0	(106,185)	.07/01/2037 ..
12546Y-AA-9 ..	CHNGE Mortgage Trust-CHNGE 2022-2 A1		.12/01/2022 ..	PAYDOWN		..5,642,109	..5,642,109	..5,642,061	0	0	49	0	49	0	..5,642,109	0	0	0	101,685	.03/01/2067 ..
12551L-AA-4 ..	CHNGE Mortgage Trust 202-CHNGE 2022-4 A1		.12/01/2022 ..	PAYDOWN		358,275	358,275	351,077	0	0	7,198	0	7,198	0	358,275	0	0	0	2,468	.10/01/2057 ..
125523-AH-3 ..	Cigna Corp-SENIOR UNSECURED		.07/06/2022 ..	VARIOUS		..22,933,820	..23,000,000	..22,778,710	22,841,592	0	10,346	0	10,346	0	..22,851,937	0	81,883	81,883	733,542	.10/15/2028 ..
125523-BZ-2 ..	Cigna Corp-SENIOR UNSECURED		.01/20/2022 ..	GOLDMAN		..18,511,470	..17,000,000	..16,912,540	16,961,055	0	824	0	824	0	..16,961,879	0	1,549,591	1,549,591	316,625	.02/25/2026 ..
125523-CB-4 ..	Cigna Corp-SENIOR UNSECURED		.06/21/2022 ..	MORGAN		..8,573,580	..9,000,000	..8,996,310	8,998,580	0	80	0	80	0	..8,998,661	0	(425,081)	(425,081)	248,200	.03/01/2027 ..
125585-AF-6 ..	CIT Group Securitization-CIT 1995-1 A5		.08/15/2022 ..	VARIOUS		11,221	11,221	11,228	37,936	0	(26,715)	0	(26,715)	0	11,221	0	0	0	564	.08/15/2022 ..
12559M-AG-7 ..	CIT Home Equity Loan Tru-CITHE 2002-1 AF		.12/01/2022 ..	PAYDOWN		57,914	57,914	59,290	57,103	0	811	0	811	0	57,914	0	0	0	1,713	.02/01/2030 ..
12563L-AS-6 ..	CLI Funding VI LLC-2020-3A A		.12/18/2022 ..	PAYDOWN		453,333	453,333	453,240	453,244	0	89	0	89	0	453,333	0	0	0	5,037	.10/18/2045 ..
12564E-AA-0 ..	CIM Trust 2021-J2-CIM 2021-J2 A1		.12/01/2022 ..	PAYDOWN		..2,344,980	..2,344,980	..2,371,361	2,371,438	0	(26,458)	0	(26,458)	0	..2,344,980	0	0	0	25,918	.04/01/2051 ..
12564K-AA-6 ..	CIM Trust 2021-J1-CIM 2021-J1 A1		.12/01/2022 ..	PAYDOWN		..1,195,854	..1,195,854	..1,227,245	1,227,087	0	(31,233)	0	(31,233)	0	..1,195,854	0	0	0	11,540	.03/01/2051 ..
12565K-AA-5 ..	CLI Funding VIII LLC-CLIF 2021-1A A		.12/18/2022 ..	PAYDOWN		36,376	36,376	31,140	0	0	5,236	0	5,236	0	36,376	0	0	0	50	.02/18/2046 ..

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
12566U-AE-4	CitiMortgage Alternative-CMALT 2007-A2 1		12/01/2022	PAYDOWN		65,193	79,029	79,026	79,893	0	(777)	867	(1,644)	0	65,193	0	0	0	1,953	02/01/2037
12566U-AN-4	CitiMortgage Alternative-CMALT 2007-A2 1		12/01/2022	PAYDOWN		106,056	123,884	115,306	120,525	0	6,582	5,321	1,261	0	106,056	0	0	0	3,062	02/01/2037
12566V-AE-2	CitiMortgage Alternative-CMALT 2007-A4 1		12/01/2022	PAYDOWN		84,571	93,619	81,783	80,154	0	12,109	0	12,109	0	84,571	0	0	0	2,220	04/01/2037
12566X-AM-0	CitiMortgage Alternative-CMALT 2007-A7 2		12/01/2022	PAYDOWN		126,118	137,768	136,956	137,823	0	288	867	(579)	0	126,118	0	0	0	3,007	07/01/2037
12569C-AB-7	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		12/01/2022	PAYDOWN		114,546	114,546	114,285	0	0	261	0	261	0	114,546	0	0	0	1,490	06/01/2067
12569C-AC-5	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		12/01/2022	PAYDOWN		238,637	238,637	235,243	0	0	3,394	0	3,394	0	238,637	0	0	0	3,103	06/01/2067
12575A-AB-3	CMFT Net Lease-CIMNL 2021-1 A2		12/20/2022	PAYDOWN		211,475	211,475	211,383	211,384	0	91	0	91	0	211,475	0	0	0	2,944	07/20/2051
12585E-AA-4	CHP (Fresno Ca) Trust Certificate		12/15/2022	SINKING PAYMENT		1,509,372	1,509,372	1,509,372	1,509,373	0	0	0	0	0	1,509,372	0	0	0	25,869	02/15/2028
12591K-AD-7	COMM 2013-CCRE12 Mortgage-COMM 2013-CR12		12/01/2022	PAYDOWN		501,587	501,587	506,580	502,075	0	(488)	0	(488)	0	501,587	0	0	0	12,964	10/01/2046
12593F-BC-7	COMM 2015-LC21 Mortgage -COMM 2015-LC21		09/01/2022	PAYDOWN		1,178,893	1,178,893	1,186,583	1,181,520	0	(2,628)	0	(2,628)	0	1,178,893	0	0	0	23,927	07/01/2048
12598R-AA-1	COLT 2021-5 Mortgage Loa-COLT 2021-5 A1		12/01/2022	PAYDOWN		213,374	213,374	193,370	0	0	20,004	0	20,004	0	213,374	0	0	0	1,310	11/01/2066
126117-AT-7	CNA FINANCIAL CORP-SR UNSECURED		01/18/2022	GOLDMAN		7,618,660	7,000,000	7,037,590	7,017,498	0	(136)	0	(136)	0	7,017,362	0	601,298	601,298	121,625	03/01/2026
126117-AV-2	CNA Financial Corp-SENIOR UNSECURED		12/07/2022	SUNTRUST CAPITAL MAR		9,257,050	10,000,000	9,990,200	9,992,522	0	903	0	903	0	9,993,425	0	(736,375)	(736,375)	430,625	05/01/2029
12624K-AD-8	COMM 2012-CCRE2 MORTGAGE-COMM 2012-CR2 A		06/01/2022	PAYDOWN		8,000,000	8,000,000	8,199,483	8,003,257	0	(3,257)	0	(3,257)	0	8,000,000	0	0	0	72,045	08/01/2045
12625U-BF-9	COMM 2013-CCRE9 Mortgage-COMM 2013-CR9 A		12/01/2022	PAYDOWN		6,796,346	6,796,346	7,041,256	6,832,174	0	(35,828)	0	(35,828)	0	6,796,346	0	0	0	210,730	07/01/2045
12626G-AF-0	COMM 2013-LC13 Mortgage -COMM 2013-LC13		10/01/2022	PAYDOWN		62,520	62,520	64,513	62,836	0	(316)	0	(316)	0	62,520	0	0	0	1,825	08/01/2046
12628L-AD-2	CSAB Mortgage-Backed Tru-CSAB 2006-4 A2A		12/01/2022	PAYDOWN		166,646	166,646	48,513	51,301	0	117,828	2,483	115,345	0	166,646	0	0	0	1,254	12/01/2036
12632Q-AW-3	COMM 2014-CCRE18 Mortgage-COMM 2014-CR18		05/01/2022	PAYDOWN		113,228	113,228	114,355	113,383	0	(156)	0	(156)	0	113,228	0	0	0	1,675	07/01/2047
12636Y-AC-6	CRH America Finance Inc-SENIOR UNSECURED		01/21/2022	GOLDMAN		13,817,541	12,736,000	12,175,301	12,338,516	0	3,703	0	3,703	0	12,342,219	0	1,475,322	1,475,322	155,114	04/04/2028
12638P-AB-5	CSMC Mortgage-Backed Tru-CSMC 2007-3 1A1		12/01/2022	PAYDOWN		116,007	116,007	41,146	41,264	0	74,939	196	74,743	0	116,007	0	0	0	845	04/01/2037
12640W-AC-4	CSMC Series 2008-3R-CSMC 2008-3R 1A2		12/01/2022	PAYDOWN		163,143	164,507	150,843	144,928	0	19,135	0	19,135	0	163,143	0	0	0	2,979	07/01/2037
126416-AB-2	CSMC 2022-NQM1-CSMC 2022-NQM1 A2		12/01/2022	PAYDOWN		1,259,580	1,259,580	1,259,560	0	0	20	0	20	0	1,259,580	0	0	0	13,417	11/01/2066
126416-AC-0	CSMC 2022-NQM1-CSMC 2022-NQM1 A3		12/01/2022	PAYDOWN		3,084,590	3,084,590	3,084,579	0	0	11	0	11	0	3,084,590	0	0	0	34,173	11/01/2066
12641P-AF-1	CSMC Series 2009-6R-CSMC 2009-6R 1A4		01/10/2022	CREDIT SUISSE SECURI		276,176	259,678	276,176	276,176	0	0	0	0	0	276,176	0	0	0	1,742	01/01/2036
12641P-AG-9	CSMC Series 2009-6R-CSMC 2009-6R 1A5		01/10/2022	CREDIT SUISSE SECURI		862,581	800,000	862,581	862,581	0	(331)	0	(331)	0	862,250	0	331	331	5,367	01/01/2036
12641P-AH-7	CSMC Series 2009-6R-CSMC 2009-6R 1A6		01/10/2022	CREDIT SUISSE SECURI		891,113	800,000	891,113	891,113	0	(486)	0	(486)	0	890,627	0	486	486	5,367	01/01/2036
12641P-AN-4	CSMC Series 2009-6R-CSMC 2009-6R 2A3		01/01/2022	PAYDOWN		255,158	255,158	266,750	266,750	0	(11,592)	0	(11,592)	0	255,158	0	0	0	12,060	10/01/2035
12641P-AP-9	CSMC Series 2009-6R-CSMC 2009-6R 2A4		01/10/2022	CREDIT SUISSE SECURI		1,259,717	1,191,680	1,259,717	1,259,717	0	(367)	0	(367)	0	1,259,350	0	367	367	2,185	10/01/2035
12641P-AQ-7	CSMC Series 2009-6R-CSMC 2009-6R 2A5		01/10/2022	CREDIT SUISSE SECURI		1,420,148	1,787,520	1,420,148	1,420,148	0	1,817	0	1,817	0	1,421,965	0	(1,817)	(1,817)	3,277	10/01/2035
12641P-AR-5	CSMC Series 2009-6R-CSMC 2009-6R 2A6		01/10/2022	CREDIT SUISSE SECURI		442,728	890,801	442,728	442,728	0	0	0	0	0	442,728	0	0	0	1,633	10/01/2035
12641P-BB-9	CSMC Series 2009-6R-CSMC 2009-6R 4A5		01/10/2022	VARIOUS		679,971	829,018	662,430	662,430	0	18,279	0	18,279	0	680,709	0	(738)	(738)	5,029	11/01/2035
12641P-BC-7	CSMC Series 2009-6R-CSMC 2009-6R 4A6		01/10/2022	VARIOUS		80,609	139,720	73,652	73,652	0	7,223	0	7,223	0	80,876	0	(267)	(267)	848	11/01/2035
12641P-BP-8	CSMC Series 2009-6R-CSMC 2009-6R 6A4		01/10/2022	VARIOUS		759,397	775,231	758,230	758,230	0	1,249	0	1,249	0	759,479	0	(82)	(82)	1,324	09/01/2035
12641P-BQ-6	CSMC Series 2009-6R-CSMC 2009-6R 6A5		01/10/2022	VARIOUS		509,766	582,520	504,402	504,402	0	5,734	0	5,734	0	510,136	0	(370)	(370)	(4,296)	09/01/2035
12641P-BR-4	CSMC Series 2009-6R-CSMC 2009-6R 6A6		01/10/2022	VARIOUS		266,695	442,993	253,697	253,697	0	13,811	0	13,811	0	267,508	0	(813)	(813)	(12,186)	09/01/2035
12641P-CJ-1	CSMC Series 2009-6R-CSMC 2009-6R 9A4		01/01/2022	VARIOUS		9,862	9,862	9,683	9,683	0	179	0	179	0	9,862	0	0	0	67	04/01/2036
12641P-CK-8	CSMC Series 2009-6R-CSMC 2009-6R 9A5		01/01/2022	VARIOUS		0	90,450	85,504	85,504	0	0	0	0	0	85,504	0	(85,504)	(85,504)	208	04/01/2036
12641Q-AA-0	CSMC Series 2009-7R-CSMC 2009-7R 3A3		01/10/2022	VARIOUS		103,196	142,339	103,196	103,196	0	167	0	167	0	103,363	0	(167)	(167)	1,295	09/01/2037
12641Q-AF-9	CSMC Series 2009-7R-CSMC 2009-7R 4A2		01/10/2022	CREDIT SUISSE SECURI		525,438	726,966	525,438	525,438	0	865	0	865	0	526,303	0	(865)	(865)	5,089	07/01/2037
12641Q-AG-7	CSMC Series 2009-7R-CSMC 2009-7R 4A3		01/10/2022	CREDIT SUISSE SECURI		496,063	910,850	496,063	496,063	0	1,679	0	1,679	0	497,742	0	(1,679)	(1,679)	6,376	07/01/2037
12641Q-AH-5	CSMC Series 2009-7R-CSMC 2009-7R 4A4		01/10/2022	CREDIT SUISSE SECURI		496,063	910,850	496,063	496,063	0	1,679	0	1,679	0	497,742	0	(1,679)	(1,679)	6,376	07/01/2037
12641Q-AJ-1	CSMC Series 2009-7R-CSMC 2009-7R 4A5		01/01/2022	VARIOUS		470,801	555,913	195,534	195,534	0	275,266	0	275,266	0	470,801	0	0	0	(271,375)	07/01/2037
12641Q-AQ-5	CSMC Series 2009-7R-CSMC 2009-7R 5A3		01/01/2022	VARIOUS		603,870	603,870	635,687	635,687	0	(31,818)	0	(31,818)	0	603,870	0	0	0	32,925	11/01/2035
12641Q-AR-3	CSMC Series 2009-7R-CSMC 2009-7R 5A4		01/10/2022	CREDIT SUISSE SECURI		756,552	1,020,000	756,552	756,552	0	1,275	0	1,275	0	757,827	0	(1,275)	(1,275)	1,870	11/01/2035
12641Q-AS-1	CSMC Series 2009-7R-CSMC 2009-7R 5A5		01/10/2022	CREDIT SUISSE SECURI		249,374	527,907	249,374	249,374	0	1,225	0	1,225	0	250,599	0	(1,225)	(1,225)	968	11/01/2035
12641Q-AX-0	CSMC Series 2009-7R-CSMC 2009-7R 6A2		01/10/2022	CREDIT SUISSE SECURI		1,765,847	1,648,895	1,765,847	1,765,847	0	(636)	0	(636)	0	1,765,211	0	636	636	3,023	09/01/2035
12641Q-AY-8	CSMC Series 2009-7R-CSMC 2009-7R 6A3		01/14/2022	VARIOUS		1,292,529	1,964,568	1,292,529	1,292,529	0	3,195	0	3,195	0	1,295,724	0	(3,195)	(3,195)	3,602	09/01/2035
12641Q-BF-8	CSMC Series 2009-7R-CSMC 2009-7R 7A4		01/01/2022	VARIOUS		1,224,114	1,966,448	1,224,114	1,224,114	0	3,317	0	3,317	0	1,227,431	0	(3,317)	(3,317)	3,482	12/01/2036
12641Q-BQ-4	CSMC Series 2009-7R-CSMC 2009-7R 8A6		01/01/2022	VARIOUS		508,464	508,464	244,063	244,063	0	264,401	0	264,401	0	508,464	0	0	0	(264,062)	05/01/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
126410-BX-9	CSMC Series 2009-7R-CSMC 2009-7R 9A4		.01/10/2022	VARIOUS		.633,151	.646,217	.631,793	.631,793	0	1,426	0	1,426	0	.633,219	0	(68)	(68)	3,852	.08/01/2035
126410-CJ-9	CSMC Series 2009-7R-CSMC 2009-7R 11A2		.01/01/2022	VARIOUS		1,938,784	1,938,784	1,908,748	1,908,748	0	30,035	0	30,035	0	1,938,784	0	0	0	(17,595)	.02/01/2035
126410-CS-9	CSMC Series 2009-7R-CSMC 2009-7R 12A5		.01/01/2022	VARIOUS		.976,510	.976,518	.629,854	.629,854	0	346,656	0	346,656	0	.976,510	0	0	0	(340,105)	.01/01/2036
126410-CX-8	CSMC Series 2009-7R-CSMC 2009-7R 13A2		.01/01/2022	PAYDOWN		.294,463	.294,463	.260,165	.260,165	0	34,298	0	34,298	0	.294,463	0	0	0	0	.06/01/2037
126410-CY-6	CSMC Series 2009-7R-CSMC 2009-7R 13A3		.01/10/2022	CREDIT SUISSE SECURI		.175,122	.268,340	.175,122	.122,164	0	.393	0	.393	0	.175,515	0	(393)	(393)	537	.06/01/2037
126410-CZ-3	CSMC Series 2009-7R-CSMC 2009-7R 13A4		.01/10/2022	CREDIT SUISSE SECURI		.167,334	.374,720	.167,334	.167,334	0	.815	0	.815	0	.168,149	0	(815)	(815)	749	.06/01/2037
126410-DN-9	CSMC Series 2009-7R-CSMC 2009-7R 15A2		.01/10/2022	CREDIT SUISSE SECURI		.284,216	.257,237	.284,216	.284,216	0	(130)	0	(130)	0	.284,086	0	130	130	772	.04/26/2037
126410-DP-4	CSMC Series 2009-7R-CSMC 2009-7R 15A3		.01/10/2022	CREDIT SUISSE SECURI		.90,728	.143,106	.90,728	.90,728	0	.218	0	.218	0	.90,946	0	(218)	(218)	429	.04/26/2037
126410-EB-4	CSMC Series 2009-7R-CSMC 2009-7R 17A2		.01/10/2022	CREDIT SUISSE SECURI		.499,178	.510,612	.499,178	.499,184	0	.63	0	.63	0	.499,246	0	(68)	(68)	61	.03/26/2037
126410-EC-2	CSMC Series 2009-7R-CSMC 2009-7R 17A3		.01/10/2022	CREDIT SUISSE SECURI		.450,067	.540,000	.450,067	.450,108	0	.490	0	.490	0	.450,598	0	(531)	(531)	62	.03/26/2037
126410-ED-0	CSMC Series 2009-7R-CSMC 2009-7R 17A4		.01/10/2022	CREDIT SUISSE SECURI		.14,155	.540,000	.14,155	.14,315	0	2,079	0	2,079	0	.16,395	0	(2,240)	(2,240)	64	.03/26/2037
126410-EE-8	CSMC Series 2009-7R-CSMC 2009-7R 17A5		.01/10/2022	CREDIT SUISSE SECURI		.12,558	.600,000	.12,558	.12,731	0	2,288	0	2,288	0	.15,019	0	(2,461)	(2,461)	71	.03/26/2037
126410-EF-5	CSMC Series 2009-7R-CSMC 2009-7R 17A6		.01/10/2022	CREDIT SUISSE SECURI		.25,115	1,200,000	.25,115	.25,463	0	4,575	0	4,575	0	.30,038	0	(4,923)	(4,923)	143	.03/26/2037
126410-EL-2	CSMC Series 2009-7R-CSMC 2009-7R 18A2		.01/01/2022	VARIOUS		.325,330	.325,330	.319,079	.319,079	0	6,251	0	6,251	0	.325,330	0	0	0	419	.03/01/2037
126410-EM-0	CSMC Series 2009-7R-CSMC 2009-7R 18A3		.01/10/2022	CREDIT SUISSE SECURI		.437,472	.540,000	.437,472	.437,472	0	.462	0	.462	0	.437,934	0	(462)	(462)	1,753	.03/01/2037
126410-EN-8	CSMC Series 2009-7R-CSMC 2009-7R 18A4		.01/10/2022	CREDIT SUISSE SECURI		.194,121	.540,000	.194,121	.194,121	0	1,344	0	1,344	0	.195,465	0	(1,344)	(1,344)	1,753	.03/01/2037
126410-EP-3	CSMC Series 2009-7R-CSMC 2009-7R 18A5		.01/10/2022	CREDIT SUISSE SECURI		.113,849	.600,000	.113,849	.43,945	0	1,814	0	1,814	0	.115,663	0	(1,814)	(1,814)	1,948	.03/01/2037
126410-EQ-1	CSMC Series 2009-7R-CSMC 2009-7R 18A6		.01/10/2022	CREDIT SUISSE SECURI		.97,822	1,200,000	.97,822	.97,822	0	0	0	0	0	.97,822	0	0	0	3,896	.03/01/2037
126410-EW-8	CSMC Series 2009-7R-CSMC 2009-7R 1A2		.01/01/2022	VARIOUS		.396,485	.396,485	.419,366	.419,366	0	(22,881)	0	(22,881)	0	.396,485	0	0	0	25,540	.03/01/2036
126410-EX-6	CSMC Series 2009-7R-CSMC 2009-7R 1A3		.01/10/2022	CREDIT SUISSE SECURI		.388,566	.361,350	.388,566	.388,566	0	(142)	0	(142)	0	.388,424	0	.142	.142	2,424	.03/01/2036
126410-EY-4	CSMC Series 2009-7R-CSMC 2009-7R 1A4		.01/10/2022	CREDIT SUISSE SECURI		.637,601	.722,700	.637,601	.637,601	0	.417	0	.417	0	.638,018	0	(417)	(417)	4,848	.03/01/2036
12641T-AB-2	CSMC Series 2009-5R-CSMC 2009-5R 1A2		.12/01/2022	PAYDOWN		.936,758	.940,319	.716,854	.683,407	0	.255,397	0	.255,397	0	.936,758	0	0	0	9,071	.06/01/2036
12646U-AK-4	CSMC Trust 2013-1VR1-CSMC 2013-1VR1 A2		.12/01/2022	PAYDOWN		.374,333	.374,333	.350,001	.354,333	0	.20,000	0	.20,000	0	.374,333	0	0	0	4,358	.03/01/2043
12646W-AH-7	CSMC Trust 2013-1VR2-CSMC 2013-1VR2 A2		.12/01/2022	PAYDOWN		.367,690	.367,690	.343,560	.347,566	0	.20,124	0	.20,124	0	.367,690	0	0	0	3,394	.04/01/2043
12646X-AJ-1	CSMC Trust 2013-1VR3-CSMC 2013-1VR3 A2		.12/01/2022	PAYDOWN		.336,135	.336,135	.318,278	.321,000	0	.15,135	0	.15,135	0	.336,135	0	0	0	3,255	.05/01/2043
12647G-BZ-0	CSMC Trust 2013-1VR4-CSMC 2013-1VR4 A20		.12/01/2022	PAYDOWN		.97,094	.97,094	.94,834	.95,209	0	1,885	0	1,885	0	.97,094	0	0	0	1,320	.07/01/2043
12647H-BC-9	CSMC Trust 2013-8R-CSMC 2013-8R 4A2		.12/29/2022	PAYDOWN		.2,513,428	.2,417,714	.1,754,803	.2,138,345	0	.313,938	0	.313,938	0	.2,513,428	0	0	0	6,919	.12/27/2036
12647P-AK-4	CSMC Trust 2013-7-CSMC 2013-7 A6		.12/01/2022	PAYDOWN		.504,908	.504,908	.486,605	.488,467	0	.16,441	0	.16,441	0	.504,908	0	0	0	8,267	.08/01/2043
12648H-BB-0	CSMC Trust 2014-1VR2-CSMC 2014-1VR2 B1		.11/01/2022	PAYDOWN		.470,698	.470,698	.461,284	.461,664	0	9,034	0	9,034	0	.470,698	0	0	0	8,842	.04/01/2044
12648T-AQ-2	CSMC Trust 2014-1VR3-CSMC 2014-1VR3 B1		.12/01/2022	PAYDOWN		.542,193	.542,193	.539,142	.539,347	0	2,845	0	2,845	0	.542,193	0	0	0	9,136	.07/01/2044
12659Y-AB-0	COLT 2022-3 Mortgage Loa-COLT 2022-3 A2		.12/01/2022	PAYDOWN		.1,259,618	.1,259,618	.1,259,601	.1,259,601	0	.18	0	.18	0	.1,259,618	0	0	0	19,757	.06/01/2028
12659Y-AC-8	COLT 2022-3 Mortgage Loa-COLT 2022-3 A3		.12/01/2022	PAYDOWN		.1,007,694	.1,007,694	.1,007,170	.1,007,170	0	.525	0	.525	0	.1,007,694	0	0	0	15,391	.06/01/2028
12660B-AB-7	Credit Suisse Mortgage C-CSMC 2022-ATH1		.12/01/2022	PAYDOWN		.1,747,514	.1,747,514	.1,747,488	.1,747,488	0	.26	0	.26	0	.1,747,514	0	0	0	21,766	.01/01/2067
12660B-AC-5	Credit Suisse Mortgage C-CSMC 2022-ATH1		.12/01/2022	PAYDOWN		.2,597,707	.2,597,707	.2,597,683	.2,597,683	0	.23	0	.23	0	.2,597,707	0	0	0	33,819	.01/01/2067
12663G-AA-5	COLT 2022-7 Mortgage Loa-COLT 2022-7 A1		.12/01/2022	PAYDOWN		.255,151	.255,151	.255,149	.255,149	0	.2	0	.2	0	.255,151	0	0	0	2,925	.04/01/2067
12663G-AB-3	COLT 2022-7 Mortgage Loa-COLT 2022-7 A2		.12/01/2022	PAYDOWN		.242,394	.242,394	.242,393	.242,393	0	.0	0	.0	0	.242,394	0	0	0	3,245	.04/01/2067
12663G-AC-1	COLT 2022-7 Mortgage Loa-COLT 2022-7 A3		.12/01/2022	PAYDOWN		.127,576	.127,576	.126,707	.126,707	0	.868	0	.868	0	.127,576	0	0	0	1,594	.04/01/2067
12664A-AE-9	CSMC 2022-ATH3-CSMC 2022-ATH3 A2		.12/01/2022	PAYDOWN		.270,646	.270,646	.270,643	.270,643	0	.3	0	.3	0	.270,646	0	0	0	3,663	.08/01/2067
12664A-AF-6	CSMC 2022-ATH3-CSMC 2022-ATH3 A3		.12/01/2022	PAYDOWN		.282,073	.282,073	.282,072	.282,072	0	.1	0	.1	0	.282,073	0	0	0	3,907	.08/01/2067
126650-AN-0	CVS Pass-Through Trust-FIRST LIEN		.12/10/2022	SINKING PAYMENT		.340,794	.340,794	.348,556	.342,085	0	(1,291)	0	(1,291)	0	.340,794	0	0	0	11,614	.10/10/2033
126650-AW-0	CVS Pass-Through Trust-FIRST LIEN		.12/10/2022	SINKING PAYMENT		.252,687	.252,687	.252,686	.252,697	0	(11)	0	(11)	0	.252,687	0	0	0	7,310	.01/11/2027
126650-BQ-2	CVS HEALTH CORP PASS THRU CTF 30/360		.12/10/2022	SINKING PAYMENT		.367,186	.367,186	.431,153	.404,189	0	(37,003)	0	(37,003)	0	.367,186	0	0	0	13,955	.01/10/2030
126650-BV-1	CVS Pass-Through Trust-FIRST LIEN		.01/31/2022	VARIOUS		.3,736,590	.3,279,021	.3,358,799	.3,319,283	0	(148)	0	(148)	0	.3,319,135	0	.417,455	.417,455	21,587	.01/10/2033
126650-BY-5	CVS PASS-THROUGH TRUST-SENIOR SECURED NO		.12/10/2022	VARIOUS		.9,838,481	.8,456,508	.8,463,963	.8,461,740	0	(4,739)	0	(4,739)	0	.8,457,001	0	.1,381,480	.1,381,480	58,055	.01/10/2034
126650-CL-2	CVS Health Corp-SENIOR UNSECURED		.01/18/2022	VARIOUS		.6,581,143	.6,196,000	.6,133,668	.6,171,273	0	.453	0	.453	0	.6,171,726	0	.409,417	.409,417	120,048	.07/20/2025
126650-CX-6	CVS Health Corp-SENIOR UNSECURED		.01/21/2022	GOLDMAN		.15,363,880	.14,000,000	.13,803,160	.13,868,804	0	1,301	0	1,301	0	.13,870,104	0	.1,493,776	.1,493,776	200,667	.03/25/2028
12665E-AD-2	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 A2		.12/01/2022	PAYDOWN		.151,100	.151,100	.147,039	.147,039	0	4,061	0	4,061	0	.151,100	0	0	0	2,602	.06/01/2067
12665V-AA-0	CVS Pass-Through Trust S-FIRST LIEN		.12/10/2022	SINKING PAYMENT		.307,976	.307,976	.307,976	.307,977	0	(1)	0	(1)	0	.307,976	0	0	0	6,989	.08/11/2036
126670-JP-4	OHL Mortgage Pass-Through-CIHL 2005-HYB9		.12/01/2022	PAYDOWN		.137,245	.183,680	.158,379	.151,308	0	.23,039	0	.23,039	0	.137,245	0	0	0	1,726	.02/01/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
126670-NY-0	CWABS Asset-Backed Certi-CWLT 2005-16 2AF		12/01/2022	PAYDOWN		66,400	66,400	63,595	8,577	0	57,823	0	57,823	0	66,400	0	0	0	1,354	05/01/2036
12667F-4N-2	Alternative Loan Trust 2-CWALT 2005-7CB		12/01/2022	PAYDOWN		421,680	424,123	374,117	369,686	0	54,229	626	53,603	0	421,680	0	0	0	10,264	03/01/2038
12667F-5E-1	Alternative Loan Trust 2-CWALT 2005-6CB		12/01/2022	PAYDOWN		221,545	240,139	220,267	210,873	0	25,811	0	25,811	0	221,545	0	0	0	5,941	04/01/2035
12667F-EG-6	Alternative Loan Trust 2-CWALT 2004-J2 3		12/01/2022	PAYDOWN		118,541	118,541	117,708	118,083	0	459	0	459	0	118,541	0	0	0	2,878	04/01/2034
12667F-RE-7	Alternative Loan Trust 2-CWALT 2004-J6 1		12/01/2022	PAYDOWN		218,633	218,633	221,913	218,889	0	(256)	0	(256)	0	218,633	0	0	0	5,811	08/01/2024
12667F-RG-2	Alternative Loan Trust 2-CWALT 2004-J6 2		12/01/2022	PAYDOWN		1,390	1,390	1,397	1,391	0	(1)	0	(1)	0	1,390	0	0	0	48	11/01/2031
12667F-VN-2	COUNTRYWIDE ALTERNATIVE -SERIES 2004-24C		12/01/2022	PAYDOWN		1,643,783	1,643,783	1,642,750	1,623,396	0	20,387	0	20,387	0	1,643,783	0	0	0	43,155	11/01/2034
12667G-AA-1	Alternative Loan Trust 2-CWALT 2005-13CB		12/25/2022	PAYDOWN		1,075,478	1,078,370	931,325	836,777	0	240,572	0	240,572	0	1,075,478	0	0	0	6,190	05/25/2035
12667G-AC-7	Alternative Loan Trust 2-CWALT 2005-13CB		12/01/2022	PAYDOWN		147,373	147,769	135,928	132,480	0	15,166	0	15,166	0	147,373	0	0	0	3,667	05/01/2035
12668A-AC-6	Alternative Loan Trust 2-CWALT 2005-IM1		11/25/2022	PAYDOWN		84,089	133,319	87,405	40,116	0	76,008	0	76,008	0	84,089	0	0	0	414	01/25/2036
12668A-PC-3	Alternative Loan Trust 2-CWALT 2005-54CB		12/01/2022	PAYDOWN		199,785	256,618	217,163	220,319	0	28,697	3,814	24,883	0	199,785	0	0	0	6,828	11/01/2035
12668A-XL-4	Alternative Loan Trust 2-CWALT 2005-63 5		12/01/2022	PAYDOWN		130,609	133,575	121,637	119,278	0	26,294	0	26,294	0	130,609	0	0	0	2,924	12/01/2035
12668B-YA-5	Alternative Loan Trust 2-CWALT 2006-7CB		12/01/2022	PAYDOWN		30,620	32,092	27,717	14,137	0	17,707	0	17,707	0	30,620	0	0	0	659	05/01/2036
126694-2H-0	CHL Mortgage Pass-Through-CWHL 2006-10 1A		12/01/2022	PAYDOWN		55,327	52,491	33,805	33,967	0	19,588	57	19,531	0	55,327	0	0	0	1,305	05/01/2036
126694-4F-2	CHL Mortgage Pass-Through-CWHL 2006-HYB3		12/01/2022	PAYDOWN		122,702	125,744	120,760	120,760	0	5,228	0	5,228	0	122,702	0	0	0	1,797	05/01/2036
126694-BE-7	CHL Mortgage Pass-Through-CWHL 2005-HYB6		12/01/2022	PAYDOWN		60,126	61,296	54,036	55,262	0	6,044	292	5,752	0	60,126	0	0	0	694	10/01/2035
126694-CS-5	CHL Mortgage Pass-Through-CWHL 2005-21 A1		12/01/2022	PAYDOWN		373,200	375,748	306,557	0	0	66,215	119	66,096	0	373,200	0	0	0	11,226	10/01/2035
126694-D5-4	CHL Mortgage Pass-Through-CWHL 2006-HYB2		12/01/2022	PAYDOWN		263,328	263,969	231,176	177,462	0	86,237	0	86,237	0	263,328	0	0	0	2,116	04/01/2036
126694-D7-0	CHL Mortgage Pass-Through-CWHL 2006-HYB2		12/01/2022	PAYDOWN		29,184	29,207	26,655	914	0	914	0	914	0	29,184	0	0	0	506	04/01/2036
126694-HP-6	CHL Mortgage Pass-Through-CWHL 2005-25 A1		12/01/2022	PAYDOWN		198,596	191,181	141,938	10,713	0	55,549	4,098	51,451	0	198,596	0	0	0	2,721	11/01/2035
126694-LC-0	CHL Mortgage Pass-Through-CWHL 2005-24 A3		12/01/2022	PAYDOWN		237,759	237,985	181,561	0	0	55,921	0	55,921	0	237,759	0	0	0	3,851	11/01/2035
126694-MH-8	CHL Mortgage Pass-Through-CWHL 2005-HYB7		12/01/2022	PAYDOWN		863,464	861,907	689,525	702,468	0	160,436	0	160,436	0	863,464	0	0	0	8,426	11/01/2035
126694-QJ-0	CHL Mortgage Pass-Through-CWHL 2005-HYB8		12/01/2022	PAYDOWN		677,250	671,403	609,512	639,443	0	32,585	0	32,585	0	677,250	0	0	0	12,838	12/01/2035
126694-UJ-5	CHL Mortgage Pass-Through-CWHL 2005-31 1A		12/01/2022	PAYDOWN		222,069	222,069	192,174	200,754	0	21,316	0	21,316	0	222,069	0	0	0	4,523	01/01/2036
126694-UM-8	CHL Mortgage Pass-Through-CWHL 2005-31 2A		12/01/2022	PAYDOWN		117,875	136,370	131,213	125,387	0	10,138	0	10,138	0	117,875	0	0	0	1,686	01/01/2036
126694-UN-6	CHL Mortgage Pass-Through-CWHL 2005-31 2A		12/01/2022	PAYDOWN		182,064	210,631	202,666	193,668	0	15,659	0	15,659	0	182,064	0	0	0	2,604	01/01/2036
12669D-US-5	CHL Mortgage Pass-Through-CWHL 2002-39 A1		12/01/2022	PAYDOWN		169,025	169,120	168,856	178,376	0	5	25	(20)	0	164,845	0	4,180	4,180	3,686	02/01/2033
12669F-A8-6	CHL Mortgage Pass-Through-CWHL 2004-11 2A		12/01/2022	PAYDOWN		882,353	882,353	714,706	727,190	0	155,163	0	155,163	0	882,353	0	0	0	13,117	07/01/2034
12669F-V8-3	CHL Mortgage Pass-Through-CWHL 2004-HYB4		12/01/2022	PAYDOWN		103,257	103,257	103,416	103,108	0	149	0	149	0	103,257	0	0	0	1,493	09/01/2034
12669F-VH-3	CHL Mortgage Pass-Through-CWHL 2004-6 2A1		12/01/2022	PAYDOWN		285,058	285,058	285,587	281,766	0	3,293	0	3,293	0	285,058	0	0	0	1,205	05/01/2034
12669G-3S-8	CHL Mortgage Pass-Through-CWHL 2005-16 A2		12/01/2022	PAYDOWN		178,650	175,580	144,024	0	0	30,310	2,026	28,284	0	178,650	0	0	0	6,290	09/01/2035
12669G-4K-4	CHL Mortgage Pass-Through-CWHL 2005-J3 1A		12/01/2022	PAYDOWN		331,277	312,214	262,690	0	0	53,024	1,668	51,356	0	331,277	0	0	0	5,944	09/01/2035
12669G-A5-0	CHL Mortgage Pass-Through-CWHL 2005-HYB3		12/01/2022	PAYDOWN		11,052	11,052	10,057	9,767	0	1,285	0	1,285	0	11,052	0	0	0	183	06/01/2035
12669G-BY-6	CHL Mortgage Pass-Through-CWHL 2004-HYB7		12/01/2022	PAYDOWN		169,716	169,716	170,456	159,737	0	9,979	0	9,979	0	169,716	0	0	0	2,174	11/01/2034
12669G-BZ-3	CHL Mortgage Pass-Through-CWHL 2004-HYB7		12/01/2022	PAYDOWN		494,318	494,318	496,474	464,841	0	29,477	0	29,477	0	494,318	0	0	0	6,332	11/01/2034
12669G-GH-8	CHL Mortgage Pass-Through-CWHL 2004-HYB8		12/01/2022	PAYDOWN		386,048	386,048	315,594	313,575	0	72,473	0	72,473	0	386,048	0	0	0	7,871	01/01/2035
12669G-RA-5	CHL Mortgage Pass-Through-CWHL 2005-15 A8		12/01/2022	PAYDOWN		59,294	52,768	47,564	35,610	0	17,730	15	17,715	0	59,294	0	0	0	1,198	08/01/2035
12673P-AJ-4	CA Inc-SENIOR UNSECURED		10/28/2022	SUMRIDGE PARTNERS LL		9,297,310	10,000,000	10,276,700	10,156,307	0	(24,098)	0	(24,098)	0	10,132,209	0	(834,899)	(834,899)	530,056	03/15/2027
12694*-AA-4	CYS (New Albany, IN) Trust Certificate		12/15/2022	SINKING PAYMENT		171,700	171,700	171,700	171,700	0	0	0	0	0	171,700	0	0	0	4,617	01/15/2041
12697*-AA-7	Cric KY HQ LLC Senior Secured Note		12/15/2022	SINKING PAYMENT		132,220	132,220	132,220	132,220	0	(2)	0	(2)	0	132,220	0	0	0	3,329	03/15/2042
127055-AL-5	Cabot Corp-SENIOR UNSECURED		12/13/2022	JP MORGAN SECURITIES		9,114,158	10,000,000	9,970,400	9,977,356	0	2,360	0	2,360	0	9,979,716	0	(865,558)	(865,558)	582,222	07/01/2029
12707*-AA-9	CYS (NC SC PA & VA) Con Trust Certifica		12/15/2022	SINKING PAYMENT		428,056	428,056	428,056	428,056	0	(1)	0	(1)	0	428,056	0	0	0	11,251	01/15/2044
12724@-AA-6	CYS (Clawson & Richmond Trust Certificat		12/15/2022	SINKING PAYMENT		470,997	470,997	475,533	475,072	0	(4,074)	0	(4,074)	0	470,997	0	0	0	10,396	01/15/2035
12733*-AA-3	CTL Pass-Thru Trust Seri Trust Certifica		12/15/2022	SINKING PAYMENT		270,132	270,132	270,132	270,132	0	0	0	0	0	270,132	0	0	0	3,796	10/15/2043
127387-AL-2	Cadence Design Systems I-SENIOR UNSECURE		03/21/2022	BARCLAYS CAPITAL INC		3,089,580	3,000,000	2,988,420	2,996,354	0	366	0	366	0	2,996,720	0	92,860	92,860	57,604	10/15/2024
12760@-AA-1	CGA Capital Corp Pass Thru Ctf's Series 2		12/10/2022	SINKING PAYMENT		985,463	985,463	985,463	985,463	0	0	0	0	0	985,463	0	0	0	11,608	03/01/2031
12762*-AA-1	CDI Tuscany Intermediate Senior Secured		12/31/2022	SINKING PAYMENT		2,248	2,248	2,248	0	0	0	0	0	0	2,248	0	0	0	0	06/30/2040
133131-AW-2	Camden Property Trust-SENIOR UNSECURED		03/29/2022	SUNTRUST CAPITAL MAR		6,225,840	6,000,000	5,993,580	5,995,697	0	344	0	344	0	5,996,040	0	229,800	229,800	113,433	10/15/2028
134429-BG-3	Campbell Soup Co-SENIOR UNSECURED		01/18/2022	GOLDMAN		17,983,560	16,590,000	15,276,579	15,648,429	0	6,926	0	6,926	0	15,655,356	0	2,328,204	2,328,204	239,057	03/15/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identifi- cation	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
14040H-BJ-3	Capital One Financial Co-SUBORDINATED		01/21/2022	JEFFERIESLLC		21,263,800	20,000,000	19,998,400	20,000,117	0	(117)	0	(117)	0	20,000,000	0	1,263,800	1,263,800	200,667	10/29/2025
14040H-BK-0	Capital One Financial Co-SUBORDINATED		01/18/2022	GOLDMAN		30,546,280	29,000,000	28,413,130	28,691,898	0	3,688	0	3,688	0	28,695,586	0	1,850,694	1,850,694	519,583	07/28/2026
14040H-BN-4	Capital One Financial Co-SENIOR UNSECURE		01/24/2022	VARIOUS		9,174,120	8,618,000	8,592,749	8,603,872	0	248	0	248	0	8,604,120	0	570,000	570,000	122,986	03/09/2027
14040H-BW-4	Capital One Financial Co-SENIOR UNSECURE		01/19/2022	VARIOUS		10,649,300	10,000,000	9,538,700	9,691,160	0	2,648	0	2,648	0	9,693,807	0	955,493	955,493	180,500	01/31/2028
14149Y-BE-7	Cardinal Health Inc-SR UNSECURED		05/03/2022	BNP PARIBAS		4,996,400	5,000,000	4,996,400	4,998,631	0	139	0	139	0	4,998,769	0	(2,369)	(2,369)	119,271	09/15/2025
141781-GF-5	Cargill Inc. Senior Note		06/30/2022	SINKING PAYMENT		394,737	394,737	462,261	402,525	0	(7,788)	0	(7,788)	0	394,737	0	0	0	14,368	06/30/2023
142339-AH-3	Carlisle Cos Inc-SENIOR UNSECURED		07/26/2022	JANE		7,683,360	8,000,000	7,968,080	7,980,209	0	1,609	0	1,609	0	7,981,819	0	(298,459)	(298,459)	197,500	12/01/2027
14576A-AA-0	Cars Net Lease Mortgage -CARM 2020-1A A1		12/15/2022	PAYDOWN		140,000	140,000	139,942	139,944	0	56	0	56	0	140,000	0	0	0	1,524	12/15/2050
14576A-AB-8	Cars Net Lease Mortgage -CARM 2020-1A A2		12/15/2022	PAYDOWN		15,000	15,000	14,991	14,991	0	9	0	9	0	15,000	0	0	0	197	12/15/2050
14576A-AC-6	Cars Net Lease Mortgage -CARM 2020-1A A3		12/15/2022	PAYDOWN		11,250	11,250	11,243	11,243	0	7	0	7	0	11,250	0	0	0	185	12/15/2050
14855J-AB-1	Castlelake Aircraft Secu-CLAST 2016-1 A		12/15/2022	PAYDOWN		497,882	497,882	495,514	0	0	2,368	0	2,368	0	497,882	0	0	0	0	08/15/2041
14855M-AA-6	Castlelake Aircraft Secu-SERIES 2019-1A		12/15/2022	PAYDOWN		575,356	575,356	575,355	575,363	0	(6)	0	(6)	0	575,356	0	0	0	7,883	04/15/2039
14856G-AA-8	Castlelake Aircraft Stru-CLAST 2021-1A A		12/15/2022	PAYDOWN		713,453	713,453	713,433	713,435	0	18	0	18	0	713,453	0	0	0	13,467	01/15/2046
14912L-5X-5	Caterpillar Financial Se-SENIOR UNSECURE		03/16/2022	GOLDMAN		5,123,700	5,000,000	4,995,900	4,999,277	0	3	0	3	0	4,999,280	0	124,420	124,420	59,375	11/24/2023
14987B-AE-3	CC Holdings GS V LLC / C-FIRST LIEN		03/21/2022	CALL 102.161		3,064,830	3,000,000	3,000,000	3,000,000	0	0	0	0	0	3,000,000	0	64,830	64,830	50,037	04/15/2023
152314-KJ-8	Centex Home Equity Loan -CXHE 2004-C AF5		12/01/2022	PAYDOWN		335,963	335,963	335,123	335,187	0	775	0	775	0	335,963	0	0	0	8,533	06/01/2034
161175-AY-0	CHARTER COMM OPT LLC/CAP-FIRST LIEN		01/21/2022	CITIGROUP GLOBAL MAR		14,089,920	13,000,000	13,000,000	13,000,000	0	0	0	0	0	13,000,000	0	1,089,920	1,089,920	322,565	07/23/2025
161175-BJ-2	Charter Communications O-FIRST LIEN		11/08/2022	CITIGROUP GLOBAL MAR		8,764,800	10,000,000	9,916,600	9,948,568	0	6,352	0	6,352	0	9,954,921	0	(1,190,121)	(1,190,121)	463,542	02/15/2028
161175-BR-4	Charter Communications O-FIRST LIEN		10/17/2022	GOLDMAN		9,119,400	10,000,000	9,993,500	9,996,505	0	744	0	744	0	9,997,249	0	(877,849)	(877,849)	531,653	03/30/2029
161546-CW-4	Chase Funding Trust Seri-CFAB 2002-3 1A5		12/01/2022	PAYDOWN		233,721	233,721	231,394	232,150	0	1,571	0	1,571	0	233,721	0	0	0	4,763	06/01/2032
16159W-AC-8	Chase Home Lending Mortg-CHASE 2019-1 A3		12/01/2022	PAYDOWN		445,156	445,156	455,728	455,135	0	(9,979)	0	(9,979)	0	445,156	0	0	0	6,143	03/01/2050
16162W-PV-5	Chase Mortgage Finance T-CHASE 2005-A2 1		12/01/2022	PAYDOWN		20,230	20,499	17,614	6,801	0	13,642	0	13,642	0	20,230	0	0	0	299	01/01/2036
16162X-AD-9	Chase Mortgage Finance T-CHASE 2006-S3 1		12/25/2022	PAYDOWN		46,440	46,440	40,700	25,800	0	20,640	0	20,640	0	46,440	0	0	0	1,654	11/25/2036
16162Y-AL-9	Chase Mortgage Finance T-CHASE 2006-S4 A		11/25/2022	PAYDOWN		29,625	25,387	16,344	16,344	0	10,560	0	10,560	0	29,625	0	0	0	328	12/25/2036
161630-BA-5	Chase Mortgage Finance T-CHASE 2007-A1 1		12/01/2022	PAYDOWN		59,292	59,292	57,402	56,628	0	2,664	0	2,664	0	59,292	0	0	0	843	02/01/2037
16165M-AG-3	ChaseFlex Trust Series 2-CFKX 2006-2 A5		12/01/2022	PAYDOWN		335,865	326,200	317,121	319,248	0	10,609	2,054	8,555	0	335,865	0	0	0	6,361	09/01/2036
16372F-AA-0	Chemical Bank Pass-Thru Certificate		12/10/2022	SINKING PAYMENT		174,152	174,152	174,152	174,152	0	0	0	0	0	174,152	0	0	0	4,074	06/10/2044
166754-AW-1	Chevron Phillips Chemica-SENIOR UNSECURE		03/16/2022	GOLDMAN		29,836,240	28,000,000	27,997,760	27,998,573	0	1,427	0	1,427	0	28,000,000	0	1,836,240	1,836,240	665,681	04/01/2025
16876A-AB-0	Children's Hospital Medi-SENIOR UNSECURE		03/15/2022	WELLS FARGO		6,011,880	6,000,000	6,000,000	6,000,162	0	(29)	0	(29)	0	6,000,133	0	11,747	11,747	58,011	11/15/2026
16877F-AA-0	Childress Klien-Cambridg Senior Secured		12/05/2022	SINKING PAYMENT		672,235	672,235	673,076	672,836	0	(601)	0	(601)	0	672,235	0	0	0	10,514	02/05/2036
170257-AE-9	CHL Mortgage Pass-Through-CIHL 2006-16 3A		11/01/2022	PAYDOWN		716,048	705,490	356,368	356,382	0	354,981	13	354,968	0	716,048	0	0	0	16,219	11/01/2036
17025A-AH-5	CHL Mortgage Pass-Through-CIHL 2006-17 A8		12/25/2022	PAYDOWN		164,286	185,754	111,503	0	0	64,178	3,047	61,131	0	164,286	0	0	0	4,548	12/25/2036
17025R-AA-3	COUNTRYWIDE HOME LOANS-SERIES 2007-HY4 C		12/01/2022	PAYDOWN		254,199	259,205	214,817	213,631	0	44,444	0	44,444	0	254,199	0	0	0	3,556	09/01/2047
17030J-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-1 A1		12/01/2022	PAYDOWN		2,926,547	2,926,547	2,926,525	2,926,547	0	22	0	22	0	2,926,547	0	0	0	34,296	01/01/2067
171232-AE-1	Chubb Corp/The-SENIOR UNSECURED		08/16/2022	WELLS FARGO		3,271,755	2,755,000	3,616,792	3,302,235	0	(28,564)	0	(28,564)	0	3,273,670	0	(1,915)	(1,915)	142,066	11/15/2031
171232-AS-0	CHUBB CORP-SR NOTE		09/15/2022	WELLS FARGO		5,397,629	4,674,000	6,195,434	5,947,594	0	(39,604)	0	(39,604)	0	5,907,991	0	(510,362)	(510,362)	256,551	05/15/2038
17181C-AA-6	CIM Small Business Loan -CIMLT 2018-1A A		12/20/2022	PAYDOWN		1,405,559	1,405,559	1,405,559	1,405,515	0	44	0	44	0	1,405,559	0	0	0	20,576	03/20/2043
172062-AF-8	CINCINNATI FINANCIAL COR-SR UNSECURED		12/21/2022	VARIOUS		36,276,696	32,902,000	40,123,092	37,822,113	0	(464,658)	0	(464,658)	0	37,357,454	0	(1,080,758)	(1,080,758)	1,859,115	05/15/2028
17252M-AN-0	Cintas Corp No 2-SENIOR UNSECURED		03/31/2022	JANE		9,233,460	9,000,000	8,965,440	8,980,750	0	1,206	0	1,206	0	8,981,956	0	251,504	251,504	169,275	04/01/2027
17275R-AW-2	CISCO SYSTEMS INC-SR UNSECURED		03/23/2022	AMHERST SECURITIES		5,131,550	5,000,000	4,986,650	4,995,031	0	186	0	186	0	4,995,216	0	136,334	136,334	48,611	07/30/2022
17288X-AA-2	Citadel LP-SENIOR UNSECURED		11/18/2022	CALL 100.140466		21,029,498	21,000,000	20,991,510	20,999,340	0	(13)	0	(13)	0	20,999,327	0				

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
17307G-TY-4	Citigroup Mortgage Loan -CMLTI 2005-3 24		12/01/2022	PAYDOWN		404,327	375,520	357,214	313,588	0	63,849	0	63,849	0	404,327	0	0	0	4,115	08/01/2035
17307G-U2-2	Citigroup Mortgage Loan -CMLTI 2005-10 1		09/01/2022	PAYDOWN		209,929	204,927	176,424	167,442	0	42,487	0	42,487	0	209,929	0	0	0	2,175	12/01/2035
17307G-VN-5	Citigroup Mortgage Loan -CMLTI 2005-WF2		12/01/2022	PAYDOWN		1,509	1,509	1,256	190	0	1,319	0	1,319	0	1,509	0	0	0	41	08/01/2035
17307G-W9-5	Citigroup Mortgage Loan -CMLTI 2005-11 A		12/01/2022	PAYDOWN		72,531	72,531	70,197	69,281	0	3,250	0	3,250	0	72,531	0	0	0	692	11/01/2035
17309A-AD-1	CitiMortgage Alternative-CMALT 2006-A1 1		12/01/2022	PAYDOWN		219,266	230,475	219,012	225,574	0	5,767	2,357	3,410	0	219,266	0	0	0	5,902	04/01/2036
17309A-AF-6	CitiMortgage Alternative-CMALT 2006-A1 1		12/01/2022	PAYDOWN		307,385	317,965	301,411	294,576	0	22,244	0	22,244	0	307,385	0	0	0	8,788	04/01/2036
17309B-AB-3	Citigroup Mortgage Loan -CMLTI 2006-WF2		12/01/2022	PAYDOWN		21,716	21,716	10,305	0	0	11,358	66	11,292	0	21,716	0	0	0	207	05/01/2036
17309N-AG-6	Citicorp Residential Mor-CRMSI 2006-1 M1		12/01/2022	PAYDOWN		1,037,618	1,037,618	994,168	1,009,406	0	28,212	0	28,212	0	1,037,618	0	0	0	24,494	07/01/2036
17309V-AH-6	CitiMortgage Alternative-CMALT 2006-A4 1		12/01/2022	PAYDOWN		121,013	138,518	134,865	135,771	0	1,516	602	914	0	121,013	0	0	0	4,564	09/01/2036
17312H-AF-6	Citicorp Residential Mor-CRMSI 2007-2 A6		12/01/2022	PAYDOWN		17,659	17,659	16,998	17,147	0	512	0	512	0	17,659	0	0	0	341	06/01/2037
17312V-AA-6	Citigroup Mortgage Loan -CMLTI 2007-6 1A		12/01/2022	PAYDOWN		5,938	3,226	1,126	1,214	0	3,629	0	3,629	0	5,938	0	0	0	25	03/01/2037
17314Q-AD-9	Citigroup Mortgage Loan -CMLTI 2009-11 2		07/01/2022	PAYDOWN		38,174	38,174	12,979	10,541	0	27,633	0	27,633	0	38,174	0	0	0	710	01/01/2036
17315X-AF-8	Citigroup Mortgage Loan -CMLTI 2009-9 2A		12/01/2022	PAYDOWN		114,954	114,954	87,081	90,686	0	17,495	0	17,495	0	114,954	0	0	0	625	11/01/2035
17322N-AA-2	Citigroup Mortgage Loan -CMLTI 2014-J1 A		01/19/2022	VARIOUS		1,584,033	1,565,016	1,571,374	1,574,680	0	(332)	0	(332)	0	1,574,348	0	9,685	9,685	7,523	06/01/2044
17322N-AD-6	Citigroup Mortgage Loan -CMLTI 2014-J1 A		12/01/2022	PAYDOWN		120,172	120,172	119,459	117,876	0	2,296	0	2,296	0	120,172	0	0	0	1,492	06/01/2044
17323M-AE-5	Citigroup Mortgage Loan -CMLTI 2015-A B3		12/01/2022	PAYDOWN		1,941,379	1,941,379	1,764,228	1,764,822	0	176,557	0	176,557	0	1,941,379	0	0	0	37,842	06/01/2058
173333-ZB-4	Losant Lot Inc. Note		05/31/2022	MATURITY		250,000	250,000	250,000	250,000	0	0	0	0	0	250,000	0	0	0	0	05/31/2022
177376-AE-0	Citrix Systems Inc-SENIOR UNSECURED		01/18/2022	GOLDMAN		16,943,360	16,000,000	15,965,120	15,978,913	0	(78)	0	(78)	0	15,978,834	0	964,526	964,526	98,000	12/01/2027
191098-AK-8	Coca-Cola Consolidated I-SENIOR UNSECURE		05/04/2022	U. S. BANCORP		9,966,000	10,000,000	9,997,500	9,999,349	0	143	0	143	0	9,999,492	0	(33,492)	(33,492)	169,417	11/25/2025
193051-AA-7	Cold Storage Trust 2020-COLD 2020-1CE5		03/10/2022	VARIOUS		12,159,900	12,287,382	12,287,382	12,287,382	0	0	0	0	0	12,287,382	0	(127,482)	(127,482)	26,034	11/15/2037
19421U-AA-2	College Ave Student Loan-CASL 2019-A A1		03/16/2022	VARIOUS		8,737,776	8,801,975	8,779,318	8,781,728	0	8,822	0	8,822	0	8,790,549	0	(52,773)	(52,773)	29,835	12/28/2048
19421U-AB-0	College Avenue Student L-CASL 2019-A A2		12/25/2022	PAYDOWN		560,482	560,482	560,276	560,302	0	180	0	180	0	560,482	0	0	0	9,559	12/28/2048
19423D-AB-6	College Ave Student Loan-SERIES 2018-A C		03/16/2022	VARIOUS		5,015,569	4,997,643	4,995,406	4,996,064	0	156	0	156	0	4,996,220	0	19,349	19,349	46,622	12/26/2047
19424K-AB-9	College Avenue Student L-CASL 2021-A A2		12/25/2022	PAYDOWN		1,871,731	1,871,731	1,871,358	1,871,375	0	356	0	356	0	1,871,731	0	0	0	13,264	07/25/2051
196856-AA-4	COLT Funding LLC-COLT 2022-4 A1		12/01/2022	PAYDOWN		64,457	64,457	63,087	0	0	1,370	0	1,370	0	64,457	0	0	0	511	03/01/2067
196856-AC-0	COLT Funding LLC-COLT 2022-4 A3		12/01/2022	PAYDOWN		475,152	475,152	471,112	0	0	4,040	0	4,040	0	475,152	0	0	0	7,213	03/01/2067
19687Y-AA-3	COLT 2020-RPL1 Trust-COLT 2020-RPL1 A1		12/01/2022	PAYDOWN		4,204,277	4,204,277	4,204,272	4,204,206	0	71	0	71	0	4,204,277	0	0	0	25,268	01/01/2065
19688E-AA-6	COLT 2021-1 Mortgage Loa-COLT 2021-1 A1		12/01/2022	PAYDOWN		980,964	980,964	863,248	0	0	117,716	0	117,716	0	980,964	0	0	0	2,161	06/01/2066
19688F-AA-3	COLT 2021-3 Mortgage Loa-COLT 2021-3 A1		12/01/2022	PAYDOWN		193,400	193,400	166,082	0	0	27,318	0	27,318	0	193,400	0	0	0	581	09/01/2066
19688H-AA-9	COLT 2022-1 Mortgage Loa-COLT 2022-1 A1		12/01/2022	PAYDOWN		5,512,919	5,512,919	5,512,864	0	0	55	0	55	0	5,512,919	0	0	0	64,166	12/01/2066
19688L-AA-0	COLT 2022-5 Mortgage Loa-COLT 2022-5 A1		12/01/2022	PAYDOWN		701,328	701,328	701,110	0	0	217	0	217	0	701,328	0	0	0	9,546	04/01/2067
19688L-AB-8	COLT 2022-5 Mortgage Loa-COLT 2022-5 A2		12/01/2022	PAYDOWN		1,163,441	1,163,441	1,146,493	0	0	16,948	0	16,948	0	1,163,441	0	0	0	15,787	03/01/2067
19688M-AB-6	COLT 2022-8 Mortgage Loa-COLT 2022-8 A2		12/01/2022	PAYDOWN		173,597	173,597	172,146	0	0	1,452	0	1,452	0	173,597	0	0	0	68	08/01/2067
19688M-AC-4	COLT 2022-8 Mortgage Loa-COLT 2022-8 A3		12/01/2022	PAYDOWN		179,772	179,772	177,002	0	0	2,770	0	2,770	0	179,772	0	0	0	71	08/01/2067
198280-AF-6	Columbia Pipeline Group -SENIOR UNSECURE		05/09/2022	BARCLAYS CAPITAL INC		10,222,600	10,000,000	9,984,700	9,994,664	0	591	0	591	0	9,995,255	0	227,345	227,345	200,000	06/01/2025
19828J-AA-6	Columbia Property Trust -SENIOR UNSECURE		01/07/2022	CALL 108.856		15,239,840	14,000,000	13,980,260	13,993,246	0	32	0	32	0	13,993,278	0	1,246,562	1,246,562	154,933	04/01/2025
19828J-AB-4	Columbia Property Trust -SENIOR UNSECURE		01/07/2022	CALL 108.715		9,784,350	9,000,000	8,966,340	8,983,113	0	82	0	82	0	8,983,195	0	801,155	801,155	129,575	08/15/2026
20030N-BM-2	Comcast Corp-SR UNSECURED		08/15/2022	JANE		5,015,850	5,000,000	4,981,200	4,986,737	0	691	0	691	0	4,987,428	0	28,422	28,422	211,167	08/15/2034
20030N-BP-5	COMCAST CORP-SENIOR UNSECURED		08/15/2022	MORGAN		7,059,290	7,000,000	7,365,330	7,288,559	0	(10,409)	0	(10,409)	0	7,278,150	0	(218,860)	(218,860)	309,711	08/15/2035
20030N-CT-6	Comcast Corp-SENIOR UNSECURED		03/31/2022	DAIWA SECURITIES AME		13,677,560	13,000,000	12,993,500	12,996,005	0	627	0	627	0	12,996,632	0	680,928	680,928	253,265	10/15/2028
200339-DX-4	Comerica Bank-SUBORDINATED		09/29/2022	VARIOUS		21,227,050	22,000,000	21,926,890	21,972,187	0	5,633	0	5,633	0	21,977,820	0	(750,770)	(750,770)	1,006,889	07/27/2025
200340-AQ-0	Comerica Inc-SUBORDINATED		01/18/2022	GOLDMAN		14,585,863	13,750,000	13,608,315	13,678,068	0	992	0	992	0	13,679,060	0	906,803	906,803	258,347	07/22/2026
20048E-AY-7	COMM 2013-LC6 MORTGAGE T-COMM 2013-LC6 A		11/01/2022	PAYDOWN		20,495,252	20,495,252	19,039,966	20,318,892	0	176,360	0	176,360	0	20,495,252	0	0	0	444,127	01/01/2046
20267U-AA-7	COMMONBOND STUDENT LOAN -SERIES 16-B CLA		12/25/2022	PAYDOWN		469,573	469,573	469,446	469,489	0	84	0	84	0	469,573	0	0	0	6,227	10/25/2040
203372-AX-5	CommScope Inc-SECURED		07/14/2022	BOFAILSEC		5,417,750	6,668,000	6,668,000	6,668,000	0	0	0	0	0	6,668,000	0	(1,250,250)	(1,250,250)	284,240	09/01/2029
20369E-AA-0	Community Health Network-SECURED		01/19/2022	JP MORGAN SECURITIES		5,348,750	5,000,000	5,000,000	5,000,131	(33)	0	(33)	0							

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21	
										11	12	13	14	15							
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	
20755D-AA-4	Connecticut Avenue Secur-CAS 2022-R08 1M		12/27/2022	PAYDOWN		1,418,887	1,418,887	1,425,254	0	0	(6,367)	0	(6,367)	0	1,418,887	0	0	0	14,534	07/25/2042	
20826F-AQ-9	ConocoPhillips Co-SENIOR UNSECURED		01/21/2022	GOLDMAN		13,321,920	12,000,000	11,995,200	11,998,565	0	158	0	158	0	11,998,723	0	1,323,197	1,323,197	214,500	03/15/2026	
21036P-BC-1	Constellation Brands Inc-SENIOR UNSECURE		01/20/2022	WELLS FARGO		11,189,200	10,000,000	9,972,000	9,980,504	0	26	0	26	0	9,980,529	0	1,208,671	1,208,671	89,125	11/15/2028	
21075W-CJ-2	ContiMortgage Home Equit-COMHE 1996-1 A7		12/01/2022	PAYDOWN		17,065	17,065	17,052	3,031	0	14,034	0	14,034	0	17,065	0	0	0	575	03/01/2027	
210795-QB-9	CONTL AIRLINES 2012-2 A-FIRST LIEN		10/29/2022	SINKING PAYMENT		491,764	491,764	495,452	493,562	0	(1,798)	0	(1,798)	0	491,764	0	0	0	14,687	10/29/2024	
21079N-AA-9	CONTL AIRLINES 2007-1-FIRST LIEN		04/19/2022	MATURITY		1,201,645	1,201,645	1,188,502	1,200,698	0	946	0	946	0	1,201,645	0	0	0	35,947	04/19/2022	
212168-AA-6	Continental Wind LLC-FIRST LIEN		08/31/2022	SINKING PAYMENT		594,259	594,259	594,259	594,259	0	0	0	0	0	594,259	0	0	0	25,977	02/28/2033	
21872F-AA-5	Corevest American Financ-CAFL 2019-1 A		01/19/2022	VARIOUS		6,500,313	6,319,068	6,318,784	6,314,509	0	30	0	30	0	6,314,539	0	185,774	185,774	29,451	03/01/2052	
21872M-AA-0	CoreVest American Financ-CAFL 2018-2 A		12/01/2022	PAYDOWN		2,647,850	2,647,850	2,647,830	2,647,612	0	237	0	237	0	2,647,850	0	0	0	85,011	11/01/2052	
21872N-AA-8	Corevest American Financ-CAFL 2019-3 A		01/19/2022	VARIOUS		6,148,265	6,046,362	6,046,206	6,045,970	0	3	0	3	0	6,045,974	0	102,291	102,291	23,251	10/01/2052	
22160E-AA-6	Costco (Monterey Park C Trust Certifica		12/20/2022	SINKING PAYMENT		119,671	119,671	119,671	119,652	0	19	0	19	0	119,671	0	0	0	2,550	06/20/2043	
22163F-AA-1	Costco (Oceanside NY) Le Trust Certifica		12/15/2022	SINKING PAYMENT		296,942	296,942	296,942	296,942	0	0	0	0	0	296,942	0	0	0	5,009	11/30/2041	
224044-CE-5	Cox Communications Inc-SENIOR UNSECURED		01/20/2022	TORONTO DOMINION SEC		7,365,330	7,000,000	6,541,150	6,825,015	0	3,532	0	3,532	0	6,828,546	0	536,784	536,784	129,510	02/01/2025	
224044-CJ-4	Cox Communications Inc-SENIOR UNSECURED		01/21/2022	CITIGROUP GLOBAL MAR		4,148,671	3,935,000	3,651,326	3,742,313	0	2,079	0	2,079	0	3,744,392	0	404,279	404,279	61,211	08/15/2027	
22541Q-CZ-3	Credit Suisse First Bost-CSFB 2003-AR15		12/27/2022	PAYDOWN		185,437	185,437	185,437	187,282	0	(1,845)	0	(1,845)	0	185,437	0	0	0	3,399	06/25/2033	
22541Q-FV-9	CSFB MORTGAGE-BACKED PAS-CSFB 2003-17 1A		12/01/2022	PAYDOWN		37,873	37,873	38,225	37,796	0	77	0	77	0	37,873	0	0	0	1,249	06/01/2033	
22541Q-XS-6	Credit Suisse First Bost-CSFB 2003-23 DB		12/01/2022	PAYDOWN		239,479	239,479	239,629	238,841	0	638	0	638	0	239,479	0	0	0	8,462	09/01/2033	
22541S-PJ-1	CSFB Mortgage-Backed Tru-CSFB 2004-AR6 C		12/27/2022	PAYDOWN		288,441	288,441	229,310	245,710	0	42,731	0	42,731	0	288,441	0	0	0	1,751	10/25/2034	
225458-2Y-3	Credit Suisse First Bost-CSFB 2005-8 9A1		12/01/2022	PAYDOWN		170,081	197,795	170,579	170,684	0	22,930	156	22,774	0	170,081	0	0	0	5,760	09/01/2035	
225458-L5-5	Credit Suisse First Bost-CSFB 2005-7 1A1		12/01/2022	PAYDOWN		65,297	32,068	31,331	0	0	3,287	39	3,248	0	65,297	0	0	0	651	08/01/2035	
225458-LD-8	CSFB MORTGAGE-BACKED PAS-CSFB 2005-3 6A1		10/01/2022	PAYDOWN		293,040	293,040	258,608	268,540	0	24,500	0	24,500	0	293,040	0	0	0	9,258	07/01/2035	
225470-QB-9	CSMC Mortgage-Backed Tru-CSMC 2006-3 5A5		06/01/2022	PAYDOWN		90,357	90,365	43,347	43,355	0	47,006	0	47,006	0	90,357	0	0	0	1,501	04/01/2036	
225470-VF-7	CSMC Mortgage-Backed Tru-CSMC 2006-1 3A1		12/01/2022	PAYDOWN		178,335	178,345	113,781	113,781	0	64,560	0	64,560	0	178,335	0	0	0	7,379	02/01/2036	
22549N-AA-9	Credit Suisse ABS Repack-CSRT 2018-PS1 A		07/25/2022	PAYDOWN		2,367,262	2,367,262	2,296,245	2,312,860	0	54,403	0	54,403	0	2,367,262	0	0	0	20,655	01/01/2037	
225490-FJ-9	Credit Suisse First Bost-CSFB 2003-1 1A1		12/01/2022	PAYDOWN		36,902	36,902	38,240	(675)	0	37,577	0	37,577	0	36,902	0	0	0	1,149	02/01/2033	
22942M-BF-2	CSMC Mortgage-Backed Tru-CSMC 2006-8 5A1		12/01/2022	PAYDOWN		64,184	64,219	62,613	65,101	0	(885)	0	(885)	0	64,184	0	0	0	1,553	10/01/2026	
22944P-AA-5	CSMC Trust 2013-TH1-CSMC 2013-TH1 A1		12/01/2022	PAYDOWN		257,260	257,260	231,012	231,966	0	25,294	0	25,294	0	257,260	0	0	0	1,632	02/01/2043	
22960*-AA-0	CTL PASS THRU TR SER 2013 (OCHSNER SLIDE		12/15/2022	SINKING PAYMENT		890,302	890,302	890,302	890,323	0	(21)	0	(21)	0	890,302	0	0	0	25,237	12/15/2028	
22965E-AA-3	WAG (Edina, Minnesota) C Trust Certifica		12/15/2022	SINKING PAYMENT		179,684	179,684	181,481	181,044	0	(1,360)	0	(1,360)	0	179,684	0	0	0	4,494	07/15/2037	
22968R-AE-6	CubeSmart LP-SENIOR UNSECURED		10/28/2022	WELLS FARGO		4,542,100	5,000,000	4,967,800	4,975,983	0	2,343	0	2,343	0	4,978,327	0	(436,227)	(436,227)	264,931	02/15/2029	
22969*-AA-1	Wal-Mart (Greenville Pen Trust Certifica		12/28/2021	DIRECT		0	0	0	0	0	18,997	0	18,997	0	0	0	0	0	0	12/15/2029	
22970*-AA-8	BNSF (Dayton, Texas) Con Trust Certifica		12/01/2022	SINKING PAYMENT		631,984	631,984	631,984	632,004	0	(20)	0	(20)	0	631,984	0	0	0	14,863	05/15/2034	
22973E-AA-3	Great West Casualty Comp Trust Certifica		12/15/2022	SINKING PAYMENT		284,496	284,496	238,549	243,427	0	17,217	0	17,217	0	257,185	0	27,311	27,311	4,936	12/15/2037	
22977E-AA-9	CTL Pass-Thru Trust Ser1 Trust Certifica		12/15/2022	SINKING PAYMENT		273,079	273,079	273,079	273,079	0	0	0	0	0	273,079	0	0	0	0	5,758	12/15/2038
229899-AB-5	Cullen/Frost Bankers Inc-SUBORDINATED		01/18/2022	GOLDMAN		19,652,220	18,000,000	17,959,860	17,977,913	0	313	0	313	0	17,978,226	0	1,673,994	1,673,994	276,750	03/17/2027	
23204G-AC-4	Customers Bancorp Inc-SENIOR UNSECURED		06/30/2022	MATURITY		8,000,000	8,000,000	7,982,000	7,998,048	0	1,952	0	1,952	0	8,000,000	0	0	0	158,000	06/30/2022	
23242L-AB-9	CIHEQ Revolving Home Equ-CIHEL 2006-F 2A		12/15/2022	PAYDOWN		63,089	63,089	44,084	4,614	0	58,475	0	58,475	0	63,089	0	0	0	244	07/15/2036	
23248A-AJ-0	COUNTRYWIDE ASSET-BACKED-SERIES 2007-SEA		12/27/2022	PAYDOWN		141,287	141,287	87,598	122,380	0	18,907	0	18,907	0	141,287	0	0	0	335	05/25/2047	
233046-AF-8	DNKN 2017-1A A211		11/20/2022	PAYDOWN		210,000	210,000	210,000	210,000	0	0	0	0	0	210,000	0	0	0	5,289	11/20/2047	
233046-AH-4	DB Master Finance LLC-DNKN 2017-1AW A211		11/20/2022	PAYDOWN		120,000	120,000	119,944	119,967	0	33	0	33	0	120,000	0	0	0	2,010	11/20/2047	
233046-AM-3	DB Master Finance LLC-DNKN 2019-1AW A23W		11/20/2022	PAYDOWN		180,000	180,000	181,922	181,481	0	(1,481)	0	(1,481)	0	180,000	0	0	0	4,502	05/20/2049	
23316F-AA-5	DEA (Nashville TN) LLC Pass-Thru Certifi		12/05/2022	SINKING PAYMENT		345,767	345,767	345,767	345,767	0	0	0	0	0	345,767	0	0	0	5,840	08/05/2040	
23332U-AD-6	DSLA Mortgage Loan Trust-DSLA 2004-AR1 A		12/19/2022	PAYDOWN		310,994	310,994	272,800	277,584	0	33,410	0	33,410	0	310,994	0	0	0	1,972	09/19/2044	
233851-DF-8	Daimler Finance North Am-SENIOR UNSECURE		01/18/2022	GOLDMAN		10,805,500	10,000,000	9,799,300	9,866,071	0	1,120	0	1,120	0	9,867,191	0	938,309	938,309	154,167	02/22/2028	
233851-DT-8	Daimler Finance North Am-SENIOR UNSECURE		07/13/2022	VARIOUS		4,970,080	5,000,000	4,987,950	4,991,023	0	616	0	616	0	4,991,640	0	(21,560)	(21,560)	192,903	02/22/2029	
237194-AL-9	Darden Restaurants Inc-SENIOR UNSECURED		07/25/2022	JP MORGAN SECURITIES		11,666,040	12,000,000	11,994,840	11,997,576	0	129	0	129	0	11,997,704	0	(331,664)	(331,664)	341,367	05/01/2027	
24023F-AA-7	DC Department of Correct Pass-Thru Certi		12/15/2022	SINKING PAYMENT		304,572	304,572	304,572	305,050	0	(										

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identifi- cation	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
247109-BS-9	DELMARVA PIWR & LIGHT CO-SECURED		03/16/2022	GOLDMAN		10,157,800	10,000,000	9,995,800	9,999,382	0	(4)	0	(4)	0	9,999,378	0	158,422	158,422	119,583	11/15/2023
24736X-AA-6	DELTA AIR LINES 2015-1AA-FIRST LIEN		07/30/2022	SINKING PAYMENT		306,818	306,818	306,818	306,891	0	(73)	0	(73)	0	306,818	0	0	0	8,342	07/30/2027
24736Y-AA-4	Delta Air Lines 2015-1 C-DAL 3 7/8 07/30		07/30/2022	SINKING PAYMENT		153,411	153,411	153,411	153,309	0	101	0	101	0	153,411	0	0	0	4,459	07/30/2027
24763L-FN-5	Delta Funding Home Equit-DELHE 1999-2 A7		11/01/2022	PAYDOWN		41,904	41,904	40,523	22,422	0	19,482	0	19,482	0	41,904	0	0	0	411	08/01/2030
25150M-AC-0	Deutsche Alt-A Securitie-DBALT 2007-RMP1		12/27/2022	PAYDOWN		567,452	567,452	446,868	503,432	0	64,020	0	64,020	0	567,452	0	0	0	5,583	12/25/2036
25150N-AB-0	Deutsche Alt-A Securitie-DBALT 2006-AR5		12/27/2022	PAYDOWN		219,661	219,661	116,969	74,448	0	145,213	0	145,213	0	219,661	0	0	0	1,200	10/25/2036
251510-CV-3	Deutsche Alt-A Securitie-DBALT 2005-1 1A		12/25/2022	PAYDOWN		219,284	219,284	159,255	161,298	0	57,986	0	57,986	0	219,284	0	0	0	1,353	02/25/2035
251510-EP-4	DEUTSCHE ALT-A SECURITIE-DBALT 2005-3 5A		12/25/2022	PAYDOWN		960,488	960,488	720,908	788,508	0	171,980	0	171,980	0	960,488	0	0	0	3,399	06/25/2035
251510-LM-3	Deutsche Alt-A Securitie-DBALT 2006-AR1		12/01/2022	PAYDOWN		45,079	43,323	38,896	43,853	0	(51)	0	(51)	0	45,079	0	0	0	792	02/01/2036
251510-MD-2	Deutsche Alt-B Securitie-DBALT 2006-AB1		12/01/2022	PAYDOWN		69,903	69,424	69,313	46,244	0	23,230	0	23,230	0	69,903	0	0	0	568	02/01/2036
251563-FP-2	Deutsche Mortgage Securi-DMSI 2004-4 7AR		12/25/2022	PAYDOWN		0	0	100,034	504	0	(143)	0	(143)	0	0	0	0	0	1,961	06/25/2034
25216A-AA-2	Dext ABS 2020-1 LLC-DEXT 2020-1 A		12/15/2022	PAYDOWN		1,015,833	1,015,833	1,015,812	1,015,816	0	17	0	17	0	1,015,833	0	0	0	7,346	02/16/2027
25273C-AB-6	Diamond Resorts Owner Tr-DROT 2021-1A B		12/20/2022	PAYDOWN		1,012,300	1,012,300	1,006,131	0	0	6,169	0	6,169	0	1,012,300	0	0	0	9,446	11/21/2033
25389J-AQ-9	DIGITAL REALTY TRUST LP-SENIOR UNSECURED		02/03/2022	CALL 111.036		7,772,520	7,000,000	7,000,000	7,000,000	0	0	0	0	0	7,000,000	0	772,520	772,520	112,681	10/01/2025
25389J-AT-3	Digital Realty Trust LP-SENIOR UNSECURED		01/18/2022	GOLDMAN		11,066,600	10,000,000	9,985,200	9,990,562	0	175	0	175	0	9,990,737	0	1,075,863	1,075,863	228,681	07/15/2028
25432G-AC-3	Dime Community Bancshare-SUBORDINATED		06/15/2022	CALL 100		20,000,000	20,000,000	20,000,000	20,000,012	0	(12)	0	(12)	0	20,000,000	0	0	0	450,000	06/15/2027
25466A-AP-6	Discover Bank-SENIOR UNSECURED		01/18/2022	GOLDMAN		22,259,400	20,000,000	19,925,800	19,947,938	0	514	0	514	0	19,948,452	0	2,310,948	2,310,948	328,083	09/13/2028
254687-FP-6	Walt Disney Co/The-SENIOR UNSECURED		10/28/2022	GOLDMAN		21,739,830	23,000,000	22,974,700	22,980,713	0	3,009	0	3,009	0	22,983,722	0	(1,243,892)	(1,243,892)	940,828	03/23/2027
254687-FQ-4	Walt Disney Co/The-SENIOR UNSECURED		11/07/2022	VARIOUS		38,954,020	43,000,000	42,879,600	42,898,174	0	9,410	0	9,410	0	42,907,584	0	(3,953,564)	(3,953,564)	1,839,306	03/22/2030
254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED		01/24/2022	BOFAMLSEC		14,938,000	14,000,000	13,987,540	13,993,761	0	361	0	361	0	13,994,123	0	943,877	943,877	266,272	02/09/2027
25470D-AR-0	Discovery Communications-SENIOR UNSECURE		01/19/2022	RBC CAPITAL MARKETS		8,493,760	8,000,000	7,971,440	7,982,041	0	179	0	179	0	7,982,220	0	511,540	511,540	106,211	03/20/2028
25470D-BC-2	Discovery Communications-SENIOR UNSECURE		05/25/2022	TORONTO DOMINION SEC		7,023,100	7,000,000	6,948,620	6,980,277	0	2,789	0	2,789	0	6,983,066	0	40,034	40,034	145,600	11/15/2024
25470D-BE-8	Discovery Communications-SENIOR UNSECURE		10/03/2022	MORGAN		9,561,200	10,000,000	9,981,000	9,988,445	0	2,073	0	2,073	0	9,990,518	0	(429,318)	(429,318)	318,194	06/15/2025
25512D-AA-7	Diversified ABS Phase V Senior Secured N		12/31/2022	SINKING PAYMENT		9,180,884	9,180,884	9,180,884	0	0	0	0	0	0	9,180,884	0	0	0	182,828	12/31/2030
256677-AD-7	Dollar General Corp-SENIOR UNSECURED		01/18/2022	GOLDMAN		3,222,360	3,000,000	2,995,320	2,998,121	0	7	0	7	0	2,998,127	0	224,233	224,233	27,321	11/01/2025
256677-AE-5	Dollar General Corp-SENIOR UNSECURED		01/18/2022	GOLDMAN		5,377,900	5,000,000	4,996,300	4,998,039	0	11	0	11	0	4,998,049	0	379,851	379,851	51,128	04/15/2027
257469-AJ-5	Dominion Resources Inc/V-SENIOR NOTE		08/16/2022	JEFFERIESLLC		14,312,837	13,715,000	13,189,330	13,399,493	0	12,767	0	12,767	0	13,412,259	0	900,578	900,578	754,039	08/01/2033
25755T-AE-0	DOMINOS PIZZA MASTER ISS-SERIES 2015-1A		10/25/2022	PAYDOWN		160,000	160,000	160,000	160,000	0	0	0	0	0	160,000	0	0	0	0	10/25/2045
25755T-AH-3	DOMINOS PIZZA MASTER ISS-SERIES 17-1A CL		10/25/2022	PAYDOWN		225,000	225,000	224,931	210,000	0	69	0	69	0	225,000	0	0	0	5,714	07/25/2047
25755T-AJ-9	Domino's Pizza Master Is-DPABS 2018-1A A		10/25/2022	PAYDOWN		70,000	70,000	70,000	70,008	0	(8)	0	(8)	0	70,000	0	0	0	1,801	07/25/2048
25755T-AK-6	Domino's Pizza Master Is-DPABS 2018-1A A		10/25/2022	PAYDOWN		35,000	35,000	34,989	34,998	0	2	0	2	0	35,000	0	0	0	947	07/25/2048
25755T-AL-4	Domino's Pizza Master Is-DPABS 2019-1A A		10/25/2022	PAYDOWN		75,000	75,000	75,000	75,000	0	0	0	0	0	75,000	0	0	0	1,719	10/25/2049
25755T-AM-2	Domino's Pizza Master Is-DPABS 2019-1AW		10/25/2022	PAYDOWN		215,000	215,000	215,109	215,120	0	(120)	0	(120)	0	215,000	0	0	0	3,885	10/25/2049
260543-CN-1	Dow Chemical Co/The-SENIOR UNSECURED		01/24/2022	BARCLAYS CAPITAL INC		2,165,760	2,000,000	1,997,980	1,998,943	0	(21)	0	(21)	0	1,998,922	0	166,838	166,838	14,156	11/30/2025
260543-CY-7	Dow Chemical Co/The-SENIOR UNSECURED		07/19/2022	BOFAMLSEC		2,021,080	2,000,000	2,002,040	2,001,878	0	(169)	0	(169)	0	2,001,709	0	19,371	19,371	61,600	11/30/2028
26067*-AA-3	Dow (Midland Mi) Control Trust Certifica		12/15/2022	SINKING PAYMENT		511,359	511,359	513,660	512,919	0	(1,560)	0	(1,560)	0	511,359	0	0	0	13,897	03/15/2034
26070J-AD-2	DowDuPont Inc-SENIOR UNSECURED		07/19/2022	U. S. BANCORP		10,019,100	10,000,000	10,000,000	10,000,490	0	(186)	0	(186)	0	10,000,303	0	18,797	18,797	322,875	11/15/2028
26208L-AC-2	DRIVEN BRANDS FUNDING LL-HONK 2018-1A A2		10/20/2022	PAYDOWN		70,000	70,000	70,000	70,010	0	(10)	0	(10)	0	70,000	0	0	0	2,073	04/20/2048
26209X-AC-5	DRIVEN BRANDS FUNDING LL-HONK 2020-2A A2		10/20/2022	PAYDOWN		50,000	50,000	50,000	50,000	0	0	0	0	0	50,000	0	0	0	1,012	01/20/2051
26441Y-BB-2	Duke Realty LP-SENIOR UNSECURED		07/11/2022	CITIGROUP GLOBAL MAR		5,823,720	6,000,000	5,935,560	5,954,348	0	3,190	0	3,190	0	5,957,538	0	(133,818)	(133,818)	198,667	09/15/2028
26442E-AD-2	DUKE ENERGY OHIO INC-SECURED		08/23/2022	BARCLAYS CAPITAL INC		5,010,300	5,000,000	4,998,350	4,999,753	0	188	0	188	0	4,999,941	0	10,359	10,359	186,833	09/01/2023
26443B-AA-6	Dulles Discovery 1 Contr Pass-Thru Certi		12/05/2022	SINKING PAYMENT		561,789	561,789	561,789	561,789	0	0	0	0	0	561,789					

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
26929H-AB-1	EWC Master Issuer LLC-WAX 2022-1A A2		12/15/2022	PAYDOWN		37,500	37,500	36,031	0	0	1,469	0	1,469	0	37,500	0	0	0	1,169	03/15/2052
277432-AW-0	Eastman Chemical Co-SENIOR UNSECURED		10/28/2022	VARIOUS		21,027,607	22,000,000	21,630,450	21,730,077	0	24,935	0	24,935	0	21,755,012	0	(727,405)	(727,405)	812,230	12/01/2028
278265-AD-5	Eaton Vance Corp-SENIOR UNSECURED NOTE		02/10/2022	MORGAN		25,616,750	25,000,000	24,880,000	24,979,690	0	1,024	0	1,024	0	24,980,713	0	636,037	636,037	148,524	06/15/2023
278265-AE-3	Eaton Vance Corp-SENIOR UNSECURED		10/31/2022	GOLDMAN		5,940,285	6,500,000	6,476,080	6,486,562	0	2,061	0	2,061	0	6,488,623	0	(548,338)	(548,338)	243,931	04/06/2027
278642-AN-3	eBay Inc-SENIOR UNSECURED		02/09/2022	CALL 100		14,000,000	14,000,000	13,968,080	13,968,919	0	514	0	514	0	13,999,434	0	566	566	221,667	03/09/2022
278865-BE-9	Ecolab Inc-SENIOR UNSECURED		05/31/2022	VARIOUS		21,156,352	20,000,000	19,981,200	19,984,207	0	687	0	687	0	19,984,894	0	1,171,458	1,171,458	659,413	03/24/2030
28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURE		01/18/2022	GOLDMAN		16,513,650	15,000,000	14,965,050	14,976,669	0	(97)	0	(97)	0	14,976,572	0	1,537,078	1,537,078	62,708	06/15/2028
28416L-AB-8	Elara HGV Timeshare Issu-EHGV 2021-A B		12/25/2022	PAYDOWN		721,523	721,523	709,403	0	0	12,119	0	12,119	0	721,523	0	0	0	6,576	08/27/2035
285512-AD-1	Electronic Arts Inc-SENIOR UNSECURED		01/21/2022	WELLS FARGO		11,022,700	10,000,000	9,966,900	9,985,037	0	386	0	386	0	9,985,422	0	1,037,278	1,037,278	192,000	03/01/2026
28852L-AA-1	Ellington Clo III Ltd-ECLD 2018-3A A1		10/20/2022	PAYDOWN		74,485	74,485	74,485	74,492	0	(7)	0	(7)	0	74,485	0	0	0	2,034	07/20/2030
28852L-AN-3	Ellington Clo III Ltd-ECLD 2018-3A A2R		10/20/2022	PAYDOWN		99,313	99,313	99,313	99,313	0	0	0	0	0	99,313	0	0	0	2,813	07/20/2030
28932M-AA-3	Elm Road Generating Stat-SECURED NOTE		08/11/2022	SINKING PAYMENT		382,859	382,859	382,859	382,877	0	(18)	0	(18)	0	382,859	0	0	0	15,021	02/11/2030
292480-AH-3	Enable Midstream Partner-SENIOR UNSECURE		08/23/2022	DAIWA SECURITIES AME		3,963,040	4,000,000	3,995,480	3,998,843	0	225	0	225	0	3,999,069	0	(36,029)	(36,029)	121,333	05/15/2024
292480-AK-6	Enable Midstream Partner-SENIOR UNSECURE		01/21/2022	VARIOUS		14,944,640	14,000,000	13,946,100	13,969,918	0	466	0	466	0	13,970,384	0	974,256	974,256	221,833	03/15/2027
29273R-BG-3	Energy Transfer Partners-SR UNSECURED		01/18/2022	GOLDMAN		12,926,880	12,000,000	11,913,000	11,962,502	0	595	0	595	0	11,963,097	0	963,783	963,783	292,917	01/15/2026
29278N-AG-8	Energy Transfer Operatin-SENIOR UNSECURE		10/03/2022	BARCLAYS CAPITAL INC		9,534,000	10,000,000	9,978,900	9,983,261	0	2,046	0	2,046	0	9,985,307	0	(451,307)	(451,307)	510,417	04/15/2029
29336U-AE-7	EnLink Midstream Partner-SENIOR UNSECURE		08/31/2022	CA CASH CLOSE		2,548,190	2,627,000	2,435,696	2,549,265	0	14,042	0	14,042	0	2,563,307	0	(15,117)	(15,117)	81,765	06/01/2025
29364D-AU-4	ENTERGY ARKANSAS INC 1ST MTG BD		03/31/2022	JP MORGAN SECURITIES		4,055,440	4,000,000	3,986,840	3,994,003	0	474	0	474	0	3,994,477	0	60,963	60,963	71,167	04/01/2026
29379V-BE-2	ENTERPRISE PRODUCTS OPER-SENIOR UNSECURE		05/16/2022	JANE		8,008,640	8,000,000	7,974,480	7,991,436	0	870	0	870	0	7,992,306	0	16,334	16,334	227,500	02/15/2025
29379V-BL-6	Enterprise Products Oper-SENIOR UNSECURE		01/18/2022	GOLDMAN		5,358,200	5,000,000	4,988,000	4,993,829	0	119	0	119	0	4,993,948	0	364,252	364,252	85,035	02/15/2027
30040W-AF-5	Eversource Energy-SENIOR UNSECURED		07/19/2022	BNP PARIBAS		7,864,590	8,000,000	7,944,400	7,958,206	0	2,755	0	2,755	0	7,960,961	0	(96,371)	(96,371)	273,889	04/01/2029
30070R-AC-6	ACRES Commercial Realty -XAN 2020-RS08 A		03/17/2022	PAYDOWN		7,198,000	7,198,000	7,218,244	7,199,632	0	(1,632)	0	(1,632)	0	7,198,000	0	0	0	25,249	03/15/2035
30161N-AN-1	Exelon Corp-SENIOR UNSECURED		07/18/2022	BOFAMLSEC		6,973,190	7,000,000	6,968,738	6,982,607	0	2,503	0	2,503	0	6,985,110	0	(11,920)	(11,920)	165,132	06/15/2025
30212P-AJ-4	Expedia Inc-SENIOR UNSECURED NOTE		06/13/2022	CALL 102.783627		5,139,181	5,000,000	4,972,200	4,991,564	0	1,287	0	1,287	0	4,992,851	0	146,330	146,330	186,250	08/15/2024
30212P-AP-0	Expedia Group Inc-SENIOR UNSECURED		01/21/2022	GOLDMAN		10,462,900	10,000,000	9,243,800	9,470,852	0	5,163	0	5,163	0	9,476,014	0	986,886	986,886	168,889	02/15/2028
30227F-AJ-9	Extended Stay America Tr-ESA 2021-ESH D		10/15/2022	PAYDOWN		279,484	279,484	279,484	279,484	0	0	0	0	0	279,484	0	0	0	7,492	07/15/2038
302508-AQ-9	FMR LLC-UNSECURED		09/22/2022	FIRST TENNESSEE		26,096,230	23,215,000	31,880,899	28,370,128	0	(434,046)	0	(434,046)	0	27,936,082	0	(1,839,852)	(1,839,852)	1,342,635	06/15/2029
30251B-AD-0	FMR LLC-SENIOR UNSECURED BOND		08/16/2022	JEFFERIESLLC		12,081,233	11,750,000	12,116,015	12,018,075	0	(11,810)	0	(11,810)	0	12,006,265	0	74,968	74,968	609,091	02/01/2033
30260G-AA-4	FCI Funding 2021-1 LLC-FCITL 2021-1A A		12/15/2022	PAYDOWN		7,804,146	7,804,146	7,803,804	7,803,822	0	323	0	323	0	7,804,146	0	0	0	44,060	04/15/2033
302635-AC-1	FS KKR Capital Corp-SENIOR UNSECURED		04/15/2022	CALL 100		25,510,000	25,510,000	25,627,573	25,517,575	0	(8,219)	0	(8,219)	0	25,509,356	0	644	644	504,885	05/15/2022
30288B-AE-5	FREMF 2015-K721 Mortgage-FREMF 2015-K721		09/01/2022	PAYDOWN		6,000,000	6,000,000	5,486,406	5,926,210	0	73,790	0	73,790	0	6,000,000	0	0	0	155,984	11/01/2047
30292*-AA-2	FBI Bronx Control Trust Pass-Thru Certif		12/15/2022	SINKING PAYMENT		528,105	528,105	528,105	528,105	0	0	0	0	0	528,105	0	0	0	11,252	07/15/2033
31307*-AA-9	FDL-CC LLC Senior Note Tranche A-1		12/15/2022	SINKING PAYMENT		128,204	128,204	128,224	128,218	0	(14)	0	(14)	0	128,204	0	0	0	2,873	02/15/2035
31307*-AC-5	FDL-CC LLC Senior Note Tranche A-3		12/15/2022	SINKING PAYMENT		73,329	73,329	73,332	73,332	0	(3)	0	(3)	0	73,329	0	0	0	(12,879)	06/15/2037
313747-AU-1	Federal Realty Investmen-SENIOR UNSECURE		02/10/2022	U. S. BANCORP		9,282,420	9,000,000	8,911,620	8,979,311	0	1,046	0	1,046	0	8,980,357	0	302,063	302,063	206,388	01/15/2024
3137BL-AR-9	Freddie Mac Multifamily -FIMV M036 A		12/01/2022	CALL 100		495,000	495,000	508,613	500,560	0	(984)	0	(984)	0	499,576	0	(4,576)	(4,576)	13,716	12/01/2029
31428X-BZ-8	FedEx Corp-SENIOR UNSECURED		07/29/2022	CITIGROUP GLOBAL MAR		15,083,100	15,000,000	14,963,700	14,970,004	0	1,549	0	1,549	0	14,971,554	0	111,546	111,546	455,104	05/15/2030
31429*-AA-2	Fedex Chino Control Pass Trust Certifica		12/15/2022	SINKING PAYMENT		661,379	661,379	661,379	661,379	0	0	0	0	0	661,379	0	0	0	11,202	10/15/2035
31572Y-AB-4	Ellington Financial Mort-EFMT 2022-2 A2		12/01/2022	PAYDOWN		257,866	257,866	253,954	0	0	3,911	0	3,911	0	257,866	0	0	0	3,218	04/01/2067
31572Y-AC-2	Ellington Financial Mort-EFMT 2022-2 A3		12/01/2022	PAYDOWN		982,572	982,572	964,461	0	0	18,111	0	18,111	0	982,572	0	0	0	12,260	04/01/2067
31573E-AA-9	Ellington Financial Mort-EFMT 2022-3 A1		12/01/2022	PAYDOWN		678,432	678,432	670,987	0	0	7,445	0	7,445	0	678,432	0	0	0	5,502	08/01/2067
31573E-AB-7	Ellington Financial Mort-EFMT 2022-3 A2		12/01/2022	PAYDOWN		312,621	312,621	303,845	0	0	8,776	0	8,776	0	312,621	0	0	0	2,878	08/01/2067
31573E-AC-5	Ellington Financial Mort-EFMT 2022-3 A3		12/01/2022	PAYDOWN		150,763	150,763	144,165	0	0	6,597	0	6,597	0	150,763	0	0	0	1,820	08/01/2067
31620R-AF-2	Fidelity National Financ-SENIOR UNSECURE		09/01/2022	MATURITY		5,000,000	5,000,000	4,975,650	4,998,027	0	1,973	0	1,973	0	5,000,000	0	0	0	275,000	09/01/2022
31620R-AH-8	Fidelity National Financ-SENIOR UNSECURE		01/21/2022	GOLDMAN		14,223,170	13,000,000	12,902,760	12,932,305	0	865	0	865	0	12,933,171	0	1,289,999	1,289,999	260,000	08/15/2028
31677A-AB-0	Fifth Third Bank/Cincinnati-SUBORDINATED		07/06/2022	VARIOUS		12,740,882	13,000,000	12,987,130	12,994,507	0	584	0	584	0	12,995,091	0	(254,209)	(254,209)	407,193	03/15/2026
31677Q-BM-0	Fifth Third Bank NA-SENIOR UNSECURED		03/24/2022	VARIOUS		15,482,229	15,000,000	15,000,000	15,000,743	0	(321)	0	(321)	0	15,000,422	0	481,807	481,807	389,319	07/28/2025
31737V-AA-4	Finance of America HECM -FAHB 2020-HB2 A		08/25/2022	PAYDOWN		10,010,220	10,010,220	9,930,465	9,941,085	0	69,135	0	69,135	0	10,010,220	0	0	0	98,269	07/25/2030
318685-AA-2	First Bancshares Inc/Whi-SENIOR UNSECURE		07/01/2022	MATURITY		8,000,000	8,000,000	8,000,000	8,000,088	0	(88)	0	(88)	0	8,000,000	0	0	0	340,000	07/01/2022

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
319383-AC-9	First Busey Corp-SUBORDINATED		.08/25/2022	CALL 100		10,000,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	0	0	351,040	.05/25/2027
32010L-AN-4	First Eagle Commercial L-NWSTR 2016-1A A		.10/25/2022	PAYDOWN		3,117,034	3,117,034	3,116,993	3,116,998	0	336	0	336	0	3,117,034	0	0	0	70,613	.01/25/2032
32027L-AE-5	First Franklin Mortgage -FFML 2006-FF14		.12/27/2022	PAYDOWN		272,336	272,336	238,421	259,730	0	0	0	13,606	0	272,336	0	0	0	943	.10/25/2036
32051G-SQ-9	First Horizon Alternativ-FHAMS 2005-AA7		.12/01/2022	PAYDOWN		517,313	523,309	472,085	473,905	0	55,052	6,845	48,207	0	517,313	0	0	0	7,682	.09/01/2035
32051G-T7-0	First Horizon Alternativ-FHAMS 2006-FA1		.12/01/2022	PAYDOWN		96,715	104,021	64,338	64,338	0	36,878	0	36,878	0	96,715	0	0	0	3,117	.04/01/2036
32051G-XQ-3	First Horizon Mortgage P-FHASI 2005-AR5		.12/01/2022	PAYDOWN		353,663	353,663	337,536	311,587	0	42,076	0	42,076	0	353,663	0	0	0	6,754	.11/01/2035
32051G-XV-2	First Horizon Mortgage P-FHASI 2005-AR5		.12/01/2022	PAYDOWN		269,823	270,293	266,431	243,345	0	26,843	0	26,843	0	269,823	0	0	0	6,439	.11/01/2035
32051H-AF-0	First Horizon Alternativ-FHAMS 2006-FA3		.01/01/2022	PAYDOWN		319,572	514,742	319,530	319,556	0	16	0	16	0	319,572	0	0	0	38,158	.07/01/2036
32052E-AA-7	First Horizon Mortgage P-FHASI 2006-AR3		.12/01/2022	PAYDOWN		17,057	16,565	13,915	10,845	0	5,797	0	5,797	0	17,057	0	0	0	148	.11/01/2036
32056J-AA-2	First Horizon Mortgage P-FHASI 2007-AR3		.12/01/2022	PAYDOWN		877,303	903,277	607,768	352,104	0	541,467	0	541,467	0	877,303	0	0	0	11,998	.11/01/2037
320844-PD-9	FirstMerit Bank NA/Akron-SUBORDINATED		.01/21/2022	GOLDMAN		14,205,840	13,200,000	13,281,796	13,243,897	0	(573)	0	(573)	0	13,243,325	0	962,515	962,515	93,940	.11/25/2026
337158-AJ-8	First Horizon Bank-SUBORDINATED		.09/07/2022	AMHERST SECURITIES		25,285,930	25,000,000	25,000,000	25,000,000	0	0	0	0	0	25,000,000	0	285,930	285,930	1,229,861	.05/01/2030
337358-BH-7	Wachovia Corp-SUBORDINATED		.08/03/2022	WELLS FARGO		25,975,799	23,490,000	27,801,622	25,024,110	0	(173,486)	0	(173,486)	0	24,850,624	0	1,125,175	1,125,175	1,788,802	.08/01/2026
337738-AP-3	Fiserv Inc-SENIOR UNSECURED		.07/19/2022	U. S. BANCORP		9,844,600	10,000,000	9,993,300	9,997,906	0	169	0	169	0	9,998,076	0	(153,476)	(153,476)	245,972	.06/01/2025
337738-AU-2	Fiserv Inc-SENIOR UNSECURED		.09/08/2022	GOLDMAN		35,405,429	39,019,000	38,019,492	38,183,526	0	64,557	0	64,557	0	38,248,083	0	(2,842,654)	(2,842,654)	1,635,004	.07/01/2029
337915-AA-0	FIRSTMERIT CORP SUB NT		.08/23/2022	PNC CAPITAL MARKETS		10,013,500	10,000,000	10,097,820	10,012,884	0	(7,607)	0	(7,607)	0	10,005,277	0	8,223	8,223	460,375	.02/04/2023
33803W-AA-7	Fishers Lane Associates -SECURED		.12/05/2022	SINKING PAYMENT		958,386	958,386	958,386	958,387	0	(2)	0	(2)	0	958,386	0	0	0	19,138	.08/05/2030
33830J-AA-3	Five Guys Funding LLC-GUYS 2017-1A A2		.10/25/2022	PAYDOWN		55,000	55,000	55,000	55,000	0	0	0	0	0	55,000	0	0	0	2,214	.07/25/2047
33830J-AA-7	Five Guys Funding LLC-GUYS 2017-1AW 1AW		.10/25/2022	PAYDOWN		10,000	10,000	9,825	9,831	0	169	0	169	0	10,000	0	0	0	315	.07/25/2047
33972P-AA-7	FLNG LIQUEFACTION 2 LLC-FIRST LIEN		.09/30/2022	SINKING PAYMENT		179,500	179,500	179,500	179,483	0	17	0	17	0	179,500	0	0	0	5,682	.03/31/2038
340711-AW-0	Florida Gas Transmission-SENIOR UNSECURE		.06/24/2022	JANE		4,989,900	5,000,000	4,988,750	4,995,735	0	527	0	527	0	4,996,262	0	(6,362)	(6,362)	207,229	.07/15/2025
341078-AA-7	Florida Pipeline Holding Senior Secured		.08/15/2022	SINKING PAYMENT		1,865,229	1,865,229	1,865,229	1,865,229	0	0	0	0	0	1,865,229	0	0	0	45,473	.08/15/2038
34417M-AB-3	FOCUS Brands Funding LLC-FOCUS 2017-1A A		.10/30/2022	PAYDOWN		60,000	60,000	60,000	60,000	0	0	0	0	0	60,000	0	0	0	1,910	.04/30/2047
34417Q-AA-6	FOCUS Brands Funding LLC-FOCUS 2018-1 A2		.10/30/2022	PAYDOWN		120,000	120,000	120,000	120,021	0	(21)	0	(21)	0	120,000	0	0	0	3,888	.10/30/2048
34417Q-AB-4	FOCUS Brands Funding LLC-FOCUS 2018-1W A		.04/30/2022	PAYDOWN		32,500	32,500	34,267	34,191	0	(1,691)	0	(1,691)	0	32,500	0	0	0	540	.10/29/2048
347466-AE-4	Fort Irwin Land LLC-UNSECURED		.12/15/2022	SINKING PAYMENT		415,219	415,219	390,487	399,265	0	15,954	0	15,954	0	415,219	0	0	0	16,575	.12/15/2035
34964C-AA-4	FORTUNE BRANDS HOME & SE-SENIOR UNSECURE		.09/09/2022	U. S. BANCORP		9,828,000	10,000,000	9,935,700	9,975,289	0	4,359	0	4,359	0	9,979,648	0	(151,648)	(151,648)	297,778	.06/15/2025
35040U-AA-9	Foundation Finance Trust-FFIN 2017-1A A		.09/15/2022	PAYDOWN		1,522,411	1,522,411	1,522,191	1,522,381	0	30	0	30	0	1,522,411	0	0	0	18,731	.07/15/2033
35041J-AA-3	Foundation Finance Trust-FFIN 2019-1A A		.12/15/2022	PAYDOWN		1,261,531	1,261,531	1,261,335	1,244,339	0	17,192	0	17,192	0	1,261,531	0	0	0	24,847	.11/15/2034
35137L-AH-8	Fox Corp-SENIOR UNSECURED		.10/28/2022	VARIOUS		28,325,645	30,000,000	30,197,400	30,148,509	0	(14,202)	0	(14,202)	0	30,134,307	0	(1,808,662)	(1,808,662)	1,712,049	.01/25/2029
35564K-B2-4	Freddie Mac Structured A-STACR 2022-HQ2		.12/27/2022	PAYDOWN		845,939	845,939	846,624	(685)	0	(685)	0	(685)	0	845,939	0	0	0	8,010	.07/25/2040
35564K-E3-9	Freddie Mac STACR REMIC -STACR 2022-HQ3		.12/27/2022	PAYDOWN		352,222	352,222	352,222	0	0	0	0	0	0	352,222	0	0	0	3,134	.08/25/2042
35805B-AA-6	Fresenius Medical Care U-SENIOR UNSECURE		.11/10/2022	JP MORGAN SECURITIES		12,551,550	15,000,000	14,769,150	14,819,951	0	18,280	0	18,280	0	14,838,231	0	(2,286,681)	(2,286,681)	515,625	.06/15/2029
35824#-AA-2	Fresno County (Rowell Bu Trust Certifica		.12/15/2022	SINKING PAYMENT		14,415	14,415	14,547	(125)	0	0	0	(125)	0	14,415	0	0	0	253	.05/15/2040
35826#-AA-4	County of Fresno CA Trust Certificates		.12/15/2022	SINKING PAYMENT		355,950	355,950	359,502	359,077	0	(3,127)	0	(3,127)	0	355,950	0	0	0	8,651	.06/15/2038
35952F-AB-6	Fort Huachuca-YPG Commun-UNSECURED		.12/15/2022	SINKING PAYMENT		393,137	393,137	423,212	403,474	0	(10,337)	0	(10,337)	0	393,137	0	0	0	31,451	.12/15/2026
360271-AJ-9	Fulton Financial Corp-SUBORDINATED		.01/18/2022	GOLDMAN		5,701,657	5,320,000	5,304,466	5,314,900	0	29	0	29	0	5,314,929	0	386,728	386,728	43,225	.11/15/2024
361448-AN-3	GATX CORP-SENIOR UNSECURED NOTE		.04/12/2022	CALL 100.66		8,052,800	8,000,000	7,924,000	7,995,696	0	2,191	0	2,191	0	7,997,887	0	54,913	54,913	123,500	.06/15/2022
361448-BC-6	GATX Corp-SENIOR UNSECURED		.10/28/2022	BARCLAYS CAPITAL INC		9,359,150	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(640,850)	(640,850)	418,979	.11/07/2028
361448-BF-9	GATX Corp-SENIOR UNSECURED		.08/23/2022	SUNTRUST CAPITAL MAR		8,302,708	9,000,000	8,980,830	8,984,358	0	648	0	648	0	8,985,005	0	(682,297)	(682,297)	234,411	.06/30/2030
36157N-FL-3	GE Mortgage Services LLC-GEOMS 1997-HE4		.12/01/2022	PAYDOWN		16,152	16,152	13,586	16,274	0	2,876	2,998	(122)	0	16,152	0	0	0	584	.12/01/2028
36168N-AJ-2	GE Capital Funding LLC-SENIOR UNSECURED		.08/23/2022	DEUTSCHE BANK SECURI		8,516,430	9,000,000	9,000,000	9,000,000	0	0	0	0	0	9,000,000	0	(483,570)	(483,570)	306,900	.05/15/2030
36167K-AA-6	GCAT 2021-NQM6 Trust-GCAT 2021-NQM6 A1		.12/01/2022	PAYDOWN		210,814	210,814	189,469	0	0	21,345	0	21,345	0	210,814	0	0	0	805	.08/01/2066
36169K-AA-4	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A1		.12/01/2022	PAYDOWN		248,036	248,036	246,882	0	0	1,154	0	1,154	0	248,036	0	0	0	2,829	.02/01/2067
36169K-AB-2	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A2		.12/01/2022	PAYDOWN		909,398	909,398	891,514	0	0	17,884	0	17,884	0	909,398	0	0	0	10,371	.02/01/2067
36185N-6N-5	GIAOM Mortgage Loan Trus-GIAOM 2005-AR2		.12/01/2022	PAYDOWN		894,734	894,734	810,441	802,347	0	92,387	0	92,387	0	894,734	0	0	0	8,189	.05/01/2035
36192C-AE-5	GS Mortgage Securities C-GSMS 2013-GC10		.12/01/2022	PAYDOWN		26,720,000	26,720,000	24,665,477	26,447,405	0	272,595	0	272,595	0	26,720,000	0	0	0	673,576	.02/01/2046
36198#-AA-0	GE Huntsville 2020A Leas Trust Certifica		.12/15/2022	SINKING PAYMENT		225,336	225,336	225,336	225,336	0	0	0	0	0	225,336	0	0	0	4,772	.04/15/2046
36200#-AA-8	GE Huntsville 2020B Leas Trust Certifica		.12/15/2022	SINKING PAYMENT		53,184	53,184	53,184	53,184	0	0	0	0	0	53,184	0	0	0	1,345	.04/15/2046

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
36228F-UJ-3	GSR Mortgage Loan Trust -GSR 2003-7F 4A1		12/01/2022	PAYDOWN		27,391	27,391	26,715	26,539	0	853	0	853	0	27,391	0	0	0	486	10/01/2032
3622EA-AA-8	GSAA TRUST-GSAA 2007-3 1A1A		12/27/2022	PAYDOWN		712,216	712,216	465,888	412,067	0	301,129	980	300,149	0	712,216	0	0	0	1,574	03/25/2047
362341-4A-4	GSR Mortgage Loan Trust -GSR 2006-AR1 2A		11/01/2022	PAYDOWN		72,783	68,812	65,837	66,674	0	2,595	0	2,595	0	72,783	0	0	0	652	01/01/2036
362341-4F-3	GSR Mortgage Loan Trust -GSR 2006-AR1 3A		11/01/2022	PAYDOWN		110,519	109,472	107,693	108,156	0	1,585	0	1,585	0	110,519	0	0	0	891	01/01/2036
362341-DP-1	GSR Mortgage Loan Trust -GSR 2005-6F 1A5		12/01/2022	PAYDOWN		308,206	308,206	309,362	309,327	0	(1,121)	0	(1,121)	0	308,206	0	0	0	5,003	07/01/2035
362341-FN-4	GSR Mortgage Loan Trust -GSR 2005-AR4 3A		11/01/2022	PAYDOWN		216,836	213,903	199,461	168,612	0	45,704	0	45,704	0	216,836	0	0	0	3,540	07/01/2035
362341-SG-5	GSR MORTGAGE LOAN TRUST-SERIES 2005-AR6		12/01/2022	PAYDOWN		930,497	677,507	613,988	618,612	0	87,872	0	87,872	0	930,497	0	0	0	10,147	09/01/2035
362341-XC-8	GSR Mortgage Loan Trust -GSR 2005-AR7 4A		12/01/2022	PAYDOWN		151,677	142,197	123,488	105,345	0	38,450	79	38,371	0	151,677	0	0	0	1,512	11/01/2035
362341-XE-4	GSR Mortgage Loan Trust -GSR 2005-AR7 5A		12/01/2022	PAYDOWN		325,810	309,922	268,832	251,035	0	63,715	0	63,715	0	325,810	0	0	0	6,129	11/01/2035
362341-XG-8	GSR Mortgage Loan Trust -GSR 2005-AR7 6A		12/01/2022	PAYDOWN		240,703	240,703	228,910	228,950	0	11,752	0	11,752	0	240,703	0	0	0	3,623	11/01/2035
36242D-WI-0	GSR Mortgage Loan Trust -GSR 2005-AR3 6A		12/01/2022	PAYDOWN		120,417	120,417	113,147	105,925	0	14,492	0	14,492	0	120,417	0	0	0	1,506	05/01/2035
36242D-BZ-5	GSR MORTGAGE LOAN TRUST-SERIES 2004-9 CL		12/01/2022	PAYDOWN		252,041	252,041	244,795	246,333	0	5,708	0	5,708	0	252,041	0	0	0	4,442	08/01/2034
36242D-FS-7	GSR Mortgage Loan Trust -GSR 2004-11 2A1		12/01/2022	PAYDOWN		335,551	335,551	337,327	335,043	0	508	0	508	0	335,551	0	0	0	3,234	09/01/2034
36242D-FX-6	GSR Mortgage Loan Trust -GSR 2004-11 3A1		12/01/2022	PAYDOWN		13,527	13,527	13,550	13,498	0	29	0	29	0	13,527	0	0	0	100	09/01/2034
36242D-H4-8	GSR Mortgage Loan Trust -GSR 2005-AR2 1A		11/01/2022	PAYDOWN		437,115	437,115	401,053	400,736	0	36,379	0	36,379	0	437,115	0	0	0	2,008	04/01/2035
36242D-H9-7	GSR Mortgage Loan Trust -GSR 2005-AR2 4A		12/01/2022	PAYDOWN		426,970	426,970	414,961	414,837	0	12,133	0	12,133	0	426,970	0	0	0	6,144	04/01/2035
36242D-LY-7	GSR Mortgage Loan Trust -GSR 2004-13F 4A		12/25/2022	PAYDOWN		0	0	519,975	2,328	0	(1,685)	0	(1,685)	0	0	0	0	0	20,061	11/25/2034
36242D-QY-2	GSR Mortgage Loan Trust -GSR 2004-15F 2A		12/01/2022	PAYDOWN		28,615	28,615	28,678	27,411	0	1,204	0	1,204	0	28,615	0	0	0	674	12/01/2034
36242D-VA-8	GSR Mortgage Loan Trust -GSR 2005-1F 1A6		12/01/2022	PAYDOWN		226,734	199,538	196,446	0	0	6,287	0	6,287	0	226,734	0	0	0	3,272	02/01/2035
36244S-AD-0	GSAA Home Equity Trust 2-GSAA 2006-13 AF		12/01/2022	PAYDOWN		501,595	501,595	346,101	177,147	0	324,448	0	324,448	0	501,595	0	0	0	4,287	07/01/2036
36246M-AU-3	GTP ACQ PARTNERS I-SECD REV NT AMER TWIR		01/19/2022	WELLS FARGO		15,515,550	15,000,000	14,985,500	14,994,396	0	88	0	88	0	14,994,484	0	521,066	521,066	52,230	06/16/2025
36248F-AA-0	GSA (Anchorage AK) CTL P Pass-Thru Certi		12/15/2022	SINKING PAYMENT		1,347,068	1,347,068	1,359,192	1,354,812	0	(7,744)	0	(7,744)	0	1,347,068	0	0	0	25,675	11/15/2030
362480-AD-7	GSC CAPITAL CORP MORTGAG-SERIES 2006-2 C		12/27/2022	PAYDOWN		243,945	222,091	171,785	187,551	0	40,072	0	40,072	0	243,945	0	0	0	1,019	05/25/2036
362498-AA-1	GSA Gth l US Government Lease-Backed Pas		12/15/2022	SINKING PAYMENT		307,136	307,136	307,136	307,142	0	(6)	0	(6)	0	307,136	0	0	0	7,386	05/15/2038
36264E-BD-5	GS Mortgage-Backed Secur-GSMB5 2022-NM1		12/01/2022	PAYDOWN		370,889	370,889	382,362	0	0	(11,473)	0	(11,473)	0	370,889	0	0	0	6,989	05/01/2062
362669-AV-5	GSR Mortgage Loan Trust -GSR 2007-4F 6A1		02/01/2022	PAYDOWN		10,286	7,445	6,901	48,743	0	(241,967)	0	(241,967)	0	10,286	0	0	0	45	06/01/2027
36298G-AA-7	GSPA Monetization Trust-SECURED		12/09/2022	SINKING PAYMENT		820,618	820,618	832,103	826,106	0	(5,489)	0	(5,489)	0	820,618	0	0	0	29,001	10/09/2029
36850F-AA-9	Geisinger (Jenkins Towns Trust Certifica		12/15/2022	SINKING PAYMENT		495,936	495,936	495,936	495,936	0	0	0	0	0	495,936	0	0	0	9,158	12/15/2033
369550-BL-1	General Dynamics Corp-SENIOR UNSECURED		04/06/2022	VARIOUS		25,283,720	25,000,000	24,788,000	24,836,706	0	8,306	0	8,306	0	24,845,012	0	438,708	438,708	448,778	04/01/2027
369550-BM-9	General Dynamics Corp-SENIOR UNSECURED		05/10/2022	VARIOUS		24,217,900	25,000,000	24,736,750	24,776,654	0	8,707	0	8,707	0	24,785,361	0	(567,461)	(567,461)	554,323	04/01/2030
370334-CG-7	Goldman Sachs Group Inc-/SENIOR UNSECURED		01/18/2022	GOLDMAN		5,459,900	5,000,000	4,989,900	4,993,354	0	38	0	38	0	4,993,392	0	466,508	466,508	54,250	04/17/2028
37045X-BG-0	General Motors Financial-SENIOR UNSECURE		01/20/2022	GOLDMAN		8,832,400	8,000,000	7,971,120	7,986,779	0	335	0	335	0	7,987,114	0	845,286	845,286	166,833	03/01/2026
37045X-BQ-8	General Motors Financial-SENIOR UNSECURE		08/03/2022	JANE		6,842,990	7,000,000	6,990,270	6,995,142	0	552	0	552	0	6,995,694	0	(152,704)	(152,704)	232,556	10/06/2026
37045X-BT-2	General Motors Financial-SENIOR UNSECURE		01/21/2022	GOLDMAN		7,523,460	7,000,000	6,989,850	6,994,749	0	125	0	125	0	6,994,874	0	528,586	528,586	159,017	01/17/2027
375558-AZ-6	GILEAD SCIENCES INC-SENIOR UNSECURED		05/16/2022	GOLDMAN		9,960,100	10,000,000	9,990,600	9,997,448	0	120	0	120	0	9,997,568	0	(37,468)	(37,468)	279,028	02/01/2025
375558-BF-9	GILEAD SCIENCES INC-SR UNSECURED		06/10/2022	MORGAN		9,824,000	10,000,000	9,961,940	9,983,434	0	1,605	0	1,605	0	9,985,039	0	(161,039)	(161,039)	286,931	03/01/2026
378272-AQ-1	Glencore Funding LLC-SENIOR UNSECURED		11/02/2022	MIZUHO SECURITIES		6,303,220	7,000,000	6,940,430	5,082	0	6,962,792	0	6,962,792	0	6,967,874	0	(664,654)	(664,654)	276,524	10/27/2027
378272-AV-0	Glencore Funding LLC-SENIOR UNSECURED		10/24/2022	VARIOUS		13,599,240	15,000,000	14,950,650	14,962,516	0	3,781	0	3,781	0	14,966,297	0	(1,367,057)	(1,367,057)	814,938	03/12/2029
38141G-ES-9	GOLDMAN SACHS GROUP INC-SR UNSECURED		01/20/2022	GOLDMAN		610,475	530,000	483,334	510,202	0	218	0	218	0	510,419	0	100,056	100,056	16,556	01/15/2027
38141G-IV-2	Goldman Sachs Group Inc-/SENIOR UNSECURE		01/20/2022	GOLDMAN		5,285,550	5,000,000	4,864,400	4,904,997	0	697	0	697	0	4,905,694	0	379,856	379,856	48,205	04/23/2028
38141G-WZ-3	Goldman Sachs Group Inc-/SENIOR UNSECURE		01/18/2022	GOLDMAN		10,829,900	10,000,000	9,917,750	9,941,697	0	298	0	298	0	9,941,995	0	887,905	887,905	92,671	05/01/2029
38177X-AA-2	Golub Capital BDC 3 QLO -GBDC3 2021-1A A		06/23/2022	JEFFERIESLLC		12,493,000	13,000,000	13,000,000	13,000,000	0	0	0	0	0	13,000,000	0	(507,000)	(507,000)	186,688	04/15/2033
38217U-AC-6	Goodgreen 2021-1 Trust-GOODG 2021-1A C		12/15/2022	PAYDOWN		339,764	339,764	310,034	0	0	29,729	0	29,729	0	339,764	0	0	0	96	10/15/2056
391164-AF-7	GREAT PLAINS ENERGY INC-SR UNSECURED		06/15/2022	MATURITY		4,000,000	4,000,000	4,091,640	4,002,362	0	(2,362)	0	(2,362)	0	4,000,000	0	0	0	105,840	06/15/2022
39138Q-AA-3	Great-West Lifeco Financ-SENIOR UNSECURE		01/20/2022	WELLS FARGO		10,942,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	942,000	942,000	75,319	05/17/2028
391416-AA-2	Great Western Bancorp In-SUBORDINATED		03/03/2022	CALL 100		10,000,000	10,000,000	10,000,000	0	0	(2,250)	0	(2,250)	0	9,997,620	0	2,380	2,380	20,314	08/15/2025
39538W-BE-7	GreenPoint Mortgage Fund-GPMF 2005-HY1 M		12/27/2022	PAYDOWN		1,355,430	1,355,430	978,451	1,208,626	0	146,804	0	146,804	0	1,355,430	0	0	0	15,603	07/25/2035
39678W-AA-6	Greenwich Capital Struct-GCSP 2005-1 A1		11/01/2022	PAYDOWN		80,162	80,162	79,761	81,367	0	(1,205)	0	(1,205)	0	80,162	0	0	0	1,492	09/01/2034
402524-AE-2	Gulf South Pipeline Co L-SENIOR UNSECURE		03/21/2022	CALL 100		5,000,000	5,000,000	4,982,050	4,999,019	0	269	0	269	0	4,999,288	0	712	712	53,333	06/15/2022

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
402740-AD-6	Gulfstream Natural Gas S-SENIOR UNSECURE		.01/18/2022	TORONTO DOMINION SEC		3,226,860	3,000,000	2,998,860	2,999,665	0	.25	0	.25	0	2,999,690	0	227,170	227,170	47,917	.09/15/2025
404119-BX-6	HCA Inc-FIRST LIEN		.11/08/2022	VARIOUS		4,417,490	5,000,000	4,974,850	4,980,542	0	1,856	0	1,856	0	4,982,399	0	(564,909)	(564,909)	186,198	.06/15/2029
40431H-AD-9	HSI Asset Loan Obligatio-HALO 2006-2 1A4		.12/25/2022	PAYDOWN		0	0	10,787	0	0	.11	0	.11	0	0	0	0	0	612	.12/25/2036
406216-BG-5	HALLIBURTON COMPANY-SR UNSECURED		.01/20/2022	GOLDMAN		649,418	612,000	610,280	611,282	0	6	0	6	0	611,288	0	38,130	38,130	4,457	.11/15/2025
406216-BL-4	Halliburton Co-SENIOR UNSECURED		.06/13/2022	CITIGROUP GLOBAL MAR		4,412,900	5,000,000	4,998,700	4,998,960	0	.34	0	.34	0	4,998,995	0	(586,095)	(586,095)	115,178	.03/01/2030
410495-AA-3	Hanni Financial Corp-SUBORDINATED		.03/30/2022	CALL 100		28,000,000	28,000,000	28,000,000	28,000,182	0	(182)	0	(182)	0	28,000,000	0	0	0	763,000	.03/30/2027
410867-AF-2	Hanover Insurance Group -SENIOR UNSECURE		.09/20/2022	VARIOUS		26,531,252	27,000,000	27,319,120	27,157,028	0	(23,570)	0	(23,570)	0	27,133,457	0	(602,205)	(602,205)	1,107,214	.04/15/2026
41161P-CX-9	HarborView Mortgage Loan-HVMLT 2004-1 1A		.12/19/2022	PAYDOWN		21,131	21,131	20,122	19,979	0	1,242	.90	1,152	0	21,131	0	0	0	157	.04/19/2034
41161P-EX-7	HarborView Mortgage Loan-HVMLT 2004-5 2A		.12/01/2022	PAYDOWN		35,229	35,229	28,272	32,820	0	2,410	0	2,410	0	35,229	0	0	0	359	.06/01/2034
41161P-EZ-2	HarborView Mortgage Loan-HVMLT 2004-5 3A		.12/01/2022	PAYDOWN		619,805	619,805	617,080	616,030	0	3,775	0	3,775	0	619,805	0	0	0	13,075	.06/01/2034
41161P-FV-0	HarborView Mortgage Loan-HVMLT 2004-6 5A		.12/01/2022	PAYDOWN		219,179	219,179	222,188	222,651	0	(3,472)	0	(3,472)	0	219,179	0	0	0	4,306	.08/01/2034
41161P-MV-2	HarborView Mortgage Loan-HVMLT 2005-4 1A		.12/01/2022	PAYDOWN		47,742	47,742	35,104	51,652	0	4	8,209	(8,205)	0	33,723	0	14,019	14,019	808	.07/01/2035
41161P-TN-3	HARBORVIEW MORTGAGE LOAN-SERIES 2005-10		.12/19/2022	PAYDOWN		174,418	174,418	122,030	112,504	0	61,914	0	61,914	0	174,418	0	0	0	1,053	.11/19/2035
41161P-UK-7	HarborView Mortgage Loan-SERIES 05-11 QL		.12/19/2022	PAYDOWN		131,986	131,986	93,086	106,090	0	25,895	0	25,895	0	131,986	0	0	0	488	.08/19/2045
41161V-AC-4	HarborView Mortgage Loan-HVMLT 2006-7 2A		.12/19/2022	PAYDOWN		35,857	43,568	30,953	32,392	0	8,447	0	8,447	0	35,857	0	0	0	372	.09/19/2046
41162G-AA-0	HarborView Mortgage Loan-HVMLT 2006-11 A		.12/19/2022	PAYDOWN		908,602	872,565	786,672	769,257	0	7,629	0	7,629	0	908,602	0	0	0	5,855	.12/19/2036
411707-AD-4	Hardee's Funding LLC-HNGRY 2018-1A A2II		.12/20/2022	PAYDOWN		140,000	140,000	140,000	140,000	0	0	0	0	0	140,000	0	0	0	4,339	.06/20/2048
411707-AH-5	Hardee's Funding LLC-HNGRY 2020-1A A2		.12/20/2022	PAYDOWN		120,000	120,000	120,000	120,000	0	0	0	0	0	120,000	0	0	0	2,986	.12/20/2050
41283L-AU-9	Harley-Davidson Financia-SENIOR UNSECURE		.02/04/2022	MATURITY		8,000,000	8,000,000	7,993,040	7,999,765	0	235	0	235	0	8,000,000	0	0	0	162,000	.02/04/2022
413086-AH-2	Harman International Ind-SENIOR UNSECURE		.01/20/2022	BARCLAYS CAPITAL INC		10,607,300	10,000,000	9,933,600	9,974,968	0	334	0	334	0	9,975,302	0	631,998	631,998	79,542	.05/15/2025
413875-AR-6	HARRIS CORPORATION-SR UNSECURED		.07/18/2022	AMHERST SECURITIES		4,944,150	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(55,850)	(55,850)	139,974	.04/27/2025
418056-AZ-0	Hasbro Inc-SENIOR UNSECURED		.08/24/2022	BARCLAYS CAPITAL INC		12,065,950	13,000,000	12,958,400	12,966,236	0	2,200	0	2,200	0	12,968,436	0	(902,486)	(902,486)	388,375	.11/19/2029
419838-AA-5	HAWAIIAN AIRLINES 13-1A-FIRST LIEN		.12/08/2022	VARIOUS		2,568,879	2,990,584	2,990,583	2,991,361	0	(302)	0	(302)	0	2,991,060	0	(422,181)	(422,181)	161,047	.01/15/2026
42217K-BF-2	Welltower Inc-SENIOR UNSECURED		.05/25/2022	DAIWA SECURITIES AME		7,057,680	7,000,000	6,994,820	6,998,350	0	325	0	325	0	6,998,675	0	59,005	59,005	136,889	.06/01/2025
42225U-AF-1	HEALTHCARE TRUST OF AMER-SENIOR UNSECURE		.01/19/2022	FTS		8,522,160	8,000,000	7,959,360	7,976,336	0	.76	0	.76	0	7,976,411	0	545,749	545,749	166,667	.07/01/2027
42249H-AA-7	HealthPartners, Inc. Senior Note Series		.05/15/2022	CALL 100		696,378	696,378	696,378	696,405	0	.32	0	.32	0	696,437	0	(59)	(59)	16,052	.05/15/2030
426927-AD-1	Heritage Commerce Corp-SUBORDINATED		.06/01/2022	CALL 100		5,000,000	5,000,000	5,000,000	5,000,020	0	(20)	0	(20)	0	5,000,000	0	0	0	131,250	.06/01/2027
427096-AG-7	HERCULES CAPITAL INC-SENIOR UNSECURED		.02/22/2022	CALL 102.215		7,666,125	7,500,000	7,458,675	7,492,741	0	1,187	0	1,187	0	7,493,928	0	172,197	172,197	114,661	.10/23/2022
42770Q-AA-0	HERO Funding Trust 2014-HERO 2014-2A A		.09/20/2022	PAYDOWN		360,203	360,203	359,958	360,094	0	109	0	109	0	360,203	0	0	0	11,149	.09/21/2040
42770R-AA-8	HERO Funding Trust 2014-HERO 2014-1A A		.09/20/2022	PAYDOWN		238,572	238,572	238,570	238,572	0	0	0	0	0	238,572	0	0	0	8,862	.09/20/2038
42824C-AW-9	HP ENTERPRISE CO-SENIOR UNSECURED		.01/20/2022	TORONTO DOMINION SEC		34,403,966	31,495,000	31,472,219	31,489,859	0	(91)	0	(91)	0	31,489,768	0	2,914,198	2,914,198	424,395	.10/15/2026
42981C-AA-6	HIGH STREET FUNDING TRUS-SENIOR UNSECURE		.01/20/2022	VARIOUS		10,888,500	10,000,000	10,000,000	10,000,382	0	.164	0	.164	0	10,000,546	0	887,954	887,954	181,569	.02/15/2028
431282-AM-4	HIGHWOODS REALTY LP-SENIOR UNSECURED NOT		.10/15/2022	CALL 100		4,000,000	4,000,000	3,957,600	3,994,885	0	3,709	0	3,709	0	3,998,594	0	1,406	1,406	181,250	.01/15/2023
431282-AP-7	HIGHWOODS REALTY LP-SENIOR UNSECURED		.01/20/2022	GOLDMAN		2,143,460	2,000,000	1,973,340	1,985,044	0	.189	0	.189	0	1,985,232	0	158,228	158,228	30,785	.03/01/2027
431282-AQ-5	Highwoods Realty LP-SENIOR UNSECURED		.01/20/2022	GOLDMAN		5,429,800	5,000,000	4,940,900	4,960,859	0	.393	0	.393	0	4,961,252	0	468,548	468,548	73,906	.03/15/2028
43132A-AA-6	Hildene Collateral Manag-SECURED		.12/28/2021	DIRECT		0	0	0	0	0	(1,075)	0	(1,075)	0	0	0	0	0	0	.12/28/2042
43283G-AD-4	Hilton Grand Vacations T-HGVT 2022-2A D		.12/25/2022	PAYDOWN		462,638	462,638	462,576	0	0	.63	0	.63	0	462,638	0	0	0	8,367	.01/25/2037
43285H-AA-6	Hilton Grand Vacations T-HGVT 2020-AA A		.01/19/2022	BOFAMLSEC		1,640,681	1,609,990	1,609,886	1,609,900	0	.1	0	.1	0	1,609,901	0	30,780	30,780	3,186	.02/25/2039
433674-AA-6	NRZ Excess Spread-Collat-NZES 2020-PLS1		.12/25/2022	PAYDOWN		1,517,017	1,517,017	1,517,013	1,517,014	0	.3	0	.3	0	1,517,017	0	0	0	29,802	.12/25/2025
436893-AA-9	Home BancShares Inc/AR-SUBORDINATED		.04/15/2022	CALL 100		23,000,000	23,000,000	22,999,310	23,002,758	0	(2,758)	0	(2,758)	0	23,000,000	0	0	0	646,875	.04/15/2027
437076-BC-5	HOME DEPOT INC-SR UNSECURED		.03/17/2022	GOLDMAN		15,388,800	15,000,000	14,922,150	14,982,041	0	1,831	0	1,831	0	14,983,872	0	404,928	404,928	337,500	.02/15/2024
43722H-AA-1	Home Depot (Monterey Par Trust Certifica		.12/15/2022	SINKING PAYMENT		207,970	207,970	207,970	207,970	0	0	0	0	0	207,970	0	0	0	3,877	.06/15/2038
43722H-AA-5	Home Depot South Windsor Pass-Thru Certi		.12/15/2022	SINKING PAYMENT		188,128	188,128	188,128	188,128	0	0	0	0	0	188,128	0	0	0	3,198	.10/15/2040
43739E-AP-2	HomeBanc Mortgage Trust-SERIES 2005-1 QL		.12/27/2022	PAYDOWN		274,696	274,696	250,145	234,801	0	39,896	0	39,896	0	274,696	0	0	0	1,215	.03/25/2035
43739E-CL-9	HomeBanc Mortgage Trust -HMBT 2006-1 1A1		.12/01/2022	PAYDOWN		41,043	34,416	30,032	27,597	0	8,257	0	8,257	0	41,043	0	0	0	381	.04/01/2037
43739H-AA-8	HomeBanc Mortgage Trust -HMBT 2006-2 A1		.12/27/2022	PAYDOWN		1,661,537	1,661,537	1,453,175	1,537,244	0	124,293	0	124,293	0	1,661,537	0	0	0	7,387	.12/25/2036
43741B-AA-7	HomeBanc Mortgage Trust -HMBT 2007-1 11A		.12/01/2022	PAYDOWN		187,265	131,240	130,361	130,361	0	5,996	0	5,996	0	187,265	0	0	0	2,218	.04/01/2047
440407-AA-2	Horizon Bancorp Inc/IN-SUBORDINATED		.11/02/2022	VARIOUS		3,087,500	3,000,000	3,000,000	3,000,000	0	0	0	0	0	3,000,000	0	87,500	87,500	139,531	.07/01/2030
44329H-AG-9	HP Communities LLC-FIRST LIEN		.09/15/2022	SINKING PAYMENT		673,008	673,008	659,331	671,466	0	1,542	0	1,542	0	673,008	0	0	0	25,438	.03/15/2023

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Iden-tification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con-sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor-tization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date
44329H-AS-3	HP Communities LLC-SECURED		.09/15/2022	SINKING PAYMENT		112,613	112,613	110,777	112,436	0	176	0	176	0	112,613	0	0	0	4,513	.03/15/2023
444859-BN-1	Humana Inc-SENIOR UNSECURED		.07/27/2022	VARIOUS		18,484,630	18,000,000	17,961,840	17,967,612	0	1,893	0	1,893	0	17,969,505	0	515,125	515,125	722,313	.04/01/2030
445658-CF-2	JB Hunt Transport Serv-SENIOR UNSECURE		.01/18/2022	GOLDMAN		7,500,640	7,000,000	6,999,580	6,999,865	0	58	0	58	0	6,999,923	0	500,717	500,717	104,733	.03/01/2026
446413-AS-5	Huntington Ingalls Indus-SENIOR UNSECURE		.01/18/2022	GOLDMAN		10,516,600	10,000,000	9,999,600	10,000,423	0	(57)	0	(57)	0	10,000,366	0	516,234	516,234	84,354	.05/01/2025
446413-AT-3	Huntington Ingalls Indus-SENIOR UNSECURE		.07/28/2022	CITIGROUP GLOBAL MAR		4,810,250	5,000,000	4,999,800	5,000,312	0	(63)	0	(63)	0	5,000,249	0	(189,999)	(189,999)	157,500	.05/01/2030
448579-AG-7	Hyatt Hotels Corp-SENIOR UNSECURED		.11/10/2022	U. S. BANCORP		9,002,620	10,000,000	9,762,000	9,826,899	0	19,475	0	19,475	0	9,846,374	0	(843,754)	(843,754)	508,229	.09/15/2028
44891A-AZ-0	Hyundai Capital America-SENIOR UNSECURED		.08/23/2022	CITIGROUP GLOBAL MAR		14,911,200	15,000,000	14,992,650	14,996,776	0	913	0	913	0	14,997,689	0	(86,489)	(86,489)	688,000	.02/01/2024
451102-BM-8	Icahn Enterprises LP / I-SENIOR UNSECURE		.02/18/2022	CALL 100		5,500,000	5,500,000	5,500,000	5,500,027	0	(27)	0	(27)	0	5,500,000	0	0	0	203,156	.02/01/2024
45254N-JB-4	IMPAC CMB TRUST-SERIES 2004-4 CLASS 2A1		.12/01/2022	PAYDOWN		151,973	151,973	146,222	140,976	0	10,997	0	10,997	0	151,973	0	0	0	3,797	.09/01/2034
45254N-KX-4	IMPAC CMB TRUST-SERIES 2004-9 CLASS 1A1		.12/27/2022	PAYDOWN		45,456	45,456	41,592	41,989	0	3,467	0	3,467	0	45,456	0	0	0	342	.01/25/2035
45254N-MZ-7	Impac CMB Trust Series 2-1MM 2005-2 1A2		.12/27/2022	PAYDOWN		332,325	332,325	270,012	294,819	0	37,506	0	37,506	0	332,325	0	0	0	2,501	.04/25/2035
45254N-NT-0	Impac CMB Trust Series 2-1MM 2005-3 M1		.12/27/2022	PAYDOWN		26,860	18,201	8,820	13,778	0	7,452	0	7,452	0	26,860	0	0	0	83	.08/25/2035
45254T-TN-4	Impac Secured Assets Tru-1MSA 2006-1 2A1		.12/27/2022	PAYDOWN		2,246	2,246	1,572	2,010	0	236	0	236	0	2,246	0	0	0	7	.05/25/2036
45276Q-AA-2	Imperial Fund Mortgage T-1MPRL 2022-NQM5		.12/01/2022	PAYDOWN		642,529	642,529	642,521	642,521	0	8	0	8	0	642,529	0	0	0	4,796	.08/01/2067
45276Q-AB-0	Imperial Fund Mortgage T-1MPRL 2022-NQM5		.12/01/2022	PAYDOWN		577,720	577,720	577,712	577,712	0	8	0	8	0	577,720	0	0	0	3,318	.08/01/2067
45276Q-AC-8	Imperial Fund Mortgage T-1MPRL 2022-NQM5		.12/01/2022	PAYDOWN		159,026	159,026	157,678	159,026	0	1,348	0	1,348	0	159,026	0	0	0	1,154	.08/01/2067
453836-AG-3	Independent Bank Corp-SUBORDINATED		.10/28/2022	PIPERJAFFRAY		4,700,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(300,000)	(300,000)	267,847	.03/15/2029
45660K-AA-9	IndyMac INDX Mortgage Lo-INDX 2006-AR39		.12/27/2022	PAYDOWN		427,555	411,658	331,641	349,037	0	66,734	0	66,734	0	427,555	0	0	0	1,311	.02/25/2037
45660L-KX-3	IndyMac INDX Mortgage Lo-INDX 2005-AR2 1		.12/27/2022	PAYDOWN		361,594	303,673	223,922	222,515	0	101,688	3,133	98,555	0	361,594	0	0	0	1,947	.02/25/2035
45660L-DB-2	IndyMac INDX Mortgage Lo-INDX 2005-AR1 1		.12/01/2022	PAYDOWN		20,360	20,360	20,207	20,276	0	83	0	83	0	20,360	0	0	0	228	.03/01/2035
45660L-V9-7	IndyMac INDX Mortgage Lo-INDX 2005-AR31		.12/01/2022	PAYDOWN		137,378	133,880	119,847	129,124	0	5,394	0	5,394	0	137,378	0	0	0	1,420	.01/01/2036
45660N-X9-1	IndyMac INDX Mortgage Lo-INDX 2004-AR6 5		.12/01/2022	PAYDOWN		35,833	35,833	29,383	30,908	0	4,925	0	4,925	0	35,833	0	0	0	576	.10/01/2034
456618-AF-4	IndyMac INDX Mortgage Lo-INDX 2006-AR8 A		.12/27/2022	PAYDOWN		269,162	269,162	238,478	289,426	0	(20,264)	0	(20,264)	0	269,162	0	0	0	1,104	.07/25/2046
45661X-AB-8	IndyMac INDX Mortgage Lo-INDX 2006-AR13		.12/25/2022	PAYDOWN		362,354	362,354	217,186	210,703	0	151,651	0	151,651	0	362,354	0	0	0	2,285	.07/25/2036
456650-AF-0	Infinity Property and Ca-SENIOR UNSECURE		.03/25/2022	CALL 101.74		11,191,400	11,000,000	11,000,000	11,000,000	0	0	0	0	0	11,000,000	0	191,400	191,400	284,167	.09/19/2022
45669A-AD-6	IndyMac INDX Mortgage Lo-INDA 2007-AR1 2		.12/01/2022	PAYDOWN		49,418	49,418	46,495	41,668	0	7,750	0	7,750	0	49,418	0	0	0	980	.03/01/2037
45783N-AA-5	InStar Leasing III LLC-INSTN 2021-1A A		.12/15/2022	PAYDOWN		239,619	239,619	239,489	239,485	0	134	0	134	0	239,619	0	0	0	2,957	.02/15/2054
458140-AS-9	INTEL CORP-SR UNSECURED		.03/21/2022	CREDIT SUISSE SECURI		14,403,900	14,000,000	13,979,140	13,992,222	0	260	0	260	0	13,992,483	0	411,417	411,417	336,700	.07/29/2025
458140-BQ-2	Intel Corp-SENIOR UNSECURED		.03/30/2022	DEUTSCHE BANK SECURI		18,624,240	18,000,000	17,964,900	17,973,071	0	1,821	0	1,821	0	17,974,892	0	649,348	649,348	348,750	.03/25/2027
458140-BR-0	Intel Corp-SENIOR UNSECURED		.05/18/2022	BARCLAYS CAPITAL INC		32,627,760	33,000,000	32,932,350	32,942,793	0	2,463	0	2,463	0	32,945,256	0	(317,496)	(317,496)	840,125	.03/25/2030
45866F-AA-2	INTERCONTINENTALEXCHANGE-SENIOR UNSECURE		.06/12/2022	CALL 101.596809		4,063,872	4,000,000	3,969,000	3,993,594	0	1,533	0	1,533	0	3,995,126	0	68,746	68,746	105,333	.10/15/2023
45866F-AD-6	INTERCONTINENTALEXCHANGE-SENIOR UNSECURE		.04/04/2022	FTS		10,201,900	10,000,000	9,998,300	9,999,723	0	(126)	0	(126)	0	9,999,597	0	202,303	202,303	130,208	.12/01/2025
459200-KA-8	International Business M-SENIOR UNSECURE		.06/08/2022	DEUTSCHE BANK SECURI		18,173,880	19,000,000	18,952,310	18,963,618	0	2,102	0	2,102	0	18,965,720	0	(791,840)	(791,840)	378,681	.05/15/2029
46187V-AA-7	Invitation Homes 2018-SF-IHSFR 2018-SFR3		.04/17/2022	PAYDOWN		987,238	987,238	846,557	946,932	0	40,305	0	40,305	0	987,238	0	0	0	3,985	.07/17/2037
46187X-AA-3	Invitation Homes 2018-SF-IHSFR 2018-SFR4		.02/25/2022	VARIOUS		12,603,680	12,651,037	11,449,188	12,651,037	0	0	0	0	0	12,651,036	0	(47,356)	(47,356)	31,466	.01/17/2038
462613-AP-5	IPALCO Enterprises Inc-FIRST LIEN		.12/20/2022	GOLDMAN		3,580,520	4,000,000	3,996,360	3,997,050	0	291	0	291	0	3,997,342	0	(416,822)	(416,822)	194,083	.05/01/2030
46591K-AC-7	JP Morgan Mortgage Trust-1PMJT 2019-8 A3		.12/01/2022	PAYDOWN		935,887	935,887	948,024	960,558	0	(24,672)	0	(24,672)	0	935,887	0	0	0	10,242	.03/01/2050
46616M-AA-8	J G WENTWORTH RECV XXII-ASSET BKD NT 10-		.12/15/2022	PAYDOWN		181,583	181,583	181,546	180,689	0	894	0	894	0	181,583	0	0	0	3,830	.12/15/2048
46616M-AB-6	JG Wentworth XXII LLC-HENDR 2010-3A B		.12/15/2022	PAYDOWN		70,094	70,094	70,092	70,100	0	(6)	0	(6)	0	70,094	0	0	0	2,651	.12/15/2050
46616P-AA-1	JGWPT XXIII LLC-HENDR 2011-1A A		.12/15/2022	PAYDOWN		291,739	291,739	291,663	291,659	0	80	0	80	0	291,739	0	0	0	7,039	.09/15/2056
46616Q-AA-9	321 HENDERSON RECEIVABLE-SERIES 2011-2A		.12/15/2022	PAYDOWN		370,313	370,313	370,100	370,099	0	214	0	214	0	370,313	0	0	0	8,927	.09/15/2056
46616V-AA-8	J G WENTWORTH RECV XXV-ASSET BKD NT 12-1		.12/15/2022	PAYDOWN		192,527	192,527	192,484	194,086	0	(1,559)	0	(1,559)	0	192,527	0	0	0	3,608	.02/16/2065
46617A-AA-3	JGWPT XXVII LLC-ASSET BKD SERIES 2012-3		.11/15/2022	PAYDOWN		400,726	400,726	396,710	397,239	0	3,487	0	3,487	0	400,726	0	0	0	6,416	.09/15/2065
46617F-AA-2	JGWPT XXVIII LLC-HENDR 2013-1A A		.12/15/2022	PAYDOWN		413,549	413,549	412,357	412,444	0	1,105	0	1,105	0	413,549	0	0	0	6,839	.04/15/2067
46617J-AA-4	JGWPT XXIX LLC-HENDR 2013-2A A		.12/15/2022	PAYDOWN		370,333	370,333	370,246	370,327	0	6	0	6	0	370,333	0	0	0	8,507	.03/15/2062
46617L-AA-9	JGWPT XXX LLC-HENDR 2013-3A A		.12/15/2022	PAYDOWN		639,725	639,725	639,208	639,244	0	481	0	481	0	639,725	0	0	0	13,584	.01/17/2073
46617T-AA-2	JGWPT XXXI LLC-ASSET BKD SERIES 2014-1 C		.12/15/2022	PAYDOWN		488,919	488,919	488,643	488,616	0	302	0	302	0	488,919	0	0	0	11,371	.03/15/2063
46618A-AA-2	JGWPT XXXII LLC-ASSET BKD SERIES 2014-2		.12/15/2022	PAYDOWN		968,448	968,448	967,092	967,211	0	1,237	0	1,237	0	968,448	0	0	0	19,335	.01/17/2073
46618H-AA-7	J G WENTWORTH XXXIII LLC-ASSET BKD SER 2		.12/15/2022	PAYDOWN		1,149,152	1,149,152	1,150,031	1,150,092	0	(940)	0	(940)	0	1,149,152	0	0	0	21,572	.06/15/2077

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
46618L-AA-8	J G WENTWORTH XXXIV LLC-ASSET BKD SER 20		12/15/2022	PAYDOWN		1,306,132	1,306,132	1,294,005	1,302,407	0	3,725	0	3,725	0	1,306,132	0	0	0	22,565	09/15/2072
46619R-AA-4	J G WENTWORTH XXXV LLC-ASSET BKD NT 15-		12/15/2022	PAYDOWN		715,914	715,914	717,016	716,824	0	(910)	0	(910)	0	715,914	0	0	0	14,649	03/15/2058
46619X-AA-1	JG Wentworth XXXVI LLC-HENDR 2015-3A A		12/15/2022	PAYDOWN		415,960	415,960	415,596	415,631	0	329	0	329	0	415,960	0	0	0	9,510	03/17/2070
46620J-AA-9	J.G. Wentworth XXXVIII L-HENDR 2017-1A A		12/15/2022	PAYDOWN		319,291	319,291	319,044	319,086	0	205	0	205	0	319,291	0	0	0	6,026	08/16/2060
46620V-AA-2	J.G. Wentworth XXXIX LLC-HENDR 2017-2A A		12/15/2022	PAYDOWN		480,945	480,945	480,727	480,945	0	0	0	0	0	480,945	0	0	0	8,747	09/15/2072
466247-J4-6	JP Morgan Mortgage Trust-JPMIT 2006-A2 2		12/01/2022	PAYDOWN		17,022	16,668	15,816	0	0	910	0	910	0	17,022	0	0	0	168	04/01/2036
466247-L6-8	JP Morgan Mortgage Trust-JPMIT 2006-A2 1		12/01/2022	PAYDOWN		753,930	753,930	718,589	730,967	0	22,963	0	22,963	0	753,930	0	0	0	10,759	08/01/2034
466247-PII-7	JP Morgan Mortgage Trust-JPMIT 2005-A3 2		12/01/2022	PAYDOWN		390,896	390,896	329,330	302,260	0	88,636	0	88,636	0	390,896	0	0	0	3,552	06/01/2035
466247-QP-1	JP Morgan Mortgage Trust-JPMIT 2005-A3 7		12/01/2022	PAYDOWN		54,903	55,245	50,796	41,112	0	14,070	0	14,070	0	54,903	0	0	0	556	06/01/2035
466247-RP-0	JP Morgan Mortgage Trust-JPMIT 2005-A4 2		12/01/2022	PAYDOWN		142,358	142,358	126,343	129,880	0	12,478	0	12,478	0	142,358	0	0	0	2,216	07/01/2035
466247-UG-6	JP MORGAN MORTGAGE TRUST-SERIES 2005-A6		12/01/2022	PAYDOWN		132,338	131,427	128,121	118,879	0	12,597	22	12,575	0	132,338	0	0	0	1,353	08/01/2035
466247-ZP-1	JP Morgan Mortgage Trust-JPMIT 2005-S3 1		11/01/2022	PAYDOWN		25,923	25,952	16,705	0	0	9,223	21	9,202	0	25,923	0	0	0	377	01/01/2036
46625H-NJ-5	JPMORGAN CHASE & CO-SUBORDINATED		01/18/2022	GOLDMAN		3,280,350	3,000,000	2,989,650	2,994,546	0	50	0	50	0	2,994,596	0	285,754	285,754	38,604	10/01/2027
46625H-RX-0	JPMORGAN CHASE & CO-SUBORDINATED		10/31/2022	VARIOUS		11,793,590	13,000,000	12,627,810	12,778,941	0	28,109	0	28,109	0	12,807,050	0	(1,013,460)	(1,013,460)	432,281	12/01/2027
46625H-RY-8	JPMORGAN CHASE & CO-SENIOR UNSECURED		10/28/2022	GOLDMAN		10,960,680	12,000,000	12,000,000	12,000,000	0	0	0	0	0	12,000,000	0	(1,039,320)	(1,039,320)	567,300	02/01/2028
46627M-AD-9	JP Morgan Alternative Lo-JPALT 2005-S1 1		12/01/2022	PAYDOWN		79,474	77,552	69,476	36,097	0	41,759	147	41,612	0	79,474	0	0	0	1,975	12/01/2035
46627M-CU-9	JP Morgan Alternative Lo-JPALT 2006-A1 2		11/01/2022	PAYDOWN		51,733	50,939	50,911	37,895	0	13,206	0	13,206	0	51,733	0	0	0	936	03/01/2036
46627M-CY-1	JP Morgan Alternative Lo-JPALT 2006-A1 3		12/01/2022	PAYDOWN		1,542,232	1,542,232	1,313,019	1,220,169	0	322,062	0	322,062	0	1,542,232	0	0	0	24,895	03/01/2036
46627M-EC-7	JP Morgan Alternative Lo-JPALT 2006-S1 1		12/01/2022	PAYDOWN		43,865	42,673	39,791	25,996	0	16,777	0	16,777	0	43,865	0	0	0	1,319	03/01/2036
46627M-EJ-2	JP Morgan Alternative Lo-JPALT 2006-S1 1		12/01/2022	PAYDOWN		145,655	147,918	109,974	110,762	0	37,264	787	36,477	0	145,655	0	0	0	3,537	03/01/2036
46628K-AC-4	JP Morgan Mortgage Trust-JPMIT 2006-A3 2		12/01/2022	PAYDOWN		33,971	28,574	25,234	20,767	0	8,775	0	8,775	0	33,971	0	0	0	386	05/01/2036
46628L-AB-4	JP Morgan Mortgage Trust-JPMIT 2006-A4 1		12/01/2022	PAYDOWN		8,063	8,063	6,357	7,043	0	1,183	163	1,020	0	8,063	0	0	0	89	06/01/2036
46628V-AH-9	JP Morgan Alternative Lo-JPALT 2006-S3 A		12/01/2022	PAYDOWN		0	193,574	129,357	131,861	0	(2,504)	0	(2,504)	0	0	0	0	0	5,331	08/01/2036
466308-AE-3	JP Morgan Alternative Lo-JPALT 2008-R3 3		12/01/2022	PAYDOWN		170,693	170,693	154,651	143,143	0	27,550	0	27,550	0	170,693	0	0	0	2,123	05/01/2037
46630G-AN-5	JP Morgan Mortgage Trust-JPMIT 2007-A1 4		12/01/2022	PAYDOWN		13,789	13,789	12,892	603	0	13,186	0	13,186	0	13,789	0	0	0	85	07/01/2035
46630P-AP-0	JP Morgan Mortgage Trust-JPMIT 2007-A2 3		12/01/2022	PAYDOWN		3,756	3,768	3,608	2,443	0	1,324	0	1,324	0	3,756	0	0	0	27	04/01/2037
46630W-AB-6	JP Morgan Mortgage Trust-JPMIT 2007-S2 1		11/01/2022	PAYDOWN		48,540	45,059	27,463	27,463	0	18,981	0	18,981	0	48,540	0	0	0	1,053	06/01/2037
46630W-AL-4	JP Morgan Mortgage Trust-JPMIT 2007-S2 1		12/01/2022	PAYDOWN		43,462	43,985	28,272	0	0	15,548	0	15,548	0	43,462	0	0	0	1,080	06/01/2037
46631N-AA-7	JP Morgan Mortgage Trust-JPMIT 2007-S3 1		10/01/2022	PAYDOWN		44,432	31,193	20,845	21,358	0	14,428	216	14,212	0	44,432	0	0	0	851	08/01/2037
46631N-DT-3	JP Morgan Mortgage Trust-JPMIT 2007-S3 1		12/01/2022	PAYDOWN		612,920	560,362	392,887	395,338	0	185,045	4,280	180,765	0	612,920	0	0	0	8,838	08/01/2037
46632T-AA-3	JP Morgan Mortgage Trust-JPMIT 2008-R2 1		12/01/2022	PAYDOWN		842,905	842,905	678,528	726,718	0	116,187	0	116,187	0	842,905	0	0	0	11,161	07/01/2037
46632Y-AB-0	JP Morgan Mortgage Trust-JPMIT 2008-R3 1		12/01/2022	PAYDOWN		279,042	279,046	35,477	35,477	0	243,565	0	243,565	0	279,042	0	0	0	2,549	06/01/2036
46632Y-AC-8	JP Morgan Mortgage Trust-JPMIT 2008-R3 2		08/01/2022	PAYDOWN		206,736	206,736	180,894	76,118	0	130,618	0	130,618	0	206,736	0	0	0	4,252	08/01/2037
46632Y-AD-6	JP Morgan Mortgage Trust-JPMIT 2008-R3 2		12/01/2022	PAYDOWN		30,628	7,897	2,609	20,589	0	0	0	20,589	0	30,630	0	(2)	(2)	0	07/01/2037
46633A-AC-9	JP Morgan Mortgage Trust-JPMIT 2008-R4 2		03/01/2022	PAYDOWN		112,559	112,559	87,304	112,505	0	54	0	54	0	112,559	0	0	0	2,233	11/01/2036
46633M-AM-1	JP Morgan Resecuritizati-JPMRR 2009-6 2A		12/01/2022	PAYDOWN		165,242	165,651	16,732	16,732	0	148,546	0	148,546	0	165,242	0	0	0	1,525	04/01/2035
46634D-AX-6	JP Morgan Resecuritizati-JPMRR 2010-1 3A		12/01/2022	PAYDOWN		229,479	258,836	122,230	132,844	0	110,021	0	110,021	0	229,479	0	0	0	7,382	04/01/2037
46634F-AU-7	JP Morgan Resecuritizati-JPMRR 2010-2 3A		05/18/2022	DIRECT		1	1	0	1	0	0	0	0	0	1	0	0	0	0	07/01/2036
46634F-AZ-6	JP Morgan Resecuritizati-JPMRR 2010-2 3A		05/18/2022	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	07/01/2036
46634F-BA-0	JP Morgan Resecuritizati-JPMRR 2010-2 3A		05/18/2022	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	07/01/2036
46635B-AD-3	JP Morgan Resecuritizati-JPMRR 2010-7 1A		12/01/2022	PAYDOWN		1,254,147	1,254,147	881,981	1,028,498	0	225,649	0	225,649	0	1,254,147	0	0	0	31,761	03/01/2039
46636S-AA-1	Jack In The Box Funding -JACK 2019-1A A2		02/25/2022	PAYDOWN		17,865,000	17,865,000	17,865,000	17,865,000	0	0	0	0	0	17,865,000	0	0	0	175,148	08/25/2049
46636S-AB-9	Jack in the Box Funding -JACK 2019-1A A2		11/25/2022	PAYDOWN		200,000	200,000	200,000	200,000	0	0	0	0	0	200,000	0	0	0	5,595	08/25/2049
46636S-AC-7	Jack in the Box Funding -JACK 2019-1A A2		11/25/2022	PAYDOWN		135,475	135,475	128,079	0	0	7,397	0	7,397	0	135,475	0	0	0	2,370	08/25/2049
46636S-AD-5	Jack in the Box Funding -JACK 2022-1A A2		11/25/2022	PAYDOWN		150,000	150,000	150,000	0	0	0	0	0	0	150,000	0	0	0	2,785	02/26/2052
46636S-AE-3	Jack in the Box Funding -JACK 2022-1A A2		11/25/2022	PAYDOWN		51,450	51,450	45,871	0	0	5,579	0	5,579	0	51,450	0	0	0	798	02/26/2052
46639J-AE-0	JP Morgan Chase Commerci-JPMCC 2013-C10		12/01/2022	PAYDOWN		9,279,535	9,279,535	8,634,318	9,185,562	0	93,974	0	93,974	0	9,279,535	0	0	0	221,278	12/01/2047
46639Y-AQ-0	JP Morgan Chase Commerci-JPMCC 2013-LC11		12/01/2022	PAYDOWN		1,839,517	1,839,517	1,715,349	1,819,028	0	20,489	0	20,489	0	1,839,517	0	0	0	49,911	04/01/2046
46645A-AB-7	JP Morgan Resecuritizati-JPMRR 2015-4 1A		05/26/2022	PAYDOWN		344,180	344,180	315,355	341,841	0	2,339	0	2,339	0	344,180	0	0	0	564	06/2

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
46651G-AC-3	JP Morgan Mortgage Trust-JPMIT 2019-7 A3		12/01/2022	PAYDOWN		282,449	282,449	285,979	285,773	0	(3,324)	0	(3,324)	0	282,449	0	0	0	3,770	02/01/2050
472320-AA-8	Jefferies Resecuritizati-JMAC 2008-R1 A		12/27/2022	PAYDOWN		595,446	672,319	615,666	0	0	43,651	0	43,651	0	595,446	0	0	0	17,051	06/25/2047
472321-AA-6	Jefferies Resecuritizati-JMAC 2008-R2 1A		12/01/2022	PAYDOWN		1,125,402	1,125,402	862,517	1,023,706	0	101,696	0	101,696	0	1,125,402	0	0	0	27,780	10/01/2035
472321-AD-0	Jefferies Resecuritizati-JMAC 2008-R2 4A		12/01/2022	PAYDOWN		340,065	340,065	146,797	179,014	0	161,051	0	161,051	0	340,065	0	0	0	3,083	01/01/2037
472321-AG-3	Jefferies Resecuritizati-JMAC 2008-R2 1A		12/01/2022	PAYDOWN		0	125,478	27,542	27,542	0	0	0	0	0	0	0	0	0	3,304	10/01/2035
472321-AH-1	Jefferies Resecuritizati-JMAC 2008-R2 2A		12/01/2022	PAYDOWN		0	18,119	4,951	2,426	0	2,546	0	2,546	0	0	0	0	0	40	01/01/2037
472321-AJ-7	Jefferies Resecuritizati-JMAC 2008-R2 3A		12/01/2022	PAYDOWN		372,368	372,368	314,547	357,939	0	14,429	0	14,429	0	372,368	0	0	0	3,932	01/01/2039
472321-AK-4	Jefferies Resecuritizati-JMAC 2008-R2 3A		12/01/2022	PAYDOWN		0	(23,441)	(8,112)	(11,119)	0	(3,703)	0	(3,703)	0	0	0	0	0	(400)	01/01/2039
47232A-AB-4	Jefferies Resecuritizati-JMAC 2008-R3 1A		12/01/2022	PAYDOWN		332,549	332,549	201,712	273,420	0	59,129	0	59,129	0	332,549	0	0	0	4,049	03/01/2036
47232A-AC-2	Jefferies Resecuritizati-JMAC 2008-R3 1A		12/01/2022	PAYDOWN		434	7,111	2,675	2,329	0	616	0	616	0	434	0	0	0	93	03/01/2036
47232A-AE-8	Jefferies Resecuritizati-JMAC 2008-R3 2A		12/01/2022	PAYDOWN		465,412	465,412	330,442	465,412	0	0	0	0	0	465,412	0	0	0	7,796	06/01/2036
47232A-AH-1	Jefferies Resecuritizati-JMAC 2008-R3 3A		12/01/2022	PAYDOWN		258,502	300,989	58,778	55,239	0	211,504	0	211,504	0	258,502	0	0	0	4,128	05/01/2037
47232C-AH-7	Jefferies Resecuritizati-JMAC 2009-R5 4A		12/01/2022	PAYDOWN		38,076	35,575	32,401	33,935	0	(8,052)	82	(8,134)	0	33,194	0	4,882	4,882	302	06/01/2037
47232D-AH-5	Jefferies Resecuritizati-JMAC 2009-R5 2A		07/29/2022	DLB ACCOUNTING ONLY		0	1	1	1	0	0	0	0	0	1	(1)	0	(1)	0	09/01/2036
47232D-AJ-1	Jefferies Resecuritizati-JMAC 2009-R5 2A		01/04/2022	DIRECT		0	1	1	1	0	0	0	0	0	1	(1)	0	(1)	0	09/01/2036
47232D-AL-6	Jefferies Resecuritizati-JMAC 2009-R5 2A		12/29/2021	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	09/01/2036
47232D-AU-6	Jefferies Resecuritizati-JMAC 2009-R5 4A		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	09/01/2036
47232D-AV-4	Jefferies Resecuritizati-JMAC 2009-R5 4A		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	09/01/2036
47232D-DA-7	Jefferies Resecuritizati-JMAC 2009-R5 14		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	06/01/2037
47232D-DB-5	Jefferies Resecuritizati-JMAC 2009-R5 14		12/30/2021	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	06/01/2037
47232D-DK-5	Jefferies Resecuritizati-JMAC 2009-R5 16		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	08/01/2037
47232D-DN-9	Jefferies Resecuritizati-JMAC 2009-R5 16		08/12/2022	DIRECT		82,062	82,062	16,938	16,938	0	(20,496)	0	(20,496)	0	(3,559)	85,621	0	85,621	176	08/01/2037
47232D-DS-8	Jefferies Resecuritizati-JMAC 2009-R5 17		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	09/01/2035
47232D-EK-4	Jefferies Resecuritizati-JMAC 2009-R5 20		07/29/2022	DLB ACCOUNTING ONLY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	02/01/2037
47232D-EL-2	Jefferies Resecuritizati-JMAC 2009-R5 20		12/30/2021	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	02/01/2037
47232D-EX-6	Jefferies Resecuritizati-JMAC 2009-R5 22		08/10/2022	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	08/01/2037
47232T-AB-3	Jefferies Resecuritizati-JMAC 2009-R3 1A		12/01/2022	PAYDOWN		582,509	582,509	509,695	529,615	0	52,894	0	52,894	0	582,509	0	0	0	7,231	12/01/2035
47232V-AX-0	Jefferies Resecuritizati-JMAC 2009-R4 5A		12/30/2021	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	09/01/2035
47232V-GM-8	Jefferies Resecuritizati-JMAC 2009-R4 32		12/30/2021	DIRECT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	03/01/2036
47233D-AB-7	Jefferies Resecuritizati-JMAC 2009-R11 1		12/01/2022	PAYDOWN		1,166,619	1,183,908	185,049	857,509	0	311,579	0	311,579	0	1,166,619	0	0	0	(155,067)	09/01/2036
47233J-AG-3	Jefferies Group LLC / Je-SENIOR UNSECURE		01/20/2022	JEFFERIESLLC		16,667,700	15,000,000	14,910,900	14,950,777	0	657	0	657	0	14,951,434	0	1,716,266	1,716,266	381,938	01/15/2027
47760Q-AB-9	Jimmy Johns Funding LLC-JIMMY 2017-1A A2		10/30/2022	PAYDOWN		2,574,000	2,574,000	2,574,000	2,574,000	0	0	0	0	0	2,574,000	0	0	0	32,492	07/30/2047
478045-AA-5	JOHN SEVIER COMB CYCLE-SECURED		08/15/2022	VARIOUS		3,496,494	3,410,033	3,410,033	3,410,282	0	(77)	0	(77)	0	3,410,205	0	86,289	86,289	170,554	01/15/2042
47805L-AB-7	John Marshall Bancorp In-SUBORDINATED		07/15/2022	CALL 100		5,000,000	5,000,000	5,000,000	5,000,527	0	(527)	0	(527)	0	5,000,000	0	0	0	287,500	07/15/2027
478160-BJ-2	Johnson & Johnson-SR UNSECURED		05/31/2022	U. S. BANCORP		5,980,520	5,600,000	5,568,248	5,578,251	0	727	0	727	0	5,578,978	0	401,542	401,542	120,458	12/05/2033
482480-AE-0	KLA Corp-SENIOR UNSECURED		07/07/2022	CA_CASH_CLOSE		9,886,325	9,941,000	9,915,949	9,932,957	0	1,260	0	1,260	0	9,934,218	0	(47,893)	(47,893)	527,640	11/01/2024
48305Q-AA-1	Kaiser Foundation Hospi-SENIOR UNSECURE		04/01/2022	MATURITY		18,000,000	18,000,000	17,919,720	17,997,669	0	2,331	0	2,331	0	18,000,000	0	0	0	315,000	04/01/2022
485134-BP-4	Evergy Metro Inc-SECURED		03/30/2022	DEUTSCHE BANK SECURI		10,167,000	10,000,000	9,964,400	9,979,848	0	1,278	0	1,278	0	9,981,126	0	185,874	185,874	229,139	08/15/2025
487836-BU-1	Kellogg Co-SENIOR UNSECURED		01/20/2022	GOLDMAN		10,538,600	10,000,000	9,206,100	9,452,270	0	5,136	0	5,136	0	9,457,406	0	1,081,194	1,081,194	65,167	11/15/2027
487836-BW-7	Kellogg Co-SENIOR UNSECURED		01/18/2022	GOLDMAN		17,725,120	16,000,000	15,943,360	15,962,131	0	118	0	118	0	15,962,249	0	1,762,871	1,762,871	124,222	04/01/2022
49271V-AF-7	Keurig Dr Pepper Inc-SENIOR UNSECURED		01/20/2022	VARIOUS		41,086,650	37,000,000	36,830,950	36,881,126	0	769	0	769	0	36,881,895	0	4,204,755	4,204,755	278,757	05/25/2028
493268-AY-2	Keycorp Student Loan Tru-KSLT 2000-B A2		10/25/2022	PAYDOWN		37,363	37,363	30,264	37,196	0	168	0	168	0	37,363	0	0	0	217	07/25/2029
49338L-AE-3	Keysight Technologies In-SENIOR UNSECURE		01/19/2022	FTS		7,733,740	7,000,000	6,991,110	6,995,175	0	52	0	52	0	6,995,227	0	738,513	738,513	93,917	04/06/2027
494550-BJ-4	Kinder Morgan Energy Par-SENIOR UNSECURE		03/01/2022	MATURITY		4,000,000	4,000,000	3,996,560	3,999,943	0	57	0	57	0	4,000,000	0	0	0	83,000	03/01/2022
494550-BV-7	KINDER MORGAN ENER PART-SENIOR UNSECURED		08/23/2022	TORONTO DOMINION SEC		5,012,550	5,000,000	4,991,600	4,997,510	0	736	0	736	0	4,998,246	0	14,304	14,304	208,958	09/01/2024
49456B-AP-6	Kinder Morgan Inc/DE-SENIOR UNSECURED		01/24/2022	CIBC OPPENHEIMER		6,542,520	6,000,000	5,977,320	5,985,253	0	233	0	233	0	5,985,486	0	557,034	557,034	103,917	03/01/2028
497266-AC-0	Kirby Corp-SENIOR UNSECURED		11/29/2022	SEAPORT GROUP		14,459,700	16,000,000	15,977,440	15,986,245	0	1,624	0	1,624	0	15,987,869	0	(1,528,169)	(1,528,169)	838,833	03/01/2028
501044-DL-2	Kroger Co/The-SENIOR UNSECURED		07/07/2022	VARIOUS		19,930,460	20,000,000	19,880,600	19,911,601	0	5,585	0	5,585	0	19,917,187	0	13,273	13,273	874,250	01/15/2029
502438-AA-8	LVCVA (Las Vegas NV) Rec Trust Certifica		12/15/2022	SINKING PAYMENT		520,976	520,976	520,976	520,974	0	1	0	1	0	520,976	0	0	0	12,816	12/15/2039

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Iden-tification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con-sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor-tization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date
50543L-AA-0	LABRADOR AVIATION FINANC-SERIES 2016-1A		12/15/2022	PAYDOWN		782,842	782,842	767,653	776,816	0	6,026	0	6,026	0	782,842	0	0	0	21,319	01/15/2042
512807-AN-8	LAM RESEARCH CORP-SR UNSECURED		03/16/2022	GOLDMAN		9,273,420	9,000,000	8,996,220	8,998,961	0	405	0	405	0	8,999,365	0	274,055	274,055	173,850	03/15/2025
512807-AU-2	Lam Research Corp-SENIOR UNSECURED		04/05/2022	VARIOUS		20,802,100	20,000,000	19,963,800	19,973,061	0	1,399	0	1,399	0	19,974,460	0	827,640	827,640	442,222	03/15/2029
521070-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED		09/07/2022	VARIOUS		3,922,880	4,000,000	3,988,720	3,996,216	0	906	0	906	0	3,997,122	0	(74,242)	(74,242)	153,333	02/13/2025
521070-AH-8	LAZARD GROUP LLC-SENIOR UNSECURED		12/21/2022	VARIOUS		9,355,536	10,000,000	9,906,500	9,948,838	0	8,235	0	8,235	0	9,957,073	0	(601,537)	(601,537)	416,372	03/01/2027
521070-AJ-4	Lazard Group LLC-SENIOR UNSECURED		12/19/2022	VARIOUS		9,323,100	10,000,000	9,907,900	9,934,298	0	7,931	0	7,931	0	9,942,229	0	(619,129)	(619,129)	548,750	09/19/2028
521070-AK-1	Lazard Group LLC-SENIOR UNSECURED		12/13/2022	JEFFERIESLLC		9,388,300	10,000,000	9,924,100	9,942,339	0	6,550	0	6,550	0	9,948,889	0	(560,589)	(560,589)	551,736	03/11/2029
521865-AV-1	Lear Corp-SENIOR UNSECURED		01/24/2022	GOLDMAN		8,479,280	8,000,000	7,943,520	7,965,888	0	432	0	432	0	7,966,320	0	512,960	512,960	110,622	09/15/2027
521865-BA-2	Lear Corp-SENIOR UNSECURED		12/16/2022	SUMRIDGE PARTNERS LL		9,115,870	10,000,000	9,969,100	9,976,483	0	2,735	0	2,735	0	9,979,217	0	(863,347)	(863,347)	449,615	05/15/2029
524660-AZ-0	Leggett & Platt Inc-SENIOR UNSECURED		09/14/2022	KEY CAPITAL MARKETS		9,517,000	10,000,000	9,939,100	9,953,854	0	4,439	0	4,439	0	9,958,293	0	(441,293)	(441,293)	441,222	03/11/2029
524901-AT-2	Legg Mason Inc-SENIOR UNSECURED NOTE		03/18/2022	JP MORGAN SECURITIES		15,400,050	15,000,000	15,036,380	15,011,308	0	(1,440)	0	(1,440)	0	15,009,867	0	390,183	390,183	406,521	07/15/2024
524901-AV-7	LEGG MASON INC SR NT		04/05/2022	U. S. BANCORP		26,092,500	25,000,000	25,217,150	25,111,979	0	(5,719)	0	(5,719)	0	25,106,260	0	986,240	986,240	666,319	03/15/2026
52520M-CE-1	Lehman Mortgage Trust 20-LMT 2005-2 3A7		12/01/2022	Lehman		37,515		37,496	27,123	0	17,915	0	17,915	0	37,515	0	0	0	852	12/01/2035
525221-EM-5	Lehman XS Trust Series 2-LXS 2005-7N 1A1		12/27/2022	PAYDOWN		241,296	241,296	176,970	192,244	0	49,053	0	49,053	0	241,296	0	0	0	1,258	12/25/2035
525221-GM-3	LEHMAN XS TRUST-SERIES 2005-9N CLASS 1A1		12/27/2022	PAYDOWN		924,585	924,585	788,498	812,016	0	112,569	0	112,569	0	924,585	0	0	0	4,329	02/25/2036
52523M-AD-2	Lehman XS Trust 2006-15-LXS 2006-15 A4		12/27/2022	PAYDOWN		292,618	285,001	157,541	185,791	0	103,304	0	103,304	0	292,618	0	0	0	1,332	10/25/2036
525241-AL-9	Lehman XS Trust 2007-1-LXS 2007-1 WF1		12/01/2022	PAYDOWN		61,095	60,580	39,128	40,249	0	20,678	0	20,678	0	61,095	0	0	0	952	01/01/2037
53227J-AA-2	Life Storage LP-SENIOR UNSECURED		01/18/2022	GOLDMAN		10,749,400	10,000,000	9,952,300	9,969,991	0	93	0	93	0	9,970,084	0	779,316	779,316	37,674	12/15/2027
53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2		12/25/2022	CA_CASH_CLOSE		765,937		765,937	0	0	0	0	0	0	765,937	0	0	0	10,643	11/25/2047
53946H-AB-4	Loan Asset Issuer LLC - Series 2022 NG-2		12/25/2022	CA_CASH_CLOSE		261,540		261,540	0	0	0	0	0	0	261,540	0	0	0	4,185	11/25/2047
53946H-AC-2	Loan Asset Issuer LLC - Series 2022 NG-2		12/25/2022	CA_CASH_CLOSE		147,116		147,116	0	0	0	0	0	0	147,116	0	0	0	2,663	11/25/2047
53948W-AA-1	Loan Asset Issuer LLC - Series 2021 NG-1		12/25/2022	CA_CASH_CLOSE		3,621,439		3,621,439	0	0	0	0	0	0	3,621,439	0	0	0	45,228	10/25/2046
53948W-AB-9	Loan Asset Issuer LLC - Series 2021 NG-1		12/25/2022	VARIOUS		1,992,130		1,992,130	1,992,130	0	0	0	0	0	1,992,130	0	0	0	32,438	10/25/2046
53948W-AC-7	Loan Asset Issuer LLC - Series 2021 NG-1		12/25/2022	VARIOUS		1,351,272		1,351,272	1,351,272	0	0	0	0	0	1,351,272	0	0	0	30,163	10/25/2046
53950X-AA-4	Loan Asset Issuer LLC - Series 2022 NG-1		12/25/2022	CA_CASH_CLOSE		2,087,053		2,087,053	0	0	0	0	0	0	2,087,053	0	0	0	33,009	02/25/2047
53950X-AB-2	Loan Asset Issuer LLC - Series 2022 NG-1		12/25/2022	CA_CASH_CLOSE		1,147,879		1,147,879	0	0	0	0	0	0	1,147,879	0	0	0	24,160	02/25/2047
53950X-AC-0	Loan Asset Issuer LLC - Series 2022 NG-1		12/25/2022	CA_CASH_CLOSE		678,292		678,292	0	0	0	0	0	0	678,292	0	0	0	18,417	02/25/2047
539830-BH-1	LOCKHEED MARTIN CORP-SENIOR UNSECURED		03/29/2022	CITIGROUP GLOBAL MAR		4,082,360	4,000,000	3,969,120	3,986,596	0	661	0	661	0	3,987,258	0	95,102	95,102	100,978	01/15/2026
540424-AS-7	Loews Corp-SENIOR UNSECURED		03/29/2022	WELLS FARGO		5,125,800	5,000,000	4,989,200	4,995,112	0	474	0	474	0	4,995,585	0	130,215	130,215	93,750	04/01/2026
542514-EV-2	Long Beach Mortgage Loan-LBMLT 2004-1 M2		02/25/2022	PAYDOWN		28,585		27,970	28,563	0	22	0	22	0	28,585	0	0	0	27	02/25/2034
543190-AA-0	LONGTRAIN LEASING III LL-SERIES 2015-1A		11/15/2022	PAYDOWN		349,006		337,699	342,907	0	6,099	0	6,099	0	349,006	0	0	0	4,080	01/15/2045
543190-AB-8	Longtrain Leasing III LL-LTRAN 2015-1A A		06/15/2022	PAYDOWN		410,986		403,572	407,543	0	3,443	0	3,443	0	410,986	0	0	0	8,343	01/15/2045
548661-CZ-8	Lowe's Cos Inc-SENIOR UNSECURED		02/10/2022	U. S. BANCORP		13,382,590	13,000,000	12,922,130	12,984,758	0	1,239	0	1,239	0	12,985,996	0	396,594	396,594	208,497	09/15/2023
548661-DU-8	Lowe's Cos Inc-SENIOR UNSECURED		06/13/2022	GOLDMAN		27,285,440	28,000,000	27,865,040	27,885,268	0	5,330	0	5,330	0	27,890,599	0	(605,159)	(605,159)	804,000	04/15/2030
552740-AK-1	MASTR Asset Securitizati-MASTR 2006-2 1A		12/01/2022	PAYDOWN		222,019		223,939	211,077	0	66,435	0	66,435	0	222,019	0	0	0	4,868	06/01/2036
552758-AA-2	MFRA Trust-MFRA 2022-CHM1 A1		12/01/2022	PAYDOWN		5,307,353		5,307,345	0	0	8	0	8	0	5,307,353	0	0	0	62,090	09/01/2056
552800-AU-1	MCF CLO V LLC-MCFCL 2017-1A ARR		08/01/2022	CREDIT SUISSE SECURI		14,149,688		14,625,000	14,625,000	0	0	0	0	0	14,625,001	0	(475,313)	(475,313)	249,621	04/20/2033
55281F-AN-0	MCF CLO VII LLC-MCFCL 2017-3A AR		07/15/2022	SNBC NIKKO SECURITIE		13,380,500	14,000,000	14,000,000	14,000,000	0	0	0	0	0	14,000,000	0	(619,500)	(619,500)	222,150	07/20/2033
55282X-AA-8	MF1 Multifamily Housing -MF1 2021-FL5 A		03/10/2022	VARIOUS		36,283,439		36,875,872	36,875,872	0	0	0	0	0	36,875,871	0	(592,432)	(592,432)	90,823	07/15/2036
552823A-AA-7	MCA Fund Holding LLC-MCA 2020-1 A		11/01/2022	PAYDOWN		4,919,358		4,929,701	0	0	(10,170)	0	(10,170)	0	4,919,358	0	0	0	104,029	01/15/2035
55286E-AC-2	MFA 2022-NQM3 Trust-MFRA 2022-NQM3 A3		12/01/2022	PAYDOWN		119,043		115,975	0	0	3,068	0	3,068	0	119,043	0	0	0	420	09/01/2067
552915-AC-4	MAI Holdings Inc-SECURED		04/26/2022	SEAPORT GROUP		915,000		3,000,000	613,967	0	436,312	0	436,312	0	1,050,279	0	(135,279)	(135,279)	116,375	06/01/2023
55336V-AA-8	MPLX 4 02/15/25-SENIOR UNSECURED		09/20/2022	JANE		2,928,660	3,000,000	2,989,200	2,996,296	0	808	0	808	0	2,997,104	0	(68,444)	(68,444)	132,333	02/15/2025
55336V-AK-6	MPLX LP-SENIOR UNSECURED		01/21/2022	JP MORGAN SECURITIES		10,710,100	10,000,000	9,983,400	9,991,307	0	227	0	227	0	9,991,534	0	718,566	718,566	165,000	03/01/2027
55336V-AR-1	MPLX LP-SENIOR UNSECURED		01/21/2022	JEFFERIESLLC		8,496,720	8,000,000	7,964,080	7,976,902	0	281	0	281	0	7,977,184	0	519,536	519,536	115,556	03/15/2028
55336V-AS-9	MPLX LP-SENIOR UNSECURED		10/17/2022	TORONTO DOMINION SEC		6,470,380	7,000,000	6,960,240	6,970,267	0	2,730	0	2,730	0	6,972,998	0	(502,618)	(502,618)	395,733	02/15/2029
55336V-BN-9	MPLX LP-SENIOR UNSECURED		01/18/2022	GOLDMAN		7,593,460	7,000,000	6,987,540	6,992,756	0	(38)	0	(38)	0	6,992,718	0	600,742	600,742	40,493	12/01/2027
55400U-AB-9	MVII 2022-1 LLC-MVIOT 2022-1A B		12/20/2022	PAYDOWN		1,620,494		1,620,313	0	0	181	0	181	0	1,620,494	0	0	0	24,155	11/21/2039
556907-AK-4	Magellan Health Inc-SENIOR UNSECURED		01/19/2022	CALL 107.30395		12,876,474	12,000,000	11,977,080	11,997,354	0	101	0	101	0	11,997,455	0	879,019	879,019	171,600	09/22/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
559080-AK-2	MAGELLAN MIDSTREAM PARTN-SR UNSECURED		.01/24/2022	BARCLAYS CAPITAL INC		14,304,290	13,000,000	13,120,620	13,056,042	0	(657)	0	(657)	0	13,055,386	0	1,248,904	1,248,904	261,806	.03/01/2026
56035L-AC-8	Main Street Capital Corp-SENIOR UNSECURE		.12/01/2022	MATURITY		25,000,000	25,000,000	24,789,000	24,958,028	0	41,972	0	41,972	0	25,000,000	0	0	0	1,125,000	.12/01/2022
56585A-BD-3	Marathon Petroleum Corp-SENIOR UNSECURED		.09/07/2022	TORONTO DOMINION SEC		4,691,350	5,000,000	4,987,906	4,810,517	0	18,520	0	18,520	0	4,829,037	0	(137,687)	(137,687)	178,389	.04/01/2022
570535-AK-0	Markel Corp-Senior UNSECURED		.07/01/2022	MATURITY		3,000,000	3,000,000	2,995,560	2,999,731	0	269	0	269	0	3,000,000	0	0	0	147,000	.07/01/2022
571748-AZ-5	Marsh & McLennan Cos Inc-SR UNSECURED		.05/17/2022	VARIOUS		7,998,680	8,000,000	7,993,840	7,997,549	0	195	0	195	0	7,997,744	0	936	936	203,750	.03/14/2026
571748-BG-6	Marsh & McLennan Cos Inc-SENIOR UNSECURE		.06/02/2022	BARCLAYS CAPITAL INC		15,153,300	15,000,000	14,994,750	14,997,463	0	68	0	68	0	14,997,531	0	155,769	155,769	475,781	.03/15/2029
571903-BB-8	Marriott International I-SENIOR UNSECURE		.09/30/2022	VARIOUS		16,611,334	17,550,000	17,366,230	17,416,075	0	11,864	0	11,864	0	17,427,940	0	(816,606)	(816,606)	668,018	.12/01/2028
573874-AN-4	Marvell Technology Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		19,081,820	17,000,000	16,995,920	16,999,334	0	(415)	0	(415)	0	16,998,920	0	2,082,900	2,082,900	64,458	.06/22/2028
576431-AJ-9	MASTR Adjustable Rate Mo-MARM 2007-1 2A1		.12/01/2022	PAYDOWN		9,702	9,702	7,753	7,753	0	1,949	0	1,949	0	9,702	0	0	0	149	.11/01/2036
576433-C5-3	MASTR Adjustable Rate Mo-MARM 2005-6 5A2		.12/01/2022	PAYDOWN		40,815	40,825	34,271	32,550	0	8,273	0	8,273	0	40,815	0	0	0	393	.07/01/2035
576433-05-2	MASTR Adjustable Rate Mo-MARM 2005-7 3A1		.12/01/2022	PAYDOWN		31,250	31,254	25,238	22,758	0	8,495	0	8,495	0	31,250	0	0	0	297	.09/01/2035
576433-GM-2	MASTR Adjustable Rate Mo-MARM 2003-6 6A1		.12/01/2022	PAYDOWN		349,566	349,566	336,457	329,243	0	20,322	0	20,322	0	349,566	0	0	0	3,635	.12/01/2033
576433-HM-1	MASTR Adjustable Rate Mo-MARM 2003-7 4A1		.12/01/2022	PAYDOWN		35,086	35,086	34,121	33,718	0	1,368	0	1,368	0	35,086	0	0	0	417	.01/01/2034
576433-QD-1	MASTR Adjustable Rate Mo-MARM 2004-7 5A1		.11/01/2022	PAYDOWN		27,403	27,403	26,033	25,368	0	2,035	0	2,035	0	27,403	0	0	0	213	.07/01/2034
576433-XA-9	MASTR Adjustable Rate Mo-MARM 2005-1 3A1		.12/01/2022	PAYDOWN		7,855	7,855	7,462	7,360	0	495	0	495	0	7,855	0	0	0	136	.02/01/2035
576433-XW-1	MASTR Adjustable Rate Mo-MARM 2005-2 3A1		.12/01/2022	PAYDOWN		144,663	144,663	138,877	137,943	0	6,721	0	6,721	0	144,663	0	0	0	1,492	.03/01/2035
576434-J7-0	MASTR Alternative Loan T-MALT 2005-2 4A3		.12/25/2022	PAYDOWN		231,294	231,294	192,263	8,844	0	8,844	0	8,844	0	231,294	0	0	0	1,186	.03/25/2035
576434-W5-9	MASTR Alternative Loan T-MALT 2005-6 3A1		.12/01/2022	PAYDOWN		5,005	5,005	4,499	3,727	0	(1,013)	517	(1,530)	0	5,005	0	0	0	539	.12/01/2035
57643L-LC-8	Mastr Asset Backed Secur-MABS 2005-AB1 A		.12/01/2022	PAYDOWN		2,130,148	2,130,148	2,073,812	2,091,988	0	38,160	0	38,160	0	2,130,148	0	0	0	30,612	.11/01/2035
57643M-LZ-5	MASTR Asset Securitizati-MASTR 2006-1 1A		.12/01/2022	PAYDOWN		95,021	95,104	74,300	78,171	0	20,714	3,790	16,924	0	95,021	0	0	0	3,654	.05/01/2036
57645T-AA-5	MASTR Adjustable Rate Mo-MARM 2007-HF2 A		.12/27/2022	PAYDOWN		1,281,619	1,281,619	1,124,128	1,241,345	0	40,274	0	40,274	0	1,281,619	0	0	0	6,375	.09/25/2037
582839-AH-9	Mead Johnson Nutrition C-SENIOR UNSECURE		.03/31/2022	GOLDMAN		12,293,520	12,000,000	12,019,860	12,008,950	0	(579)	0	(579)	0	12,008,371	0	285,149	285,149	191,125	.11/15/2025
585055-B5-4	MEDTRONIC INC-SR UNSECURED		.03/17/2022	GOLDMAN		2,871,057	2,803,000	2,776,147	2,793,589	0	703	0	703	0	2,794,292	0	76,765	76,765	50,688	.03/15/2025
585495-AA-2	Mello Mortgage Capital A-MELLO 2021-MTG1		.12/01/2022	PAYDOWN		3,835,452	3,835,452	3,882,596	3,882,745	0	(47,293)	0	(47,293)	0	3,835,452	0	0	0	41,263	.04/01/2051
58550L-AA-6	Mello Warehouse Securitii-MWST 2021-1 A		.02/17/2022	BOFAMLSEC		9,900,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(100,000)	(100,000)	11,844	.02/25/2055
58551V-AA-0	Mello Warehouse Securitii-MWST 2020-2 A		.02/15/2022	BOFAMLSEC		22,345,313	22,500,000	22,500,000	22,500,000	0	0	0	0	0	22,500,001	0	(154,688)	(154,688)	29,395	.11/25/2053
58601V-AA-0	Memorial Health Services-SENIOR UNSECURE		.05/01/2022	MATURITY		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	87,400	.05/01/2022
589400-AB-6	Mercury General Corp-SENIOR UNSECURED		.01/24/2022	GOLDMAN		21,546,560	20,000,000	19,969,400	19,983,680	0	375	0	375	0	19,984,055	0	1,562,505	1,562,505	318,267	.03/15/2027
58942H-AC-5	Mercy Health/OH-SECURED		.01/19/2022	CITIGROUP GLOBAL MAR		6,669,060	6,000,000	6,000,000	6,000,479	0	(139)	0	(139)	0	6,000,340	0	668,720	668,720	143,400	.07/01/2028
59020U-V7-7	Merrill Lynch Mortgage I-MILMI 2005-A9 1A		.12/01/2022	PAYDOWN		147,962	147,962	138,806	141,651	0	7,344	1,033	6,311	0	147,962	0	0	0	535	.12/01/2035
59020U-W4-3	MERRILL LYNCH MORTGAGE I-SERIES 2005-A9C		.11/01/2022	PAYDOWN		75,691	76,430	58,641	48,386	0	30,235	2,304	27,931	0	75,691	0	0	0	693	.12/01/2035
59023N-AW-8	Merrill Lynch Mortgage I-MILMI 2006-AF2 P		.03/01/2022	PAYDOWN		5,748	5,748	3,449	1,488	0	0	0	0	0	5,748	0	0	0	0	.10/01/2036
59023P-AB-9	Merrill Lynch Mortgage I-MILCC 2006-3 2A1		.12/01/2022	PAYDOWN		162,767	162,767	144,898	141,948	0	21,645	826	20,819	0	162,767	0	0	0	1,898	.10/01/2036
59048B-AA-6	Mesa Air Group, Inc. Class A Notes		.07/15/2022	SINKING PAYMENT		461,065	461,065	461,065	461,253	0	(188)	0	(188)	0	461,065	0	0	0	16,539	.07/15/2029
59100U-AA-6	Meta Financial Group Inc-SUBORDINATED		.05/15/2022	CALL 100		20,000,000	20,000,000	20,000,000	20,000,000	0	0	0	0	0	20,000,000	0	0	0	498,586	.08/15/2026
59156R-AE-8	METLIFE INC-SR UNSECURED		.06/10/2022	DAIWA SECURITIES AME		1,600,382	1,400,000	1,768,242	1,678,897	0	(9,147)	0	(9,147)	0	1,669,750	0	(69,368)	(69,368)	45,247	.12/15/2032
59156R-AJ-7	MetLife Inc-SENIOR UNSECURED		.08/11/2022	MORGAN		24,275,042	20,774,000	26,216,600	25,060,065	0	(166,359)	0	(166,359)	0	24,883,706	0	(618,664)	(618,664)	882,895	.06/15/2034
59156R-BH-0	METLIFE INC-SR UNSECURED		.03/16/2022	GOLDMAN		10,198,300	10,000,000	10,001,690	10,000,640	0	3	0	3	0	10,000,643	0	197,657	197,657	158,000	.04/10/2024
59156R-BQ-0	MetLife Inc-SENIOR UNSECURED		.03/31/2022	JANE		7,147,280	7,000,000	6,999,440	7,000,012	0	14	0	14	0	7,000,026	0	147,254	147,254	98,700	.11/13/2025
591894-CC-2	Metropolitan Edison Co-SENIOR UNSECURED		.07/26/2022	DEUTSCHE BANK SECURI		4,968,400	5,000,000	4,993,900	4,995,708	0	304	0	304	0	4,996,012	0	(27,612)	(27,612)	222,764	.01/15/2029
59408T-AA-8	Michael Kors USA Inc-SENIOR UNSECURED		.02/10/2022	MORGAN		5,110,000	5,000,000	4,975,400	4,989,380	0	380	0	380	0	4,989,760	0	120,240	120,240	64,375	.11/01/2024
595112-BP-7	Micron Technology Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		7,546,000	7,000,000	6,999,650	7,000,184	0	94	0	94	0	7,000,278	0	545,722	545,722	126,131	.02/15/2027
59523U-AL-1	Mid-America Apartments L-SENIOR UNSECURE		.05/11/2022	U. S. BANCORP		10,034,600	10,000,000	9,887,300	9,968,632	0	4,358	0	4,358	0	9,972,990	0	61,610	61,610	154,167	.06/15/2024
59523U-AM-9	Mid-America Apartments L-SENIOR UNSECURE		.01/21/2022	CITIGROUP GLOBAL MAR		10,690,500	10,000,000	9,899,000	9,956,503	0	589	0	589	0	9,957,092	0	733,408	733,408	77,778	.11/15/2025
59523U-AP-2	Mid-America Apartments L-SENIOR UNSECURE		.01/20/2022	CITIGROUP GLOBAL MAR		14,332,760	13,000,000	12,932,390	12,947,755	0	193	0	193	0	12,947,947	0	1,384,813	1,384,813	59,150	.06/15/2028
595481-AA-0	Mid-State Capital Corp 2-MDST 2005-1 A		.12/01/2022	PAYDOWN		216,878	216,878	208,203	216,878	0	0	0	0	0	216,878	0	0	0	6,680	.01/01/2040
59549W-AA-1	Mid-State Trust XI-MDST 11 A1		.12/15/2022	PAYDOWN		288,906	288,906	288,897	288,906	0	0	0	0	0	288,906	0	0	0	7,701	.07/15/2038
59748T-AA-7	MIDLAND COGEN VENTURE-SENIOR SECURED NOT		.09/15/2022	SINKING PAYMENT		728,000	728,000	728,000	728,045	0	(45)	0	(45)	0	728,000	0	0	0	32,760	.03/15/2025
609207-AM-7	Mondelez International I-SENIOR UNSECURE		.01/21/2022	WELLS FARGO		13,233,480	12,000,000	11,882,640	11,920,509	0	631	0	631	0	11,921,141	0	1,312,339	1,312,339	107,250	.05/07/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
60935Y-AA-7	MoneyGram International -FIRST LIEN		.03/29/2022	MARKETAXESS FINANCIA		1,555,725	1,500,000	1,518,750	1,517,817	0	(1,180)	0	(1,180)	0	1,516,637	0	39,088	39,088	55,990	.08/01/2026
615369-AS-4	Moody's Corp-SENIOR UNSECURED		.07/18/2022	VARIOUS		38,039,761	38,000,000	37,957,060	37,971,680	0	3,590	0	3,590	0	37,975,270	0	64,491	64,491	1,009,658	.03/24/2025
617446-7X-1	MORGAN STANLEY-SUBORDINATED		.01/18/2022	GOLDMAN		5,517,600	5,000,000	4,977,250	4,991,471	0	22	0	22	0	4,991,493	0	526,107	526,107	38,889	.11/24/2025
617446-7Y-9	Morgan Stanley-SUBORDINATED NOTE		.01/18/2022	GOLDMAN		10,865,400	10,000,000	9,955,242	9,955,242	0	539	0	539	0	9,955,781	0	909,619	909,619	159,500	.09/08/2026
61748H-AW-1	Morgan Stanley Mortgage -MSM 2004-5AR 4A		.12/01/2022	PAYDOWN		256,017	256,017	258,892	257,328	0	(1,311)	0	(1,311)	0	256,017	0	0	0	3,660	.07/01/2034
61748H-FK-2	MORGAN STANLEY MORTGAGE -SERIES 2004-10A		.12/01/2022	PAYDOWN		217,624	217,624	206,301	207,807	0	9,817	0	9,817	0	217,624	0	0	0	3,230	.11/01/2034
61748H-UF-6	Morgan Stanley Mortgage -MSM 2006-1AR 1A		.11/25/2022	PAYDOWN		114,794	115,056	88,623	73,010	0	41,864	0	41,864	0	114,794	0	0	0	630	.02/25/2036
61749L-AP-6	Morgan Stanley Mortgage -MSM 2006-8AR 5A		.12/01/2022	PAYDOWN		276,966	276,966	202,704	215,019	0	61,947	0	61,947	0	276,966	0	0	0	2,921	.06/01/2036
61749L-BM-2	Morgan Stanley Mortgage -MSM 2006-8AR 6A		.11/01/2022	PAYDOWN		4,707	4,707	3,654	2,411	0	2,295	0	2,295	0	4,707	0	0	0	54	.06/01/2036
61751D-AE-4	Morgan Stanley Mortgage -MSM 2006-17XS A		.12/01/2022	PAYDOWN		224,422	224,422	135,675	80,748	0	144,684	1,010	143,674	0	224,422	0	0	0	1,494	.10/01/2046
61751M-AU-8	Morgan Stanley Mortgage -MSM 2007-10XS A		.12/01/2022	PAYDOWN		837,933	837,933	763,305	748,254	0	89,679	0	89,679	0	837,933	0	0	0	6,552	.02/01/2037
61751Q-AB-1	Morgan Stanley Home Equi-MSHEL 2007-1 A2		.12/27/2022	PAYDOWN		205,686	205,686	117,884	62,302	0	143,384	0	143,384	0	205,686	0	0	0	742	.12/25/2036
617526-AD-0	Morgan Stanley ABS Capit-MSAC 2007-HE1 A		.12/27/2022	PAYDOWN		389,416	389,416	238,272	231,551	0	163,728	5,864	157,864	0	389,416	0	0	0	1,436	.11/25/2036
61758M-AA-5	Morgan Stanley Re-REMIC -MSRR 2009-R2 1A		.07/01/2022	PAYDOWN		536,067	536,067	556,703	530,219	0	5,848	0	5,848	0	536,067	0	0	0	10,290	.04/01/2036
61758V-AQ-0	Morgan Stanley Re-REMIC -MSRR 2010-R2 3B		.10/01/2022	PAYDOWN		364,546	364,546	151,099	235,375	0	129,171	0	129,171	0	364,546	0	0	0	10,004	.10/01/2037
61759X-AC-6	Morgan Stanley Re-REMIC -MSRR 2010-R8 1C		.12/01/2022	PAYDOWN		380,496	391,727	264,835	250,151	0	138,407	0	138,407	0	380,496	0	0	0	8,200	.01/01/2037
61761J-ZN-2	Morgan Stanley-SUBORDINATED		.01/18/2022	GOLDMAN		3,225,510	3,000,000	2,989,200	2,994,695	0	38	0	38	0	2,994,733	0	230,777	230,777	28,638	.04/23/2027
61761Q-AE-3	MORGAN STANLEY BANK OF A-MSBAM 2013-C8 A		.11/01/2022	PAYDOWN		6,340,000	6,340,000	5,997,244	6,291,880	0	48,120	0	48,120	0	6,340,000	0	0	0	160,650	.12/01/2048
61915R-AK-2	MortgageIT Trust 2005-3-MHL 2005-3 A1		.12/20/2022	PAYDOWN		4,799	4,799	2,759	3,672	0	1,127	0	1,127	0	4,799	0	0	0	31	.08/25/2035
61915R-AU-0	MortgageIT Trust 2005-5-MHL 2005-5 A1		.12/27/2022	PAYDOWN		198,545	198,545	128,061	157,552	0	40,993	0	40,993	0	198,545	0	0	0	862	.12/25/2035
61945C-AG-8	Mosaic Co/The-SENIOR UNSECURED		.01/20/2022	BARCLAYS CAPITAL INC		10,753,000	10,000,000	9,980,400	9,988,081	0	17	0	17	0	9,988,098	0	764,902	764,902	77,625	.11/15/2027
61946Q-AB-7	Mosaic Solar Loan Trust -MSAIC 2022-1A B		.12/20/2022	PAYDOWN		2,779,185	2,779,185	2,674,777	0	0	104,408	0	104,408	0	2,779,185	0	0	0	35,113	.01/20/2053
61946U-AB-8	Mosaic Solar Loan Trust -MSAIC 2022-2A B		.12/20/2022	PAYDOWN		171,477	171,477	169,703	0	0	1,773	0	1,773	0	171,477	0	0	0	1,459	.01/21/2053
620076-BF-5	Motorola Solutions Inc-SENIOR UNSECURED		.06/23/2022	VARIOUS		8,257,031	8,165,000	8,006,109	8,116,486	0	7,304	0	7,304	0	8,123,790	0	133,241	133,241	248,414	.09/01/2024
620076-BL-2	Motorola Solutions Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		6,627,180	6,000,000	5,989,980	5,993,731	0	132	0	132	0	5,993,863	0	633,317	633,317	112,700	.09/15/2025
620076-BN-8	Motorola Solutions Inc-SENIOR UNSECURED		.09/08/2022	GOLDMAN		14,382,000	15,000,000	14,994,000	14,995,887	0	(7)	0	(7)	0	14,995,880	0	(613,880)	(613,880)	553,917	.05/23/2029
62854A-AN-4	MYLAN NV-SENIOR UNSECURED		.01/20/2022	GOLDMAN		18,033,600	17,000,000	16,869,270	16,936,260	0	535	0	535	0	16,936,794	0	1,096,806	1,096,806	72,746	.06/15/2026
628778-AB-8	NBT Bancorp Inc-SUBORDINATED		.10/28/2022	PIPERJAFFRAY		7,560,000	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	(440,000)	(440,000)	533,333	.07/01/2030
62878Y-AA-2	NOTHING BUNDT CAKES-BUNDT 2021-1 A2		.04/30/2022	PAYDOWN		25,000	25,000	25,000	25,000	0	0	0	0	0	25,000	0	0	0	280	.07/30/2051
629377-CL-4	NRG Energy Inc-FIRST LIEN		.12/07/2022	GOLDMAN		7,336,000	8,000,000	7,989,520	7,992,350	0	908	0	908	0	7,993,259	0	(657,259)	(657,259)	350,067	.06/15/2029
62942K-AA-4	NRP Mortgage Trust 2013--NRPMT 2013-1 A1		.12/01/2022	PAYDOWN		1,067,201	1,067,201	1,020,397	1,027,365	0	39,836	0	39,836	0	1,067,201	0	0	0	11,357	.07/01/2043
62946A-AA-2	NP SPE II LLC-NPRL 2016-1A A1		.12/20/2022	PAYDOWN		1,461,640	1,461,640	1,461,640	1,461,685	0	(46)	0	(46)	0	1,461,640	0	0	0	32,313	.04/20/2046
62946A-AC-8	NP SPE II LLC-NPRL 2017-1A A1		.12/20/2022	PAYDOWN		998,393	998,393	998,383	998,394	0	(1)	0	(1)	0	998,393	0	0	0	17,064	.10/21/2047
62947A-AB-9	NP SPE II LLC-NPRL 2019-2A A2		.12/19/2022	PAYDOWN		3,520,150	3,520,150	3,520,002	3,520,061	0	89	0	89	0	3,520,150	0	0	0	17,606	.11/19/2049
62947A-AF-0	NP SPE X LP-NPRL 2021-1A A1		.12/19/2022	PAYDOWN		61,546	61,546	61,528	61,529	0	18	0	18	0	61,546	0	0	0	1,202	.03/19/2051
62953J-AA-3	NXT Capital CLO 2017-2 L-NXTC 2017-2A A		.10/25/2022	PAYDOWN		6,788,003	6,788,003	6,788,003	6,786,627	0	1,376	0	1,376	0	6,788,003	0	0	0	63,555	.10/25/2029
62955M-AA-4	NRZ FHT Excess LLC-NZES 2020-FHT1 A		.12/25/2022	GOLDMAN		821,734	821,734	821,715	821,721	0	13	0	13	0	821,734	0	0	0	17,870	.11/25/2025
631103-AG-3	NASDAQ INC-SENIOR UNSECURED		.01/18/2022	GOLDMAN		5,350,150	5,000,000	4,995,300	4,997,953	0	(64)	0	(64)	0	4,997,889	0	352,261	352,261	10,694	.06/30/2026
636180-BL-4	NATIONAL FUEL GAS CO-SENIOR UNSECURED NO		.11/25/2022	CALL 100		1,500,000	1,500,000	1,495,995	1,499,476	0	350	0	350	0	1,499,826	0	174	174	69,375	.03/01/2023
636180-BN-0	National Fuel Gas Co-SENIOR UNSECURED		.12/08/2022	GOLDMAN		3,693,680	4,000,000	3,972,680	3,983,213	0	2,495	0	2,495	0	3,985,707	0	(292,027)	(292,027)	196,183	.09/15/2027
636180-BP-5	National Fuel Gas Co-SENIOR UNSECURED		.01/24/2022	JEFFERIESLLC		10,778,300	10,000,000	9,927,300	9,948,946	0	633	0	633	0	9,949,579	0	828,721	828,721	191,319	.09/01/2028
637417-AH-9	National Retail Property-SENIOR UNSECURE		.01/18/2022	GOLDMAN		4,294,800	4,000,000	3,990,360	3,996,063	0	15	0	15	0	3,996,078	0	298,722	298,722	28,889	.11/15/2025
63874L-AA-2	Natixis Commercial Mortg-NCMS 2018-TECH		.01/19/2022	WELLS FARGO		3,995,000	4,000,000	3,967,500	3,972,366	0	262	0	262	0	3,972,628	0	22,372	22,372	3,738	.11/15/2034
63939E-AB-9	NAVIENT PRIVATE ED LN TR 2015-A LN BACKE		.12/15/2022	PAYDOWN		530,103	530,103	529,907	530,067	0	36	0	36	0	530,103	0	0	0	7,919	.12/15/2028
64016N-AA-5	Neighborly Issuer LLC-NBLY 2021-1A A2		.10/30/2022	PAYDOWN		4,000	4,000	3,503	0	0	497	0	497	0	4,000	0	0	0	0	.04/30/2051
64016N-AC-1	Neighborly Issuer 2022-1-NBLY 2022-1A A2		.10/30/2022	PAYDOWN		20,000	20,000	17,683	0	0	2,317	0	2,317	0	20,000	0	0	0	277	.01/30/2052
64033N-AA-4	Nelnet Student Loan Trus-NSLT 2014-5A A		.12/27/2022	PAYDOWN		623,613	623,613	601,007	0	0	22,606	0	22,606	0	623,613	0	0	0	2,531	.07/25/2046
64128X-AG-5	NEUBERGER BERMAN GRP/FIN-SENIOR UNSECURE		.01/18/2022	BARCLAYS CAPITAL INC		5,455,200	5,000,000	4,960,250	4,977,390	0	239	0	239	0	4,977,629	0	477,571	477,571	78,125	.03/15/2027
643529-AC-4	New Century Alternative -NCAMT 2006-ALT2		.12/01/2022	PAYDOWN		93,369	93,369	58,772	21,648	0	71,866	145	71,721	0	93,369	0	0	0	489	.10/01/2036

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
643529-AD-2	New Century Alternative -NCAMT 2006-ALT2		12/01/2022	PAYDOWN		42,598	42,598	28,328	9,869	0	32,730	0	32,730	0	42,598	0	0	0	223	10/01/2036
64352V-IP-3	New Century Home Equity -NCHET 2005-A AS		12/01/2022	PAYDOWN		527,763	527,763	497,417	504,690	0	23,073	0	23,073	0	527,763	0	0	0	13,326	08/01/2035
64755*-AA-1	New Mountain Guardian II Senior Note		03/15/2022	MATURITY		941,935	941,935	941,935	941,929	0	6	0	6	0	941,935	0	0	0	18,448	03/15/2022
647551-A8-9	New Mountain Finance Cor Senior Note Ser		07/15/2022	MATURITY		17,000,000	17,000,000	17,000,000	17,000,146	0	(146)	0	(146)	0	17,000,000	0	0	0	809,200	07/15/2022
64830Y-AC-1	NRZ Excess Spread-Collat-NZES 2021-FNT1		12/25/2022	PAYDOWN		1,393,838	1,393,838	1,393,822	1,393,824	0	13	0	13	0	1,393,838	0	0	0	21,705	03/25/2026
64831J-AA-7	New Residential Advance -NRART 2020-APT1		06/14/2022	VARIOUS		29,500,000	30,000,000	29,999,964	29,999,987	0	(7)	0	(7)	0	29,999,980	0	(499,980)	(499,980)	108,644	12/16/2052
64831Q-AA-1	New Residential Mortgage-NRZT 2022-NQM3		12/01/2022	PAYDOWN		667,949	667,949	658,245	0	0	9,703	0	9,703	0	667,949	0	0	0	279,196	04/01/2062
64831Q-AB-9	New Residential Mortgage-NRZT 2022-NQM3		12/01/2022	PAYDOWN		285,841	285,841	279,767	0	0	6,074	0	6,074	0	285,841	0	0	0	3,402	04/01/2062
64831T-AA-5	New Residential Mortgage-NRZT 2021-NQM3		12/01/2022	PAYDOWN		1,570,650	1,570,650	1,460,712	0	0	109,938	0	109,938	0	1,570,650	0	0	0	4,317	11/01/2056
64831V-AB-8	New Residential Mortgage-NRZT 2022-NQM5		12/01/2022	PAYDOWN		207,084	207,084	204,382	0	0	2,702	0	2,702	0	207,084	0	0	0	0	11/01/2052
64831V-AC-6	New Residential Mortgage-NRZT 2022-NQM5		12/01/2022	PAYDOWN		289,917	289,917	283,493	0	0	6,425	0	6,425	0	289,917	0	0	0	0	11/01/2052
649604-AD-7	New York Mortgage Trust -SENIOR UNSECURE		01/15/2022	MATURITY		15,063,000	15,063,000	14,976,686	15,061,878	0	1,122	0	1,122	0	15,063,000	0	0	0	470,719	01/15/2022
650119-AA-8	New York University-UNSECURED		07/01/2022	CALL 100		373,000	373,000	404,705	392,197	0	(721)	0	(721)	0	391,476	0	(18,476)	(18,476)	19,530	07/01/2036
651587-AF-4	NEWMARKET CORP-SENIOR UNSECURED NOTE		03/15/2022	CALL 102.028		2,040,560	2,000,000	1,996,600	1,999,615	0	4	0	4	0	1,999,619	0	40,941	40,941	20,500	12/15/2022
65251X-AN-6	NewStar Berkeley Fund CL-NSBKY 2016-1A A		01/25/2022	PAYDOWN		2,160,961	2,160,961	2,160,961	2,160,961	0	0	0	0	0	2,160,961	0	0	0	9,520	10/25/2028
65251X-AQ-9	NewStar Berkeley Fund CL-NSBKY 2016-1A B		01/25/2022	PAYDOWN		4,000,000	4,000,000	4,000,000	4,000,000	0	0	0	0	0	4,000,000	0	0	0	0	10/25/2028
65444#-AA-1	9 Campus Circle Westlake Senior Secured		12/11/2022	SINKING PAYMENT		609,475	609,475	609,475	609,475	0	0	0	0	0	609,475	0	0	0	10,234	07/01/2024
65535V-KX-5	Nomura Asset Acceptance -NAA 2005-WF1 2A		12/01/2022	PAYDOWN		6,758	6,758	6,870	6,796	0	(37)	0	(37)	0	6,758	0	0	0	161	03/01/2035
65535V-MJ-4	Nomura Asset Acceptance -NAA 2005-AR3 1A		12/27/2022	PAYDOWN		145,719	145,719	120,137	120,628	0	26,514	1,422	25,092	0	145,719	0	0	0	1,057	07/25/2035
65535V-NL-8	Nomura Asset Acceptance -NAA 2005-AR4 5A		12/27/2022	PAYDOWN		36,824	36,824	22,150	24,421	0	(17)	2,253	(2,270)	0	21,229	0	15,595	15,595	99	08/25/2035
65535V-SJ-8	Nomura Asset Acceptance -NAA 2006-AP2 A2		12/01/2022	PAYDOWN		169,091	169,091	68,162	69,660	0	100,146	715	99,431	0	169,091	0	0	0	1,929	01/01/2036
65539C-AK-2	Nomura Resecuritization -NMRR 2011-4RA 1		12/01/2022	PAYDOWN		279,163	263,242	218,724	220,334	0	46,463	0	46,463	0	279,163	0	0	0	3,871	12/01/2036
65540E-BR-9	Nomura Resecuritization -NMRR 2014-1R 3A		12/28/2022	PAYDOWN		5,410,123	5,410,123	4,517,453	4,993,105	0	417,019	0	417,019	0	5,410,123	0	0	0	23,925	07/26/2036
665859-AP-9	Northern Trust Corp-SUBORDINATED		03/23/2022	VARIOUS		39,178,292	37,000,000	36,854,720	36,946,748	0	2,354	0	2,354	0	36,949,101	0	2,229,191	2,229,191	443,826	10/30/2025
666807-BS-0	Northrop Grumman Corp-SENIOR UNSECURED		06/07/2022	JP MORGAN SECURITIES		23,254,610	23,000,000	22,907,770	22,922,655	0	3,661	0	3,661	0	22,926,316	0	328,294	328,294	612,822	06/01/2030
667274-AB-0	Northwell Healthcare Inc-SECURED		03/16/2022	JP MORGAN SECURITIES		6,060,900	6,000,000	6,000,000	6,000,108	0	24	0	24	0	6,000,132	0	60,768	60,768	77,428	11/01/2027
667294-AW-2	NORTHWEST AIR 2001-1 A1-FIRST LIEN		04/01/2022	MATURITY		144,727	144,727	148,578	144,895	0	(168)	0	(168)	0	144,727	0	0	0	5,095	04/01/2022
667339-AA-3	Northwest Bancshares Inc-SUBORDINATED		10/31/2022	PIPERJAFFRAY		7,286,960	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	(713,040)	(713,040)	361,778	09/15/2030
66775V-AB-1	Northwest Pipeline LLC-SENIOR UNSECURED		01/21/2022	JEFFERIESLLC		7,468,930	7,000,000	6,974,870	6,985,834	0	182	0	182	0	6,986,017	0	482,913	482,913	88,667	04/01/2027
67021C-AP-2	NSTAR Electric Co-SENIOR UNSECURED		06/06/2022	SCOTIA CAPITAL MARKE		10,885,050	11,000,000	10,939,720	10,948,808	0	2,318	0	2,318	0	10,951,126	0	(66,076)	(66,076)	298,115	04/01/2030
67087T-DE-8	Oakwood Mortgage Investo-OAK 2002-A A3		12/01/2022	PAYDOWN		98,488	98,488	98,480	98,480	0	7	0	7	0	98,488	0	0	0	2,462	05/01/2024
67098A-AM-1	OBX 2019-INV1 Trust-OBX 2019-INV1 A12		12/01/2022	PAYDOWN		6,653,693	6,653,693	6,088,129	6,196,697	0	456,995	0	456,995	0	6,653,693	0	0	0	108,685	11/01/2048
67102*-AA-4	Osf Industries Ltd. - Corp & Other Bond		04/08/2022	EXCHANGE OFFER		80,000,000	80,000,000	80,000,000	80,000,000	0	0	0	0	0	80,000,000	0	0	0	254,400	12/22/2028
67103H-AH-0	O'Reilly Automotive Inc-SENIOR UNSECURED		07/27/2022	WELLS FARGO		9,702,600	10,000,000	9,999,100	9,999,716	0	(148)	0	(148)	0	9,999,568	0	(296,968)	(296,968)	257,833	06/01/2029
67103H-AJ-6	O'Reilly Automotive Inc-SENIOR UNSECURED		08/09/2022	CITIGROUP GLOBAL MAR		7,891,950	8,000,000	7,996,720	7,997,298	0	228	0	228	0	7,997,526	0	(105,576)	(105,576)	289,333	04/01/2030
67113A-AP-5	OBX 2019-EXP3 Trust-OBX 2019-EXP3 1A8		12/01/2022	PAYDOWN		269,763	269,763	270,184	270,170	0	(407)	0	(407)	0	269,763	0	0	0	3,269	10/01/2059
67113X-AB-6	OBX 2021-J1 Trust-OBX 2021-J1 A2		12/01/2022	PAYDOWN		3,961,604	3,961,604	3,937,463	3,929,176	0	32,427	0	32,427	0	3,961,604	0	0	0	38,531	05/01/2051
67117D-AA-8	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		12/01/2022	PAYDOWN		218,344	218,344	218,344	0	0	0	0	0	0	218,344	0	0	0	2,391	08/01/2062
67117D-AB-6	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		12/01/2022	PAYDOWN		103,217	103,217	102,981	0	0	236	0	236	0	103,217	0	0	0	1,261	08/01/2062
67117D-AC-4	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		12/01/2022	PAYDOWN		104,210	104,210	102,981	0	0	1,228	0	1,228	0	104,210	0	0	0	1,273	08/01/2062
67118A-AN-5	OPG Trust 2021-PORT-OPG 2021-PORT E		09/15/2022	PAYDOWN		7,865,647	7,865,647	7,800,221	7,801,564	0	64,083	0	64,083	0	7,865,647	0	0	0	108,412	10/15/2036
67118A-AQ-8	OPG Trust 2021-PORT-OPG 2021-PORT F		09/15/2022	PAYDOWN		3,142,483	3,142,483	3,134,595	3,134,799	0	7,684	0	7,684	0	3,142,483	0	0	0	51,688	10/15/2036
67118A-AS-4	OPG Trust 2021-PORT-OPG 2021-PORT G		09/15/2022	PAYDOWN		3,141,225	3,141,225	3,133,429	3,133,574	0	7,650	0	7,650	0	3,141,225	0	0	0	60,659	10/15/2036
67181D-AA-9	Oak Street Investment Gr-OAKIG 2020-1A A		12/20/2022	PAYDOWN		113,354	113,354	113,349	113,350	0	3	0	3	0	113,354	0	0	0	1,136	11/20/2050
67181D-AB-7	Oak Street Investment Gr-SERIES 20-1A CL		12/20/2022	PAYDOWN		113,354	113,354	113,306	113,313	0	40	0	40	0	113,354	0	0	0	1,357	11/20/2050
67190A-AA-4	Oak Street Investment Gr-OAKIG 2021-1A A		12/20/2022	PAYDOWN		163,338	163,338	162,517	156,780	0	820	0	820	0	163,338	0	0	0	1,265	01/20/2051
67190A-AB-2	Oak Street Investment Gr-OAKIG 2021-1A A		12/20/2022	PAYDOWN		143,737	143,737	143,718	143,718	0	19	0	19	0	143,737	0	0	0	1,503	01/20/2051
674135-EM-6	Oakwood Mortgage Investo-OAK 1999-A M2		12/01/2022	PAYDOWN		0	(2,407)	(2,130)	(322)	0	6,850	0	6,850	0	0	0	0	0	73	04/01/2029
674480-AC-5	OBX 2019-EXP1 Trust-OBX 2019-EXP1 1A3		12/01/2022	PAYDOWN		753,688	753,688	749,920	750,127	0	3,561	0	3,561	0	753,688	0	0	0	12,148	01/01/2059

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
674599-CM-5	Occidental Petroleum Cor-SENIOR UNSECURE		.03/09/2022	CA_CASH_CLOSE		7,900,000	8,000,000	7,966,320	7,982,414	0	659	0	659	0	7,983,072	0	(83,072)	(83,072)	136,000	.02/15/2027
674599-CR-4	Occidental Petroleum Cor-SENIOR UNSECURE		.03/09/2022	CA_CASH_CLOSE		5,012,500	5,000,000	4,996,550	4,997,662	0	129	0	129	0	5,010,291	0	2,209	2,209	103,167	.08/15/2026
674599-CS-2	Occidental Petroleum Cor-SENIOR UNSECURE		.03/09/2022	CA_CASH_CLOSE		7,017,500	7,000,000	6,965,420	6,972,652	0	664	0	664	0	6,990,815	0	26,685	26,685	156,333	.08/15/2029
675234-AA-6	OceanFirst Financial Cor-SUBORDINATED		.03/31/2022	CALL 100		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	51,724	.09/30/2026
677071-AF-9	Ohana Military Communiti-UNSECURED		.10/01/2022	SINKING PAYMENT		231,149	231,149	233,939	232,103	0	(954)	0	(954)	0	231,149	0	0	0	9,879	.10/01/2026
677071-AM-4	Ohana Military Communiti-UNSECURED		.10/01/2022	SINKING PAYMENT		152,706	152,706	157,197	154,320	0	(1,613)	0	(1,613)	0	152,706	0	0	0	6,281	.10/01/2026
679574-AG-8	Old Dominion Electric Co-FIRST LIEN		.12/01/2022	SINKING PAYMENT		604,167	604,167	650,981	627,334	0	(23,167)	0	(23,167)	0	604,167	0	0	0	37,519	.12/01/2028
679574-AH-6	Old Dominion Electric Co-FIRST LIEN		.12/01/2022	SINKING PAYMENT		166,656	166,656	173,178	170,281	0	(3,625)	0	(3,625)	0	166,656	0	0	0	9,459	.12/01/2028
680223-AK-0	Old Republic Internation-SENIOR UNSECURE		.01/18/2022	GOLDMAN		8,536,320	8,000,000	7,734,760	7,860,601	0	1,513	0	1,513	0	7,862,114	0	674,206	674,206	124,000	.08/26/2026
681936-BF-6	Omega Healthcare Investo-SENIOR UNSECURE		.01/24/2022	CITIGROUP GLOBAL MAR		5,427,500	5,000,000	4,927,300	4,963,635	0	447	0	447	0	4,964,082	0	463,418	463,418	71,875	.04/01/2027
681936-BK-5	Omega Healthcare Investo-SENIOR UNSECURE		.01/18/2022	GOLDMAN		9,778,950	9,000,000	8,908,020	8,944,713	0	531	0	531	0	8,945,244	0	833,706	833,706	219,688	.01/15/2028
68233J-AR-5	ONCOR ELECTRIC DELIVERY-SENIOR SECURED N		.03/01/2022	CALL 100		5,000,000	5,000,000	4,990,950	4,999,559	0	2	0	2	0	4,999,561	0	439	439	51,250	.06/01/2022
68233J-BU-7	Oncor Electric Delivery -FIRST LIEN		.05/31/2022	CITIGROUP GLOBAL MAR		16,666,380	18,000,000	17,980,380	17,984,798	0	845	0	845	0	17,985,643	0	(1,319,263)	(1,319,263)	270,875	.05/15/2030
682680-AS-2	ONEOK Inc-SENIOR UNSECURED		.10/28/2022	JANE		4,542,200	5,000,000	4,992,250	4,995,584	0	419	0	419	0	4,996,003	0	(453,803)	(453,803)	260,000	.07/13/2027
682680-AU-7	ONEOK Inc-SENIOR UNSECURED		.01/21/2022	GOLDMAN		18,363,400	17,000,000	16,953,590	16,968,810	0	357	0	357	0	16,969,167	0	1,394,233	1,394,233	408,236	.07/15/2028
682680-AW-3	ONEOK Inc-SENIOR UNSECURED		.11/22/2022	TORONTO DOMINION SEC		6,487,250	7,000,000	6,978,090	6,983,432	0	1,762	0	1,762	0	6,985,194	0	(497,944)	(497,944)	363,708	.03/15/2029
68268H-AA-4	OneMain Financial Issuan-OMFIT 2016-3A A		.07/18/2022	PAYDOWN		7,798,195	7,798,195	8,014,994	7,814,805	0	(16,610)	0	(16,610)	0	7,798,195	0	0	0	85,607	.06/18/2031
68389X-AS-4	ORACLE CORP-SR UNSECURED		.08/23/2022	VARIOUS		12,026,240	12,000,000	12,205,060	12,036,536	0	(7,633)	0	(7,633)	0	12,028,903	0	(2,663)	(2,663)	371,563	.07/15/2023
69120H-AA-4	Owl Rock Capital Corpora Senior Note		.12/28/2021	DIRECT		0	0	0	0	0	(137,675)	0	(137,675)	0	0	0	0	0	0	.06/21/2023
69144A-AA-7	Oxford Finance Funding 2-OXFIN 2020-1A A		.12/15/2022	PAYDOWN		2,477,236	2,477,236	2,466,592	0	0	10,644	0	10,644	0	2,477,236	0	0	0	23,075	.02/15/2028
69337B-AH-7	PHH Alternative Mortgage-PHHAM 2007-1 21		.12/01/2022	PAYDOWN		316,345	395,662	364,922	371,345	0	19,751	8,090	11,661	0	316,345	0	0	0	12,739	.02/01/2037
693456-AA-3	PMT Loan Trust 2013-J1-PMTLT 2013-J1 A1		.12/01/2022	PAYDOWN		462,820	462,820	450,960	451,543	0	11,277	0	11,277	0	462,820	0	5,554	5,554	15,709	.09/01/2043
69349L-AR-9	PNC Bank NA-SUBORDINATED		.04/11/2022	JEFFERIESLLC		15,090,000	15,000,000	14,963,400	14,975,153	0	545	0	545	0	14,975,698	0	114,302	114,302	433,688	.07/26/2028
69352P-AQ-6	PPL Capital Funding Inc-SENIOR UNSECURED		.08/09/2022	FIRST TENNESSEE		3,915,760	4,000,000	3,998,640	3,998,892	0	69	0	69	0	3,998,961	0	(83,201)	(83,201)	135,667	.04/15/2030
693684-AA-0	PSMC 2020-1 Trust-PSMC 2020-1 A1		.12/01/2022	PAYDOWN		1,283,062	1,283,062	1,311,730	1,310,536	0	(27,473)	0	(27,473)	0	1,283,062	0	0	0	15,709	.01/01/2050
69374X-AA-8	PSMC 2019-2 Trust-PSMC 2019-2 A1		.12/01/2022	PAYDOWN		1,161,010	1,161,010	1,184,230	1,188,702	0	(27,692)	0	(27,692)	0	1,161,010	0	0	0	10,598	.10/01/2049
69375B-AA-5	PSMC 2019-3 Trust-PSMC 2019-3 A1		.12/01/2022	PAYDOWN		764,854	764,854	775,968	778,394	0	(13,540)	0	(13,540)	0	764,854	0	0	0	8,049	.11/01/2049
69403W-AA-5	Pacific Beacon LLC-FIRST LIEN		.07/15/2022	SINKING PAYMENT		693,730	693,730	765,225	735,672	0	(41,943)	0	(41,943)	0	693,730	0	0	0	28,259	.07/15/2026
694476-AA-0	Pacific LifeCorp-SENIOR UNSECURED		.08/17/2022	KEY CAPITAL MARKETS		24,526,998	20,825,000	26,247,521	24,961,936	0	(172,261)	0	(172,261)	0	24,789,675	0	(262,677)	(262,677)	1,269,684	.09/15/2033
69546T-AA-0	Pagaya AI Debt Selection-PAID 2020-3 A		.08/15/2022	PAYDOWN		3,279,359	3,279,359	3,279,329	3,279,351	0	8	0	8	0	3,279,359	0	0	0	22,094	.05/17/2027
69546V-AA-5	PAGAYA AI Debt Trust 202-PAID 2022-2 A		.12/15/2022	PAYDOWN		2,311,937	2,311,937	2,311,937	0	0	0	0	0	0	2,311,937	0	0	0	51,325	.01/15/2030
70215H-AA-8	Parlstat (Varian 2020 I Pass-Thru Certif		.12/15/2022	SINKING PAYMENT		566,061	566,061	566,061	566,061	0	0	0	0	0	566,061	0	0	0	10,381	.03/15/2030
70337U-10-0	Patrons' Legacy-PATRNL 5.775 12/23/22		.12/23/2022	SINKING PAYMENT		1,134,500	1,134,500	1,096,773	1,134,500	0	0	0	0	0	1,134,500	0	0	0	95,920	.01/23/2024
70338A-10-3	Patrons' Legacy-PATRNL 5.646 05/17/22		.08/19/2022	SINKING PAYMENT		788,450	788,450	788,450	788,450	0	0	0	0	0	788,450	0	0	0	25,968	.11/17/2023
70338C-10-9	Patrons' Legacy-PATRNL 6.673 12/04/23		.03/04/2022	SINKING PAYMENT		2	2	2	2	0	0	0	0	0	2	0	0	0	0	.12/04/2023
704699-AE-7	Peapack-Gladstone Financ-SUBORDINATED		.11/22/2022	BARINGSLLC		2,738,317	3,000,000	3,000,000	3,000,000	0	0	0	0	0	3,000,000	0	(261,683)	(261,683)	93,917	.12/30/2030
709599-AH-7	PENSKE TRUCK LEASING/PTL-SENIOR UNSECURE		.07/11/2022	MATURITY		8,000,000	8,000,000	7,950,080	7,996,740	0	3,260	0	3,260	0	8,000,000	0	0	0	390,000	.07/11/2022
709599-AX-2	Penske Truck Leasing Co -SENIOR UNSECURE		.01/20/2022	FTS		9,759,330	9,000,000	8,987,490	8,993,278	0	100	0	100	0	8,993,378	0	765,952	765,952	118,650	.04/01/2027
709599-BJ-2	Penske Truck Leasing Co -SENIOR UNSECURE		.09/28/2022	U. S. BANCORP		14,339,400	15,000,000	14,951,400	14,966,317	0	6,158	0	6,158	0	14,972,475	0	(633,075)	(633,075)	725,000	.07/15/2025
71270Q-EB-8	People's United Bank NA-SUBORDINATED		.08/23/2022	JP MORGAN SECURITIES		11,942,520	12,000,000	11,929,080	11,979,471	0	4,771	0	4,771	0	11,984,243	0	(41,723)	(41,723)	533,333	.03/15/2028
713448-CY-2	PepsiCo Inc-SENIOR UNSECURED		.03/17/2022	GOLDMAN		14,383,180	14,000,000	13,934,480	13,974,613	0	1,171	0	1,171	0	13,975,784	0	407,396	407,396	332,111	.07/17/2025
71367H-AA-4	PERENfra Laguna LLC Senior Secured Notes		.10/15/2022	SINKING PAYMENT		219,462	219,462	219,462	0	0	0	0	0	0	219,462	0	0	0	6,284	.10/15/2049
717081-CY-7	Pfizer Inc-SENIOR UNSECURED NOTE		.08/15/2022	MIZUHO SECURITIES		12,085,650	9,000,000	13,539,330	12,780,976	0	(98,556)	0	(98,556)	0	12,682,420	0	(596,770)	(596,770)	597,600	.03/15/2039
718546-AC-8	PHILLIPS 66-SENIOR UNSECURED NOTE		.04/01/2022	MATURITY		3,000,000	3,000,000	2,992,890	2,999,797	0	203	0	203	0	3,000,000	0	0	0	64,500	.04/01/2022
718546-AK-0	Phillips 66-SENIOR UNSECURED		.08/15/2022	WELLS FARGO		5,076,200	5,000,000	4,937,200	4,953,602	0	1,581	0	1,581	0	4,955,183	0	121,017	121,017	175,667	.11/15/2034
718546-AR-5	Phillips 66-SENIOR UNSECURED		.01/24/2022	JEFFERIESLLC		13,879,580	13,000,000	12,987,000	12,992,112	0	180	0	180	0	12,992,292	0	887,288	887,288	184,492	.03/15/2028
718546-AV-6	Phillips 66-SENIOR UNSECURED		.05/16/2022	SMBC NIKKO SECURITIE		7,050,750	7,000,000	6,996,220	6,995,362	0	576	0	576	0	6,995,939	0	54,811	54,811	163,946	.04/09/2025
718549-AF-5	PHILLIPS 66 PARTNERS LP-SENIOR UNSECURED		.05/05/2022	EXCHANGE OFFER		6,983,976	7,000,000	6,973,400	6,983,156	0	820	0	820	0	6,983,976	0	0	0	177,917	.03/01/2028
71951Q-AA-0	Physicians Realty LP-SENIOR UNSECURED		.01/19/2022	BARCLAYS CAPITAL INC		7,618,730	7,000,000	6,977,390	6,987,475	0	167	0	167	0	6,987,643	0	631,087	631,087	105,350	.03/15/2027

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
71951Q-AB-8	Physicians Realty LP-SENIOR UNSECURED		.01/19/2022	BARCLAYS CAPITAL INC		10,697,600	10,000,000	9,977,900	9,986,641	0	185	0	185	0	9,986,826	0	710,774	710,774	204,083	.01/15/2028
720186-AL-9	Piedmont Natural Gas Co -SENIOR UNSECURE		.07/25/2022	WELLS FARGO		9,462,500	10,000,000	9,974,800	9,980,829	0	1,179	0	1,179	0	9,982,008	0	(519,508)	(519,508)	229,444	.06/01/2029
723787-AM-9	PIONEER NATURAL RESOURCE-SR UNSECURED		.01/24/2022	JEFFERIESLLC		10,799,200	10,000,000	9,976,840	9,990,363	0	185	0	185	0	9,990,548	0	808,652	808,652	236,097	.01/15/2026
72650R-BJ-0	Plains All American Pipe-SENIOR UNSECURE		.01/18/2022	GOLDMAN		6,476,760	6,000,000	5,990,760	5,996,522	0	31	0	31	0	5,996,552	0	480,208	480,208	73,625	.10/15/2025
72650R-BL-5	PLAINS ALL AMER PIPELINE-SENIOR UNSECURE		.01/24/2022	BOFAMLSEC		5,401,950	5,000,000	4,985,800	4,992,628	0	(28)	0	(28)	0	4,992,600	0	409,350	409,350	25,625	.12/15/2026
72703P-AA-1	Planet Fitness Master Is-PLNT 2018-1A A2		.03/05/2022	PAYDOWN		6,192,000	6,192,000	6,192,000	6,192,221	0	(221)	0	(221)	0	6,192,000	0	0	0	47,649	.09/05/2048
72703P-AC-7	Planet Fitness Master Is-2019-1A A2 FIXE		.12/05/2022	PAYDOWN		110,000	110,000	111,363	111,349	0	(1,349)	0	(1,349)	0	110,000	0	0	0	2,652	.12/05/2049
741503-AW-6	Booking Holdings Inc-SENIOR UNSECURED		.04/18/2022	TORONTO DOMINION SEC		7,082,600	7,000,000	6,981,940	6,993,723	0	637	0	637	0	6,994,360	0	88,240	88,240	152,590	.03/15/2025
741503-AZ-9	Booking Holdings Inc-SENIOR UNSECURED		.03/28/2022	JP MORGAN SECURITIES		7,074,900	7,000,000	6,986,490	6,993,757	0	219	0	219	0	6,993,976	0	80,924	80,924	83,300	.06/01/2026
741503-BC-9	PRICELINE GROUP INC/THE-SENIOR UNSECURED		.03/30/2022	JP MORGAN SECURITIES		13,116,220	13,000,000	12,989,340	12,994,014	0	527	0	527	0	12,994,541	0	121,679	121,679	251,261	.03/15/2028
74166Y-AC-4	Primose Funding LLC-PROSE 2022-1 A2		.10/30/2022	PAYDOWN		6,750	6,750	6,750	0	0	0	0	0	0	6,750	0	0	0	158	.04/30/2052
7425A0-BC-3	Principal Life Global Fu-SECURED		.06/06/2022	KEY CAPITAL MARKETS		3,571,218	3,150,000	3,813,485	3,693,985	0	(15,663)	0	(15,663)	0	3,678,322	0	(107,104)	(107,104)	124,873	.10/15/2033
742651-DM-1	Private Export Funding C-SECURED		.05/15/2022	MATURITY		3,500,000	3,500,000	3,489,045	3,499,596	0	404	0	404	0	3,500,000	0	0	0	49,000	.05/15/2022
74331C-AA-6	Progress Residential 202-PROG 2020-SFR1		.01/19/2022	PERFTRUSTOP		16,337,578	16,500,000	16,499,452	16,495,972	0	33	0	33	0	16,496,005	0	(158,427)	(158,427)	39,692	.04/01/2037
74333N-AA-0	Progress Residential 201-PROG 2019-SFR2		.05/01/2022	PAYDOWN		7,922,889	7,922,889	7,922,788	7,861,340	0	61,549	0	61,549	0	7,922,889	0	0	0	103,776	.05/01/2036
74333N-AC-6	Progress Residential 201-PROG 2019-SFR2		.05/01/2022	PAYDOWN		12,000,000	12,000,000	11,999,833	11,897,659	0	102,341	0	102,341	0	12,000,000	0	0	0	172,300	.05/01/2036
74333W-AJ-1	Progress Residential Trust-PROG 2021-SFR		.12/01/2022	PAYDOWN		2,322	2,322	2,321	2,321	0	0	0	0	0	2,322	0	0	0	81	.12/01/2040
74338*-AA-6	Project Axis Garner NC C Trust Certificat		.12/15/2022	SINKING PAYMENT		407,190	407,190	407,190	407,196	0	(6)	0	(6)	0	407,190	0	0	0	8,974	.11/15/2039
74340X-BH-3	Prologis LP-SENIOR UNSECURED		.03/28/2022	BARCLAYS CAPITAL INC		12,202,680	12,000,000	11,918,400	11,943,130	0	2,203	0	2,203	0	11,945,332	0	257,348	257,348	251,875	.09/15/2028
74340X-BL-4	Prologis LP-SENIOR UNSECURED		.03/28/2022	CITIGROUP GLOBAL MAR		3,165,570	3,000,000	2,992,260	2,994,340	0	109	0	109	0	2,994,449	0	171,121	171,121	87,135	.02/01/2029
74348T-AJ-1	Prospect Capital Corp-SENIOR UNSECURED		.09/01/2022	BASS TRADING LLC		18,760,000	18,760,000	18,436,000	18,709,026	0	28,733	0	28,733	0	18,737,759	0	22,241	22,241	1,074,596	.03/15/2023
743516-AA-6	Project Arrow Oak Creek Trust Certificate		.12/10/2022	SINKING PAYMENT		717,313	717,313	717,313	717,313	0	0	0	0	0	717,313	0	0	0	(1,423)	.07/10/2040
743674-BD-4	Protective Life Corp-SENIOR UNSECURED		.07/26/2022	JP MORGAN SECURITIES		14,817,150	15,000,000	14,963,850	14,975,805	0	1,819	0	1,819	0	14,977,624	0	(160,474)	(160,474)	533,917	.09/30/2028
743874-AC-3	Provident Funding Mortga-PFMT 2020-1 A2		.12/01/2022	PAYDOWN		257,878	257,878	261,545	261,370	0	(3,491)	0	(3,491)	0	257,878	0	0	0	2,941	.02/01/2050
74387L-AC-5	Provident Funding Mortga-PFMT 2019-1 A2		.12/01/2022	PAYDOWN		604,265	604,265	612,668	612,087	0	(7,822)	0	(7,822)	0	604,265	0	0	0	7,007	.12/01/2049
74387Y-AD-5	Provident Funding Mortga-PFMT 2021-1 A2A		.12/01/2022	PAYDOWN		3,983,696	3,983,696	3,944,393	3,944,864	0	38,833	0	38,833	0	3,983,696	0	0	0	38,675	.04/01/2051
74432Q-AQ-8	PRUDENTIAL FINANCIAL INC-SR UNSECURED MT		.08/26/2022	GOLDMAN		8,197,758	7,500,000	8,982,600	8,732,174	0	(40,312)	0	(40,312)	0	8,691,862	0	(494,104)	(494,104)	303,807	.12/14/2036
744482-BL-3	Public Service Co of New-FIRST LIEN		.03/18/2022	MARKETAXESS FINANCIA		7,107,450	7,000,000	6,974,380	6,994,727	0	656	0	656	0	6,995,383	0	112,067	112,067	95,958	.11/01/2023
747262-AK-9	QVC INC-SECURED NOTE		.01/04/2022	GOLDMAN SACHS		4,125,000	4,000,000	3,998,720	3,999,884	0	4	0	4	0	3,999,888	0	125,112	125,112	53,958	.03/15/2023
747262-AS-2	QVC Inc-FIRST LIEN		.01/05/2022	GOLDMAN		6,367,500	6,000,000	5,995,620	5,999,063	0	5	0	5	0	5,999,068	0	368,432	368,432	77,600	.04/01/2024
747262-AU-7	QVC INC-1ST LIEN		.04/19/2022	VARIOUS		5,916,829	6,000,000	5,991,600	5,997,219	0	170	0	170	0	5,997,389	0	(80,560)	(80,560)	176,530	.02/15/2025
74834L-BA-7	Quest Diagnostics Inc-SENIOR UNSECURED		.07/19/2022	JP MORGAN SECURITIES		9,785,500	10,000,000	9,970,700	9,977,578	0	1,216	0	1,216	0	9,978,793	0	(193,293)	(193,293)	234,500	.06/30/2029
74922M-AA-9	RALI Series 2006-QA6 Tru-RALI 2006-QA6 A		.12/27/2022	PAYDOWN		214,688	203,465	177,893	190,716	0	15,089	0	15,089	0	214,688	0	0	0	762	.07/25/2036
74922Q-AA-0	RALI Series 2006-QA8 Tru-RALI 2006-QA8 A		.12/27/2022	PAYDOWN		75,502	71,958	55,084	8,507	0	8,507	0	8,507	0	75,502	0	0	0	480	.09/25/2036
74923G-AC-7	RALI Series 2007-QA1 Tru-RALI 2007-QA1 A		.12/27/2022	PAYDOWN		476,395	468,511	368,182	395,150	0	75,390	0	75,390	0	476,395	0	0	0	1,875	.01/25/2037
74923H-AQ-4	RALI Series 2007-QS4 Tru-RALI 2007 QA 3A		.12/01/2022	PAYDOWN		108,708	112,170	107,163	107,557	0	4,833	333	4,500	0	108,708	0	0	0	3,144	.03/01/2037
74927B-AK-6	RBSSP Resecuritization T-RBSSP 2009-8 7A		.09/01/2022	PAYDOWN		36,750	36,750	39,644	(11,288)	0	(11,288)	0	(11,288)	0	36,750	0	0	0	5,931	.09/01/2037
74927T-AC-5	RBSSP Resecuritization T-RBSSP 2010-9 3A		.12/28/2022	PAYDOWN		592,520	592,520	556,229	532,775	0	59,745	0	59,745	0	592,520	0	0	0	9,493	.10/26/2034
74928D-AV-7	RBSSP Resecuritization T-RBSSP 2009-1 7A		.12/01/2022	PAYDOWN		303,133	280,956	129,778	127,243	0	166,197	0	166,197	0	303,133	0	0	0	3,200	.06/01/2037
74928F-AY-6	RBSSP Resecuritization T-RBSSP 2009-3 6A		.12/01/2022	PAYDOWN		157,511	185,446	113,362	144,193	0	144,193	0	144,193	0	157,511	0	0	0	7,269	.03/01/2036
74928R-AB-0	RBSSP Resecuritization T-RBSSP 2009-10 1		.10/01/2022	PAYDOWN		50,477	50,477	34,072	41,229	0	9,352	104	9,248	0	50,477	0	0	0	886	.08/01/2035
74928U-AM-9	RBSSP Resecuritization T-RBSSP 2009-12 5		.12/01/2022	PAYDOWN		467,158	435,259	308,247	365,197	0	82,917	0	82,917	0	467,158	0	0	0	5,905	.08/01/2036
74928U-AX-5	RBSSP Resecuritization T-RBSSP 2009-12 8		.12/01/2022	PAYDOWN		267,655	264,972	112,706	152,341	0	152,341	0	152,341	0	267,655	0	0	0	3,297	.06/01/2036
74928U-BV-8	RBSSP Resecuritization T-RBSSP 2009-12 1		.12/28/2022	PAYDOWN		4,255,372	4,255,372	3,468,128	3,442,185	0	813,187	0	813,187	0	4,255,372	0	0	0	54,169	.10/25/2035
74928X-BB-6	RBSSP Resecuritization T-RBSSP 2009-6 3A		.12/28/2022	PAYDOWN		1,180,389	1,444,750	1,042,133	1,300,294	0	171,300	111,901	59,399	0	1,180,389	0	0	0	18,738	.01/26/2036
74929F-AK-5	RBSSP Resecuritization T-RBSSP 2010-3 4A		.12/01/2022	PAYDOWN		160,388	160,388	157,732	160,388	0	3,196	0	3,196	0	160,388	0	0	0	1,707	.12/01/2035
74930X-BB-2	RBSSP Resecuritization T-RBSSP 2012-1 4B		.12/01/2022	PAYDOWN		695,654	695,654	664,349	703,919	0	(8,265)	0	(8,265)	0	695,654	0	0	0	289,330	.01/01/2029
749357-AA-7	RCKT Mortgage Trust 2019-RCKT 2019-1 A1		.12/01/2022	PAYDOWN		1,474,875	1,474,875	1,497,689	1,504,260	0	(29,386)	0	(29,386)	0	1,474,875	0	0	0	14,421	.09/01/2049
749389-AA-0	RCKT Mortgage Trust 2020-RCKT 2020-1 A1		.12/01/2022	PAYDOWN		1,817,487	1,817,487	1,735,700	1,698,005	0	119,482	0	119,482	0	1,817,487	0	0	0	19,481	.02/01/2050

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Iden-tification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con-sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor-tization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date
74949L-AC-6	RELX Capital Inc-SENIOR UNSECURED		.06/27/2022	JP MORGAN SECURITIES		9,584,800	10,000,000	9,883,900	9,911,779	0	5,217	0	5,217	0	9,916,995	0	(332,195)	(332,195)	312,222	.03/18/2029
749574-AC-3	RFMSI Series 2006-SA2 Tr-RFMSI 2006-SA2		.12/01/2022	PAYDOWN		45,213	47,788	34,640	19,550	0	27,466	0	27,466	0	45,213	0	0	0	1,138	.08/01/2036
74958T-AB-9	RFMSI Series 2007-SA3 Tr-RFMSI 2007-SA3		.04/01/2022	PAYDOWN		60,723	59,048	52,056	45,077	0	14,188	0	14,188	0	60,723	0	0	0	754	.07/01/2037
74958W-AC-0	RFMSI Series 2007-SA1 Tr-RFMSI 2007-SA1		.12/01/2022	PAYDOWN		104,137	108,035	61,272	39,363	0	66,870	0	66,870	0	104,137	0	0	0	1,926	.02/01/2037
74958X-AF-1	RFMSI Series 2007-SA2 Tr-RFMSI 2007-SA2		.12/01/2022	PAYDOWN		56,037	55,385	50,487	50,487	0	4,976	0	4,976	0	56,037	0	0	0	1,136	.04/01/2037
74958Y-AE-2	RFMSI Series 2007-S4 Tru-RFMSI 2007-S4 A		.12/25/2022	PAYDOWN		50,589	55,625	51,624	0	0	3,286	461	2,825	0	50,589	0	0	0	1,507	.04/25/2037
749685-AX-1	RPM International Inc-SENIOR UNSECURED		.11/17/2022	VARIOUS		10,731,793	11,820,000	11,941,936	11,917,451	0	(10,775)	0	(10,775)	0	11,906,676	0	(1,174,883)	(1,174,883)	636,972	.03/01/2029
74968R-AA-3	RMF Proprietary Issuance-PPIT 2019-1 A		.12/25/2022	PAYDOWN		9,278,826	9,278,826	9,207,001	9,219,993	0	58,833	0	58,833	0	9,278,826	0	0	0	99,777	.10/25/2063
74969M-AA-3	RMF Proprietary Issuance-PPIT 2020-1 A		.12/25/2022	PAYDOWN		4,093,261	4,093,261	4,093,261	4,093,261	0	0	0	0	0	4,093,261	0	0	0	68,835	.04/26/2060
750038-AA-5	Renewable Energy Alterna Senior Secured		.12/31/2022	VARIOUS		56,264	56,264	56,264	56,264	0	43,546	0	43,546	0	56,264	0	0	0	0	.09/30/2046
75086#-AA-3	Rainier Gsa Portfolio I US Govt Lease Ba		.12/15/2022	SINKING PAYMENT		246,474	246,474	246,474	246,474	0	(1)	0	(1)	0	246,474	0	0	0	6,190	.07/15/2036
75115B-AC-3	RALI Series 2006-QA5 Tru-RALI 2006-QA5 2		.12/01/2022	PAYDOWN		180,694	198,922	172,257	171,239	0	25,620	113	25,507	0	180,694	0	0	0	7,255	.07/01/2036
75115D-AA-3	RALI Series 2006-QS13 Tr-RALI 2006-QS13		.12/25/2022	PAYDOWN		65,152	74,614	54,893	54,893	0	16,591	0	16,591	0	65,152	0	0	0	301	.09/25/2036
75115L-AA-5	RALI Series 2007-QH7 Tru-RALI 2007-QH7 1		.12/27/2022	PAYDOWN		217,657	217,657	200,244	200,472	0	17,184	0	17,184	0	217,657	0	0	0	1,487	.08/25/2037
75116C-ET-9	RESIDENTIAL ACCREDIT LOA-SERIES 2007-QS6		.12/01/2022	PAYDOWN		41,639	48,041	43,627	46,218	0	3,152	0	628	0	41,639	0	0	0	1,256	.04/01/2037
75116F-BH-1	RALI Series 2007-QS9 Tru-RALI 2007-QS9 A		.12/01/2022	PAYDOWN		217,207	251,116	240,942	241,367	0	7,218	265	6,953	0	217,207	0	0	0	7,962	.07/01/2037
75156V-AD-7	RAMP Series 2006-RS3 Tru-RAMP 2006-RS3 A		.12/27/2022	PAYDOWN		620,157	606,592	477,218	500,907	0	109,561	0	109,561	0	620,157	0	0	0	2,968	.05/25/2036
75574U-60-6	Ready Capital Corp-SENIOR UNSECURED		.10/25/2022	JONES TRADING INST		9,258,072	400,000	10,000,000	0	0	(218,583)	0	(218,583)	0	9,781,417	0	(523,345)	(523,345)	481,894	.02/15/2026
75575J-AA-3	Ready Capital Mortgage F-RQMT 2020-FL4 A		.01/25/2022	VARIOUS		12,770,100	12,739,811	12,739,811	12,739,811	0	0	0	0	0	12,739,811	0	30,289	30,289	23,769	.02/25/2035
756109-AQ-7	Realty Income Corp-SENIOR UNSECURED		.03/16/2022	WELLS FARGO		7,152,320	7,000,000	6,996,920	6,999,450	0	(166)	0	(166)	0	6,999,285	0	153,035	153,035	183,094	.07/15/2024
756109-AR-5	Realty Income Corp-SENIOR UNSECURED		.03/29/2022	SUNTRUST CAPITAL MAR		5,155,750	5,000,000	4,974,950	4,988,785	0	703	0	703	0	4,989,488	0	166,262	166,262	95,104	.10/15/2026
759351-AM-1	REINSURANCE GRP OF AMER-SENIOR UNSECURED		.06/03/2022	WELLS FARGO		5,002,250	5,000,000	4,999,800	4,999,995	0	5	0	5	0	5,000,000	0	2,250	2,250	143,736	.09/15/2026
759676-AF-6	RENAISSANCE HOME EQUITY -RAMC 2006-2 AF3		.06/01/2022	PAYDOWN		11,314	11,314	10,183	6,017	0	5,297	0	5,297	0	11,314	0	0	0	176	.08/01/2036
75970E-AA-5	Renasant Corp-SUBORDINATED		.03/01/2022	CALL 100		2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	2,000,000	0	0	0	0	.09/01/2026
75971F-AY-9	RENAISSANCE HOME EQUITY -RAMC 2007-3W AF		.12/01/2022	PAYDOWN		226,354	226,354	162,975	175,185	0	51,169	0	51,169	0	226,354	0	0	0	2,828	.09/01/2037
75973Q-AA-5	RENAISSANCE RE FINANCE-SENIOR UNSECURED		.04/04/2022	MIZUHO SECURITIES		10,046,900	10,000,000	9,927,200	9,957,195	0	1,494	0	1,494	0	9,958,689	0	88,211	88,211	263,542	.07/01/2027
759950-DM-7	Renaissance Home Equity -RAMC 2004-3 AF5		.12/01/2022	PAYDOWN		514,446	514,446	453,998	445,313	0	69,133	0	69,133	0	514,446	0	0	0	9,437	.11/01/2034
759950-EM-6	Renaissance Home Equity -RAMC 2004-4 AF5		.12/01/2022	PAYDOWN		1,029,712	1,029,712	929,637	950,475	0	79,237	0	79,237	0	1,029,712	0	0	0	15,827	.02/01/2035
760985-S6-9	RFSC Series 2004-RP1 Tru-RFSC 2004-RP1A		.10/25/2022	PAYDOWN		102,018	102,018	101,508	88,776	0	13,243	0	13,243	0	102,018	0	0	0	1,642	.11/25/2042
76110H-H8-5	RALI Series 2004-QA6 Tru-RALI 2004-QA6 N		.12/01/2022	PAYDOWN		24,506	24,588	21,374	21,499	0	3,076	0	3,076	0	24,506	0	0	0	447	.12/01/2034
76110H-T9-0	RALI Series 2005-QA2 Tru-RALI 2005-QA2 N		.12/01/2022	PAYDOWN		44,341	44,341	28,364	29,942	0	14,399	0	14,399	0	44,341	0	0	0	807	.02/01/2035
761118-BU-1	RALI Series 2005-QA8 Tru-RALI 2005-QA8 N		.12/01/2022	PAYDOWN		473,418	480,016	406,196	408,946	0	69,775	0	69,775	0	473,418	0	0	0	7,867	.07/01/2035
761118-FL-7	RALI Series 2005-QA9 Tru-RALI 2005-QA9 C		.12/01/2022	PAYDOWN		367,000	373,053	361,673	325,995	0	46,467	0	46,467	0	367,000	0	0	0	6,199	.08/01/2035
761118-FM-5	RESIDENTIAL ACCREDIT LOA-SERIES 2005-QA9		.12/01/2022	PAYDOWN		325,511	347,957	313,353	301,850	0	42,668	0	42,668	0	325,511	0	0	0	5,192	.08/01/2035
761118-GS-1	RALI Series 2005-QS13 Tr-RALI 2005-QS13		.12/25/2022	PAYDOWN		266,085	287,893	237,587	237,587	0	45,556	0	45,556	0	266,085	0	0	0	1,342	.09/25/2035
761118-GT-9	RALI Series 2005-QS13 Tr-RALI 2005-QS13		.12/25/2022	PAYDOWN		0	0	13,531	0	0	0	0	0	0	0	0	0	0	10,861	.09/25/2035
761118-KH-0	RALI Series 2005-QS15 Tr-RALI 2005-QS15		.12/01/2022	PAYDOWN		136,716	121,790	112,499	85,612	0	38,767	0	38,767	0	136,716	0	0	0	2,624	.10/01/2035
761118-SC-3	RALI Series 2006-QS1 Tru-RALI 2006-QS1 A		.12/01/2022	PAYDOWN		266,764	302,136	280,262	280,883	0	17,376	446	16,930	0	266,764	0	0	0	9,303	.01/01/2036
761118-UG-1	RALI Series 2006-QS2 Tru-RALI 2006 QS2 1		.12/01/2022	PAYDOWN		78,815	85,683	83,476	83,476	0	1,538	0	1,538	0	78,815	0	0	0	2,694	.02/01/2036
761118-UQ-9	RALI Series 2006-QS2 Tru-RALI 2006-QS2 1		.12/01/2022	PAYDOWN		16,335	17,437	16,149	14,471	0	2,817	0	2,817	0	16,335	0	0	0	519	.02/01/2036
76111X-TF-0	RFMSI Series 2005-SA1 Tr-RFMSI 2005-SA1		.01/01/2022	PAYDOWN		3,093	3,093	3,029	3,061	0	32	0	32	0	3,093	0	0	0	5	.03/01/2035
76112B-NM-8	GMACM Mortgage Loan Tru-GMACM 2005-AA1		.12/01/2022	PAYDOWN		1,376,793	1,419,189	1,314,347	1,328,987	0	84,327	0	84,327	0	1,376,793	0	0	0	14,276	.05/01/2035
76971E-AA-2	RMF Buyout Issuance Tru-RBIT 2020-HB1 A		.12/25/2022	PAYDOWN		2,873,140	2,873,140	2,873,136	2,884,303	0	(11,163)	0	(11,163)	0	2,873,140	0	0	0	47,296	.10/25/2050
776743-AB-2	Roper Technologies Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		5,326,000	5,000,000	4,991,700	4,996,586	0	(28)	0	(28)	0	4,996,557	0	329,443	329,443	18,715	.12/15/2025
776743-AD-8	Roper Technologies Inc-SENIOR UNSECURED		.01/24/2022	BOFAILSEC		7,491,890	7,000,000	6,998,880	6,999,694	0	(116)	0	(116)	0	6,999,578	0	492,312	492,312	30,294	.12/15/2026
776743-AF-3	Roper Technologies Inc-SENIOR UNSECURED		.07/19/2022	DEUTSCHE BANK SECURI		9,800,400	10,000,000	9,989,200	9,993,071	0	535	0	535	0	9,993,605	0	(193,205)	(193,205)	357,000	.09/15/2025
77775*-BU-4	Rosenthal & Rosenthal, I Senior Note		.01/15/2022	SINKING PAYMENT		2,000,000	2,000,000	2,000,000	2,000,440	0	(440)	0	(440)	0	2,000,000	0	0	0	43,800	.01/15/2025
77775*-BV-2	Rosenthal & Rosenthal, I Senior Note		.01/31/2022	VARIOUS		6,266,000	6,266,000	6,266,000	6,266,000	0	0	0	0	0	6,266,000	0	0	0	166,676	.01/31/2026
778296-AD-5	Ross Stores Inc-SENIOR UNSECURED		.08/25/2022	JEFFERIESLLC		7,880,380	8,000,000	7,958,400	7,964,366	0	2,407	0	2,407	0	7,966,773	0	(86,393)	(86,393)	332,933	.04/15/2030

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Iden-tification	Description	For-ign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con-sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor-tization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date
78355H-KQ-1	Ryder System Inc-SENIOR UNSECURED		.01/20/2022	TORONTO DOMINION SEC		16,192,050	15,000,000	14,997,150	14,999,756	0	(278)	0	(278)	0	14,999,477	0	1,192,573	1,192,573	102,135	.06/01/2025
78386N-BG-2	SACO I Inc-SACO 1999-3 1B1		.11/01/2022	PAYDOWN		44,876	44,876	43,691	44,472	0	404	0	404	0	44,876	0	0	0	1,174	.04/01/2039
784054-AB-4	SCF Equipment Leasing 20-SOFET 2020-1A A		.03/20/2022	PAYDOWN		6,254,392	6,254,392	6,254,094	6,254,291	0	101	0	101	0	6,254,392	0	0	0	4,963	.10/20/2025
78409V-AJ-6	S&P GLOBAL INC-SR UNSECURED		.03/21/2022	CA_CASH_CLOSE		12,566,400	12,000,000	11,910,480	11,965,750	0	1,641	0	1,641	0	12,533,791	0	32,609	32,609	694,400	.06/15/2025
78433X-AA-8	Stonepeak 2021-1 ABS-SALTT 2021-1A AA		.12/15/2022	PAYDOWN		99,568	99,568	92,832	99,568	0	6,736	0	6,736	0	99,568	0	0	0	577	.02/28/2033
78433X-AC-4	Stonepeak 2021-1 ABS-SALTT 2021-1A B		.12/15/2022	PAYDOWN		108,973	108,973	100,310	108,973	0	8,662	0	8,662	0	108,973	0	0	0	1,044	.02/28/2033
78443C-BN-3	SLM Private Credit Stude-SLMA 2004-B A3		.12/15/2022	PAYDOWN		2,048,515	2,048,515	1,628,570	1,940,344	0	108,172	0	108,172	0	2,048,515	0	0	0	16,685	.03/15/2024
78444E-AA-6	SIP HoldCo LLC Senior Secured Notes		.12/16/2022	SINKING PAYMENT		197,995	197,995	197,995	197,995	0	0	0	0	0	197,995	0	0	0	3,068	.12/15/2046
78449Q-AB-4	SMB Private Education Lo-SMB 2015-B A2A		.03/15/2022	PAYDOWN		215,825	215,825	214,831	215,706	0	119	0	119	0	215,825	0	0	0	930	.07/15/2027
78449X-AJ-6	SMB Private Education Lo-SMB 2020-B A1A		.12/15/2022	PAYDOWN		1,577,851	1,577,851	1,547,773	1,577,851	0	30,078	0	30,078	0	1,577,851	0	0	0	8,794	.07/15/2053
78449Y-AA-8	SMB Private Education Lo-SMB 2021-B A		.12/15/2022	PAYDOWN		1,918,494	1,918,494	1,749,427	1,918,494	0	169,067	0	169,067	0	1,918,494	0	0	0	6,929	.07/17/2051
78472J-AA-1	SPS Servicer Advance Rec-SPART 2020-T1 A		.11/15/2022	VARIOUS		2,500,000	2,500,000	2,499,921	2,499,926	0	74	0	74	0	2,500,000	0	0	0	21,333	.11/15/2052
78473T-AJ-9	STARM Mortgage Loan Trus-STARM 2007-2 4A		.12/01/2022	PAYDOWN		125,269	125,269	116,980	125,269	0	33,061	419	32,642	0	125,269	0	0	0	1,241	.04/01/2037
78488L-AA-8	SWC Funding LLC 2018-1-SWC 2018-1A A		.11/15/2022	PAYDOWN		9,082,157	9,082,157	9,018,230	9,058,877	0	23,280	0	23,280	0	9,082,157	0	0	0	259,459	.08/15/2033
78516F-AA-7	Sabal Trail Transmission-SENIOR UNSECURE		.01/19/2022	JEFFERIESLLC		10,878,900	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	878,900	878,900	94,356	.05/01/2028
78518F-AA-5	Saber Midstream LLC Senior Secured Notes		.12/31/2022	SINKING PAYMENT		1,685,059	1,685,059	1,680,846	1,680,846	0	4,213	0	4,213	0	1,685,059	0	0	0	16,081	.03/31/2029
785592-AX-4	Sabine Pass Liquefaction-FIRST LIEN		.08/22/2022	DEUTSCHE BANK SECURI		4,857,250	5,000,000	4,987,200	4,989,417	0	596	0	596	0	4,990,013	0	(132,763)	(132,763)	174,375	.05/15/2030
79588T-AC-4	Sammons Financial Group -SENIOR UNSECURE		.01/18/2022	GOLDMAN		32,367,000	30,000,000	29,983,200	29,991,856	0	(214)	0	(214)	0	29,991,642	0	2,375,358	2,375,358	252,167	.05/12/2027
80282K-AA-6	SANTANDER HOLDINGS USA-SENIOR UNSECURED		.01/20/2022	MORGAN		16,008,600	15,000,000	14,994,000	14,998,469	0	186	0	186	0	14,998,654	0	1,009,946	1,009,946	350,625	.07/17/2025
80282K-AP-1	Santander Holdings USA I-SENIOR UNSECURE		.01/19/2022	CREDIT SUISSE SECURI		25,622,160	24,000,000	24,137,210	24,085,785	0	(706)	0	(706)	0	24,085,080	0	1,537,080	1,537,080	551,467	.07/13/2027
805564-EM-9	Saxon Asset Securities T-SAST 1999-3 BF1		.12/01/2022	PAYDOWN		0	3,864	3,864	3,040	0	3,023	0	3,023	0	0	0	0	0	(105)	.12/01/2032
806851-AG-6	SCHLUMBERGER HLDGS CORP-SR UNSECURED		.06/21/2022	GOLDMAN		1,582,444	1,601,000	1,587,199	1,594,919	0	692	0	692	0	1,595,611	0	(13,167)	(13,167)	32,376	.12/21/2025
806851-AH-4	Schlumberger Holdings Co-SENIOR UNSECURE		.12/08/2022	VARIOUS		19,152,200	20,000,000	19,986,400	19,989,101	0	1,322	0	1,322	0	19,990,423	0	(838,223)	(838,223)	957,944	.05/01/2029
806851-AK-7	Schlumberger Holdings Co-SENIOR UNSECURE		.08/15/2022	VARIOUS		23,714,666	24,449,000	24,426,996	24,434,168	0	900	0	900	0	24,435,068	0	(720,402)	(720,402)	699,967	.05/17/2028
808513-AG-0	CHARLES SCHWAB CORP-SENIOR UNSECURED NOT		.09/01/2022	MATURITY		8,000,000	8,000,000	8,004,720	8,000,410	0	(410)	0	(410)	0	8,000,000	0	0	0	258,000	.09/01/2022
808513-BG-8	Charles Schwab Corp/The-SENIOR UNSECURED		.06/07/2022	BOFAMLSEC		19,540,360	19,000,000	18,973,020	18,977,182	0	972	0	972	0	18,978,154	0	562,206	562,206	627,330	.03/22/2030
81378E-AA-1	SECURITIZED ASSET BACKED-SERIES 2007-BR4		.12/27/2022	PAYDOWN		1,113,958	1,113,958	487,688	311,217	0	802,741	0	802,741	0	1,113,958	0	0	0	1,845	.05/25/2037
81721M-AK-5	Diversified Healthcare T-SENIOR UNSECURE		.11/17/2022	STIFEL NICOLAUS		4,942,000	5,600,000	5,582,304	5,595,262	0	1,809	0	1,809	0	5,597,071	0	(655,071)	(655,071)	280,778	.05/01/2024
81743A-AA-7	SEQUOIA MORTGAGE TRUST 2-SEMT 2019-5 A1		.12/01/2022	PAYDOWN		1,538,066	1,538,066	1,564,982	1,562,883	0	(24,817)	0	(24,817)	0	1,538,066	0	0	0	18,504	.12/01/2049
81745A-AB-3	Sequoia Mortgage Trust 2-SEMT 2013-5 A2		.12/01/2022	PAYDOWN		564,736	564,736	534,646	539,433	0	25,303	0	25,303	0	564,736	0	0	0	6,867	.05/01/2043
81745C-AA-1	Sequoia Mortgage Trust 2-SEMT 2013-1 A1		.12/01/2022	PAYDOWN		469,867	469,867	423,399	432,641	0	37,226	0	37,226	0	469,867	0	0	0	5,497	.06/01/2043
81745J-AA-6	Sequoia Mortgage Trust 2-SEMT 2013-11 A1		.12/01/2022	PAYDOWN		289,158	289,158	285,272	285,832	0	3,326	0	3,326	0	289,158	0	0	0	4,496	.09/01/2043
81745M-AA-9	Sequoia Mortgage Trust 2-SEMT 2013-2 A		.12/01/2022	PAYDOWN		795,263	795,263	712,398	727,291	0	67,972	0	67,972	0	795,263	0	0	0	5,692	.02/01/2043
81745R-AB-6	Sequoia Mortgage Trust 2-SEMT 2013-3 A2		.12/01/2022	PAYDOWN		715,300	715,300	661,354	667,530	0	47,770	0	47,770	0	715,300	0	0	0	6,549	.07/30/2051
81748J-AA-3	Sequoia Mortgage Trust 2-SEMT 2019-4 A1		.12/01/2022	PAYDOWN		782,302	782,302	798,681	806,593	0	(24,291)	0	(24,291)	0	782,302	0	0	0	7,605	.11/01/2049
81748K-AA-0	Sequoia Mortgage Trust 2-SEMT 2020-2 A1		.12/01/2022	PAYDOWN		1,787,578	1,787,578	1,831,709	1,848,228	0	(60,650)	0	(60,650)	0	1,787,578	0	0	0	20,376	.03/01/2050
81748M-AA-6	Sequoia Mortgage Trust 2-SEMT 2020-1 A1		.12/01/2022	PAYDOWN		1,127,180	1,127,180	1,153,070	1,151,861	0	(24,681)	0	(24,681)	0	1,127,180	0	0	0	15,151	.02/01/2050
81761T-AA-3	ServiceMaster Funding LL-SERV 2020-1 A2I		.10/30/2022	PAYDOWN		22,500	22,500	21,274	22,500	0	1,226	0	1,226	0	22,500	0	0	0	213	.01/30/2051
81761T-AC-9	ServiceMaster Funding LL-SERIES 20-1 CLA		.04/30/2022	PAYDOWN		12,500	12,500	10,969	12,500	0	1,531	0	1,531	0	12,500	0	0	0	104	.01/30/2051
81761T-AE-5	ServiceMaster Funding LL-SERV 2021-1 A1		.10/30/2022	PAYDOWN		62,500	62,500	54,025	62,500	0	8,475	0	8,475	0	62,500	0	0	0	716	.07/30/2051
81761T-AG-0	ServiceMaster Funding LL-SERV 2021-1 A2I		.10/30/2022	PAYDOWN		230,000	230,000	230,000	230,000	0	0	0	0	0	230,000	0	0	0	4,475	.07/30/2051
817743-AA-5	SERVPRO Master Issuer LL-SPRO 2019-1A A2		.10/25/2022	PAYDOWN		182,500	182,500	183,633	183,279	0	(779)	0	(779)	0	182,500	0	0	0	4,428	.10/25/2049
81788Y-AA-1	767-3-25285 Trust / 767--FIRST LIEN		.10/05/2022	VARIOUS		832,128	832,128	832,128	832,128	0	(1)	0	(1)	0	832,128	0	0	0	18,309	.10/05/2022
82434B-BF-2	SHERWIN-WILLIAMS CO/THE-SENIOR UNSECURED		.01/24/2022	TORONTO DOMINION SEC		5,347,300	5,000,000	4,978,000	4,988,162	0	201	0	201	0	4,988,363	0	358,937	358,937	104,785	.01/15/2026
82652R-AB-5	Sierra Timeshare 2021-2 -SRFC 2021-2A B		.12/20/2022	PAYDOWN		71,728	71,728	66,079	71,728	0	5,649	0	5,649	0	71,728	0	0	0	157	.09/20/2038
826934-AC-5	Sierra Timeshare 2022-3 -SRFC 2022-3A C		.12/20/2022	PAYDOWN		426,869	426,869	426,770	426,869	0	99	0	99	0	426,869	0	0	0	3,807	.07/20/2039
82817*-AA-9	Silver Spring Metro Cent Senior Note Tra		.12/05/2022	SINKING PAYMENT		272,382	272,382	272,382	272,382	0	0	0	0	0	272,382	0	0	0	5,246	.01/05/2029
82817*-AA-7	Silver Spring Metro Cent Senior Note Tra		.12/05/2022	SINKING PAYMENT		237,151	237,151	237,148	237,149	0	2	0	2	0	237,151	0	0	0	4,870	.01/07/2029
828807-CR-6	SIMON PROPERTY GROUP LP-SR UNSECURED		.03/16/2022	WELLS FARGO		8,143,840	8,000,000	7,950,320	7,988,377	0	1,056	0	1,056	0	7,989,433	0	154,407	154,407	189,167	.02/01/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
82922T-AA-7	Sinai Health System-SECURED		.07/20/2022	CALL 100		195,000	195,000	195,000	195,000	0	0	0	0	0	195,000	0	0	0	5,212	.01/20/2036
832248-AZ-1	Smithfield Foods Inc-SENIOR UNSECURED		.10/28/2022	SEAPORT GROUP		4,523,850	5,000,000	4,993,950	4,996,895	0	317	0	317	0	4,997,212	0	(473,362)	(473,362)	265,625	.02/01/2027
832248-BB-3	Smithfield Foods Inc-SENIOR UNSECURED		.10/28/2022	SEAPORT GROUP		6,482,070	7,000,000	6,964,440	6,972,544	0	2,862	0	2,862	0	6,975,406	0	(493,336)	(493,336)	394,333	.04/01/2029
83416W-AB-9	SOLAR STAR FUNDING LLC-SECURED		.12/30/2022	SINKING PAYMENT		297,800	297,800	297,800	297,768	0	32	0	32	0	297,800	0	0	0	5,882	.06/30/2035
834423-AB-1	Solvay Finance America L-SENIOR UNSECURE		.01/20/2022	BNP PARIBAS		10,738,900	10,000,000	9,986,450	9,986,553	0	19	0	19	0	9,986,572	0	752,328	752,328	63,042	.12/03/2025
83546D-AL-2	Sonic Capital LLC-SONIC 2020-1AW A21W		.11/20/2022	PAYDOWN		64,167	64,167	65,290	65,246	0	(1,080)	0	(1,080)	0	64,167	0	0	0	1,073	.01/20/2050
83546D-AM-0	Sonic Capital LLC-SONIC 2020-1AW A21W		.11/20/2022	PAYDOWN		160,417	160,417	170,482	170,129	0	(9,712)	0	(9,712)	0	160,417	0	0	0	2,202	.01/20/2050
83611M-HM-3	Soundview Home Loan Trus-SVHE 2005-B M2		.12/01/2022	PAYDOWN		86,399	137,686	75,211	107,201	0	4,797	0	4,797	0	86,399	0	0	0	2,898	.05/01/2035
83611M-JX-7	Soundview Home Loan Trus-SVHE 2005-PT4		.12/27/2022	PAYDOWN		864,491	864,491	661,335	843,918	0	20,572	0	20,572	0	864,491	0	0	0	6,772	.12/25/2035
83612T-AR-3	Soundview Home Loan Trus-SVHE 2007-PT1		.12/25/2022	PAYDOWN		0	0	106,778	11,650	0	(587)	0	(587)	0	0	0	0	0	1,578	.06/25/2037
841215-AA-4	Southaven Combined Cycle-SECURED		.08/15/2022	SINKING PAYMENT		451,502	451,502	451,502	451,516	0	(14)	0	(14)	0	451,502	0	0	0	13,065	.08/15/2033
84265V-AH-8	SOUTHERN COPPER CORP-SR UNSECURED		.08/23/2022	MILLENNIUM ADVISORS		4,913,800	5,000,000	4,972,950	4,990,004	0	1,826	0	1,826	0	4,991,831	0	(78,031)	(78,031)	161,997	.04/23/2025
843646-AM-2	Southern Power Co-SENIOR UNSECURED		.01/24/2022	U. S. BANCORP		2,147,980	2,000,000	1,995,580	1,998,177	0	(3)	0	(3)	0	1,998,175	0	149,805	149,805	12,681	.12/01/2021
84747Y-AA-4	Southwest Airlines Co 20-FIRST LIEN		.08/01/2022	VARIOUS		1,160,200	1,160,200	1,163,241	1,161,536	0	(1,335)	0	(1,335)	0	1,160,200	0	0	0	53,821	.08/01/2022
84858D-AA-6	SPIRIT AIR 2015-1 PTT A-SECURED		.10/01/2022	SINKING PAYMENT		241,428	241,428	241,428	241,529	0	(101)	0	(101)	0	241,428	0	0	0	7,424	.04/01/2028
84858W-AA-4	Spirit Airlines Pass Thr-FIRST LIEN		.08/15/2022	SINKING PAYMENT		341,077	341,077	341,077	341,184	0	(107)	0	(107)	0	341,077	0	0	0	8,634	.02/15/2030
85208N-AD-2	Sprint Spectrum Co LLC -FIRST LIEN		.12/20/2022	SINKING PAYMENT		5,750,000	5,750,000	5,750,000	5,750,000	0	0	0	0	0	5,750,000	0	0	0	136,474	.03/20/2025
85235-AA-6	St Louis County Control Trust Certificat		.12/15/2022	SINKING PAYMENT		988,530	988,530	988,530	988,530	0	0	0	0	0	988,530	0	0	0	19,355	.12/15/2036
854502-AH-4	Stanley Black & Decker I-SENIOR UNSECURE		.06/22/2022	VARIOUS		19,890,840	20,000,000	19,985,200	19,990,654	0	757	0	757	0	19,991,411	0	(100,571)	(100,571)	473,167	.11/15/2028
855244-AD-1	Starbucks Corp-SENIOR UNSECURED		.02/10/2022	U. S. BANCORP		13,385,320	13,000,000	12,995,320	12,999,359	0	138	0	138	0	12,999,497	0	385,823	385,823	184,907	.10/01/2023
855541-AC-2	SUNTRUST ADJUSTABLE RATE-SERIES 2007-S1		.12/01/2022	PAYDOWN		224,145	224,145	209,623	191,146	0	32,999	0	32,999	0	224,145	0	0	0	2,268	.01/01/2037
85571R-AA-8	Starwood Mortgage Reside-STAR 2022-3 A1		.12/01/2022	PAYDOWN		335,300	335,300	333,055	330,000	0	2,245	0	2,245	0	335,300	0	0	0	3,600	.03/01/2067
85571R-AB-6	Starwood Mortgage Reside-STAR 2022-3 A2		.12/01/2022	PAYDOWN		875,469	875,469	855,467	855,467	0	20,002	0	20,002	0	875,469	0	0	0	9,374	.03/01/2067
85571R-AC-4	Starwood Mortgage Reside-STAR 2022-3 A3		.12/01/2022	PAYDOWN		817,596	817,596	796,624	796,624	0	20,972	0	20,972	0	817,596	0	0	0	8,232	.03/01/2067
85573J-AA-4	Starwood Mortgage Reside-STAR 2021-3 A1		.12/01/2022	PAYDOWN		653,012	653,012	604,853	604,853	0	48,160	0	48,160	0	653,012	0	0	0	2,140	.06/01/2056
85573T-AA-2	Starwood Mortgage Reside-STARWOOD MORTGA		.12/01/2022	PAYDOWN		6,660,122	6,660,122	6,660,011	6,660,011	0	111	0	111	0	6,660,122	0	0	0	69,165	.12/01/2066
857477-AM-5	State Street Corp-SENIOR UNSECURED		.03/16/2022	GOLDMAN		7,145,320	7,000,000	6,983,200	6,996,578	0	293	0	293	0	6,996,871	0	148,449	148,449	84,894	.11/20/2023
857477-AT-0	STATE STREET CORP-SR UNSECURED		.04/04/2022	VARIOUS		25,449,167	25,000,000	24,966,500	24,987,369	0	819	0	819	0	24,988,188	0	460,979	460,979	550,043	.08/18/2025
857477-BD-4	State Street Corp-SENIOR UNSECURED		.04/11/2022	MORGAN		8,166,160	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	166,160	166,160	119,629	.12/03/2029
860630-AD-4	Stifel Financial Corp-SENIOR UNSECURED N		.05/04/2022	STIFEL NICOLAUS		15,115,575	15,000,000	15,219,900	15,078,435	0	(10,715)	0	(10,715)	0	15,067,719	0	47,856	47,856	509,115	.07/18/2024
860630-AG-7	Stifel Financial Corp-SENIOR UNSECURED		.12/08/2022	VARIOUS		10,635,600	12,000,000	11,914,200	11,926,062	0	7,248	0	7,248	0	11,933,310	0	(1,297,710)	(1,297,710)	513,222	.05/15/2030
86212V-AA-2	Store Master Funding I-V-STR 2016-1A A1		.12/20/2022	PAYDOWN		227,281	227,281	227,160	227,219	0	62	0	62	0	227,281	0	0	0	4,905	.10/20/2046
86212V-AD-6	Store Master Funding I-V-STR 2018-1A A1		.12/20/2022	PAYDOWN		101,192	101,192	101,117	99,989	0	60	0	60	0	101,192	0	0	0	2,149	.10/20/2048
86212V-AE-4	Store Master Funding I-V-SERIES 18-1A CL		.12/20/2022	PAYDOWN		132,500	132,500	132,450	132,462	0	38	0	38	0	132,500	0	0	0	3,079	.10/20/2048
86213C-AB-1	STORE MASTER FUNDING LLC-SERIES 2015-1A		.12/20/2022	PAYDOWN		107,500	107,500	106,956	107,282	0	218	0	218	0	107,500	0	0	0	2,428	.04/20/2045
863572-LV-3	Structured Asset Securit-SASC 1996-4 A		.12/01/2022	PAYDOWN		6,697	6,697	6,279	6,336	0	361	0	361	0	6,697	0	0	0	191	.09/01/2031
863579-C3-0	Structured Adjustable Ra-SARM 2005-21 6A		.12/01/2022	PAYDOWN		359,449	335,650	294,677	264,166	0	77,749	0	77,749	0	359,449	0	0	0	5,127	.11/01/2035
863579-J9-0	Structured Adjustable Ra-SARM 2005-22 1A		.11/01/2022	PAYDOWN		93,270	93,479	80,256	81,678	0	12,821	1,061	11,760	0	93,270	0	0	0	1,211	.12/01/2035
863579-RP-5	Structured Adjustable Ra-SARM 2005-11 1A		.12/01/2022	PAYDOWN		146,242	146,374	126,706	134,612	0	17,342	5,599	11,743	0	146,242	0	0	0	1,824	.05/01/2035
863579-SU-3	Structured Adjustable Ra-SARM 2005-12 3A		.12/01/2022	PAYDOWN		337,102	337,102	258,918	222,053	0	115,050	0	115,050	0	337,102	0	0	0	4,551	.06/01/2035
863579-UL-0	Structured Adjustable Ra-SARM 2005-15 1A		.12/01/2022	PAYDOWN		103,825	104,004	77,714	63,139	0	40,807	0	40,807	0	103,825	0	0	0	1,041	.07/01/2035
863579-UU-0	Structured Adjustable Ra-SARM 2005-15 4A		.12/01/2022	PAYDOWN		209,427	208,065	183,418	171,479	0	36,861	0	36,861	0	209,427	0	0	0	3,141	.07/01/2035
863579-VH-8	Structured Adjustable Ra-SARM 2005-17 1A		.12/01/2022	PAYDOWN		62,851	62,851	60,160	61,360	0	1,491	0	1,491	0	62,851	0	0	0	960	.08/01/2035
863579-VW-5	Structured Adjustable Ra-SARM 2005-17 5A		.12/25/2022	PAYDOWN		406,842	400,973	280,196	236,186	0	167,684	0	167,684	0	406,842	0	0	0	1,507	.08/25/2035
863579-XC-7	Structured Adjustable Ra-SARM 2005 - 18		.12/01/2022	PAYDOWN		482,433	471,270	342,508	352,981	0	134,963	12,880	122,083	0	482,433	0	0	0	6,494	.09/01/2035
863579-XR-4	Structured Adjustable Ra-SARM 2005-18 8A		.11/01/2022	PAYDOWN		368,078	368,099	338,195	314,174	0	53,916	0	53,916	0	368,078	0	0	0	2,501	.09/01/2035
863579-ZL-5	Structured Adjustable Ra-SARM 2005-20 3A		.11/01/2022	PAYDOWN		497,102	469,909	399,185	356,148	0	123,298	0	123,298	0	497,102	0	0	0	5,296	.10/01/2035
86358R-DX-2	Structured Asset Securit-SASC 2001-SB1 A		.12/01/2022	PAYDOWN		540,105	541,461	485,327	494,418	0	46,859	0	46,859	0	540,105	0	0	0	9,551	.08/01/2031
86358R-XY-8	Structured Asset Securit-SASC 2002-AL1 A		.12/01/2022	PAYDOWN		318,996	325,194	256,138	268,763	0	53,946	0	53,946	0	318,996	0	0	0	5,659	.02/01/2032

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
86358R-XZ-5	Structured Asset Securit-SASC 2002-AL1 A		11/01/2022	PAYDOWN		235,640	238,134	177,464	181,561	0	68,353	12,370	55,983	0	235,640	0	0	0	4,455	02/01/2032
86358R-YB-7	Structured Asset Securit-SASC 2002-AL1 A		12/01/2022	PAYDOWN		64,701	65,286	46,072	58,359	0	6,719	0	6,719	0	64,701	0	0	0	0	02/01/2032
86359A-ME-0	Structured Asset Securit-SASC 2003-AL1 A		12/01/2022	PAYDOWN		110,143	110,143	96,045	99,485	0	10,658	0	10,658	0	110,143	0	0	0	1,814	04/01/2031
86359A-MG-5	Structured Asset Securit-SASC 2003-AL1 A		12/01/2022	PAYDOWN		38,161	38,161	26,878	33,540	0	4,621	0	4,621	0	38,161	0	0	0	0	04/01/2031
86359A-WR-0	Structured Asset Securit-SASC 2003-AL2 A		12/01/2022	PAYDOWN		877,693	877,693	761,698	761,072	0	116,621	0	116,621	0	877,693	0	0	0	16,012	01/01/2031
86359A-WT-6	Structured Asset Securit-SASC 2003-AL2 A		12/25/2022	PAYDOWN		135,398	135,398	105,264	109,052	0	26,346	0	26,346	0	135,398	0	0	0	0	01/25/2031
86359B-AU-2	Structured Asset Securit-SASC 2005-4XS 1		12/01/2022	PAYDOWN		597,874	597,874	559,012	592,303	0	5,571	0	5,571	0	597,874	0	0	0	14,293	03/01/2035
86359B-LE-9	Structured Adjustable Ra-SARM 2004-2 4A1		12/01/2022	PAYDOWN		100,432	100,432	96,792	95,138	0	5,294	0	5,294	0	100,432	0	0	0	1,014	03/01/2034
86359D-EY-9	STRUCTURED ASSET SECURIT-SASC 2005-PF2 A		12/25/2022	PAYDOWN		0	0	155,960	36,079	0	(4,047)	0	(4,047)	0	0	0	0	0	10,596	04/25/2035
86359F-AA-8	Structured Asset Securit-SASC 2006-S2 A2		12/25/2022	PAYDOWN		18,878	18,878	14,678	14	0	18,864	0	18,864	0	18,878	0	0	0	269	06/25/2036
86359L-NA-3	Structured Asset Mortgage-SAMI 2005-AR6 2		12/27/2022	PAYDOWN		237,869	237,869	167,416	186,627	0	51,242	0	51,242	0	237,869	0	0	0	1,388	09/25/2045
86360B-AG-3	Structured Adjustable Ra-SARM 2006-4 4A1		11/01/2022	PAYDOWN		67,048	66,486	37,243	35,446	0	16,971	0	16,971	0	67,048	0	0	0	852	05/01/2036
86360B-AJ-7	Structured Adjustable Ra-SARM 2006-4 5A1		12/01/2022	PAYDOWN		64,069	64,986	53,211	49,798	0	14,973	0	14,973	0	64,069	0	0	0	962	05/01/2036
86363B-AA-3	Structured Asset Securit-SASC 2007-RM1 A		12/27/2022	PAYDOWN		17,194,407	17,194,407	16,248,715	16,301,141	0	893,266	0	893,266	0	17,194,407	0	0	0	91,439	05/25/2047
86363G-AF-1	Structured Adjustable Ra-SARM 2007-3 3A1		12/01/2022	PAYDOWN		510,892	510,911	300,088	301,939	0	210,951	1,989	208,962	0	510,892	0	0	0	5,500	04/01/2047
863667-AJ-0	STRYKER CORP-SENIOR UNSECURED		08/15/2022	U. S. BANCORP		4,983,550	5,000,000	4,944,700	4,950,797	0	845	0	845	0	4,951,642	0	31,908	31,908	213,264	03/15/2046
86669P-AA-3	Sun Country Pass Through Series 2022-1A		09/15/2022	SINKING PAYMENT		1,058,436	1,058,436	1,058,436	0	0	0	0	0	0	1,058,436	0	0	0	0	03/15/2031
86669Q-AA-1	Sun Country Pass Through Series 2022-1B		09/15/2022	SINKING PAYMENT		357,825	357,825	357,825	0	0	0	0	0	0	357,825	0	0	0	0	03/15/2029
86744V-AA-9	Helios Issuer LLC-SNVA 2022-B A		12/20/2022	PAYDOWN		152,385	152,385	151,330	1,056	0	1,056	0	1,056	0	152,385	0	0	0	1,230	08/20/2049
86744V-AB-7	Helios Issuer LLC-SNVA 2022-B B		12/20/2022	PAYDOWN		185,836	185,836	176,351	0	0	9,485	0	9,485	0	185,836	0	0	0	1,800	08/20/2049
86744W-AA-7	Sunnova Helios X Issuer -SNVA 2022-C A		12/20/2022	PAYDOWN		237,676	237,676	224,882	0	0	12,795	0	12,795	0	237,676	0	0	0	1,400	11/22/2049
86765B-AT-6	Energy Transfer LP-SENIOR UNSECURED		10/17/2022	BARCLAYS CAPITAL INC		6,468,420	7,000,000	6,978,720	6,989,657	0	1,441	0	1,441	0	6,991,098	0	(522,678)	(522,678)	344,283	07/15/2026
86772R-AA-3	Sunrun Jupiter Issuer 20-SUNRN 2022-1A A		10/30/2022	PAYDOWN		812,540	812,540	805,929	0	0	6,612	0	6,612	0	812,540	0	0	0	18,155	07/30/2057
86787E-BB-2	Truist Bank-SENIOR UNSECURED		03/29/2022	SUNTRUST CAPITAL MAR		10,308,600	10,000,000	9,993,900	9,996,934	0	304	0	304	0	9,997,239	0	311,361	311,361	166,500	11/03/2025
86909H-AA-5	Susquehanna (18 Propert Trust Certifica		12/23/2022	SINKING PAYMENT		(126,156)	(126,156)	(126,157)	(126,157)	0	(1)	0	(1)	0	(126,156)	0	0	0	0	12/23/2036
86909H-AH-4	Truist Bank-SENIOR UNSECURED		08/15/2022	MATURITY		2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	2,000,000	0	0	0	107,500	08/15/2022
869507-AA-1	SUTTONPARK STRUCTURED SE-SERIES 17-1A CL		12/15/2022	PAYDOWN		401,803	401,803	401,601	401,639	0	163	0	163	0	401,803	0	0	0	12,428	01/15/2071
87165B-AG-8	SYNCHRONY FINANCIAL-SENIOR UNSECURED		01/18/2022	GOLDMAN		10,668,100	10,000,000	9,971,260	9,988,877	0	378	0	378	0	9,989,255	0	678,845	678,845	221,250	07/23/2025
871829-AZ-0	Sysco Corp-SENIOR UNSECURED		05/03/2022	TORONTO DOMINION SEC		10,019,650	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	19,650	19,650	222,917	10/01/2025
871829-BL-0	Sysco Corp-SENIOR UNSECURED		08/22/2022	SUSQUEHANNA BANCSHAR		2,150,745	1,989,000	1,984,863	1,985,449	0	282	0	282	0	1,985,731	0	165,014	165,014	106,182	04/01/2030
872225-AD-9	TBW Mortgage-Backed Trus-TBW 2006-5 A3		12/01/2022	PAYDOWN		2,781,850	2,781,850	2,526,171	2,526,171	0	255,679	0	255,679	0	2,781,850	0	0	0	40,943	11/01/2036
87222E-AB-4	TBW Mortgage-Backed Trus-TBW 2007-1 A2		12/27/2022	PAYDOWN		195,452	195,452	57,111	0	0	138,869	1,124	137,745	0	195,452	0	0	0	281	03/25/2037
87222E-AC-2	TBW Mortgage-Backed Trus-TBW 2007-1 A3		12/01/2022	PAYDOWN		179,002	179,002	63,087	0	0	115,125	1,034	114,091	0	179,002	0	0	0	548	03/01/2037
87233Q-AB-4	TC PipeLines LP-SENIOR UNSECURED		05/02/2022	BARCLAYS CAPITAL INC		5,038,100	5,000,000	4,978,800	4,992,432	0	774	0	774	0	4,993,207	0	44,893	44,893	140,365	03/13/2025
87233Q-AC-2	TC PipeLines LP-SENIOR UNSECURED		01/20/2022	JEFFERIESLLC		5,362,450	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	362,450	362,450	31,958	05/25/2027
87236Y-AD-0	TD Ameritrade Holding Co-SENIOR UNSECURE		09/14/2022	GOLDMAN		12,442,360	12,950,000	12,973,197	12,958,017	0	(1,514)	0	(1,514)	0	12,956,502	0	(514,142)	(514,142)	449,878	04/01/2025
87246Y-AC-0	TIAA ASSET MGMT FIN LLC-SENIOR UNSECURED		06/27/2022	VARIOUS		33,088,120	32,903,000	33,019,478	32,947,697	0	(2,769)	0	(2,769)	0	32,944,928	0	143,192	143,192	763,953	11/01/2024
87264A-BD-6	T-Mobile USA Inc-FIRST LIEN		01/18/2022	GOLDMAN		31,771,200	30,000,000	29,987,100	29,989,728	0	53	0	53	0	29,989,780	0	1,781,420	1,781,420	296,875	04/15/2027
87265K-AD-4	Sixth Street Specialty L-SENIOR UNSECURE		08/01/2022	MATURITY		15,000,000	15,000,000	15,000,000	15,000,000	0	0	0	0	0	15,000,000	0	0	0	675,000	08/01/2022
87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A		12/17/2022	PAYDOWN		200,076	200,076	174,652	0	0	25,424	0	25,424	0	200,076	0	0	0	1,266	06/19/2051
87305N-AV-0	TTX Co-FIRST LIEN		01/02/2022	MATURITY		172,657	172,657	172,657	172,657	0	0	0	0	0	172,657	0	0	0	0	01/02/2022
87305N-AW-8	TTX Co-2ND LIEN		01/02/2022	MATURITY		22,726	22,726	22,726	22,726	0	0	0	0	0	22,726	0	0	0	0	01/02/2022
87305Q-BH-3	TTX Co-UNSECURED		10/28/2022	SEAPORT GROUP		9,918,475	9,500,000	10,368,575	9,894,538	0	(35,736)	0	(35,736)	0	9,858,801	0	59,674	59,674	615,679	07/01/2029
87305Q-CH-2	TTX Co-SENIOR UNSECURED		03/17/2022	GOLDMAN		18,391,320	18,000,000	17,955,860	17,984,432	0	788	0	788	0	17,985,220	0	406,100	406,100	442,800	01/15/2025
87342R-AC-8	TACO BELL FUNDING LLC-SERIES 2016-1A CLA		11/25/2022	PAYDOWN		118,500	118,500	119,408	118,841	0	(341)	0	(341)	0	118,500	0	0	0	3,681	05/25/2046
87342R-AF-1	Taco Bell Funding LLC-BELL 2016-TAW A2W		11/25/2022	PAYDOWN		70,000	70,000	70,000	70,014	0	(14)	0	(14)	0	70,000	0	0	0	2,008	11/25/2048
87407R-AA-4	TAL Advantage VII LLC-TAL 2020-1A A		12/20/2022	PAYDOWN		88,900	88,900	78,169	0	0	10,731	0	10,731	0	88,900	0	0	0	152	09/20/2045
87407R-AC-0	TAL Advantage VII LLC-TAL 2020-1A B		12/20/2022	PAYDOWN		371,875	371,875	368,069	0	0	3,806	0	3,806	0	371,875	0	0	0	5,608	09/20/2045
87612E-BD-7	TARGET CORP-SR UNSECURED		03/17/2022	JP MORGAN SECURITIES		13,326,820	13,000,000	12,942,280	12,984,083	0	865	0	865	0	12,984,948	0	341,872	341,872	328,611	07/01/2024

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
878055-AD-4	TCF National Bank-SUBORDINATED		.06/08/2022	MATURITY		6,000,000	6,000,000	5,945,160	5,996,843	0	3,157	0	3,157	0	6,000,000	0	0	0	187,500	.06/08/2022
87819#-AA-2	TD Bank (Miami, FL) CTL Trust Certificat		.12/15/2022	SINKING PAYMENT		144,054	144,054	144,054	144,055	0	0	0	0	0	144,054	0	0	0	3,044	.01/15/2038
880451-AS-8	TENNESSEE GAS PIPELINE-SENIOR UNSECURED		.01/18/2022	GOLDMAN		2,436,560	2,000,000	1,963,800	1,987,277	0	0	0	141	0	1,987,418	0	449,142	449,142	48,611	.03/15/2027
881561-CH-5	Terwin Mortgage Trust Se-TMTS 2003-6HE M		.10/25/2022	PAYDOWN		250,295	250,295	237,311	244,345	0	5,950	0	5,950	0	250,295	0	0	0	1,702	.11/25/2033
881561-LE-2	Terwin Mortgage Trust Se-TMTS 2004-11HE		.12/27/2022	PAYDOWN		193,471	193,471	155,018	175,736	0	17,735	0	17,735	0	193,471	0	0	0	1,221	.10/25/2035
881561-LR-3	Terwin Mortgage Trust 20-TMTS 2004-19HE		.12/27/2022	PAYDOWN		79,075	79,075	58,219	70,104	0	8,972	0	8,972	0	79,075	0	0	0	301	.10/25/2034
881561-VY-7	Terwin Mortgage Trust Se-TMTS 2005-12AL		.12/01/2022	PAYDOWN		827,722	827,722	799,193	801,399	0	26,323	0	26,323	0	827,722	0	0	0	16,596	.07/01/2036
88156E-AB-2	Terwin Mortgage Trust 20-TMTS 2006-17HE		.12/27/2022	PAYDOWN		1,289,208	1,289,095	1,112,300	1,373,741	0	(84,611)	0	(84,611)	0	1,289,208	0	0	0	21,708	.01/25/2038
88157V-AB-3	Terwin Mortgage Trust 20-TMTS 2007-6ALT		.12/27/2022	PAYDOWN		310,633	310,633	161,529	189,135	0	121,497	0	121,497	0	310,633	0	0	0	1,016	.08/25/2038
88159D-AA-3	TES 2017-1 LLC-TES 2017-1A A		.09/20/2022	PAYDOWN		13,256,071	13,256,071	13,193,822	13,219,907	0	36,164	0	36,164	0	13,256,071	0	0	0	542,132	.10/20/2047
88159T-AA-8	TES 2017-2 LLC-TES 2017-2A A		.09/20/2022	PAYDOWN		6,930,263	6,930,263	6,929,803	6,931,545	0	(1,282)	0	(1,282)	0	6,930,263	0	0	0	282,803	.02/20/2048
883203-BW-0	Textron Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		8,530,320	8,000,000	7,939,360	7,971,897	0	368	0	368	0	7,972,265	0	558,055	558,055	111,111	.03/15/2026
883203-CA-7	Textron Inc-SENIOR UNSECURED		.12/19/2022	JEFFERIESLLC		8,281,800	9,000,000	8,991,990	8,993,595	0	651	0	651	0	8,994,247	0	(712,447)	(712,447)	0	.09/17/2029
885220-DX-8	Thornburg Mortgage Secur-TMST 2003-4 M1		.12/25/2022	PAYDOWN		80,482	80,482	68,007	70,511	0	9,971	0	9,971	0	80,482	0	0	0	603	.09/25/2043
885220-GB-3	Thornburg Mortgage Secur-TMST 2004-4 1A		.12/25/2022	PAYDOWN		82,044	82,044	78,250	78,689	0	3,355	0	3,355	0	82,044	0	0	0	298	.12/25/2044
885220-GK-3	Thornburg Mortgage Secur-TMST 2004-4 5A		.12/01/2022	PAYDOWN		101,538	101,538	96,588	90,562	0	10,976	0	10,976	0	101,538	0	0	0	1,300	.12/01/2044
885220-HM-8	Thornburg Mortgage Secur-TMST 2005-2 A1		.12/27/2022	PAYDOWN		495,247	495,247	495,557	491,219	0	4,029	0	4,029	0	495,247	0	0	0	3,226	.07/25/2045
885220-KW-2	Thornburg Mortgage Secur-TMST 2006-2 A2B		.12/27/2022	PAYDOWN		584,127	584,127	560,778	562,208	0	28,505	6,586	21,919	0	584,127	0	0	0	7,118	.04/25/2036
886546-AB-6	TIFFANY & CO-SR UNSECURED		.03/17/2022	JP MORGAN SECURITIES		4,093,400	4,000,000	3,988,080	3,996,387	0	407	0	407	0	3,996,794	0	96,606	96,606	71,778	.10/01/2024
88731E-AF-7	Time Warner Entertainmen-FIRST LIEN		.09/13/2022	GOLDMAN		5,095,350	5,000,000	6,355,350	5,237,463	0	(137,276)	0	(137,276)	0	5,100,187	0	(4,837)	(4,837)	418,750	.03/15/2023
887389-AK-0	Timken Co/The-SENIOR UNSECURED		.10/24/2022	SUNTRUST CAPITAL MAR		9,139,350	10,000,000	9,986,800	9,990,637	0	642	0	642	0	9,991,278	0	(851,928)	(851,928)	388,750	.12/15/2028
89171D-AD-9	Towd Point Mortgage Trus-TPMT 2015-1 A4		.12/01/2022	PAYDOWN		6,903,806	6,903,806	7,069,929	6,947,291	0	(43,484)	0	(43,484)	0	6,903,806	0	0	0	237,343	.10/01/2053
89172P-AC-3	Towd Point Mortgage Trus-TPMT 2016-2 M1		.03/23/2022	JP MORGAN SECURITIES		14,842,969	15,000,000	14,559,375	14,771,057	0	15,290	0	15,290	0	14,786,347	0	56,622	56,622	142,500	.08/01/2055
89173U-AC-1	Towd Point Mortgage Trus-TPMT 2017-4 M1		.03/23/2022	CITIGROUP GLOBAL MAR		6,921,256	7,150,000	6,602,578	6,773,687	0	9,673	0	9,673	0	6,783,361	0	137,895	137,895	73,585	.06/01/2057
89175J-AB-6	Towd Point Mortgage Trus-TPMT 2017-6 A2		.03/22/2022	CITIGROUP GLOBAL MAR		7,754,063	8,000,000	7,502,500	7,670,854	0	13,463	0	13,463	0	7,684,317	0	69,746	69,746	75,333	.10/01/2053
89176E-AB-6	Towd Point Mortgage Trus-TPMT 2018-1 A2		.03/22/2022	WELLS FARGO		7,813,750	8,000,000	7,660,000	7,776,296	0	10,206	0	10,206	0	7,786,503	0	27,247	27,247	81,611	.01/01/2058
89176E-AC-4	Towd Point Mortgage Trus-TPMT 2018-1 M1		.02/25/2022	CITIGROUP GLOBAL MAR		14,642,488	14,739,214	13,870,982	14,152,639	0	14,064	0	14,064	0	14,166,704	0	475,784	475,784	128,968	.01/01/2058
891906-AC-3	Global Payments Inc-SENIOR UNSECURED		.01/21/2022	U. S. BANCORP		14,115,660	13,000,000	12,964,900	12,983,935	0	280	0	280	0	12,984,215	0	1,131,445	1,131,445	197,600	.04/01/2026
891906-AF-6	Global Payments Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		10,915,700	10,000,000	9,975,600	9,984,078	0	(35)	0	(35)	0	9,984,043	0	931,657	931,657	60,569	.06/01/2028
89214P-BD-0	Towne Bank/Portsmouth VA-SUBORDINATED		.07/30/2022	CALL 100		25,000,000	25,000,000	25,000,000	25,000,920	0	(920)	0	(920)	0	25,000,000	0	0	0	1,125,000	.07/30/2027
893045-AE-4	Trans-Allegheny Intersta-SENIOR UNSECURE		.06/27/2022	JP MORGAN SECURITIES		7,843,280	8,000,000	7,993,920	7,998,073	0	247	0	247	0	7,998,319	0	(155,039)	(155,039)	177,956	.06/01/2025
89441#-AA-4	Traverse City Control Tr Trust Certifica		.12/15/2022	SINKING PAYMENT		362,378	362,378	366,002	369,207	0	(6,829)	0	(6,829)	0	362,378	0	0	0	7,798	.11/15/2039
89568E-AG-3	Tri-State Generation and-FIRST LIEN		.05/17/2022	GOLDMAN		3,974,120	4,000,000	3,998,320	3,999,578	0	125	0	125	0	3,999,703	0	(25,583)	(25,583)	81,400	.11/01/2024
89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A		.12/17/2022	PAYDOWN		148,106	148,106	148,076	0	0	30	0	30	0	148,106	0	0	0	2,567	.05/17/2052
89655Y-AA-4	TRINITY RAIL LEASING L.P-SERIES 2009-1A		.12/16/2022	PAYDOWN		857,504	857,504	876,261	866,921	0	(9,418)	0	(9,418)	0	857,504	0	0	0	34,254	.11/16/2039
89656C-AA-1	Trinity Rail Leasing 201-TRL 2010-1A A		.12/16/2022	PAYDOWN		1,164,091	1,164,091	1,219,727	1,201,436	0	(37,345)	0	(37,345)	0	1,164,091	0	0	0	33,023	.10/16/2040
89656R-AA-8	Trinity Rail Leasing 202-TRL 2022-1 A		.12/21/2022	PAYDOWN		118,165	118,165	118,160	0	5	0	0	5	0	118,165	0	0	0	2,317	.05/20/2052
89657A-AC-0	Trinity Rail Leasing 201-TRL 2020-1A A		.12/17/2022	PAYDOWN		510,210	510,210	510,088	510,101	0	109	0	109	0	510,210	0	0	0	5,047	.10/17/2050
89657B-AA-2	Trinity Rail Leasing 201-TRL 2019-1A A		.12/17/2022	PAYDOWN		1,538,925	1,538,925	1,461,894	1,451,034	0	60,779	0	60,779	0	1,538,925	0	0	0	29,786	.04/17/2049
89657B-AB-0	Trinity Rail Leasing 201-TRL 2019-2A A1		.12/17/2022	PAYDOWN		2,024,696	2,024,696	2,024,216	2,024,306	0	390	0	390	0	2,024,696	0	0	0	25,203	.10/18/2049
89679E-AC-6	Triumph Bancorp Inc-SUBORDINATED		.02/01/2022	EXCHANGE OFFER		6,000,000	6,000,000	6,000,000	6,000,000	0	0	0	0	0	6,000,000	0	0	0	90,417	.09/01/2031
89680H-AA-0	Triton Container Finance-TCF 2020-1A A		.12/20/2022	PAYDOWN		133,663	133,663	113,295	0	0	20,368	0	20,368	0	133,663	0	0	0	353	.09/20/2045
89680H-AB-8	Triton Container Finance-TCF 2020-1A B		.12/20/2022	PAYDOWN		113,333	113,333	104,267	0	0	9,067	0	9,067	0	113,333	0	0	0	706	.09/20/2045
89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A		.12/17/2022	PAYDOWN		84,740	84,740	75,657	0	0	9,083	0	9,083	0	84,740	0	0	0	239	.06/19/2051
90187B-AA-9	Two Harbors Investment C-SENIOR UNSECURE		.01/15/2022	MATURITY		36,172,000	36,172,000	35,485,225	36,149,084	0	22,916	0	22,916	0	36,172,000	0	0	0	1,130,375	.01/15/2022
90223*-AA-4	2015 ESA Project Company Senior Secured		.12/31/2022	SINKING PAYMENT		985,544	985,544	985,544	0	0	0	0	0	0	985,544	0	0	0	4,866	.06/30/2031
902494-AT-0	TYSON FOODS INC-SENIOR UNSECURED NOTE		.03/15/2022	CALL 100		4,000,000	4,000,000	3,978,320	3,998,788	0	335	0	335	0	3,999,123	0	.877	.877	45,000	.06/15/2022
902494-BK-8	Tyson Foods Inc-SENIOR UNSECURED		.06/22/2022	RBC CAPITAL MARKETS		11,832,760	12,000,000	11,997,840	11,998,802	0	(3)	0	(3)	0	11,998,799	0	(166,039)	(166,039)	423,400	.03/01/2029
90253#-AA-1	UA (Portland OR) CTL Pas Trust Certifica		.12/15/2022	SINKING PAYMENT		809,476	809,476	817,473	814,895	0	(5,419)	0	(5,419)	0	809,476	0	0	0	21,659	.02/15/2032

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
90265E-AP-5	UDR Inc-SENIOR UNSECURED		10/17/2022	CITIGROUP GLOBAL MAR		9,125,300	10,000,000	9,999,800	9,999,938	0	62	0	62	0	10,000,000	0	(874,700)	(874,700)	541,444	01/26/2029
90270Y-BF-5	UBS-BARCLAYS COMMERCIAL -UBSBB 2013-C5 A		11/07/2022	VARIOUS		7,858,075	7,858,075	7,411,761	7,796,055	0	61,251	0	61,251	0	7,857,306	0	769	769	(462,335)	03/01/2046
90272*-AA-0	UHC (Senior Note) CTL Pa Trust Certifica		12/15/2022	SINKING PAYMENT		217,693	217,693	217,693	217,637	0	57	0	57	0	217,693	0	0	0	4,123	05/15/2033
90319#-AA-1	UOA Fayetteville (Univer Senior Secured		12/15/2022	SINKING PAYMENT		440,558	440,558	444,964	444,838	0	(4,280)	0	(4,280)	0	440,558	0	0	0	306	03/15/2041
903436-AA-1	US AIRWAYS 2011-1A PTT-FIRST LIEN		10/22/2022	SINKING PAYMENT		107,701	107,701	107,701	107,799	0	(98)	0	(98)	0	107,701	0	0	0	5,724	10/22/2023
90345W-AA-2	US AIRWAYS 2012-1A PTT-FIRST LIEN		10/01/2022	SINKING PAYMENT		297,735	297,735	297,735	297,934	0	(200)	0	(200)	0	297,735	0	0	0	13,111	10/01/2024
90346W-AA-1	US AIRWAYS 2013-1A PTT-FIRST LIEN		11/15/2022	SINKING PAYMENT		263,121	263,121	262,463	262,783	0	338	0	338	0	263,121	0	0	0	7,758	11/15/2025
90352W-AD-6	ITE Rail Fund Levered LP-SERIES 21-1A CL		12/28/2022	PAYDOWN		646,939	646,939	646,924	646,914	0	25	0	25	0	646,939	0	0	0	7,276	02/28/2051
903798-AA-1	U.S. Department of Agric Trust Certifica		12/15/2022	SINKING PAYMENT		174,755	174,755	174,755	174,755	0	0	0	0	0	174,755	0	0	0	1,879	04/15/2038
90783T-AA-8	Union Pacific Railroad C-FIRST LIEN		01/02/2022	SINKING PAYMENT		801,232	801,232	801,233	802,526	0	(1,294)	0	(1,294)	0	801,232	0	0	0	21,649	07/02/2025
90783X-AA-9	Union Pacific Railroad C-FIRST LIEN		07/02/2022	SINKING PAYMENT		341,288	341,288	341,288	341,499	0	(211)	0	(211)	0	341,288	0	0	0	10,680	01/02/2031
909287-AA-2	UAL 2007 PASS TRUST-FIRST LIEN		05/25/2022	VARIOUS		903,001	903,001	864,439	897,455	0	4,483	0	4,483	0	901,938	0	1,063	1,063	54,766	07/02/2022
909319-AA-3	UNITED AIR 2013-1 A PTT-FIRST LIEN		08/15/2022	SINKING PAYMENT		348,957	348,957	348,957	349,068	0	(111)	0	(111)	0	348,957	0	0	0	11,254	08/15/2025
90932P-AA-6	United Airlines 2014-1 C-SECURED NOTE		10/11/2022	SINKING PAYMENT		323,228	323,228	323,228	323,339	0	(111)	0	(111)	0	323,228	0	0	0	9,693	04/11/2026
90932Q-AA-4	UNITED AIR 2014-2 A PASS THRU TR-1ST LIE		09/03/2022	SINKING PAYMENT		219,737	219,737	219,737	219,800	0	(64)	0	(64)	0	219,737	0	0	0	6,177	09/03/2026
911312-BY-1	United Parcel Service In-SENIOR UNSECURE		10/28/2022	MORGAN		17,342,100	18,000,000	17,932,140	17,942,352	0	5,312	0	5,312	0	17,947,664	0	(605,564)	(605,564)	867,750	04/01/2030
91159H-HK-9	US BANCORP-SUBORDINATED		03/17/2022	U. S. BANCORP		45,889,250	45,000,000	44,906,400	44,972,804	0	3,376	0	3,376	0	44,976,179	0	913,071	913,071	847,500	09/11/2024
913017-CY-3	United Technologies Corp-SENIOR UNSECURE		06/21/2022	VARIOUS		14,584,850	15,000,000	14,994,600	14,996,399	0	259	0	259	0	14,996,659	0	(411,809)	(411,809)	372,969	11/16/2028
91324P-CP-5	UNITEDHEALTH GROUP INC-SR UNSECURED		03/31/2022	VARIOUS		10,290,800	10,000,000	9,972,900	9,989,601	0	399	0	399	0	9,990,000	0	300,800	300,800	269,792	07/15/2025
91412N-AA-8	University of Chicago/Th-UNSECURED		10/01/2022	MATURITY		3,500,000	3,500,000	3,497,900	3,499,870	0	130	0	130	0	3,500,000	0	0	0	163,100	10/01/2022
91412N-AG-5	University of Chicago/Th-UNSECURED		10/01/2022	CALL 100		427,000	427,000	426,979	427,000	0	0	0	0	0	427,000	0	0	0	13,088	10/01/2024
91412N-AX-8	University of Chicago/Th-UNSECURED		03/17/2022	WELLS FARGO		5,277,264	5,125,000	5,125,000	5,125,104	0	153	0	153	0	5,125,258	0	152,006	152,006	87,657	10/01/2027
915271-AA-8	Univest Financial Corp-SUBORDINATED		12/30/2021	CALL 100		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	0	03/30/2025
91529Y-AL-0	UNUM GROUP SR NT		07/11/2022	GOLDMAN		4,895,800	5,000,000	4,966,400	4,985,699	0	1,812	0	1,812	0	4,987,510	0	(91,710)	(91,710)	133,472	11/05/2025
91823A-AG-6	VB-S1 Issuer LLC-VBTOW 2018-1A C		02/28/2022	PAYDOWN		10,000,000	10,000,000	10,000,000	10,000,100	0	(100)	0	(100)	0	10,000,000	0	0	0	72,052	02/15/2048
918418-AA-8	Virginia (Lafayette, IN) Trust Certifica		12/15/2022	SINKING PAYMENT		316,026	316,026	316,026	316,026	0	0	0	0	0	316,026	0	0	0	(344)	08/15/2036
91845#-AA-2	VZ (Senior Note) CTL Pas Trust Certifica		12/15/2022	SINKING PAYMENT		366,075	366,075	366,075	366,084	0	(10)	0	(10)	0	366,075	0	0	0	7,664	05/15/2035
91854*-AA-4	VZ (Irving TX)(Senior No Trust Certifica		12/15/2022	SINKING PAYMENT		338,384	338,384	338,384	338,385	0	0	0	0	0	338,384	0	0	0	6,634	08/15/2036
91855*-AA-3	VA (Ponce, PR) CTL Trust Certificate		12/15/2022	SINKING PAYMENT		2,794,674	2,794,674	2,794,674	2,794,674	0	0	0	0	0	2,794,674	0	0	0	31,232	02/15/2042
918628-AA-2	Viva Capital 3 LS 2021 L Viva Term Note		07/15/2022	CALL 100		2,007,872	2,007,872	1,904,908	0	995	0	995	995	0	1,905,902	0	101,970	101,970	5,856	10/15/2031
91913Y-AU-4	Valero Energy Corp-SENIOR UNSECURED		06/21/2022	SUSQUEHANNA BANCSHAR		4,787,750	5,000,000	4,982,750	4,991,329	0	797	0	797	0	4,992,126	0	(204,376)	(204,376)	131,278	09/15/2026
91913Y-AW-0	Valero Energy Corp-SENIOR UNSECURED		08/04/2022	GOLDMAN		12,612,860	13,000,000	12,900,290	12,924,089	0	5,559	0	5,559	0	12,929,649	0	(316,789)	(316,789)	443,444	04/01/2029
91914J-AA-0	VALERO ENERGY PARTNERS-SENIOR UNSECURED		01/21/2022	DAIWA SECURITIES AME		8,685,840	8,000,000	7,996,720	7,998,715	0	(160)	0	(160)	0	7,998,555	0	687,285	687,285	38,889	12/15/2026
91914J-AF-9	Valero Energy Partners L-SENIOR UNSECURE		01/20/2022	GOLDMAN		7,613,130	7,000,000	6,976,200	6,984,306	0	205	0	205	0	6,984,511	0	628,619	628,619	112,875	03/15/2028
92212K-AA-4	Vantage Data Centers Iss-VDC 2019-1A A2		12/15/2022	PAYDOWN		90,000	90,000	90,000	90,000	0	0	0	0	0	90,000	0	0	0	1,554	07/15/2044
92257B-AA-0	Velocity Commercial Capi-VCC 2022-3 A		12/01/2022	PAYDOWN		1,077,721	1,077,721	1,075,637	0	0	2,083	0	2,083	0	1,077,721	0	0	0	18,325	06/01/2052
92257B-AC-6	Velocity Commercial Capi-VCC 2022-3 M2		07/01/2022	PAYDOWN		86,455	86,455	86,095	86,359	0	0	0	0	0	86,455	0	0	0	793	06/01/2052
92257B-AD-4	Velocity Commercial Capi-VCC 2022-3 M3		07/01/2022	PAYDOWN		111,752	111,752	108,623	0	0	3,128	0	3,128	0	111,752	0	0	0	1,034	06/01/2052
92257B-AE-2	Velocity Commercial Capi-VCC 2022-3 M4		10/01/2022	PAYDOWN		328,446	328,446	300,140	0	0	28,306	0	28,306	0	328,446	0	0	0	4,283	06/01/2052
92257B-AF-9	Velocity Commercial Capi-VCC 2022-3 M5		07/01/2022	PAYDOWN		143,083	143,083	124,817	0	0	18,265	0	18,265	0	143,083	0	0	0	1,324	06/01/2052
92257C-AA-8	Velocity Commercial Capi-VCC 2019-1 A		12/01/2022	PAYDOWN		807,349	807,349	807,164	807,377	0	(28)	0	(28)	0	807,349	0	0	0	12,884	03/01/2049
92257P-AC-5	Velocity Commercial Capi-VCC 2022-5 M3		11/01/2022	PAYDOWN		71,053	71,053	69,849	0	0	1,204	0	1,204	0	71,053	0	0	0	495	10/01/2052
92257P-BA-8	Velocity Commercial Capi-VCC 2022-5 M2		11/01/2022	PAYDOWN		14,582	14,582	14,280	0	0	302	0	302	0	14,582	0	0	0	91	10/01/2052
92258X-AA-1	Velocity Commercial Capi-VCC 2022-1 A		12/01/2022	PAYDOWN		144,310	144,310	143,321	0	0	988	0	988	0	144,310	0	0	0	2,462	02/01/2052
92258X-AB-9	Velocity Commercial Capi-VCC 2022-1 M1		12/01/2022	PAYDOWN		829,162	829,162	822,165	0	0	6,997	0	6,997	0	829,162	0	0	0	15,363	02/01/2052
92259K-AD-2	Velocity Commercial Capi-VCC 2022-4 M1		09/01/2022	PAYDOWN		20,672	20,672	20,671	0	0	0	0	0	0	20,672	0	0	0	86	08/01/2052
92259K-AG-5	Velocity Commercial Capi-VCC 2022-4 M2		09/01/2022	PAYDOWN		40,943	40,943	40,936	0	0	6	0	6	0	40,943	0	0	0	181	08/01/2052
92259U-AA-6	Velocity Commercial Capi-VCC 2022-2 A		12/01/2022	PAYDOWN		261,488	261,488	261,442	0	0	46	0	46	0	261,488	0	0	0	6,062	04/01/2052
92259U-AB-4	Velcocity Commercial Capi-VCC 2022-2 M1		08/01/2022	PAYDOWN		94,508	94,508	94,487	0	0	21	0	21	0	94,508	0	0	0	1,583	04/01/2052

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
92259U-AC-2	Velocity Commercial Capi-VCC 2022-2 M2		.05/01/2022	PAYDOWN		14,679	14,679	14,678	.0	0	1	0	1	0	14,679	0	0	0	117	.04/01/2052
92259U-AE-8	Velocity Commercial Capi-VCC 2022-2 M4		.08/01/2022	PAYDOWN		136,100	136,100	127,668	.0	0	8,432	0	8,432	0	136,100	0	0	0	2,417	.04/01/2052
92259U-AF-5	Velocity Commercial Capi-VCC 2022-2 M5		.05/01/2022	PAYDOWN		16,937	16,937	15,130	.0	0	1,807	0	1,807	0	16,937	0	0	0	141	.04/01/2052
92259U-AG-3	Velocity Commercial Capi-VCC 2022-2 M6		.05/01/2022	PAYDOWN		15,441	15,441	13,366	.0	0	2,074	0	2,074	0	15,441	0	0	0	128	.04/01/2052
92277G-AG-2	Ventas Realty LP-SENIOR UNSECURED		.01/18/2022	GOLDMAN		10,708,000	10,000,000	9,893,850	9,954,048	0	.647	0	.647	0	9,954,695	0	753,305	753,305	211,979	.01/15/2026
92277G-AL-1	Ventas Realty LP-SENIOR UNSECURED		.01/21/2022	CITIGROUP GLOBAL MAR		13,916,811	13,000,000	12,895,480	12,940,623	0	.711	0	.711	0	12,941,333	0	975,478	975,478	158,261	.04/01/2027
92277G-AM-9	Ventas Realty LP-SENIOR UNSECURED		.01/24/2022	CITIGROUP GLOBAL MAR		8,658,560	8,000,000	7,938,640	7,959,839	0	.501	0	.501	0	7,960,340	0	698,220	698,220	128,889	.03/01/2028
92277G-AN-7	Ventas Realty LP-SENIOR UNSECURED		.10/28/2022	SUNTRUST CAPITAL MAR		9,059,400	10,000,000	9,995,400	9,996,924	0	(109)	0	(109)	0	9,996,815	0	(937,415)	(937,415)	569,556	.01/15/2029
92343V-DY-7	VERIZON COMMUNICATIONS I-SENIOR UNSECURE		.01/20/2022	BOFAMLSEC		9,785,520	9,000,000	8,933,040	8,962,130	0	.484	0	.484	0	8,962,614	0	822,906	822,906	132,000	.03/16/2027
92343V-ER-1	Verizon Communications I-SENIOR UNSECURE		.10/28/2022	BOFAMLSEC		19,480,307	20,777,000	20,518,534	20,599,456	0	19,487	0	19,487	0	20,618,943	0	(1,138,636)	(1,138,636)	999,374	.09/21/2028
92345Y-AD-8	Verisk Analytics Inc-UNSECURED		.01/20/2022	WELLS FARGO		10,603,900	10,000,000	9,946,300	9,979,740	0	.169	0	.169	0	9,979,909	0	623,991	623,991	43,333	.06/15/2025
92345Y-AF-3	Verisk Analytics Inc-SENIOR UNSECURED		.07/19/2022	DEUTSCHE BANK SECURI		2,916,480	3,000,000	2,983,890	2,987,840	0	.824	0	.824	0	2,988,664	0	(72,184)	(72,184)	105,188	.03/15/2029
92537M-AA-8	Verus Securitization Tru-VERUS 2019-INV3		.12/01/2022	PAYDOWN		3,462,112	3,462,112	3,423,164	.0	0	38,949	0	38,949	0	3,462,112	0	0	0	26,256	.11/01/2052
92539U-AA-8	Verus Securitization Tru-VERUS 2021-7 A1		.12/01/2022	PAYDOWN		3,250,197	3,250,197	3,022,414	.0	0	227,782	0	227,782	0	3,250,197	0	0	0	16,108	.10/01/2066
92539A-AA-2	Verus Securitization Tru-VERUS 2022-6 A1		.12/01/2022	PAYDOWN		365,822	365,822	362,443	.0	0	3,379	0	3,379	0	365,822	0	0	0	5,484	.06/01/2067
92539A-AB-0	Verus Securitization Tru-VERUS 2022-6 A2		.12/01/2022	PAYDOWN		372,319	372,319	363,649	.0	0	8,670	0	8,670	0	372,319	0	0	0	5,583	.06/01/2067
92539J-AA-3	Verus Securitization Tru-VERUS 2022-INV1		.12/01/2022	PAYDOWN		149,440	149,440	149,437	.0	0	3	0	3	0	149,440	0	0	0	948	.08/01/2067
92539J-AB-1	Verus Securitization Tru-VERUS 2022-INV1		.12/01/2022	PAYDOWN		134,496	134,496	134,495	.0	0	1	0	1	0	134,496	0	0	0	1,179	.08/01/2067
92539J-AC-9	Verus Securitization Tru-VERUS 2022-INV1		.12/01/2022	PAYDOWN		149,440	149,440	147,891	.0	0	1,549	0	1,549	0	149,440	0	0	0	653	.08/01/2067
92539N-AA-4	Verus Securitization Tru-VERUS 2022-7 A1		.12/01/2022	PAYDOWN		201,839	201,839	201,837	.0	0	2	0	2	0	201,839	0	0	0	2,264	.07/01/2067
92539N-AB-2	Verus Securitization Tru-VERUS 2022-7 A2		.12/01/2022	PAYDOWN		232,082	232,082	229,170	.0	0	2,912	0	2,912	0	232,082	0	0	0	2,703	.07/01/2067
92580F-AA-9	Vicof II LCSS SPV Term Loan		.03/21/2022	VARIOUS		24,650,449	24,650,449	24,650,449	24,650,449	0	0	0	0	0	24,650,449	0	0	0	123,095	.08/16/2027
928563-AC-9	VMware Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		8,556,560	8,000,000	7,973,120	7,983,962	0	220	0	220	0	7,984,182	0	572,378	572,378	129,133	.08/21/2027
928563-AD-7	VMware Inc-SENIOR UNSECURED		.01/19/2022	FTS		5,373,800	5,000,000	4,997,450	4,998,611	0	(35)	0	(35)	0	4,998,576	0	375,224	375,224	41,250	.05/15/2025
928563-AE-5	VMware Inc-SENIOR UNSECURED		.01/21/2022	VARIOUS		25,426,050	23,000,000	22,988,730	(225)	0	(225)	0	(225)	0	22,992,859	0	2,433,191	2,433,191	205,375	.05/15/2027
928668-AU-6	Volkswagen Group of Amer-SENIOR UNSECURE		.10/28/2022	VARIOUS		39,265,511	42,460,000	41,428,121	41,699,459	0	.76,460	0	.76,460	0	41,775,919	0	(2,510,408)	(2,510,408)	1,866,206	.11/13/2028
928668-BF-8	Volkswagen Group of Amer-SENIOR UNSECURE		.08/23/2022	BOFAMLSEC		6,408,850	7,000,000	6,994,820	6,995,677	0	.210	0	.210	0	6,995,887	0	(587,037)	(587,037)	204,896	.05/13/2030
929227-AT-0	WaMu Mortgage Pass-Throu-WAMU 2003-S4 24		.12/01/2022	PAYDOWN		95,814	.95,814	96,203	95,979	0	(165)	0	(165)	0	95,814	0	0	0	2,225	.06/01/2033
929227-R5-7	WaMu Mortgage Pass-Throu-WAMU 2003-AR5 A		.12/01/2022	PAYDOWN		1,316,240	1,316,240	1,076,027	1,101,202	0	215,038	0	215,038	0	1,316,240	0	0	0	14,986	.06/01/2033
92922F-3N-6	WaMu Mortgage Pass-Throu-WAMU 2005-AR12		.12/01/2022	PAYDOWN		580,207	580,207	552,076	554,627	0	25,581	0	25,581	0	580,207	0	0	0	6,261	.10/01/2035
92922F-3Q-9	WaMu Mortgage Pass-Throu-WAMU 2005-AR12		.12/01/2022	PAYDOWN		79,104	79,104	76,978	76,525	0	2,580	0	2,580	0	79,104	0	0	0	834	.09/01/2035
92922F-7C-6	WaMu Mortgage Pass-Throu-WAMU 2005-AR16		.09/01/2022	PAYDOWN		58,868	.45,056	38,049	36,793	0	10,687	0	10,687	0	58,868	0	0	0	189	.12/01/2035
92922F-8T-8	WaMu Mortgage Pass-Throu-WAMU 2005-AR18		.12/01/2022	PAYDOWN		694,133	709,155	686,994	689,764	0	18,667	0	18,667	0	694,133	0	0	0	9,529	.01/01/2036
92922F-GY-8	WaMu Mortgage Pass-Throu-WAMU 2003-S11 3		.12/25/2022	PAYDOWN		32,118	32,118	32,188	(165)	0	(165)	0	(165)	0	32,118	0	0	0	395	.11/25/2033
92922F-J5-8	WaMu Mortgage Pass-Throu-WAMU 2005-AR6 2		.12/25/2022	PAYDOWN		749,623	749,623	623,358	626,443	0	123,180	0	123,180	0	749,623	0	0	0	5,445	.04/25/2045
92925C-CC-4	WaMu Mortgage Pass-Throu-WAMU 2006-AR1 1		.12/01/2022	PAYDOWN		63,111	63,111	50,962	47,064	0	16,047	0	16,047	0	63,111	0	0	0	470	.01/01/2046
92925G-AD-5	WaMu Mortgage Pass-Throu-WAMU 2006-AR16		.12/01/2022	PAYDOWN		190,288	263,445	247,885	250,167	0	4,788	0	4,788	0	190,288	0	0	0	2,953	.12/01/2036
92925V-AF-7	WaMu Mortgage Pass-Throu-WAMU 2007-HY1 2		.12/01/2022	PAYDOWN		400,821	385,899	345,450	372,248	0	15,684	0	15,684	0	400,821	0	0	0	5,977	.02/01/2037
92925V-AP-5	WaMu Mortgage Pass-Throu-WAMU 2007-HY1 5		.12/01/2022	PAYDOWN		288,406	276,321	240,665	240,865	0	38,515	0	38,515	0	288,406	0	0	0	3,708	.02/01/2037
92927X-AC-8	WAMU MORTGAGE PASS-THROU-SERIES 2007-HY6		.12/01/2022	PAYDOWN		381,761	360,140	311,184	322,196	0	43,258	0	43,258	0	381,761	0	0	0	3,835	.06/01/2037
92937E-AZ-7	WFRBS COMMERCIAL MORTGAG-WFRBS 2013-C11		.11/01/2022	PAYDOWN		3,413,658	3,413,658	3,244,042	3,389,451	0	24,206	0	24,206	0	3,413,658	0	0	0	84,241	.03/01/2045
92938E-AM-5	WFRBS Commercial Mortgag-WFRBS 2013-C16		.12/01/2022	PAYDOWN		1,225,788	1,225,788	1,237,975	1,227,036	0	(1,248)	0	(1,248)	0	1,225,788	0	0	0	21,393	.09/01/2046
92939F-AT-6	WFRBS Commercial Mortgag-WFRBS 2014-C21		.11/01/2022	PAYDOWN		444,175	444,175	460,276	(4,517)	0	(4,517)	0	(4,517)	0	444,175	0	0	0	10,321	.08/01/2047
92940P-AD-6	WRKCo Inc-SENIOR UNSECURED		.07/19/2022	BOFAMLSEC		8,084,000	8,000,000	7,996,080	7,996,972	0	.236	0	.236	0	7,997,208	0	86,792	86,792	333,200	.03/15/2029
92940P-AE-4	WRKCo Inc-SENIOR UNSECURED		.01/18/2022	GOLDMAN		7,521,850	7,000,000	6,998,320	6,999,034	0	(72)	0	(72)	0	6,998,961	0	522,889	522,889	37,158	.06/01/2028
92977Y-BW-0	Wachovia Mortgage Loan T-WMLT 2005-B 244		.12/01/2022	PAYDOWN		66,298	66,396	61,604	60,146	0	6,238	0	6,238	0	66,298	0	0	0	595	.10/01/2035
92979D-AC-9	Wachovia Mortgage Loan T-WMLT 2007-A 241		.12/01/2022	PAYDOWN		487,465	487,465	452,503	456,604	0	33,229	2,368	30,861	0	487,465	0	0	0	3,310	.03/01/2037
92981F-AA-4	WEC 99J-73 LLC Senior Secured Note		.08/15/2022	CALL 100		51,225	.51,225	52,316	52,266	0	(15)	0	(15)	0	52,252	0	(1,027)	(1,027)	885	.09/15/2039
92981B-AA-6	WEC 99J-58 LLC Senior Secured Note		.12/15/2022	SINKING PAYMENT		120,398	120,398	122,962	122,690	0	(2,293)	0	(2,293)	0	120,398	0	0	0	2,790	.09/15/2030

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
92982#-AA-3	WEC 99J-22 LLC Senior Secured Note		.11/15/2022	CALL 100		.61,722	.61,722	.63,036	.62,977	0	(23)	0	(23)	0	.62,954	0	(1,232)	(1,232)	1,376	.09/15/2039
92982*-AA-7	WEC 99J-27 LLC Senior Secured Note		.11/15/2022	CALL 100		.66,583	.66,583	.68,002	.67,937	0	(25)	0	(25)	0	.67,912	0	(1,329)	(1,329)	1,484	.09/15/2039
92982#-AA-5	Wec 2000B-CSF-11 LLC Senior Secured Note		.12/15/2022	SINKING PAYMENT		.123,818	.123,818	.126,456	.126,176	0	(2,358)	0	(2,358)	0	.123,818	0	0	0	2,869	.09/15/2030
92983*-AA-6	WEC 99J-4 LLC Senior Secured Note		.12/15/2022	SINKING PAYMENT		.73,967	.73,967	.75,542	.75,433	0	(1,467)	0	(1,467)	0	.73,967	0	0	0	1,714	.09/15/2034
92983#-AA-4	WEC 99J-72 LLC Senior Secured Note		.11/15/2022	CALL 100		.63,624	.63,624	.64,979	.64,918	0	(24)	0	(24)	0	.64,894	0	(1,270)	(1,270)	1,418	.09/15/2039
92990G-AD-5	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 2 ...		.12/01/2022	PAYDOWN		.284,449	.276,925	.265,025	.265,025	0	12,922	0	12,922	0	.284,449	0	0	0	4,170	.05/01/2037
92990G-AG-8	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 2 ...		.12/01/2022	PAYDOWN		.587,026	.595,392	.461,195	.507,718	0	85,495	0	85,495	0	.587,026	0	0	0	14,184	.05/01/2037
92990G-AJ-2	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 3 ...		.12/01/2022	PAYDOWN		.185,937	.171,206	.155,681	.157,406	0	15,595	0	15,595	0	.185,937	0	0	0	2,121	.05/01/2037
93147#-AA-3	Walgreens (Maricopa Az) Trust Certificat		.08/19/2022	VARIOUS		.2,716,168	.2,716,168	.2,716,168	.2,716,171	0	2	0	2	0	.2,716,173	0	(5)	(5)	91,401	.10/31/2034
93363#-AA-0	WaMu Mortgage Pass-Throu-WAMU 2007-HY4 1 ...		.12/01/2022	PAYDOWN		.109,890	.110,266	.98,078	.105,577	0	4,538	0	4,538	0	.109,890	0	0	0	.985	.04/01/2037
93363#-AG-7	WaMu Mortgage Pass-Throu-WAMU 2007-HY4 3 ...		.06/01/2022	PAYDOWN		.230,610	.247,725	.234,578	.236,192	0	10,586	0	10,586	0	.230,610	0	0	0	.2,541	.04/01/2037
93363#-AL-6	WAMU MORTGAGE PASS-THROU-SERIES 2007-HY4 ...		.12/01/2022	PAYDOWN		.507,190	.513,570	.492,080	.502,709	0	10,329	0	10,329	0	.507,190	0	0	0	.5,247	.11/01/2036
93363#-AA-6	WaMu Mortgage Pass-Throu-WAMU 2006-AR19 ...		.12/01/2022	PAYDOWN		.339,229	.304,944	.294,758	.294,758	0	14,286	0	14,286	0	.339,229	0	0	0	1,020	.01/01/2047
93363#-AB-1	WaMu Mortgage Pass-Throu-WAMU 2006-AR10 ...		.12/01/2022	PAYDOWN		.113,865	.111,605	.106,978	.106,741	0	4,977	0	4,977	0	.113,865	0	0	0	1,289	.09/01/2036
93363N-AB-1	WaMu Mortgage Pass-Throu-WAMU 2006-AR12 ...		.12/01/2022	PAYDOWN		.115,292	.114,246	.107,998	.113,491	0	.634	0	.634	0	.115,292	0	0	0	.1,523	.10/01/2036
93363P-AA-8	WaMu Mortgage Pass-Throu-WAMU 2006-AR14 ...		.12/01/2022	PAYDOWN		.83,596	.77,304	.71,940	.77,984	0	(12)	0	(12)	0	.83,596	0	0	0	.825	.11/01/2036
93363P-AC-4	WaMu Mortgage Pass-Throu-WAMU 2006-AR14 ...		.12/01/2022	PAYDOWN		.921,121	.852,277	.800,409	.857,477	0	1,556	0	1,556	0	.921,121	0	0	0	.9,202	.11/01/2036
93363P-AD-2	WaMu Mortgage Pass-Throu-WAMU 2006-AR14 ...		.12/01/2022	PAYDOWN		.14,220	.13,156	.12,039	.12,828	0	.456	0	.456	0	.14,220	0	0	0	.136	.11/01/2036
93364F-AH-4	WaMu Mortgage Pass-Throu-WAMU 2007-HY7 3 ...		.12/01/2022	PAYDOWN		.205,355	.205,181	.207,209	.207,209	0	(2,025)	0	(2,025)	0	.205,355	0	0	0	.2,341	.07/01/2037
93884P-CQ-1	Washington Gas Light Co-SENIOR UNSECURED		.09/13/2022	FIRST TENNESSEE		.6,874,205	.6,500,000	.7,269,925	.6,781,744	0	(29,375)	0	(29,375)	0	.6,752,370	0	.121,835	.121,835	.421,850	.09/27/2027
93933#-TX-1	Washington Mutual MSC Mo-WAMBS 2003-MS7 ...		.12/01/2022	PAYDOWN		.115	.115	.74	.115	0	0	0	0	0	.115	0	0	0	0	.03/01/2033
93933#-X9-9	WaMu Mortgage Pass-Throu-WAMU 2006-AR1 A ...		.12/25/2022	PAYDOWN		.379,961	.379,961	.335,315	.332,354	0	.47,607	0	.47,607	0	.379,961	0	0	0	.2,847	.01/25/2045
93934F-KP-6	Washington Mutual Mortga-WMALT 2006-1 3A ...		.12/01/2022	PAYDOWN		.97,155	.116,845	.117,185	.117,185	0	(428)	0	(428)	0	.97,155	0	0	0	.3,193	.02/01/2036
93934F-MD-1	Washington Mutual Mortga-WMALT 2006-2 2C ...		.12/01/2022	PAYDOWN		.128,237	.196,856	.147,268	.148,519	0	.30,178	1,246	.28,932	0	.128,237	0	0	0	.6,653	.03/01/2036
93934N-AC-9	Washington Mutual Mortga-WMALT 2006-5 1A ...		.12/01/2022	PAYDOWN		.78,913	.101,695	.93,259	.94,768	0	5,835	1,822	.94,768	0	.78,913	0	0	0	.2,507	.07/01/2036
93934N-AR-6	Washington Mutual Mortga-WMALT 2006-5 2C ...		.12/25/2022	PAYDOWN		.18,556	.22,611	.17,863	.9,672	0	11,973	0	11,973	0	.18,556	0	0	0	.135	.07/25/2036
93936N-AA-1	Washington Mutual Mortga-WMALT 2007-4 1A ...		.12/01/2022	PAYDOWN		.98,666	.87,491	.90,415	.90,415	0	(2,371)	0	(2,371)	0	.98,666	0	0	0	.2,005	.06/01/2037
94353W-AA-3	WAVE 2017-1 TRUST-WAAV 2017-1A A ...		.12/15/2022	PAYDOWN		.1,233,223	.1,233,223	.1,233,219	.1,233,256	0	(32)	0	(32)	0	.1,233,223	0	0	0	.39,878	.11/15/2042
94354K-AA-8	WAVE 2019-1 LLC-WAAV 2019-1 A		.12/15/2022	PAYDOWN		.410,713	.410,713	.410,694	.410,704	0	9	0	9	0	.410,713	0	0	0	.7,874	.09/15/2044
947890-AJ-8	Webster Financial Corp-SENIOR UNSECURED		.11/22/2022	BARINGSLLC		.11,933,543	.13,000,000	.12,956,710	.12,967,113	0	3,564	0	3,564	0	.12,970,677	0	(1,037,134)	(1,037,134)	.617,392	.03/25/2029
948741-AL-7	WEINGARTEN REALTY INVEST-SENIOR UNSECURE		.09/29/2022	U. S. BANCORP		.6,699,560	.7,000,000	.6,946,310	.6,979,709	0	4,114	0	4,114	0	.6,983,822	0	(284,262)	(284,262)	.226,081	.06/01/2025
94945P-AA-3	Welk Resorts 2017-A LLC-WILKRG 2017-AA A ...		.12/15/2022	PAYDOWN		.952,381	.952,381	.952,284	.952,151	0	230	0	230	0	.952,381	0	0	0	.13,156	.06/15/2033
94974B-FY-1	Wells Fargo & Co-SUBORDINATED		.01/18/2022	GOLDMAN		.3,435,520	.3,200,000	.3,196,704	.3,198,765	0	(29)	0	(29)	0	.3,198,737	0	0	0	.17,129	.06/03/2026
94974B-GL-8	Wells Fargo & Co-SR UNSECURED		.01/18/2022	WELLS FARGO		.40,917,286	.37,585,000	.38,069,207	.37,836,422	0	(1,411)	0	(1,411)	0	.37,835,011	0	.3,082,275	.3,082,275	.799,099	.07/22/2027
94980G-AR-2	Wells Fargo Home Equity -WIFHET 2004-2 M4 ...		.03/25/2022	PAYDOWN		.37,362	.37,362	.25,780	.36,942	0	.421	0	.421	0	.37,362	0	0	0	.151	.12/25/2033
94984D-AC-8	Wells Fargo Mortgage Bac-WIFBMS 2006-AR13 ...		.12/01/2022	PAYDOWN		.84,994	.101,344	.85,679	.103,574	0	2,182	8,660	(6,478)	0	.84,994	0	0	0	.1,493	.09/01/2036
94985A-AA-7	Wells Fargo Mortgage Bac-WIFBMS 2006-AR15 ...		.12/01/2022	PAYDOWN		.49,638	.50,815	.48,609	(969)	52,313	(61)	(969)	(969)	0	.50,037	0	(399)	(399)	0	.10/01/2036
94986C-AA-2	Wells Fargo Mortgage Bac-WIFBMS 2007-AR4 ...		.12/01/2022	PAYDOWN		.90,450	.119,125	.112,848	.113,447	0	2,728	598	2,130	0	.90,450	0	0	0	.866	.08/01/2037
94986M-AA-0	Wells Fargo Mortgage Bac-WIFBMS 2007-AR10 ...		.10/01/2022	PAYDOWN		.83,225	.89,326	.89,829	.84,850	0	4,464	0	4,464	0	.83,225	0	0	0	.581	.01/01/2038
94986M-AF-9	Wells Fargo Mortgage Bac-WIFBMS 2007-AR10 ...		.12/01/2022	PAYDOWN		.247,718	.247,807	.204,636	.217,819	0	(30)	0	(30)	0	.217,522	0	.30,196	.30,196	.1,318	.01/01/2059
949890-AV-1	Wells Fargo Commercial M-WIFCM 2015-C27 A ...		.11/01/2022	PAYDOWN		.281,596	.281,596	.275,822	.279,389	0	2,207	0	2,207	0	.281,596	0	0	0	.4,252	.02/01/2048
94989Q-AV-2	Wells Fargo Commercial M-WIFCM 2015-SG1 A ...		.08/01/2022	PAYDOWN		.161,642	.161,642	.166,516	.163,407	0	(1,765)	0	(1,765)	0	.161,642	0	0	0	.4,083	.09/01/2048
94989Y-AY-9	Wells Fargo Commercial M-WIFCM 2016-C32 A ...		.07/01/2022	PAYDOWN		.367,032	.367,032	.370,693	.368,302	0	(1,270)	0	(1,270)	0	.367,032	0	0	0	.4,974	.01/01/2059
95002F-AA-2	Wells Fargo Mortgage Bac-WIFBMS 2019-4 A1 ...		.12/01/2022	PAYDOWN		.572,920	.572,920	.583,125	.585,553	0	(12,634)	0	(12,634)	0	.572,920	0	0	0	.7,452	.09/01/2049
95002K-AA-1	Wells Fargo Mortgage Bac-WIFBMS 2020-1 A1 ...		.12/01/2022	PAYDOWN		.845,172	.845,172	.855,209	.858,770	0	(13,598)	0	(13,598)	0	.845,172	0	0	0	.8,393	.12/01/2049
95058X-AE-8	Wendy's Funding LLC-WEN 2018-1A A21I ...		.12/15/2022	PAYDOWN		.80,000	.80,000	.76,491	.77,478	0	2,522	0	2,522	0	.80,000	0	0	0	.1,942	.03/15/2048
95058X-AG-3	Wendy's Funding LLC-WEN 2019-1A A21I ...		.12/15/2022	PAYDOWN		.250,000	.250,000	.250,000	.250,000	0	0	0	0	0	.250,000	0	0	0	.5,911	.06/15/2049
95058X-AL-2	Wendy's Funding LLC-WEN 2021-1A A21I ...		.12/15/2022	PAYDOWN		.60,000	.60,000	.60,000	.60,000	0	0	0	0	0	.60,000	0	0	0	.1,041	.06/15/2051
95757#-AA-9	Western & Southern Finan-SENIOR UNSECURE		.08/16/2022	JEFFERIESLLC		.29,575,200	.26,820,000	.31,439,670	.30,494,969	0	(158,965)	0	(158,965)	0	.30,336,004	0	(760,804)	(760,804)	.1,683,514	.07/15/2033

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
96033W-AA-6	Westgate Resorts 2018-1 -WESTR 2018-1A A		01/01/2022	PAYDOWN		1,005,703	1,005,703	1,003,935	1,003,926	0	1,777	0	1,777	0	1,005,703	0	0	0	4,114	12/01/2031
96033W-AB-4	Westgate Resorts 2018-1 -WESTR 2018-1A B		01/01/2022	PAYDOWN		1,407,985	1,407,985	1,400,945	1,405,762	0	2,223	0	2,223	0	1,407,985	0	0	0	6,101	12/01/2031
96034L-AA-9	Westgate Resorts 2020-1 -WESTR 2020-1A A		12/01/2022	PAYDOWN		2,053,282	2,053,282	2,050,584	2,052,388	0	894	0	894	0	2,053,282	0	0	0	28,697	03/01/2034
96038#-AA-8	Westin (St Louis MO) Lea Trust Certificat		12/15/2022	SINKING PAYMENT		83,619	83,619	83,619	83,619	0	0	0	0	0	83,619	0	0	0	1,872	07/15/2047
960386-AM-2	Westinghouse Air Brake T-SENIOR UNSECURE		01/18/2022	GOLDMAN		22,438,000	20,000,000	19,885,650	19,925,847	0	662	0	662	0	19,926,510	0	2,511,490	2,511,490	343,750	09/15/2028
96042#-AA-4	Westkin Portfolio (LAS & Trust Certificat		12/15/2022	SINKING PAYMENT		319,753	319,753	322,951	322,688	0	(2,935)	0	(2,935)	0	319,753	0	0	0	10,575	11/15/2038
96928*-CQ-8	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		152,560	152,560	152,560	152,561	0	(1)	0	(1)	0	152,560	0	0	0	5,753	06/15/2033
96928*-CR-6	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		186,787	186,787	186,787	186,788	0	(1)	0	(1)	0	186,787	0	0	0	6,807	05/15/2034
96928*-CX-3	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		392,244	392,244	396,196	394,704	0	(2,461)	0	(2,461)	0	392,244	0	0	0	13,276	01/15/2035
96928*-DA-2	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		772,967	772,967	781,295	777,253	0	(4,285)	0	(4,285)	0	772,967	0	0	0	22,668	08/15/2031
96928*-DJ-3	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		543,961	543,961	543,961	543,962	0	(1)	0	(1)	0	543,961	0	0	0	16,127	09/15/2031
96928*-DZ-7	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		713,000	713,000	719,553	716,116	0	(3,115)	0	(3,115)	0	713,000	0	0	0	21,911	10/15/2029
96928*-EN-3	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		754,429	754,429	762,553	759,117	0	(4,689)	0	(4,689)	0	754,429	0	0	0	11,227	11/15/2032
96928*-EZ-6	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		480,856	480,856	480,856	480,857	0	(1)	0	(1)	0	480,856	0	0	0	11,630	09/15/2033
96928*-FH-5	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		1,316,276	1,316,276	1,316,276	1,316,278	0	(2)	0	(2)	0	1,316,276	0	0	0	37,095	04/15/2025
96928*-FK-8	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		447,406	447,406	447,406	447,435	0	(29)	0	(29)	0	447,406	0	0	0	12,831	11/15/2032
96928*-FO-5	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		518,589	518,589	518,589	518,590	0	(1)	0	(1)	0	518,589	0	0	0	11,333	09/15/2033
96928*-FV-4	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		233,081	233,081	233,081	233,082	0	0	0	0	0	233,081	0	0	0	5,196	09/15/2044
96928*-FX-0	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		854,927	854,927	854,927	854,928	0	(1)	0	(1)	0	854,927	0	0	0	18,683	02/15/2036
96928*-FY-8	William Blair & Company, Trust Certificat		12/15/2022	SINKING PAYMENT		352,326	352,326	352,326	352,326	0	(1)	0	(1)	0	352,326	0	0	0	7,989	01/15/2035
96928#-AA-3	William Blair & Company Trust Certificat		12/15/2022	SINKING PAYMENT		999,384	999,384	999,384	999,384	0	0	0	0	0	999,384	0	0	0	21,927	06/15/2023
96930#-AA-9	William Blair & Company Trust Certificat		12/15/2022	SINKING PAYMENT		252,112	252,112	252,112	252,112	0	0	0	0	0	252,112	0	0	0	4,591	08/15/2035
96949L-AB-1	Williams Cos Inc/The-SENIOR UNSECURED		01/21/2022	JEFFERIES LLC		13,813,410	13,000,000	12,957,750	12,983,701	0	369	0	369	0	12,984,071	0	829,339	829,339	187,778	09/15/2025
97063Q-AA-0	WILLIS ENGINE STRUCTURED-SERIES 17-A CLA		12/15/2022	PAYDOWN		502,360	502,360	501,932	502,090	0	269	0	269	0	502,360	0	0	0	14,633	08/15/2042
97064#-AB-6	Willis North America Inc-SENIOR UNSECURE		01/21/2022	WELLS FARGO		5,486,750	5,000,000	4,998,350	4,999,164	0	56	0	56	0	4,999,220	0	487,530	487,530	81,250	09/15/2028
97064E-AA-6	Willis Engine Structured-WESTF 2018-A A		12/15/2022	PAYDOWN		495,533	495,533	495,509	495,538	0	(5)	0	(5)	0	495,533	0	0	0	11,009	09/15/2043
97064F-AA-3	Willis Engine Structured-WESTF 2020-A A		12/15/2022	PAYDOWN		789,979	789,979	789,968	789,979	0	0	0	0	0	789,979	0	0	0	12,213	03/15/2045
974153-AB-4	Wingstop Funding LLC-WSTOP 2020-1A A2		12/05/2022	PAYDOWN		52,500	52,500	52,500	52,500	0	0	0	0	0	52,500	0	0	0	1,305	12/05/2050
97652P-AL-5	WinWater Mortgage Loan T-WIN 2014-1 A11		12/01/2022	PAYDOWN		325,365	325,365	323,331	323,502	0	1,863	0	1,863	0	325,365	0	0	0	5,642	06/01/2044
97988Q-AL-8	Woodmont 2017-2 Trust-WDMNT 2017-2A A1R		07/07/2022	BARCLAYS CAPITAL INC		27,967,500	29,000,000	29,000,000	29,000,000	0	0	0	0	0	29,000,000	0	(1,032,500)	(1,032,500)	446,680	04/20/2033
981811-AE-2	Worthington Industries I-SENIOR UNSECURE		01/18/2022	GOLDMAN		6,458,100	6,000,000	5,987,340	5,994,915	0	44	0	44	0	5,994,960	0	463,140	463,140	72,042	04/15/2026
98920M-AA-0	ZAXBY'S FUNDING LLC-ZAXBY 2021-1A A2		10/30/2022	PAYDOWN		170,008	170,008	159,194	0	0	10,813	0	10,813	0	170,008	0	0	0	2,550	07/30/2051
98978V-AK-9	Zoetis Inc-SENIOR UNSECURED		01/21/2022	DEUTSCHE BANK SECURI		10,847,700	10,000,000	9,976,900	9,990,396	0	32	0	32	0	9,990,428	0	857,272	857,272	90,000	11/13/2025
G2962#-AA-1	AP Aristotle Holdings, L Super Senior No		04/22/2022	CALL 100		6,277,536	6,277,004	6,350,106	6,349,488	0	(2,208)	0	(2,208)	0	6,347,280	0	(69,744)	(69,744)	23,530	12/31/2028
G2962#-AB-9	AP Aristotle Holdings, L Senior Notes		04/22/2022	CALL 100		3,686,692	3,686,494	3,686,494	3,686,494	0	0	0	0	0	3,686,494	0	198	198	8,764	12/31/2028
G6461#-AA-6	New Mountain Guardian II Senior Note		03/15/2022	MATURITY		5,510,677	5,510,677	5,510,677	5,510,641	0	36	0	36	0	5,510,677	0	0	0	106,099	03/15/2022
G7256K-AB-0	Prop 2017-1 Ltd-ABS SSNR 5.30 03/15/42		12/15/2022	PAYDOWN		277,315	277,315	277,149	276,793	0	522	0	522	0	277,315	0	0	0	4,143	03/15/2042
G8638#-AA-1	Stripes 2013 Aircraft 1 Note		12/20/2022	SINKING PAYMENT		1,435,436	1,435,436	1,446,946	1,435,192	0	244	0	244	0	1,435,436	0	0	0	0	04/20/2023
00908#-AA-3	AIR CANADA 2015-2AA PTT-FIRST LIEN		12/15/2022	SINKING PAYMENT		337,549	337,549	337,549	337,622	0	(73)	0	(73)	0	337,549	0	0	0	9,494	12/15/2027
00908#-AB-1	Air Canada 2015-2 Class -2ND LIEN		12/15/2022	SINKING PAYMENT		216,951	216,951	216,951	217,008	0	(57)	0	(57)	0	216,951	0	0	0	6,711	12/15/2027
00908#-AA-1	AIR CANADA 2013-1A PTT-FIRST LIEN		11/15/2022	SINKING PAYMENT		143,083	143,083	143,083	143,131	0	(48)	0	(48)	0	143,083	0	0	0	4,545	05/15/2025
009090-AA-9	AIR CANADA 2015-1A PTT-FIRST LIEN		09/15/2022	SINKING PAYMENT		651,363	651,363	651,363	651,533	0	(170)	0	(170)	0	651,363	0	0	0	17,587	03/15/2027
009090-AB-7	AIR CANADA 2015-1B PTT-2ND LIEN		09/15/2022	SINKING PAYMENT		207,543	207,543	207,543	207,583	0	(40)	0	(40)	0	207,543	0	0	0	6,032	03/15/2023
06368B-GS-1	Bank of Montreal-SUBORDINATED		12/21/2022	JANE		7,107,280	8,000,000	8,000,000	8,000,001	0	38	0	38	0	8,000,039	0	(892,759)	(892,759)	311,001	12/15/2032
064159-HB-5	BANK OF NOVA SCOTIA-SUBORDINATED		01/19/2022	CREDIT SUISSE SECURI		32,437,500	30,000,000	30,111,000	30,056,556	0	(1,336)	0	(1,336)	0	30,055,220	0	2,382,280	2,382,280	131,250	12/16/2025
112595-AH-7	Brookfield Asset Managem-SENIOR UNSECURE		05/16/2022	JANE		8,046,240	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	46,240	46,240	269,333	01/15/2025
11271L-AA-0	BROOKFIELD FINANCE INC-SENIOR UNSECURE		01/19/2022	BOFAILSEC		7,570,150	7,000,000	6,932,520	6,966,978	0	274	0	274	0	6,967,252	0	602,898	602,898	40,493	06/02/2026
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED		01/18/2022	VARIOUS		47,288,639	43,951,000	43,023,390	43,310,043	0	5,623	0	5,623	0	43,315,666	0	3,972,973	3,972,973	833,238	01/25/2028
11271L-AD-4	Brookfield Finance Inc-SENIOR UNSECURED		09/14/2022	CANTOR		14,454,750	15,000,000	14,973,150	14,981,197	0	2,271	0	2,271	0	14,983,468	0	(528,718)	(528,718)	701,229	03/29/2029
11271L-AE-2	Brookfield Finance Inc-SENIOR UNSECURED		08/15/2022	JP MORGAN SECURITIES		6,848,380	7,000,000	6,993,210	6,994,238	0	384	0	384	0	6,994,621	0	(146,241)	(146,241)	255,442	04/15/2030
136385-AV-3	Canadian Natural Resourc-SENIOR UNSECURE		01/20/2022	GOLDMAN		3,676,505	3,500,000	3,329,270	3,436,249	0	1,309	0	1,309	0	3,437,559	0	238,946	238,946	65,596	02/01/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
136385-AX-9	Canadian Natural Resource-SENIOR UNSECURE	A	08/03/2022	RBC CAPITAL MARKETS		7,761,920	8,000,000	7,975,680	7,986,073	0	1,236	0	1,236	0	7,987,309	0	(225,389)	(225,389)	208,756	06/01/2027
15135U-AM-1	Cenovus Energy Inc-SENIOR UNSECURED	A	01/21/2022	BARCLAYS CAPITAL INC		7,519,470	7,000,000	6,998,810	6,999,616	0	(5)	0	(5)	0	6,999,611	0	519,859	519,859	82,639	04/15/2027
29250N-AL-9	Enbridge Inc-SENIOR UNSECURED	A	01/18/2022	GOLDMAN		12,993,960	12,000,000	11,960,570	11,979,235	0	37	0	37	0	11,979,273	0	1,014,687	1,014,687	69,417	12/01/2026
559222-AR-5	Magna International Inc-SR UNSECURED	A	03/31/2022	BARCLAYS CAPITAL INC		5,128,400	5,000,000	4,980,500	4,991,959	0	749	0	749	0	4,992,708	0	135,692	135,692	105,479	10/01/2025
56501R-AC-0	Manulife Financial Corp-SENIOR UNSECURED	A	07/07/2022	VARIOUS		21,774,117	22,000,000	21,924,290	21,965,664	0	3,841	0	3,841	0	21,969,506	0	(195,389)	(195,389)	763,365	03/04/2026
56501R-AE-6	Manulife Financial Corp-SUBORDINATED	A	12/14/2022	BOFAMLSEC		34,989,180	38,000,000	38,540,200	38,312,727	0	(54,002)	0	(54,002)	0	38,258,725	0	(3,269,545)	(3,269,545)	2,022,152	02/24/2032
59151K-AK-4	Methanex Corp-SENIOR UNSECURED	A	02/17/2022	SUMRIDGE PARTNERS LL		4,105,000	4,000,000	3,979,880	3,993,324	0	174	0	174	0	3,993,498	0	111,502	111,502	35,771	12/01/2024
67077M-AE-8	Nutrien Ltd-SENIOR UNSECURED	A	01/20/2022	JP MORGAN SECURITIES		5,378,300	5,000,000	4,994,200	4,994,203	0	(22)	0	(22)	0	4,994,181	0	384,119	384,119	21,667	12/15/2026
67077M-AT-5	Nutrien Ltd-SENIOR UNSECURED	A	07/19/2022	BOFAMLSEC		4,863,150	5,000,000	4,983,850	4,987,679	0	812	0	812	0	4,988,492	0	(125,342)	(125,342)	169,167	04/01/2029
716442-AH-1	PETRO-CANADA-SENIOR UNSECURED	A	12/21/2022	TORONTO DOMINION SEC		4,478,965	4,750,000	5,168,380	5,099,582	0	(23,192)	0	(23,192)	0	5,076,390	0	(597,425)	(597,425)	365,658	07/15/2033
71644E-AE-2	Suncor Energy Inc-SENIOR UNSECURED	A	06/21/2022	MARKETAXESS FINANCIA		4,781,462	4,320,000	5,563,685	4,980,733	0	(65,237)	0	(65,237)	0	4,915,496	0	(134,034)	(134,034)	177,660	06/15/2026
780082-AD-5	Royal Bank of Canada-SUBORDINATED	A	04/05/2022	VARIOUS		49,503,524	47,626,000	48,377,444	48,029,127	0	(25,167)	0	(25,167)	0	48,003,961	0	1,499,563	1,499,563	1,525,331	01/27/2026
891160-MJ-9	Toronto-Dominion Bank/Th-SUBORDINATED	A	10/24/2022	VARIOUS		28,116,710	30,000,000	29,434,500	29,585,912	0	27,441	0	27,441	0	29,613,353	0	(1,496,643)	(1,496,643)	1,043,698	09/15/2031
89352H-AM-1	TransCanada PipeLines Lt-SR UNSECURED	A	08/11/2022	JANE		6,930,140	7,000,000	6,968,360	6,978,031	0	1,097	0	1,097	0	6,979,129	0	(48,989)	(48,989)	309,361	03/01/2034
89352H-AT-6	TransCanada PipeLines Lt-SENIOR UNSECURE	A	01/21/2022	DAIWA SECURITIES AME		10,995,500	10,000,000	9,958,100	9,981,187	0	337	0	337	0	9,981,523	0	1,013,977	1,013,977	257,292	01/15/2026
89352H-AW-9	TransCanada PipeLines Lt-SENIOR UNSECURE	A	01/18/2022	GOLDMAN		32,769,000	30,000,000	29,504,150	29,648,338	0	2,222	0	2,222	0	29,650,559	0	3,118,441	3,118,441	230,208	05/15/2028
98417E-AT-7	GLENCORE FINANCE CANADA -SENIOR UNSECURE	A	10/25/2022	MATURITY		5,000,000	5,000,000	4,987,350	4,998,813	0	1,187	0	1,187	0	5,000,000	0	0	0	212,500	10/25/2022
00080Q-AF-2	ABN AMRO BANK NV-SUBORDINATED	D	01/18/2022	GOLDMAN		28,017,340	26,000,000	26,008,220	26,008,405	0	488	0	488	0	26,008,893	0	2,008,447	2,008,447	590,056	07/28/2025
000823-AJ-3	ABPCI Direct Lending Fun-ABPCI 2017-1A A	D	09/29/2022	CREDIT SUISSE SECURI		42,320,781	44,000,000	44,000,000	44,000,000	0	0	0	0	0	44,000,000	0	(1,679,219)	(1,679,219)	1,066,815	04/20/2032
000825-AA-7	ACAM 2019-FL1 Ltd-ACAM 2019-FL1 A	D	12/16/2022	PAYDOWN		5,112,362	5,112,362	5,112,362	5,112,362	0	0	0	0	0	5,112,362	0	0	0	48,003	11/17/2034
00084D-AL-4	ABN AMRO BANK NV-SUBORDINATED	D	01/18/2022	HSBC SECURITIES INC		21,596,600	20,000,000	20,299,400	20,169,123	0	(1,979)	0	(1,979)	0	20,167,144	0	1,429,456	1,429,456	245,333	04/18/2026
00131L-AH-8	AIA Group Ltd-SENIOR UNSECURED	D	03/31/2022	CREDIT SUISSE SECURI		23,126,180	23,000,000	23,205,840	23,165,137	0	(4,633)	0	(4,633)	0	23,160,504	0	(34,324)	(34,324)	397,500	04/09/2029
001406-AA-5	AIM Aviation Finance Ltd-DCAL 2015-1A A1	D	12/15/2022	PAYDOWN		161,907	161,907	161,839	161,905	0	36	0	36	0	161,907	0	0	0	5,071	02/15/2040
001743-AE-3	AMMC CLO 18 Ltd-AMMC 2016-18A SUB	D	12/30/2022	DIRECT		9,189,236	16,205,000	14,111,314	4,455,969	0	953,982	0	953,982	0	9,189,236	0	2,356,925	2,356,925	05/26/2031	
00175N-AC-2	AMMC CLO 15 Ltd-AMMC 2014-15A	D	12/30/2022	DIRECT		11,834,708	28,700,000	16,165,625	6,369,801	0	5,736,712	0	5,736,712	0	11,834,708	0	0	0	2,920,592	01/15/2032
00176E-AE-7	AMMC CLO XII Ltd-AMMC 2013-12A SUB	D	12/30/2022	DIRECT		3,176,462	8,400,000	2,065,560	2,462,122	0	854,944	0	(396,562)	0	3,176,462	0	0	0	244,896	11/10/2030
00176K-AC-7	AMMC CLO 16 Ltd-AMMC 2015-16A	D	12/31/2022	DIRECT		4,727,578	9,240,000	7,988,400	1,777,052	0	1,074,048	0	1,074,048	0	4,727,578	0	0	0	648,790	04/14/2029
00177C-AC-4	Ammc CLO 20 Ltd-AMMC 2017-20A	D	12/30/2022	DIRECT		9,769,007	17,010,000	15,309,000	5,693,910	0	859,670	0	859,670	0	9,769,007	0	0	0	1,657,151	04/17/2029
00178L-AB-5	AMMC CLO 21 Ltd-AMMC 2017-21A A	D	04/20/2022	BOFAMLSEC		8,434,079	8,458,100	8,458,100	8,457,146	0	954	0	954	0	8,458,100	0	(24,021)	(24,021)	58,811	11/02/2030
00179T-AB-7	AMMC CLO 21 LTD-AMMC 2017-21A SUB	D	12/30/2022	DIRECT		2,541,942	4,273,500	3,814,099	1,638,456	0	(4,538)	0	(4,538)	0	2,541,942	0	0	0	586,990	11/02/2030
00185A-AK-0	Aon PLC-SENIOR UNSECURED	D	05/16/2022	JANE		8,025,200	8,000,000	7,997,760	7,999,197	0	(9)	0	(9)	0	7,999,189	0	26,011	26,011	131,750	12/15/2025
00203Q-AE-7	AP Moller - Maersk A/S-SENIOR UNSECURED	D	09/09/2022	CITIGROUP GLOBAL MAR		14,385,000	15,000,000	14,908,200	14,928,479	0	4,949	0	4,949	0	14,933,428	0	(548,428)	(548,428)	490,625	06/20/2029
00205G-AD-9	APT Pipelines Ltd-SENIOR UNSECURED	D	01/20/2022	DEUTSCHE BANK SECURI		7,542,080	7,000,000	6,951,350	6,971,401	0	331	0	331	0	6,971,732	0	570,348	570,348	156,188	07/15/2027
00652X-AB-4	Adani Transmission Ltd-FIRST LIEN	D	11/21/2022	SINKING PAYMENT		66,720	66,720	60,835	0	5,885	0	5,885	0	66,720	0	0	0	2,127	05/21/2036	
01447Y-AB-0	ALESKO Preferred Funding-ALESC 1A A2	D	07/20/2022	VARIOUS		9,204,034	9,204,034	6,999,076	7,837,385	0	12,723	0	12,723	0	7,850,107	0	1,353,927	1,353,927	23,365	10/15/2033
01448Q-AA-8	ALESKO Preferred Funding-ALESC 4A A1	D	10/31/2022	PAYDOWN		6,680,066	6,680,066	6,281,585	6,307,931	0	372,135	0	372,135	0	6,680,066	0	0	0	18,962	07/30/2034
01448T-AA-2	ALESKO Preferred Funding-ALESC 5A A1	D	06/23/2022	PAYDOWN		45,882	45,882	39,214	42,301	0	3,582	0	3,582	0	45,882	0	0	0	248	12/23/2034
01448X-AA-3	ALESKO Preferred Funding-ALESC 6A A1	D	12/23/2022	PAYDOWN		299,367	299,367	270,124	257,043	0	42,324	0	42,324	0	299,367	0	0	0	2,601	03/23/2035
014498-AB-5	ALESKO Preferred Funding-ALESC 14A A1	D	09/23/2022	PAYDOWN		1,559,752	1,559,752	1,106,767	1,121,447	0	438,305	0	438,305	0	1,559,752	0	0			

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
052113-AB-3	Ausgrid Finance Pty Ltd-SECURED	D	01/19/2022	U B S SECURITIES		7,652,527	7,000,000	6,993,490	6,995,655	0	168	0	168	0	6,995,823	0	656,704	656,704	143,429	08/01/2028
052528-AK-2	AUST & NZ BANKING GROUP-SUBORDINATED	D	01/20/2022	BARCLAYS CAPITAL INC		10,788,100	10,000,000	9,995,200	9,998,222	0	(107)	0	(107)	0	9,998,115	0	789,985	789,985	79,444	05/19/2026
05492A-AJ-0	BFNS 2017-1-BFNS 2017-1A AR	D	10/25/2022	PAYDOWN		16,539,568	16,539,568	16,539,568	16,539,568	0	0	0	0	0	16,539,568	0	0	0	469,405	01/25/2029
05492K-AA-7	BDS 2019-FL4 LTD-BDS 2019-FL4 A	D	11/18/2022	VARIOUS		28,743,694	28,743,694	28,400,788	28,664,898	0	72,347	0	72,347	0	28,737,244	0	6,450	6,450	59,963	08/15/2036
05492Q-AA-4	BDS 2020-FL5 LTD-BDS 2020-FL5 A	D	03/10/2022	WELLS FARGO		13,883,156	14,050,000	14,072,516	14,060,681	0	(1,141)	0	(1,141)	0	14,059,540	0	(176,384)	(176,384)	43,252	02/16/2037
05492Z-AA-9	BDS 2020-FL6 Ltd-BDS 2020-FL6 A	D	09/19/2022	PAYDOWN		3,714,876	3,714,876	3,720,680	3,719,287	0	(4,411)	0	(4,411)	0	3,714,876	0	0	0	25,150	09/15/2035
05565Q-CJ-5	BP Capital Markets PLC-SENIOR UNSECURED	D	06/30/2022	CALL 100.956101		5,047,805	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	47,805	47,805	151,994	09/26/2023
05565Q-CP-1	BP CAPITAL MARKETS PLC-SR UNSECURED	D	03/21/2022	BNP PARIBAS		8,176,960	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	176,960	176,960	189,005	02/10/2024
05565Q-CS-5	BP Capital Markets PLC-SENIOR UNSECURED	D	03/18/2022	MORGAN		5,098,950	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	98,950	98,950	67,754	11/04/2024
05565Q-DA-3	BP CAPITAL MARKETS PLC-SENIOR UNSECURED	D	03/21/2022	GOLDMAN		5,088,400	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	88,400	88,400	90,572	03/17/2025
05578D-AG-7	BPCE SA-SR UNSECURED	D	01/18/2022	GOLDMAN		12,654,360	12,000,000	11,999,040	12,000,010	0	(26)	0	(26)	0	11,999,984	0	654,376	654,376	126,667	04/15/2024
05578Q-AE-3	BPCE SA-SUBORDINATED	D	01/24/2022	CREDIT SUISSE SECURI		8,645,600	8,000,000	7,919,600	7,961,419	0	604	0	604	0	7,962,023	0	683,577	683,577	124,583	04/01/2026
05586A-AA-6	BSPT 2018-FL4 Issuer Lt-BSPT 2018-FL4	D	01/19/2022	VARIOUS		469,460	469,460	466,819	468,582	0	289	0	289	0	468,872	0	588	588	545	09/15/2035
05586A-AC-2	BSPT 2018-FL4 Issuer Lt-BSPT 2018-FL4	D	03/15/2022	VARIOUS		6,979,611	7,000,000	7,000,000	6,999,200	0	800	0	800	0	7,000,000	0	(20,389)	(20,389)	25,271	09/15/2035
05587T-AA-4	BSPT 2019-FL5 Issuer Lt-BSPT 2019-FL5	D	03/15/2022	VARIOUS		16,097,642	16,189,781	16,199,900	16,193,855	0	2,300	0	2,300	0	16,196,154	0	(98,512)	(98,512)	39,406	05/15/2029
05587T-AC-0	BSPT 2019-FL5 Issuer Lt-BSPT 2019-FL5	D	03/16/2022	WELLS FARGO		6,410,625	6,500,000	6,500,000	6,500,000	0	0	0	0	0	6,500,000	0	(89,375)	(89,375)	27,229	05/15/2029
05616M-AG-1	Babson CLO Ltd 2015-11-BABSN 2015-2A COM	D	06/02/2022	EXCHANGE OFFER		20,552,518	27,500,000	25,790,558	20,019,654	0	532,864	0	532,864	0	20,552,518	0	0	0	755,384	10/20/2030
05675Z-AN-8	Baidu Inc-SENIOR UNSECURED	D	05/10/2022	VARIOUS		10,068,350	10,000,000	9,954,600	9,967,288	0	1,972	0	1,972	0	9,969,259	0	99,091	99,091	240,365	11/14/2028
05683H-AN-5	Bain Capital Credit CLO -BCC 2017-2A AR2	D	03/17/2022	VARIOUS		49,481,775	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(518,225)	(518,225)	258,461	07/25/2034
064255-AW-2	Bank of Tokyo-Mitsubishi-JUNIOR SUBORDI	D	03/17/2022	WELLS FARGO		12,199,200	12,000,000	11,974,200	11,993,874	0	927	0	927	0	11,994,801	0	204,399	204,399	238,750	03/10/2024
06738E-AN-5	BARCLAYS PLC SR NOTE	D	01/19/2022	CREDIT SUISSE SECURI		21,449,800	20,000,000	19,918,400	19,963,919	0	501	0	501	0	19,964,419	0	1,485,381	1,485,381	459,375	01/12/2026
06738E-AU-9	Barclays PLC-SENIOR UNSECURED	D	12/08/2022	VARIOUS		15,860,750	17,000,000	17,000,000	17,000,000	0	0	0	0	0	17,000,000	0	(1,139,250)	(1,139,250)	1,043,289	01/10/2028
06738E-BD-6	Barclays PLC-SENIOR UNSECURED	D	01/18/2022	GOLDMAN		27,835,000	25,000,000	24,973,500	24,981,901	0	(24)	0	(24)	0	24,981,877	0	2,853,123	2,853,123	220,978	05/16/2029
06763C-AC-1	Babson CLO Ltd/Cayman Is-BABSN LP-2A SUB	D	12/30/2022	DIRECT		12,018,569	16,900,000	12,010,999	12,018,569	0	(6,967)	0	(6,967)	0	12,018,569	0	0	0	0	01/20/2034
09069Z-ZF-1	Biowish Technologies Int Promissory Note	C	03/31/2022	MATURITY		438,540	438,540	429,635	438,260	0	279	0	279	0	438,540	0	0	0	0	03/31/2022
09261M-AA-4	Blackrock Rainier CLO VI-BLKRM 2021-6A A	D	09/29/2022	VARIOUS		48,216,700	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(1,783,300)	(1,783,300)	1,167,684	04/20/2033
09659W-2C-7	BNP Paribas SA-BNP 3 1/2 11/16/27	D	01/18/2022	BNP PARIBAS		46,845,000	45,000,000	43,573,900	44,063,085	0	7,114	0	7,114	0	44,070,199	0	2,774,801	2,774,801	280,000	11/16/2027
110113-AL-2	Sky Ltd-SENIOR UNSECURED	D	01/18/2022	GOLDMAN		5,283,250	5,000,000	4,981,000	4,994,298	0	127	0	127	0	4,994,425	0	288,825	288,825	64,583	09/16/2024
111021-AL-5	British Telecommunicatio-SENIOR UNSECURE	D	10/28/2022	HSBC SECURITIES INC		9,191,100	10,000,000	9,959,000	9,970,358	0	2,919	0	2,919	0	9,973,277	0	(782,177)	(782,177)	465,521	12/04/2028
111021-AM-3	British Telecommunicatio-SENIOR UNSECURE	D	06/23/2022	U B S SECURITIES		5,024,950	5,000,000	4,998,650	4,999,651	0	67	0	67	0	4,999,718	0	25,232	25,232	126,875	12/04/2023
12528C-AQ-4	CFIP CLO 2014-1 Ltd-CFIP 2014-1A BR	D	05/17/2022	BAIRD		7,860,800	8,000,000	8,000,000	7,999,575	0	425	0	425	0	8,000,000	0	(139,200)	(139,200)	105,171	07/13/2029
12564C-AB-2	CK Hutchison Internation-SENIOR UNSECURE	D	04/29/2022	CITIGROUP GLOBAL MAR		9,683,600	10,000,000	9,923,700	9,941,803	0	2,594	0	2,594	0	9,944,397	0	(260,797)	(260,797)	203,403	04/11/2029
12807C-AA-1	Cal Funding IV Ltd-CAI 2020-1A A	D	12/25/2022	PAYDOWN		231,030	231,030	206,366	0	0	24,664	0	24,664	0	231,030	0	0	0	1,069	09/25/2045
13877P-AA-5	Canyon CLO 2021-4 Ltd-CANYC 2021-4A A	D	03/10/2022	VARIOUS		49,702,250	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(297,750)	(297,750)	274,122	10/15/2034
14316W-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	D	03/09/2022	VARIOUS		49,846,500	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(153,500)	(153,500)	274,366	10/15/2035
15137E-BN-2	Cent CLO 21 Ltd-CECLO 2014-21A A1R3	D	02/24/2022	VARIOUS		15,904,000	16,000,000	16,000,000	16,000,000	0	0	0	0	0	16,000,000	0	(96,000)	(96,000)	61,388	07/27/2030
15672R-AA-3	Cerberus Loan Funding XX-CERB 2018-3A A1	D	10/17/2022	PAYDOWN		1,113,047	1,113,047	1,113,047	1,112,796	0	251	0	251	0	1,113,047	0	0	0	20,463	07/15/2030
15672V-AA-4	Cerberus Loan Funding XX-CERB 2018-4RA A	D	11/22/2022	CALL 100		20,500,000	20,500,000	20,495,000	20,496,838	0	40,283	0	40,283	0	20,537,121	0	(37,121)	(37,121)	640,132	10/15/2030
15674L-AA-4	Cerberus Loan Funding XX-CERB 2021-2A A	D	06/23/2022	SMBC NIKKO SECURITIE		16,362,500	17,000,000	17,000,000	17,000,000	0	0	0	0	0	17,000,000	0	(637,500)	(637,500)	250,054	04/22/2033
15674P-AA-5	Cerberus Loan Funding XX-CERB 2021-3A A																			

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
28852E-AA-7	Ellington Clo II Ltd-ECLD 2017-2A A	D	11/15/2022	PAYDOWN		7,857,672	7,857,672	7,857,672	7,852,566	0	5,106	0	5,106	0	7,857,672	0	0	0	141,348	02/15/2029
28853R-AL-3	Ellington CLO IV Ltd-ECLD 2019-4A AR	D	05/17/2022	VARIOUS		6,161,811	6,186,076	6,186,076	6,186,076	0	0	0	0	0	6,186,075	0	(24,264)	(24,264)	57,804	04/15/2029
29278G-AA-6	Enel Finance Internation-SENIOR UNSECURE	D	01/21/2022	BNP PARIBAS		7,379,750	7,000,000	6,929,300	6,958,900	0	383	0	383	0	6,959,283	0	420,467	420,467	42,292	05/25/2027
29278G-AK-4	Enel Finance Internation-SENIOR UNSECURE	D	12/06/2022	JP MORGAN SECURITIES		6,582,310	7,000,000	6,846,070	6,884,803	0	12,286	0	12,286	0	6,897,089	0	(314,779)	(314,779)	335,563	06/14/2029
30217A-AB-9	Experian Finance PLC-SENIOR UNSECURED	D	08/01/2022	VARIOUS		9,884,500	10,000,000	9,991,900	9,994,305	0	618	0	618	0	9,994,923	0	(110,423)	(110,423)	420,278	02/01/2029
30260L-AA-3	FEL Energy VI Sarl-SECURED	D	12/01/2022	SINKING PAYMENT		46,298	46,298	41,668	0	4,630	0	0	4,630	0	46,298	0	0	0	1,915	12/01/2040
30312U-AA-1	FS Rialto 2019-FL1-FSRIA 2019-FL1 A	D	03/14/2022	VARIOUS		15,871,951	16,000,000	16,000,000	16,000,000	0	0	0	0	0	16,000,000	0	(128,049)	(128,049)	36,015	12/16/2036
314890-AA-2	Ferguson Finance PLC-SENIOR UNSECURED	D	11/14/2022	VARIOUS		18,398,900	20,000,000	19,930,000	19,950,031	0	6,083	0	6,083	0	19,956,114	0	(1,557,214)	(1,557,214)	938,125	10/24/2028
33938X-AB-1	Flex Ltd-SENIOR UNSECURED	D	11/10/2022	JP MORGAN SECURITIES		9,979,640	11,000,000	10,951,820	10,958,542	0	4,115	0	4,115	0	10,962,657	0	(983,017)	(983,017)	540,719	05/12/2030
34960J-AS-4	Fortress Credit Opportun-FCO 2015-6A A1T	D	10/11/2022	PAYDOWN		4,809,436	4,809,436	4,735,026	4,773,970	0	35,466	0	35,466	0	4,809,436	0	0	0	112,262	07/10/2030
34961L-AJ-8	Fortress Credit BSL IV L-FCBSL 2017-1A B	D	01/26/2022	PAYDOWN		3,000,000	3,000,000	2,949,375	2,975,659	0	24,341	0	24,341	0	3,000,000	0	0	0	30,600	10/26/2029
36319W-AJ-8	Galaxy XXIII CLO Ltd-GALXY 2017-23A COMB	D	06/22/2022	EXCHANGE OFFER		14,209,069	16,125,000	15,875,063	13,890,384	0	318,685	0	318,685	0	14,209,069	0	0	0	325,087	04/24/2029
36321P-AE-0	Galaxy Pipeline Assets B-SECURED	D	09/30/2022	SINKING PAYMENT		18,540	18,540	16,790	0	1,750	0	0	1,750	0	18,540	0	0	0	273	09/30/2040
38136Z-AL-6	GoldenTree Credit Opport-GTOCP 2012-1A A	D	12/15/2022	PAYDOWN		15,388,173	15,388,173	15,387,802	15,388,173	0	0	0	0	0	15,388,173	0	0	0	221,987	06/15/2034
38172F-AA-6	Golub Capital Partners C-GOCAP 2017-34A	D	05/25/2022	BARCLAYS CAPITAL INC		28,874,600	29,500,000	29,500,000	29,500,000	0	0	0	0	0	29,500,000	0	(625,400)	(625,400)	340,589	03/14/2031
38174Y-AA-3	Golub Capital Partners C-GOCAP 2015-24A	D	05/05/2022	AMHERST SECURITIES		12,390,750	12,500,000	12,500,000	12,498,814	0	1,186	0	1,186	0	12,500,000	0	(109,250)	(109,250)	118,748	11/05/2029
38175B-AA-2	Golub Capital Partners C-GOCAP 2018-36A	D	08/01/2022	VARIOUS		26,861,875	27,500,000	27,478,594	27,486,141	0	110,536	0	110,536	0	27,596,676	0	(734,801)	(734,801)	380,497	02/05/2031
38175L-AC-6	Golub Capital Partners C-GOCAP 2014-18A	D	04/21/2022	PAYDOWN		10,000,000	10,000,000	10,000,000	9,995,682	0	4,318	0	4,318	0	10,000,000	0	0	0	108,211	10/25/2029
38175N-AA-6	Golub Capital Partners C-GOCAP 2015-25A	D	05/02/2022	RBC CAPITAL MARKETS		7,950,000	8,000,000	8,001,250	8,000,568	0	3,710	0	3,710	0	8,004,278	0	(54,278)	(54,278)	64,139	05/05/2030
38175W-AA-6	Golub Capital Partners C-GOCAP 2016-31A	D	05/05/2022	JEFFERIESLLC		19,776,000	20,000,000	20,000,000	20,003,371	0	9,488	0	9,488	0	20,012,860	0	(236,860)	(236,860)	171,497	08/05/2030
38178E-AA-3	Golub Capital Partners C-GOCAP 2013-16A	D	06/29/2022	BARCLAYS CAPITAL INC		16,940,000	17,600,000	17,600,000	17,600,000	0	0	0	0	0	17,600,000	0	(660,000)	(660,000)	251,684	07/25/2033
38218J-AA-4	Goodgreen 2022-1-GOODG 2022-1A A	D	12/15/2022	PAYDOWN		2,562,124	2,562,124	2,561,264	0	861	0	0	861	0	2,562,124	0	0	0	46,045	10/15/2056
38218J-AB-2	Goodgreen 2022-1-GOODG 2022-1A B	D	11/15/2022	PAYDOWN		264,965	264,965	264,590	0	375	0	0	375	0	264,965	0	0	0	4,697	10/15/2056
38218J-AC-0	Goodgreen 2022-1-GOODG 2022-1A C	D	10/15/2022	PAYDOWN		161,109	161,109	160,652	0	457	0	0	457	0	161,109	0	0	0	0	10/15/2056
38411H-AA-3	GRACIE POINT INTERNATIONAL-GPIF 2022-1A A	D	10/01/2022	PAYDOWN		142	142	142	0	0	0	0	0	0	142	0	0	0	2	04/01/2024
390556-AL-2	Great Lakes CLO 2014-1 L-GRTLK 2014-1A A	D	10/17/2022	PAYDOWN		9,300,819	9,300,819	9,300,819	9,301,199	0	(380)	0	(380)	0	9,300,819	0	0	0	108,421	10/15/2029
39809L-AA-2	Greystone CRE Notes 2019-GSTNE 2019-FL2	D	01/19/2022	WELLS FARGO		28,000,000	28,000,000	27,899,609	27,930,800	0	624	0	624	0	27,931,423	0	68,577	68,577	37,101	09/15/2037
398186-AA-4	Griffin Coal Mining Co P-SENIOR UNSECURE	D	10/07/2022	SINKING PAYMENT		3,561	3,561	3,561	0	0	0	0	0	0	3,561	0	0	0	1	10/07/2023
40049J-BB-2	Grupo Televisa SAB-SENIOR UNSECURED	D	01/20/2022	MERRILL LYNCH INTERN		12,846,000	12,000,000	12,069,320	12,032,141	0	(173)	0	(173)	0	12,031,968	0	814,032	814,032	268,250	01/30/2026
404280-AW-9	HSBC Holdings PLC-SENIOR UNSECURED	D	01/19/2022	CREDIT SUISSE SECURI		8,605,040	8,000,000	7,988,400	7,994,959	0	131	0	131	0	7,995,089	0	609,951	609,951	127,089	03/08/2026
404280-BH-1	HSBC Holdings PLC-SUBORDINATED	D	07/26/2022	VARIOUS		12,867,270	13,000,000	12,975,780	12,987,674	0	1,084	0	1,084	0	12,988,759	0	(121,489)	(121,489)	387,066	11/23/2026
404280-BK-4	HSBC HOLDINGS PLC-SENIOR UNSECURED	D	01/19/2022	CREDIT SUISSE SECURI		30,693,310	29,000,000	28,609,200	28,737,779	0	2,194	0	2,194	0	28,739,974	0	1,953,336	1,953,336	416,672	03/13/2028
404280-CC-1	HSBC Holdings PLC-SENIOR UNSECURED	D	11/22/2022	BARINGSLLC		8,659,242	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(1,340,758)	(1,340,758)	397,300	05/22/2030
40434C-AD-7	HSBC USA INC-SR UNSECURED	D	03/17/2022	GOLDMAN		18,190,080	18,000,000	17,923,320	17,979,033	0	1,222	0	1,222	0	17,980,254	0	209,826	209,826	154,000	06/23/2024
43133A-AA-5	Hildene TruPS Financials-HITR 2018-1A A1	D	07/11/2022	PAYDOWN		3,014,019	3,014,019	2,953,738	2,966,317	0	47,702	0	47,702	0	3,014,019	0	0	0	30,442	10/10/2038
43133J-AA-6	Hildene TruPS Securitiza-HITR 2019-2A A1	D	05/23/2022	PAYDOWN		2,484,076	2,484,076	2,475,382	2,474,963	0	9,114	0	9,114	0	2,484,076	0	0	0	23,420	05/22/2039
440405-AE-8	HORZN 2018-1 A	D	12/15/2022	PAYDOWN		122,776	122,776	122,774	122,779	0	(3)	0	(3)	0	122,776	0	0	0	4,411	12/15/2038
44040H-AA-0	Horizon Aircraft Finance-HORZN 2019-1 A	D	12/15/2022	PAYDOWN		578,397	578,397	578,394	578,411	0	(14)	0	(14)	0	578,397	0	0	0	13,881	07/15/2039
44841C-AB-0	Hutchison Whampoa Intern-SENIOR UNSECURE	D	01/13/2022	MATURITY		5,000,000	5,000,000	4,962,500	4,999,838	0	162	0	162	0	5,000,000	0	0	0	115,625	01/13/2022
44841D-AB-8	Hutchison Whampoa Intern-SENIOR UNSECURE	D	04/29/2022	JP MORGAN SECURITIES		9,047,430	9,000,000	8,989,560	8,996,901	0	622	0	622	0	8,997,523	0	49,907	49,907	165,844	10/31/2024
44931B-AE-7	ICG US CLO 2015-1 LTD-ICG 2015-1A COMB	D	07/19/2022																	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
539439-AR-0	Lloyds Banking Group PLC-SENIOR UNSECURE	D	11/28/2022	GOLDMAN		19,617,990	21,000,000	20,855,420	20,903,181	0	12,482	0	12,482	0	20,915,663	0	(1,297,673)	(1,297,673)	1,092,292	03/22/2028
53944Y-AB-9	Lloyds Banking Group PLC-SUBORDINATED	D	01/19/2022	CREDIT SUISSE SECURI		19,431,900	18,000,000	17,999,150	18,000,537	0	79	0	79	0	18,000,616	0	1,431,284	1,431,284	272,025	03/24/2026
53944Y-AD-5	LLOYDS BANKING GROUP PLC-SENIOR UNSECURE	D	12/01/2022	VARIOUS		16,020,210	17,000,000	17,089,250	17,054,165	0	(8,457)	0	(8,457)	0	17,045,708	0	(1,025,498)	(1,025,498)	818,854	01/11/2027
53946J-AA-2	LoanCore 2019-CRE2 Issue-LNCR 2019-CRE2	D	08/15/2022	PAYDOWN		3,107,020	3,107,020	3,005,071	3,102,429	0	4,591	0	4,591	0	3,107,020	0	0	0	18,572	05/15/2036
53946M-AA-5	LoanCore 2018-CRE1 Issue-LNCR 2018-CRE1	D	10/15/2022	PAYDOWN		2,408,109	2,408,109	2,140,207	2,268,498	0	139,611	0	139,611	0	2,408,109	0	0	0	19,821	05/15/2028
55132H-AA-7	MMcapS Funding XVII Ltd-MMCAP 17A A1	D	03/01/2022	PAYDOWN		1,418	1,418	1,351	1,378	0	40	0	40	0	1,418	0	0	0	0	12/01/2035
55446M-AA-5	MACH 1 Cayman 2019-1 Ltd	D	12/15/2022	PAYDOWN		741,653	741,653	741,629	741,644	0	8	0	8	0	741,653	0	0	0	7,657	10/15/2039
55608J-AN-8	Macquarie Group Ltd-SENIOR UNSECURED	D	10/28/2022	DEUTSCHE BANK SECURI		3,626,160	4,000,000	4,000,000	4,000,000	0	0	0	0	0	4,000,000	0	(373,840)	(373,840)	203,742	03/27/2029
55608J-AP-3	Macquarie Group Ltd-SENIOR UNSECURED	D	12/01/2022	VARIOUS		13,926,560	15,000,000	15,000,000	15,000,197	0	(197)	0	(197)	0	15,000,000	0	(1,073,440)	(1,073,440)	1,019,183	01/15/2030
55608P-AQ-7	Macquarie Bank Ltd-SENIOR UNSECURED	D	01/20/2022	DEUTSCHE BANK SECURI		4,271,960	4,000,000	3,994,120	3,997,818	0	118	0	118	0	3,997,935	0	274,025	274,025	77,778	07/29/2025
55608P-AW-4	Macquarie Bank Ltd-SENIOR UNSECURED	D	01/18/2022	GOLDMAN		10,674,400	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	674,400	674,400	200,417	01/15/2026
55819Y-AA-8	Madison Park Funding XXV-MDPK 2017-26A A	D	02/09/2022	BOFAMLSEC		7,999,200	8,000,000	8,004,400	8,002,726	0	(76)	0	(76)	0	8,002,650	0	(3,450)	(3,450)	31,418	07/29/2030
55953P-AE-5	Magnetite XVI Ltd-MAGNE 2015-16A SUB	D	12/30/2022	DIRECT		1,287,504	3,500,000	3,088,750	836,845	0	(5,944)	0	(5,944)	0	1,287,504	0	0	0	251,651	01/18/2028
58003U-AA-6	MF1 2020-FL4 Ltd-MF1 2020-FL4 A	C	01/19/2022	WELLS FARGO		32,050,016	32,000,000	32,000,000	32,000,000	0	0	0	0	0	32,000,000	0	50,016	50,016	59,828	11/15/2035
58003U-AC-2	MF1 2020-FL4 Ltd-MF1 2020-FL4 AS	C	01/19/2022	WELLS FARGO		12,018,756	12,000,000	12,000,000	12,000,000	0	0	0	0	0	12,000,000	0	18,756	18,756	27,236	11/15/2035
59111R-AA-0	METAL 2017-1 LLC-METAL 2017-1 A	D	12/15/2022	PAYDOWN		212,669	212,669	212,669	212,676	0	7	0	7	0	212,669	0	0	0	6,405	10/15/2042
592838-AA-4	Mexico Generadora de Ene-SECURED	D	06/06/2022	CA CASH CLOSE		24,553	24,553	24,906	0	(2)	(2)	0	(2)	0	24,904	0	(351)	(351)	675	12/06/2032
59319W-AA-9	MF1 2020-FL3 Ltd-MF1 2020-FL3 A	C	01/19/2022	VARIOUS		13,180,918	13,180,918	13,180,918	13,180,918	0	0	0	0	0	13,180,918	0	0	0	29,007	07/15/2035
59319W-AB-7	MF1 2020-FL3 Ltd-MF1 2020-FL3 AS	C	08/15/2022	PAYDOWN		7,000,000	7,000,000	7,000,000	7,000,000	0	0	0	0	0	7,000,000	0	0	0	159,600	07/15/2035
606822-AN-4	Mitsubishi UFJ Financial-SENIOR UNSECURE	D	03/31/2022	MITSUBISHI UFJ SEC I		10,093,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	93,000	93,000	226,748	02/22/2027
60687Y-AT-6	Mizuho Financial Group I-SENIOR UNSECURE	D	11/22/2022	BARINGSLLC		9,231,805	10,000,000	9,950,500	9,963,873	0	3,550	0	3,550	0	9,967,423	0	(735,618)	(735,618)	296,598	09/11/2029
60688H-AA-3	MMcapS Funding XVIII Ltd-SECURED	D	06/27/2022	VARIOUS		28,555	28,555	22,010	21,754	0	5,999	0	5,999	0	27,753	0	802	802	16	12/26/2039
61033R-AJ-2	Monroe Capital Mml Clo 2-MOMML 2017-1A A	D	05/25/2022	VARIOUS		18,352,893	18,500,000	18,500,000	18,500,000	0	0	0	0	0	18,500,000	0	(147,107)	(147,107)	82,145	04/22/2029
61034H-AA-2	Monroe Capital MML Clo V-MOMML 2018-1A A	D	10/17/2022	PAYDOWN		1,464,904	1,464,904	1,464,904	1,465,126	0	(222)	0	(222)	0	1,464,904	0	0	0	30,640	04/15/2030
614810-AC-9	Sompo International Hold-SENIOR UNSECURE	D	10/15/2022	MATURITY		5,000,000	5,000,000	4,984,100	4,998,543	0	1,457	0	1,457	0	5,000,000	0	0	0	235,000	10/15/2022
62856R-AC-9	MYRIAD INTL HOLDINGS BV-SR UNSECURED	D	03/18/2022	GOLDMAN SACHS INTERN		6,581,250	6,500,000	6,497,530	6,499,126	0	(266)	0	(266)	0	6,498,861	0	82,389	82,389	239,326	07/21/2025
629470-AZ-1	NXP BV / NXP Funding LLC-SENIOR UNSECURE	D	02/17/2022	TORONTO DOMINION SEC		10,491,900	10,000,000	9,997,100	9,998,460	0	569	0	569	0	9,999,029	0	492,871	492,871	231,563	03/01/2024
62954H-AB-4	NXP BV / NXP Funding LLC-SENIOR UNSECURE	D	05/16/2022	EXCHANGE OFFER		6,981,983	7,000,000	6,975,780	6,981,313	0	669	0	669	0	6,981,983	0	0	0	123,744	06/18/2029
6325C0-DJ-7	National Australia Bank -SENIOR UNSECURE	D	05/25/2022	VARIOUS		19,809,050	20,000,000	19,980,000	19,989,826	0	310	0	310	0	19,990,136	0	(181,086)	(181,086)	612,500	01/10/2027
63959W-AE-9	Nationwide Building Soci-Subordinated	D	01/21/2022	GOLDMAN		33,410,048	31,600,000	30,860,606	31,205,144	0	5,283	0	5,283	0	31,210,427	0	2,199,621	2,199,621	459,956	09/14/2026
639602-BP-6	NATIONWIDE BLDG SOCIETY-SENIOR UNSECURED	D	03/31/2022	VARIOUS		48,769,360	48,000,000	48,463,900	48,195,151	0	(14,073)	0	(14,073)	0	48,181,078	0	588,282	588,282	1,298,267	07/21/2025
64129U-BS-3	Neuberger Berman CLO XVI-NEUB 2014-17A A	D	02/18/2022	WELLS FARGO		9,975,000	10,000,000	10,003,125	10,002,323	0	(105)	0	(105)	0	10,002,218	0	(27,218)	(27,218)	40,984	04/22/2029
65130P-AW-0	Newfleet CLO 2016-1 Ltd-NEUFL 2016-1A A2	D	10/20/2022	PAYDOWN		2,556,037	2,556,037	2,556,037	2,555,944	0	93	0	93	0	2,556,037	0	0	0	56,539	04/20/2028
65557F-AD-8	Nordea Bank Abp-Subordinated	D	09/21/2022	MATURITY		5,000,000	5,000,000	4,968,200	4,995,704	0	4,296	0	4,296	0	5,000,000	0	0	0	212,500	09/21/2022
67108F-AN-6	OZLM Funding IV Ltd-OZLMF 2013-4A A1R	D	03/16/2022	BOFAMLSEC		16,579,101	16,679,847	16,686,519	16,683,771	0	26,939	0	26,939	0	16,710,711	0	(131,610)	(131,610)	97,079	10/22/2030
67115L-AA-2	Oak Hill Credit Partners-OAKC 2021-16A A	D	03/09/2022	VARIOUS		47,133,875	47,500,000	47,500,000	47,500,000	0	0	0	0	0	47,500,000	0	(366,125)	(366,125)	278,361	10/18/2034
67389Y-AF-2	Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A COM	D	05/24/2022	VARIOUS		16,468,491	17,500,000	16,552,375	13,354,271	0	3,114,220	0	3,114,220	0	16,468,491	0	0	0	1,252,173	10/20/2027
67590A-BR-2	Octagon Investment Partn-Oct14 2012-1A A	D	04/20/2022	BNP PARIBAS		19,811,400	20,000,000	20,000,000	20,000,000	0	0	0	0	0	20,000,000	0	(188,600)	(188,600)	153,505	07/15/2029
675923-AG-1	Octagon Investment Partn-Oct34 2017-1A C	D	07/20/2022	PAYDOWN		25,441,500	25,441,500	25,036,980	22,342,337	0	3,099,163	0	3,099,163	0	25,441,500	0	0	0	578,710	01/20/2030
682337-AA-8	One Eleven Funding III L-OLFL 2019-3A A1	D	03/09/2022	BAIRD		18,180,900	18,000,000	18,000,000	18,000,000	0	0	0	0	0	18,000,000	0	180,900	180,900	301,750	07/19/2033
686330-AJ-0	ORIX Corp-SENIOR UNSECURED	D	03/31/2022	SMBC NIKKO SECURITIE		13,108,550	13,000,000	12,973,090	12,984,424	0	298	0	298	0	12,984,722	0	123,828	123,828	342,044	07/18/2027
686330-AL-5	ORIX Corp-SENIOR UNSECURED	D	03/17/2022	GOLDMAN		7,690,800	7,500,000	7,493,625	7,497,527	0	12	0	12	0	7,497,539	0	193,261	193,261	206,719	01/16/2024
69346T-AA-2	PPF 2019-5 Ltd-PPF 2019-5 A	D	01/19/2022	VARIOUS		612,209	612,209	606,087	607,668	0	562	0	562	0	608,230	0	3,979	3,979	645	04/14/2036
69346W-AA-5	PPF 2019-6 Ltd-PPF 2019-6 A	D	07/15/2022	PAYDOWN		369,630	369,630	385,490	387,807	0	1,823	0	1,823	0	369,630	0	0	0	2,068	04/14/2037
69702E-AA-3	Palmer Square CLO Ltd-PLMRS 2021-4A A	D	02/11/2022	WELLS FARGO		49,934,575	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(65,425)	(65,425)	249,446	10/15/2034
70469Q-AL-3	Peaks CLO 1 Ltd-PEAKS 2014-1A A2R	D	10/25/2022	PAYDOWN		717,591	717,591	673,736	685,092	0	32,499	0	32,499	0	717,591	0	0	0	18,235	07/25/2030
72353P-AA-4	Pioneer Aircraft Finance-Series 19-1 CLA	D	12/15/2022	PAYDOWN		1,518,885	1,518,885	1,518,876	1,518,859	0	26	0	26	0	1,518,885	0	0	0	30,513	06/15/2044
74040T-AC-7	Preferred Term Securitie-PRETSL FLOAT 12	D	09/23/2022	PAYDOWN		223,904	223,904	213,758	215,528	0	8,376	0	8,376	0	223,904	0	0	0	3,220	12/23/2031
74040Y-AB-8	Preferred Term Securitie-SECURED	D	10/03/2022	PAYDOWN		216,575	216,575	214,071	213,610	0	2,965	0	2,965	0	216,575	0	0	0	1,782	07/03/2033
74041C-AA-7	Preferred Term Securitie-SECURED	D	09/26/2022	PAYDOWN		942,503	942,503	723,095	712,108	0	230,395	0	230,395	0	942,503	0	0	0	6,692	09/26/2034

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
74042H-AB-3	Preferred Term Securitie-SECURED	D	.09/22/2022	PAYDOWN		58,062	58,062	49,394	50,633	0	7,428	0	7,428	0	58,062	0	0	0	337	12/22/2035
74042J-AA-1	Preferred Term Securitie-SECURED	D	.09/22/2022	PAYDOWN		1,315,861	1,315,861	1,111,469	1,156,330	0	159,531	0	159,531	0	1,315,861	0	0	0	13,100	03/22/2038
74042M-AA-4	Preferred Term Securitie-SECURED	D	.09/22/2022	PAYDOWN		1,169,669	1,169,669	1,016,471	1,001,758	0	167,911	0	167,911	0	1,169,669	0	0	0	11,556	09/22/2036
74042W-AA-2	Preferred Term Securitie-SECURED	D	.09/23/2022	PAYDOWN		1,823,985	1,823,985	1,731,841	1,793,885	0	30,100	0	30,100	0	1,823,985	0	0	0	18,573	09/23/2035
74043A-AC-5	Preferred Term Securitie-FIRST LIEN	D	.09/22/2022	PAYDOWN		190,337	190,337	218,874	137,167	0	53,170	0	53,170	0	190,337	0	0	0	270	12/22/2036
74043A-AD-3	Preferred Term Securitie-SECURED	D	.09/22/2022	PAYDOWN		2,641,873	2,641,873	2,451,988	2,467,930	0	173,943	0	173,943	0	2,641,873	0	0	0	4,173	12/22/2036
74043C-AA-5	Preferred Term Securitie-SECURED	D	.09/22/2022	PAYDOWN		977,206	977,206	746,443	782,389	0	194,817	0	194,817	0	977,206	0	0	0	5,598	03/22/2037
74951P-DQ-8	RESI Finance LP 2005-A-RESIF 2005-A B3	D	.11/10/2022	PAYDOWN		69,928	78,249	34,687	3,403	0	70,044	0	70,044	0	69,928	0	0	0	710	03/10/2037
77879R-AB-2	Rotor Engines Securitiza-ROTOR 2011-1A A	D	.08/15/2022	PAYDOWN		342,672	342,672	335,819	337,006	0	5,666	0	5,666	0	342,672	0	0	0	8,575	06/15/2046
780097-BA-8	Natwest Group PLC-SENIOR UNSECURED	D	.01/20/2022	JEFFERIESLLC		31,679,310	29,000,000	29,793,870	29,443,790	0	(6,101)	0	(6,101)	0	29,437,689	0	2,241,621	2,241,621	421,467	04/05/2026
780097-BD-2	Natwest Group PLC-SENIOR UNSECURED	D	.08/10/2022	CA CASH_CLOSE		21,974,700	22,000,000	21,648,860	21,901,511	0	34,445	0	34,445	0	21,935,956	0	38,744	38,744	776,722	09/12/2023
780097-BG-5	Natwest Group PLC-SENIOR UNSECURED	D	.12/06/2022	HSBC SECURITIES INC		21,647,370	23,000,000	23,000,000	23,000,000	0	0	0	0	0	23,000,000	0	(1,352,630)	(1,352,630)	1,187,669	05/18/2029
80283L-AJ-2	Santander UK PLC-SENIOR UNSECURED	D	.03/17/2022	GOLDMAN		18,999,156	18,600,000	18,825,552	18,659,716	0	(5,205)	0	(5,205)	0	18,654,512	0	344,644	344,644	388,533	03/13/2024
80306A-AA-8	SAPPHIRE AVIATION FINANC-SAPA 2018-1A A	D	.12/15/2022	PAYDOWN		790,205	790,205	795,519	793,598	0	(3,393)	0	(3,393)	0	790,205	0	0	0	17,016	03/15/2040
803169-AQ-4	Saranac CLO III Ltd-SRANC 2014-3A AFR	D	.03/09/2022	BNP PARIBAS		24,718,381	24,698,128	24,698,128	24,700,306	0	(262)	0	(262)	0	24,700,044	0	18,337	18,337	221,564	06/22/2030
80382S-AR-9	Sail Net Interest Margin-SAILN 2003-5 A	D	.05/27/2022	PAYDOWN		1,448	1,448	1	10	0	1,438	0	1,438	0	1,448	0	0	0	23	06/27/2033
806854-AH-8	Schlumberger Investment -SR UNSECURED	D	.03/18/2022	CITIGROUP GLOBAL MAR		6,102,000	6,000,000	5,979,600	5,995,702	0	375	0	375	0	5,996,077	0	105,923	105,923	67,525	12/01/2023
83368R-AK-8	Societe Generale SA-SOGEN 4 01/12/27	D	.08/23/2022	BARCLAYS CAPITAL INC		9,580,500	10,000,000	9,805,650	9,891,768	0	12,429	0	12,429	0	9,904,197	0	(323,697)	(323,697)	447,778	01/12/2027
83438J-AA-4	Soloso CDO 2007-1 Ltd-SERIES 2007-1A CLA	D	.10/07/2022	PAYDOWN		1,096,020	1,096,020	1,009,708	1,010,855	0	85,165	0	85,165	0	1,096,020	0	0	0	5,178	10/07/2037
83609Y-AC-0	Sounds Point CLO IV-R LT-SERIES 13-3RA C	D	.02/09/2022	BOFAILSEC		33,521,505	33,587,000	33,596,871	33,595,100	0	(236)	0	(236)	0	33,594,864	0	(73,359)	(73,359)	140,354	04/18/2031
85208H-AA-1	Sprite 2017-1 Ltd-SPRITE 2017-1 A	D	.04/15/2022	PAYDOWN		4,675,352	4,675,352	4,657,849	4,670,369	0	4,983	0	4,983	0	4,675,352	0	0	0	24,462	12/15/2037
853254-AZ-3	Standard Chartered PLC-SENIOR UNSECURED	D	.01/18/2022	GOLDMAN		10,593,400	10,000,000	9,972,300	9,987,104	0	136	0	136	0	9,987,241	0	606,159	606,159	110,250	04/12/2026
853254-BF-6	Standard Chartered PLC-SUBORDINATED	D	.09/20/2022	DEUTSCHE BANK SECURI		4,748,550	5,000,000	4,713,750	4,838,949	0	20,367	0	20,367	0	4,859,316	0	(110,766)	(110,766)	234,708	02/19/2027
85572R-AA-7	Start Ltd/Bermuda-STARR 2018-1 A	D	.12/15/2022	PAYDOWN		2,703,332	2,703,332	2,695,040	2,698,108	0	5,224	0	5,224	0	2,703,332	0	0	0	87,157	05/15/2043
85573L-AA-9	START Ireland-STARR 2019-1 A	D	.11/15/2022	PAYDOWN		787,514	787,514	787,479	787,507	0	8	0	8	0	787,514	0	0	0	15,279	03/15/2044
85771P-AN-2	Equinor ASA-SENIOR UNSECURED	D	.05/05/2022	BARCLAYS CAPITAL INC		10,073,200	10,000,000	9,992,700	9,998,457	0	164	0	164	0	9,998,621	0	74,579	74,579	254,889	03/01/2024
85816B-DE-7	Steele Creek CLO 2015-1 -STCR 2015-1A BR	D	.03/21/2022	PAYDOWN		11,237,500	11,237,500	11,237,500	11,237,500	0	0	0	0	0	11,237,500	0	0	0	62,488	05/21/2029
86562M-AY-6	Sumitomo Mitsui Financia-SENIOR UNSECURE	D	.07/26/2022	JANE		6,706,490	7,000,000	7,000,000	7,000,000	0	0	0	0	0	7,000,000	0	(293,510)	(293,510)	236,663	01/17/2028
870674-AA-6	Sweihan PV Power Co PJSC-SECURED	D	.07/31/2022	SINKING PAYMENT		7,496	7,496	7,184	0	0	313	0	313	0	7,496	0	0	0	143	01/31/2049
87168B-AC-4	SYMP-SYMP 2021-28A A	D	.03/09/2022	BOFAILSEC		49,450,250	50,000,000	50,000,000	50,000,000	0	0	0	0	0	50,000,000	0	(549,750)	(549,750)	303,517	10/23/2034
87267J-AA-1	TruPS Financials Note Se-TFINS 2018-2A A	D	.09/30/2022	PAYDOWN		3,090,356	3,090,356	3,090,356	3,088,915	0	1,441	0	1,441	0	3,090,356	0	0	0	28,622	09/30/2039
87268R-AA-2	TruPS Financials Note Se-TFINS 2019-2A A	D	.08/29/2022	PAYDOWN		597,379	597,379	597,379	597,379	0	0	0	0	0	597,379	0	0	0	3,786	02/28/2039
87275Q-AA-5	TPG Real Estate Finance -TRTX 2018-FL2 A	D	.02/17/2022	PAYDOWN		22,030,837	22,030,837	21,177,142	21,982,522	0	48,315	0	48,315	0	22,030,837	0	0	0	46,914	11/15/2037
87406Q-AW-6	Takeda Pharmaceutical Co-SENIOR UNSECURE	D	.07/19/2022	VARIOUS		31,112,330	30,500,000	30,363,400	30,401,949	0	6,004	0	6,004	0	30,407,952	0	704,378	704,378	960,069	11/26/2028
87938W-AT-0	Telefonica Emisiones SA-SENIOR UNSECURED	D	.07/19/2022	BNP PARIBAS		9,781,300	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(218,700)	(218,700)	356,733	03/08/2027
87974K-AS-3	Telos CLO 2014-5 Ltd-TELOS 2014-5A A2R	D	.10/17/2022	PAYDOWN		2,712,983	2,712,983	2,663,810	2,697,718	0	15,265	0	15,265	0	2,712,983	0	0	0	45,527	04/17/2028
88032W-AG-1	Tencent Holdings Ltd-SENIOR UNSECURED	D	.08/05/2022	VARIOUS		19,002,130	20,000,000	19,995,000	19,997,594	0	94	0	94	0	19,997,688	0	(995,558)	(995,558)	732,481	01/19/2028
88032W-AN-6	Tencent Holdings Ltd-SENIOR UNSECURED	D	.05/10/2022	CITIGROUP GLOBAL MAR		9,452,000	10,000,000	9,996,700	9,997,499	0	292	0	292	0	9,997,792	0	(545,792)	(545,792)	232,979	04/11/2029
88606W-AA-0	Thunderbolt Aircraft Lea-SERIES 17-A CLA	D	.12/15/2022	PAYDOWN		812,029	812,029	811,994	812,340	0	(312)	0	(312)	0	812,029	0	0	0	22,856	05/17/2032
88607A-AA-7	Thunderbolt III Aircraft-TBOLT 2019-1 A	D	.11/15/2022	PAYDOWN		491,761	491,761	491,742	491,754	0	7	0	7	0	491,761	0	0	0	6,760	11/15/2039
88631Y-AC-1	TIAA CLO IV Ltd-TIA 2018-1A A1B	D	.09/19/2022	CREDIT SUISSE SECURI		6,315,270	6,500,000	6,500,000	6,501,558	0	43,106	0	43,106	0	6,544,664	0	(22			

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
902133-AR-8	Tyco Electronics Group S-SENIOR UNSECURE	D	.03/18/2022	MORGAN		6,092,280	6,000,000	5,976,840	5,993,256	0	496	0	496	0	5,993,752	0	98,528	98,528	132,825	08/01/2024
902133-AT-4	Tyco Electronics Group S-SENIOR UNSECURE	D	.04/06/2022	MORGAN		10,110,400	10,000,000	9,975,700	9,989,424	0	586	0	586	0	9,990,010	0	120,390	120,390	239,472	02/15/2026
90261A-AB-8	UBS AG/Stamford CT-SUBORDINATED	D	.08/17/2022	MATURITY		7,000,000	7,000,000	7,044,000	7,003,924	0	(3,924)	0	(3,924)	0	7,000,000	0	0	0	533,750	08/17/2022
903329-AC-4	US Capital Funding I Ltd-USCAP FLOAT 05/	D	.08/01/2022	SINKING PAYMENT		8,405,833	8,405,833	8,123,842	8,201,645	0	204,188	0	204,188	0	8,405,833	0	0	0	75,334	05/01/2034
90342W-AA-5	US Capital Funding V Ltd-USCAP 2006-5A A	D	.10/11/2022	PAYDOWN		656,416	656,416	544,825	552,087	0	104,328	0	104,328	0	656,416	0	0	0	2,319	10/10/2040
90351D-AB-3	UBS GROUP FUNDING-SR UNSECURED	D	.04/11/2022	BOFAMLSEC		15,195,600	15,000,000	15,117,460	15,056,507	0	(3,584)	0	(3,584)	0	15,052,923	0	142,677	142,677	342,031	09/24/2025
90351D-AF-4	UBS GROUP FUNDING-SENIOR UNSECURED	D	.07/19/2022	VARIOUS		58,057,247	58,989,000	59,339,681	59,170,207	0	(19,020)	0	(19,020)	0	59,151,186	0	(1,093,939)	(1,093,939)	1,740,310	04/15/2026
90352J-AC-7	UBS GROUP FUNDING SWITZE-SENIOR UNSECURE	D	.01/20/2022	U B S SECURITIES		46,415,020	43,000,000	42,882,450	42,916,759	0	844	0	844	0	42,917,603	0	3,497,417	3,497,417	603,808	03/23/2028
90390K-AB-0	US Capital Funding II Lt-USCAP FLOAT 08/	D	.08/01/2022	CALL 100		2,005,228	2,005,228	1,980,790	1,976,497	0	956	0	956	0	1,977,453	0	27,775	27,775	14,647	08/01/2034
927320-AA-9	Vinci SA-SENIOR UNSECURED	D	.05/03/2022	BNP PARIBAS		9,678,900	10,000,000	9,975,200	9,981,096	0	991	0	991	0	9,982,086	0	(303,186)	(303,186)	213,542	04/10/2029
92857W-BK-5	Vodafone Group PLC-SENIOR UNSECURED	D	.06/27/2022	JP MORGAN SECURITIES		22,775,520	23,000,000	22,660,080	22,764,363	0	15,823	0	15,823	0	22,780,186	0	(4,666)	(4,666)	584,184	05/30/2028
94949J-AA-3	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A1	D	.03/03/2022	BOFAMLSEC		14,909,400	15,000,000	15,009,375	15,008,682	0	30,695	0	30,695	0	15,039,377	0	(129,977)	(129,977)	78,909	10/20/2031
95023A-AA-8	Wellfleet CLO Ltd-WELF 2021-2A A1	D	.03/22/2022	MORGAN		46,405,500	47,000,000	47,000,000	47,000,000	0	0	0	0	0	47,000,000	0	(594,500)	(594,500)	396,440	07/15/2034
961214-DF-7	Westpac Banking Corp-SUBORDINATED	D	.12/06/2022	MORGAN		5,535,200	6,000,000	6,000,000	6,000,000	0	0	0	0	0	6,000,000	0	(464,800)	(464,800)	270,125	11/23/2031
965249-AH-8	WhiteHorse IX Ltd-WITEH 2014-9A B2R	D	.01/17/2022	PAYDOWN		1,063,697	1,063,697	1,063,697	1,063,697	0	0	0	0	0	1,063,697	0	0	0	9,494	07/17/2026
96525W-AC-7	WhiteHorse X Ltd-WITEH 2015-10A B2	D	.10/17/2022	PAYDOWN		7,072,561	7,072,561	7,072,561	7,072,561	0	0	0	0	0	7,072,561	0	0	0	227,068	04/17/2027
97316D-AA-4	Wind River CLO Ltd-WINDR 2021-3A A	D	.02/24/2022	BARCLAYS CAPITAL INC		20,720,910	21,000,000	21,000,000	21,000,000	0	0	0	0	0	21,000,000	0	(279,090)	(279,090)	151,525	07/20/2033
97988B-AC-8	WOODMONT 2018-4 TRUST-WDMT 2018-4A A2	D	.04/11/2022	PAYDOWN		11,500,000	11,500,000	11,500,000	11,499,621	0	379	0	379	0	11,500,000	0	0	0	90,570	04/20/2030
97988L-AC-9	Woodmont 2018-5 Trust-WDMT 2018-5A A2	C	.04/11/2022	PAYDOWN		8,000,000	8,000,000	8,000,000	7,994,467	0	5,533	0	5,533	0	8,000,000	0	0	0	66,618	07/25/2030
97988W-AA-9	Woodmont 2020-7 Trust-WDMT 2020-7A A1A	C	.08/23/2022	CREDIT SUISSE SECURI		16,729,700	17,000,000	17,000,000	17,000,000	0	0	0	0	0	17,000,000	0	(270,300)	(270,300)	390,703	01/15/2032
980236-A0-6	Woodside Finance Ltd-SENIOR UNSECURED	D	.12/06/2022	BARCLAYS CAPITAL INC		9,497,000	10,000,000	9,981,700	9,986,314	0	1,427	0	1,427	0	9,987,741	0	(490,741)	(490,741)	567,500	03/04/2029
984851-AD-7	YARA INTERNATIONAL ASA-SENIOR UNSECURED	D	.12/21/2022	JP MORGAN SECURITIES		7,422,060	8,000,000	7,967,680	7,984,525	0	3,208	0	3,208	0	7,987,732	0	(565,672)	(565,672)	318,356	06/06/2026
984851-AF-2	Yara International ASA-SENIOR UNSECURED	D	.01/24/2022	STIFEL NICOLAUS		7,726,180	7,000,000	6,982,360	6,988,281	0	(38)	0	(38)	0	6,988,243	0	737,937	737,937	50,799	06/01/2028
98878C-AA-4	Z Capital Credit Partner-ZCOP 2018-1A A1	D	.10/17/2022	PAYDOWN		305,968	305,968	305,968	305,968	0	0	0	0	0	305,968	0	0	0	8,683	01/16/2031
98878C-AC-0	Z Capital Credit Partner-ZCOP 2018-1A A2	D	.10/17/2022	PAYDOWN		81,592	81,592	80,266	80,957	0	634	0	634	0	81,592	0	0	0	2,142	01/16/2031
98944P-AB-3	Zephyrus Capital Aviatio-ZCAP 2018-1 A	C	.12/15/2022	PAYDOWN		1,034,869	1,034,869	1,019,538	1,022,735	0	12,135	0	12,135	0	1,034,869	0	0	0	19,975	10/15/2038
P4900*-AA-4	Gran Americas Usme Provi Senior Secured	D	.11/30/2022	SINKING PAYMENT		517,829	517,829	517,829	517,829	0	0	0	0	0	517,829	0	0	0	6,229	03/31/2031
P4900*-AB-2	Gran Americas Usme Provi Senior Secured	D	.11/30/2022	SINKING PAYMENT		46,051	46,051	46,051	46,051	0	0	0	0	0	46,051	0	0	0	542	03/31/2031
Y5008*-AA-2	Knausen Holding LLC Senior Secured Notes	D	.10/15/2022	SINKING PAYMENT		752,400	752,400	752,400	752,400	0	0	0	0	0	752,400	0	0	0	0	07/15/2027
US0174-9P-A	Allegro CLO III Ltd	D	.12/31/2022	PAYDOWN		244,193,907	0	0	0	0	0	0	0	0	244,193,907	0	0	0	0	07/25/2027
249218-AJ-7	Denver City & County School District No 1 Pinebridge Private Credit Rated Feeder, L.P.	D	.12/31/2022	SINKPMT		313,318	0	0	0	0	0	0	0	0	313,328	0	0	0	0	12/15/2026
72303*-AA-7		D	.12/31/2022	PRINCIPAL REPAYMENT		359,213	0	0	0	0	0	0	0	0	359,213	0	0	0	0	12/31/2031
83416W-AA-1	SOLAR STAR FUNDING LLC-SECURED	D	.12/30/2022	SINKING PAYMENT		219,104	0	0	0	0	32	0	32	0	219,104	0	0	0	0	06/30/2035
1109999999 Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)						11,761,527,224	11,464,925,544	11,389,109,456	11,171,906,049	0	62,631,619	1,531,240	61,100,379	0	11,656,160,595	85,619	105,281,020	105,366,639	266,229,352	XXX
14387R-40-1	Carolina First Mortgage -SUBORDINATED	D	.12/28/2021	DIRECT		0	0	0	0	0	1,581,133	0	1,581,133	0	0	0	0	0	0	01/31/2031
69349A-AA-0	PNC Capital Trust C-PNC FLOAT 06/01/28	D	.11/17/2022	IMPERIAL CAPITAL		6,035,313	6,750,000	6,336,563	6,489,802	0	33,354	0	33,354	0	6,523,156	0	(487,843)	(487,843)	123,813	06/01/2028
654777-BA-0	State Street Corp-STT 5 5/8 PERP	D	.09/22/2022	CREDIT SUISSE SECURI		6,551,850	7,045,000	6,608,050	6,616,387	0	(276)	0	(276)	0	6,616,111	0	(64,261)	(64,261)	309,320	01/01/9999
654579-AA-9	NIPPON LIFE INSURANCE-SUBORDINATED	D	.10/18/2022	CALL 100		9,000,000	9,000,000	9,000,000	9,000,000	0	0	0	0	0	9,000,000	0	0	0	450,000	10/18/2042
1309999999 Subtotal - Bonds - Hybrid Securities						21,587,163	22,795,000	21,944,613	22,106,189	0	1,614,211	0	1,614,211	0	22,139,267	0	(552,104)	(552,104)	883,133	XXX
06759U-AA-1	Barings Clo Ltd 2022-II-BABSN 2022-2A A	D	.09/20/2022	CITIGROUP GLOBAL MAR		9,893,000	10,000,000	9,790,000	9,790,000	0	4,691	0	4,691	0	9,794,691	0	98,309	98,309	60,570	07/15/2035
06762L-AM-0	Barings CLO Ltd 2020-II-BABSN 2020-1A AR	D	.03/09/2022	BARCLAYS CAPITAL INC		39,591,000	40,000,000	40,000,000	40,000,000	0	0	0	0	0	40,000,000	0	(409,000)	(409,000)	214,837	10/15/2036
06763C-AE-7	Babson CLO Ltd/Cayman Is-BABSN LP-2A D	D	.10/20/2022	PAYDOWN		4,330,384	4,330,384	4,330,384	4,330,384	0	0	0	0	0	4,330,384	0</				

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
008438-AA-7	AffiniPay Midco, LLC/Term Loan 2/20		10/03/2022	CA_CASH_CLOSE		7,530	7,530	7,530	7,530	0	0	0	0	0	7,530	0	0	0	145	03/02/2026
008438-AB-5	AFFINIPAY MIDCO LLC - INCREMENTAL TERM		10/03/2022	CA_CASH_CLOSE		757	757	757	757	0	0	0	0	0	757	0	0	0	16	03/02/2026
008438-AC-3	AFFINIPAY MIDCO LLC - 2ND AMENDMENT TERM		10/03/2022	CA_CASH_CLOSE		1,875	1,875	1,875	1,875	0	0	0	0	0	1,875	0	0	0	40	03/02/2026
00910H-AG-0	Air Comm Corporation LLC - 2021 Incremental		12/30/2022	CA_CASH_CLOSE		47,125	47,125	47,125	47,125	0	0	0	0	0	47,125	0	0	0	600	06/01/2027
01370H-AA-4	Alcami Corporation/First Lien Term Loan		09/30/2022	CA_CASH_CLOSE		10,547	10,547	10,257	10,533	0	(138)	0	(138)	0	10,395	0	152	152	286	07/14/2025
02124T-AA-1	Qatar Airways Senior Term Loan		11/14/2022	CA_CASH_CLOSE		2,214,802	2,214,802	2,205,969	0	0	0	0	0	0	2,205,969	0	8,833	8,833	(11,046)	05/06/2031
02254G-AE-3	ALVOGN TL B-EXT 1L USD		06/30/2022	VARIOUS		6,834,800	7,800,000	7,410,000	0	0	0	0	0	0	7,410,000	0	(575,200)	(575,200)	0	12/31/2023
03233*-AA-1	Amtech Software - Term Loan		12/30/2022	CA_CASH_CLOSE		27,273	27,273	27,273	27,273	0	0	0	0	0	27,273	0	0	0	642	11/02/2027
03272*-AA-3	ANAQUA PARENT HOLDINGS INC. - TERM LOAN		12/30/2022	CA_CASH_CLOSE		1,488	1,488	1,488	1,488	0	0	0	0	0	1,488	0	0	0	51	04/10/2026
03272*-AB-1	ANAQUA PARENT HOLDINGS INC. - DELAYED D		12/30/2022	CA_CASH_CLOSE		53	53	53	0	0	0	0	0	0	53	0	0	0	1	10/10/2026
05351K-AF-6	Avant Credit Card Master Avant Master Tr		11/25/2022	VARIOUS		3,815,380	3,815,380	3,815,380	667,917	0	0	0	0	0	3,815,380	0	0	0	0	12/18/2023
05351K-A*-0	Avant Cr Card Master Tr 2021-VFN1 CI A		11/25/2022	VARIOUS		51,058,800	51,058,800	51,058,800	9,075,000	0	0	0	0	0	51,058,800	0	0	0	0	12/31/2023
05351K-A0-8	Avant Credit Card Master Avant Master Tr		11/25/2022	VARIOUS		5,873,820	5,873,820	5,873,820	673,750	0	0	0	0	0	5,873,820	0	0	0	0	12/18/2023
053658-AA-4	Avetta, LLC/Term Loan 4/18		12/30/2022	CA_CASH_CLOSE		21,025	21,025	20,601	21,106	0	(254)	0	(254)	0	20,852	0	173	173	849	04/10/2024
053658-AD-8	Avetta, LLC/Second Amendment Tranche B T		12/30/2022	CA_CASH_CLOSE		16,266	16,266	15,957	16,286	0	(165)	0	(165)	0	16,122	0	144	144	661	04/10/2024
053658-AE-6	AVETTA LLC - THIRD AMENDMENT TRANCHE B		12/30/2022	CA_CASH_CLOSE		2,091	2,091	2,091	2,091	0	0	0	0	0	2,091	0	0	0	85	04/10/2024
05464H-AA-2	Axiom Merger Sub Inc./Facility B Term Loan		09/30/2022	CA_CASH_CLOSE		10,548	10,548	10,168	10,465	0	(149)	0	(149)	0	10,316	0	232	232	2	04/10/2024
066838-AA-7	BANYAN SOFTWARE HOLDINGS LLC - TERM LOAN		12/30/2022	CA_CASH_CLOSE		4,199	4,199	4,199	4,199	0	0	0	0	0	4,199	0	0	0	144	10/30/2026
066838-AB-5	BANYAN SOFTWARE HOLDINGS LLC - DELAYED		12/30/2022	CA_CASH_CLOSE		3,581	3,581	3,581	3,581	0	0	0	0	0	3,581	0	0	0	141	10/30/2026
07386*-AA-7	Bearcat Buyer 1st Lien Term Loan		08/24/2022	CA_CASH_CLOSE		2,006,789	2,006,789	1,952,340	1,990,889	0	(19,299)	0	(19,299)	0	1,971,590	0	35,199	35,199	72,761	07/09/2026
07386*-AB-5	Bearcat Buyer, Inc.- Advarra (Delayed Dr		08/24/2022	CA_CASH_CLOSE		418,366	418,366	418,366	418,366	0	0	0	0	0	418,366	0	0	0	15,169	07/08/2026
07386*-AD-1	Bearcat Buyer, Inc./2019 Incremental Fir		08/24/2022	CA_CASH_CLOSE		344,254	344,254	336,509	341,735	0	(2,617)	0	(2,617)	0	339,118	0	5,136	5,136	12,482	07/09/2026
088908-AA-2	Beyond Risk - Term Loan		12/30/2022	CA_CASH_CLOSE		16,003	16,003	15,682	15,695	0	0	0	0	0	15,695	0	308	308	112	10/08/2027
088908-AB-0	Beyond Risk - Delayed Draw Term Loan		12/30/2022	CA_CASH_CLOSE		8,377	8,377	7,675	0	0	0	0	0	0	7,675	0	702	702	4	10/08/2027
10483*-AC-9	BRAGG LIVE FOOD PRODUCTS LLC - TERM LOAN		09/30/2022	CA_CASH_CLOSE		44,601	44,601	44,601	44,601	0	0	0	0	0	44,601	0	0	0	1,776	02/29/2025
10947U-AC-2	BrightSign - Term Loan		12/30/2022	CA_CASH_CLOSE		22,320	22,320	22,097	22,097	0	8	0	8	0	22,105	0	215	215	533	10/14/2027
124648-AA-0	CAI Software - Term Loan		12/30/2022	VARIOUS		29,620	29,620	29,028	0	0	(990)	0	(990)	0	29,028	0	592	592	543	12/10/2028
127138-AA-9	CST Buyer Company/Tranche B Term Loan 03		11/01/2022	CA_CASH_CLOSE		346,441	346,441	346,441	346,441	0	0	0	0	0	346,441	0	0	0	20,738	10/03/2025
12721H-AA-7	CVP Holdco, Inc./Delayed Draw Term Loan		12/30/2022	CA_CASH_CLOSE		5,213	5,213	5,213	5,213	0	0	0	0	0	5,213	0	0	0	219	10/31/2025
12721H-AB-5	CVP Holdco Inc./Term Loan 10/19		12/30/2022	CA_CASH_CLOSE		5,672	5,672	5,672	5,672	0	0	0	0	0	5,672	0	0	0	297	10/31/2025
12721H-AC-3	CVP HOLDCO INC. - DELAYED DRAW TERM LOAN		12/30/2022	CA_CASH_CLOSE		4,233	4,233	4,233	(814)	0	0	0	0	0	4,233	0	0	0	147	10/31/2025
127568-AA-7	Cogency Global - Term Loan		12/30/2022	CA_CASH_CLOSE		33,367	33,367	32,700	0	0	0	0	0	0	32,700	0	667	667	0	02/14/2028
12759H-AA-2	SELF SPV LLC - Revolving Senior Secured		11/24/2022	CA_CASH_CLOSE		4,000,000	4,000,000	4,000,000	0	0	0	0	0	0	4,000,000	0	0	0	0	12/20/2029
14314Z-MM-3	CARLYLE SECURED LENDING III SPV, - Senior		12/20/2022	CA_CASH_CLOSE		1,596,000	1,596,000	1,596,000	0	0	0	0	0	0	1,596,000	0	0	0	6,204	09/30/2030
148450-YH-6	OSP HAMILTON PURCHASER LLC INITIAL TERM		12/31/2021	DIRECT		0	0	0	0	0	37,018	0	37,018	0	0	0	0	0	0	12/28/2027
14855T-XX-6	Castlelake Aircraft Secu Class A Loans		09/23/2022	VARIOUS		3,526,949	3,529,781	3,525,842	0	0	0	0	0	0	3,525,842	0	1,107	1,107	0	08/03/2041
14886M-AM-3	Checkout Holding Corp-CHKOUT TL EXIT 1L		12/28/2021	DIRECT		0	0	0	0	0	65,948	0	65,948	0	0	0	0	0	0	02/15/2023
14886M-AN-1	Checkout Holding Corp-CHKOUT PIK-TERM EX		12/31/2021	DIRECT		0	0	0	0	0	824,562	0	824,562	0	0	0	0	0	0	08/15/2023
150311-RR-1	BOP International Inc. - 2021 Tranche B4		04/01/2022	VARIOUS		1,089,168	1,089,168	1,072,830	0	0	(21,229)	0	(21,229)	0	1,072,830	0	16,338	16,338	0	12/19/2024
156748-AA-9	Cerberus SWIC II		11/18/2022	VARIOUS		8,485,000	8,485,000	8,485,000	8,445,764	0	0	0	0	0	8,485,000	0	0	0	77,872	11/20/2025
16117L-BW-8	Charter Communications O-CHTR TL B1 1L U		12/30/2022	CA_CASH_CLOSE		40,816	40,816	34,694	34,694	0	2,024	0	2,024	0	36,718	0	4,098	4,098	316	04/30/2025
19076*-AA-7	COBALT BUYER SUB INC. - CLOSING DATE TE		09/30/2022	CA_CASH_CLOSE		2,109	2,109	2,109	2,109	0	0	0	0	0	2,109	0	0	0	67	10/02/2028
19076*-AB-5	COBALT BUYER SUB INC. - DELAYED DRAW TE		09/30/2022	CA_CASH_CLOSE		213	213	213	213	0	0	0	0	0	213	0	0	0	0	10/02/2028
21079H-AA-6	CONTINENTAL ACQUISITION HOLDINGS INC. -		09/30/2022	CA_CASH_CLOSE		4,578	4,578	4,578	4,578	0	0	0	0	0	4,578	0	0	0	149	01/20/2027
21079H-AB-4	CONTINENTAL ACQUISITION HOLDINGS INC. -		09/30/2022	CA_CASH_CLOSE		1,671	1,671	1,671	1,671	0	0	0	0	0	1,671	0	0	0	57	01/20/2027
22458H-AC-1	Crash Champions LLC - 2021 Delayed Draw		08/01/2022	CA_CASH_CLOSE		1,591,835	1,591,835	1,517,095	0	0	0	0	0	0	1,517,095	0	74,740	74,740	32,953	08/05/2025
23344U-AC-4	DS Admiral Bidco LLC-DSADBI TL 1L USD		07/29/2022	CA_CASH_CLOSE		16,875	16,875	16,875	16,875	0	0	0	0	0	16,875	0	0	0	582	03/16/2028
23363H-AB-5	DRS Holdings III Inc./Term Loan 11/19		12/30/2022	CA_CASH_CLOSE		40,077	40,077	40,077	40,077	0	0	0	0	0	40,077	0	0	0	1,534	11/01/2025
23363H-AC-3	DRS HOLDINGS III INC. - 2021 TERM LOAN		12/30/2022	CA_CASH_CLOSE		28,231	28,231	28,231	28,231	0	0	0	0	0	28,231	0	0	0	1,081	11/01/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
243608-AC-6	DECOPAC INC. - TERM B LOAN		09/30/2022	CA_CASH_CLOSE		6,334	6,334	6,334	6,334	0	0	0	0	0	6,334	0	0	0	191	05/15/2028
248238-AA-1	DENALI HOLDCO LLC		09/30/2022	CA_CASH_CLOSE		2,812	2,812	2,812	2,812	0	0	0	0	0	2,812	0	0	0	82	09/15/2027
254039-AN-6	DILIGENT CORPORATION (FKA DIAMOND MERGER		09/30/2022	CA_CASH_CLOSE		21,150	21,150	21,150	21,150	0	0	0	0	0	21,150	0	0	0	806	08/04/2025
254039-AR-7	DILIGENT CORPORATION		09/30/2022	CA_CASH_CLOSE		194	194	194	194	0	0	0	0	0	194	0	0	0	9	08/04/2025
254039-AT-3	DILIGENT CORPORATION (FKA DIAMOND MERGER		12/30/2022	CA_CASH_CLOSE		1,875	1,875	1,856	1,863	0	(3)	0	(3)	0	1,860	0	15	15	81	08/04/2025
254039-AU-0	DILIGENT CORPORATION (FKA DIAMOND MERGER		12/30/2022	CA_CASH_CLOSE		1,875	1,875	1,875	1,875	0	0	0	0	0	1,875	0	0	0	76	08/04/2025
254039-AW-6	Diligent Corporation - 2022 Delayed Draw		12/30/2022	CA_CASH_CLOSE		153	153	153	0	0	0	0	0	0	153	0	0	0	0	08/04/2025
26745L-AC-2	Dwyer Instruments Inc - Term Loan		09/30/2022	CA_CASH_CLOSE		1,528	1,528	1,498	0	0	0	0	0	0	1,497	0	31	31	0	07/01/2027
267899-AA-6	DYNAMIC NC AEROSPACE HOLDINGS LLC - TER		12/16/2022	CA_CASH_CLOSE		46,232	46,232	46,232	46,232	0	0	0	0	0	46,232	0	0	0	2,660	12/30/2026
268698-AA-1	Standard Elevator Systems - Term Loan		12/30/2022	VARIOUS		24,746	24,746	24,251	0	0	(604)	0	(604)	0	24,257	0	489	489	315	12/02/2027
268698-AB-9	Standard Elevator Systems - Delayed Draw		12/30/2022	CA_CASH_CLOSE		6,434	6,434	6,409	0	0	0	0	0	0	6,409	0	25	25	34	12/02/2027
268878-AA-9	EP WEALTH ADVISORS LLC - TERM LOAN		12/30/2022	CA_CASH_CLOSE		5,099	5,099	5,099	5,099	0	0	0	0	0	5,099	0	0	0	167	09/04/2026
268878-AB-7	EP WEALTH ADVISORS LLC - DELAYED DRAW T		12/30/2022	CA_CASH_CLOSE		5,310	5,310	5,310	5,310	0	0	0	0	0	5,310	0	0	0	128	09/04/2026
268888-AA-0	EPS Nass Parent Inc. - Term Loan		09/30/2022	CA_CASH_CLOSE		3,427	3,427	3,427	3,427	0	0	0	0	0	3,427	0	0	0	97	04/19/2028
268888-AB-8	EPS Nass Parent Inc. - Delayed Draw Term		09/30/2022	CA_CASH_CLOSE		128	128	128	0	0	0	0	0	0	128	0	0	0	3	04/19/2028
286199-AA-2	ELEMICA PARENT INC. - DELAYED DRAW TERM		09/30/2022	CA_CASH_CLOSE		1,777	1,777	1,777	1,777	0	0	0	0	0	1,777	0	0	0	60	09/18/2025
286199-AB-0	Elemica Parent Inc./Term Loan 9/19		12/30/2022	CA_CASH_CLOSE		12,240	12,240	11,934	12,167	0	(117)	0	(117)	0	12,050	0	190	190	472	09/18/2025
286199-AC-8	ELEMICA PARENT INC. - AMENDMENT NO. 1 T		12/30/2022	CA_CASH_CLOSE		1,328	1,328	1,328	1,328	0	0	0	0	0	1,328	0	0	0	51	09/18/2025
286199-AD-6	ELEMICA PARENT INC. - AMENDMENT NO. 1 D		12/30/2022	CA_CASH_CLOSE		3,433	3,433	3,433	3,433	0	0	0	0	0	3,433	0	0	0	131	09/18/2025
286228-AA-5	ELEVATION SERVICES PARENT HOLDINGS LLC		12/30/2022	CA_CASH_CLOSE		1,801	1,801	1,801	1,801	0	0	0	0	0	1,801	0	0	0	76	12/18/2026
286228-AB-3	ELEVATION SERVICES PARENT HOLDINGS LLC		12/30/2022	CA_CASH_CLOSE		1,836	1,836	1,836	1,836	0	0	0	0	0	1,836	0	0	0	54	12/18/2026
294277-AA-2	Goldcup 17308 AB/USD Term Loan 10/18		09/30/2022	CA_CASH_CLOSE		11,015	11,015	10,767	11,030	0	(131)	0	(131)	0	10,898	0	117	117	296	04/09/2026
296439-AA-0	EShipping LLC - Term Loan		11/30/2022	CA_CASH_CLOSE		393,536	393,536	385,665	385,859	0	0	0	0	0	385,859	0	7,677	7,677	12,728	11/05/2027
296688-AA-6	ESSENTIAL SERVICES HOLDING CORPORATION -		09/30/2022	CA_CASH_CLOSE		19,650	19,650	19,650	19,650	0	0	0	0	0	19,650	0	0	0	1,032	11/16/2026
296688-AB-4	ESSENTIAL SERVICES HOLDING CORPORATION -		12/30/2022	CA_CASH_CLOSE		10,541	10,541	10,541	10,541	0	0	0	0	0	10,541	0	0	0	393	11/16/2026
296688-AC-2	ESSENTIAL SERVICES HOLDING CORPORATION -		12/30/2022	CA_CASH_CLOSE		5,274	5,274	5,274	5,274	0	0	0	0	0	5,274	0	0	0	138	11/16/2026
303019-AA-1	FS GREIT FINANCE MM-1 LLC - Secured Term		12/07/2022	CA_CASH_CLOSE		49,104,756	49,104,756	49,104,756	28,925,000	0	0	0	0	0	49,104,756	0	0	0	378,172	09/20/2029
303199-AA-1	FSS Buyer LLC Initial Term Loan		12/30/2022	CA_CASH_CLOSE		74,530	74,530	73,040	73,040	0	72	0	72	0	73,111	0	1,419	1,419	1,469	08/31/2028
320139-AA-2	FIRST EAGLE DIRECT LENDING V-B, LLC - Se		10/31/2022	CA_CASH_CLOSE		1,330,145	1,330,145	1,330,145	0	0	0	0	0	0	1,330,145	0	0	0	11,657	06/16/2029
350429-AC-6	FOUNDATION CONSUMER BRANDS LLC - TERM L		11/07/2022	CA_CASH_CLOSE		58,378	58,378	58,378	58,378	0	0	0	0	0	58,378	0	0	0	2,150	10/01/2026
350428-AA-2	Foundation Finance Trust - Fixed Class A		12/15/2022	CA_CASH_CLOSE		10,562,961	10,562,961	10,531,187	0	0	0	0	0	0	10,531,187	0	31,774	31,774	58,953	10/15/2042
359219-AA-6	Frontline Technologies Intermediate Hold		09/30/2022	CA_CASH_CLOSE		1,490,354	1,490,354	1,484,327	1,491,317	0	(3,495)	0	(3,495)	0	1,487,822	0	2,532	2,532	56,306	09/18/2023
359218-AC-4	Frontline Technologies Intermediate Hold		10/04/2022	CA_CASH_CLOSE		600,254	600,254	600,254	600,254	0	0	0	0	0	600,254	0	0	0	83,130	09/18/2023
364577-AC-5	Galway Borrower LLC-1L SR SEC0		09/30/2022	CA_CASH_CLOSE		52	52	52	52	0	0	0	0	0	52	0	0	0	0	09/30/2028
364577-AD-3	GALWAY BORROWER LLC - CLOSING DATE TERM		06/30/2022	CA_CASH_CLOSE		2,444	2,444	2,444	0	0	0	0	0	0	2,444	0	0	0	0	09/29/2028
368508-AB-9	Gehl Foods LLC/Term Loan 1/18		05/31/2022	CA_CASH_CLOSE		3,209,149	3,209,149	3,121,943	3,176,906	0	0	0	0	0	3,176,907	0	32,242	32,242	271,193	01/25/2024
388778-AG-8	GraphPad Software Inc. ProteinMetrics In		09/30/2022	CA_CASH_CLOSE		24,457	24,457	24,212	24,216	0	0	0	0	0	24,216	0	241	241	268	04/27/2027
388778-AH-6	GraphPad Software Inc. DDTL		12/28/2021	DIRECT		0	0	0	0	0	(264)	0	(264)	0	0	0	0	0	0	04/27/2027
393419-AA-0	Green Street Parent LLC and Green Stree		10/17/2022	CA_CASH_CLOSE		5,865,000	5,865,000	5,747,700	5,826,245	0	(39,323)	0	(39,323)	0	5,786,922	0	78,078	78,078	236,872	08/27/2026
403438-AA-1	Gutter Buyer Inc.		12/31/2021	DIRECT		0	0	0	0	0	(250)	0	(250)	0	0	0	0	0	0	03/08/2025
404069-AD-4	HAI Acquisition Corporation/Term Loan 10		12/30/2022	CA_CASH_CLOSE		37,500	37,500	36,558	37,611	0	(528)	0	(528)	0	37,084	0	416	416	1,109	11/03/2025
404768-AB-5	Hanley Wood LLC - 2021 Incremental Term		12/28/2022	VARIOUS		49,560	49,560	48,569	0	0	(863)	0	(863)	0	48,580	0	980	980	608	12/10/2024
404768-AC-3	Hanley Wood LLC - 2021 Delayed Draw Term		12/28/2022	CA_CASH_CLOSE		5,383	5,383	5,383	0	0	0	0	0	0	5,383	0	0	0	13,036	12/10/2024
404819-AA-8	HH - STELLA INC. - INITIAL TERM LOAN		12/30/2022	CA_CASH_CLOSE		4,814	4,814	4,814	4,814	0	0	0	0	0	4,814	0	0	0	78	04/24/2028
404819-AB-6	HH - STELLA INC. - DELAYED DRAW TERM LO		12/30/2022	CA_CASH_CLOSE		427	427	427	427	0	0	0	0	0	427	0	0	0	17	04/24/2028
410499-TT-0	Hanley Wood LLC		12/31/2021	DIRECT		0	0	0	0	0	(1,235)	0	(1,235)	0	0	0	0	0	0	12/10/2024
419028-AA-9	Sigma Electric Manufacturing Corporation		09/30/2022	CA_CASH_CLOSE		126,551	126,551	124,009	127,425	0	(1,735)	0	(1,735)	0	125,691	0	860	860	3,725	10/31/2023
419028-AB-7	Sigma Electric Manufacturing Corporation		09/30/2022	CA_CASH_CLOSE		5,735	5,735	5,678	5,742	0	(32)	0	(32)	0	5,710	0	25	25	172	10/31/2023
429819-AA-9	HIGH STREET BUYER INC. - DELAYED DRAW T		12/30/2022	CA_CASH_CLOSE		3,605	3,605	3,605	3,605	0	0	0	0	0	3,605	0	0	0	128	04/14/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
42983#-AA-7	HIGH STREET BUYER INC. - TERM LOAN B		12/30/2022	CA_CASH_CLOSE		2,799	2,799	2,799	2,799	0	0	0	0	0	2,799	0	0	0	92	04/14/2028
42983#-AB-5	HIGH STREET BUYER INC. - DELAYED DRAW T		12/30/2022	CA_CASH_CLOSE		1,728	1,728	1,728	1,728	0	0	0	0	0	1,728	0	0	0	54	04/14/2028
42983#-AC-3	HIGH STREET BUYER INC. - DELAYED DRAW T		12/30/2022	CA_CASH_CLOSE		3,577	3,577	3,577	3,577	0	0	0	0	0	3,577	0	0	0	140	04/14/2028
44961#-AB-1	Implus Footcare LLC/Initial Term Loan 0		12/30/2022	CA_CASH_CLOSE		8,822	8,822	8,822	8,822	0	0	0	0	0	8,822	0	0	0	329	04/30/2024
45004K-AC-0	IRI Holdings Inc-TL 1L USD		08/01/2022	CA_CASH_CLOSE		1,818,750	1,818,750	1,800,563	1,816,309	0	(7,883)	0	(7,883)	0	1,808,425	0	10,325	10,325	52,877	12/03/2025
45054#-AA-6	ITI Intermodal - Term Loan		12/30/2022	CA_CASH_CLOSE		12,948	12,948	12,671	12,671	0	2	0	2	0	12,672	0	276	276	332	12/20/2027
45321#-AA-5	Implus Footcare LLC/Spenco Incremental		12/30/2022	CA_CASH_CLOSE		1,375	1,375	1,371	1,378	0	(3)	0	(3)	0	1,375	0	0	0	53	04/30/2024
45763F-AN-8	Inmar Inc-INMARI TL 1L USD		12/30/2022	CA_CASH_CLOSE		35,960	35,960	34,162	36,100	0	(970)	0	(970)	0	35,130	0	830	830	873	05/01/2024
46126#-AA-6	IntraPac International LLC/U.S. Term Loa		12/30/2022	CA_CASH_CLOSE		14,804	14,804	14,471	14,754	0	(142)	0	(142)	0	14,612	0	192	192	414	01/11/2026
46126#-AB-4	INTRAPAC PARENT INC. - FIRST AMENDMENT T		12/30/2022	CA_CASH_CLOSE		1,875	1,875	1,875	1,875	0	0	0	0	0	1,875	0	0	0	52	01/11/2026
46618#-ZZ-9	Henderson Park Real Estate Fund Entities		06/30/2022	CA_CASH_CLOSE		25,000,000	25,000,000	25,000,000	25,000,000	0	0	0	0	0	25,000,000	0	0	0	179,687	01/20/2024
47231#-MT-2	JEFFERIES DIRECT LENDING FUND II C SPE L		11/15/2022	VARIOUS		2,487,602	2,487,602	2,487,602	0	0	0	0	0	0	2,487,602	0	0	0	21,882	06/17/2031
47231#-MU-9	JEFFERIES DIRECT LENDING FUND II SPE LLC		11/15/2022	VARIOUS		12,530,050	12,530,050	12,530,050	0	0	0	0	0	0	12,530,050	0	0	0	107,299	06/17/2031
48234K-AC-6	K&N Parent Inc-KNENGR TL 1L USD		06/14/2022	VARIOUS		3,495,031	3,917,526	3,388,660	3,388,660	0	269,176	0	269,176	0	3,657,836	0	(162,805)	(162,805)	56,314	10/20/2023
48240#-AA-5	K2 Insurance Services LLC/Term Loan 7/1		12/30/2022	CA_CASH_CLOSE		47,367	47,367	46,115	47,366	0	(626)	0	(626)	0	46,740	0	627	627	1,250	07/01/2026
48240#-AB-3	K2 Insurance Services LLC/Delayed Draw		12/30/2022	CA_CASH_CLOSE		8,164	8,164	8,164	8,164	0	0	0	0	0	8,164	0	0	0	165	07/01/2026
48600#-AA-1	Katla Ventures Trust - Revolver		04/25/2022	CA_CASH_CLOSE		28,457	28,457	28,457	0	0	0	0	0	0	28,457	0	0	0	39	11/10/2024
48773#-AA-8	Kellermeyer Bergensons Services LLC/Ter		12/30/2022	CA_CASH_CLOSE		3,600	3,600	3,564	3,586	0	(11)	0	(11)	0	3,575	0	25	25	149	11/07/2026
48773#-AB-6	Kellermeyer Bergensons Services LLC/202		12/30/2022	CA_CASH_CLOSE		788	788	788	788	0	0	0	0	0	788	0	0	0	35	11/07/2026
48773#-AC-4	KELLERMEYER BERGENSONS SERVICES LLC - 2		12/31/2021	CA_CASH_CLOSE		(1,870)	(1,870)	(1,870)	(1,870)	0	0	0	0	0	(1,870)	0	0	0	0	11/07/2026
48773#-AD-2	KELLERMEYER BERGENSONS SERVICES LLC - A		09/30/2022	CA_CASH_CLOSE		15,271	15,271	14,966	15,019	0	(27)	0	(27)	0	14,992	0	279	279	646	11/07/2026
48881#-AB-5	Kene Acquisition Inc./Term Loan 8/19		12/30/2022	CA_CASH_CLOSE		12,324	12,324	12,013	(106)	0	(106)	0	(106)	0	12,119	0	205	205	285	08/10/2026
48881#-AC-3	Kene Acquisition Inc./Delayed Draw Term		12/30/2022	CA_CASH_CLOSE		2,052	2,052	2,052	2,052	0	0	0	0	0	2,052	0	0	0	0	08/10/2026
49375#-AA-0	DistroKid Senior Term Loa		12/30/2022	CA_CASH_CLOSE		87,068	87,068	85,326	85,326	0	73	0	73	0	85,400	0	1,668	1,668	2,101	09/30/2027
500500-XX-6	RedSail Technologies - 2022 Incremental		09/30/2022	CA_CASH_CLOSE		6,250	6,250	6,125	6,125	0	0	0	0	0	6,125	0	125	125	0	12/11/2027
50541#-AA-5	Laboratories Bidco LLC/Term Loan 9/19		12/30/2022	CA_CASH_CLOSE		4,532	4,532	4,532	4,532	0	0	0	0	0	4,532	0	0	0	97	07/23/2027
50541#-AB-3	Laboratories Bidco LLC/Second Amendment		12/30/2022	CA_CASH_CLOSE		718	718	718	718	0	0	0	0	0	718	0	0	0	15	07/23/2027
50541#-AC-1	LABORATORIES BIDCO LLC - THIRD AMENDMENT		12/30/2022	CA_CASH_CLOSE		4,602	4,602	4,602	4,602	0	0	0	0	0	4,602	0	0	0	176	07/23/2027
50541#-AD-9	LABORATORIES BIDCO LLC - TL		12/30/2022	CA_CASH_CLOSE		21,782	21,782	21,782	21,782	0	0	0	0	0	21,782	0	0	0	828	07/23/2027
50541#-AE-7	LABORATORIES BIDCO LLC - DELAYED DRAW TE		12/30/2022	CA_CASH_CLOSE		454	454	454	0	0	0	0	0	0	454	0	0	0	30	07/23/2027
51206#-AA-9	LAKERS BUYER INC. - TERM LOAN		09/30/2022	CA_CASH_CLOSE		3,531	3,531	3,531	3,531	0	0	0	0	0	3,531	0	0	0	41	03/22/2027
51206#-AB-7	LAKERS BUYER INC. - INITIAL DELAYED DRA		09/30/2022	CA_CASH_CLOSE		802	802	802	802	0	0	0	0	0	802	0	0	0	18	03/22/2027
52172#-AA-1	LeadsOnline - Term Loan		12/30/2022	CA_CASH_CLOSE		16,138	16,138	15,855	0	0	0	0	0	0	15,856	0	282	282	385	02/07/2028
53173#-AA-4	LIDO ADVISORS LLC - INITIAL TERM LOAN		09/30/2022	CA_CASH_CLOSE		1,675	1,675	1,675	1,675	0	0	0	0	0	1,675	0	0	0	48	06/15/2027
53186#-AB-1	LIFE EXTENSION INSTITUTE INC RESTATEMENT		12/30/2022	CA_CASH_CLOSE		37,765	37,765	37,765	37,765	0	0	0	0	0	37,765	0	0	0	978	02/19/2024
533021-CC-3	HTI Technology & Industries - 2022 Term		12/30/2022	CA_CASH_CLOSE		2,756	2,756	2,715	0	0	0	0	0	0	2,715	0	41	41	0	07/07/2025
	Cleaver-Brooks Inc - 2022 Term Loan		12/30/2022	CA_CASH_CLOSE		23,426	23,426	22,958	0	0	0	0	0	0	22,957	0	469	469	0	07/14/2028
54288#-AC-2	Illinois St Sales Tax Revenue - 2022 Inc		09/30/2022	CA_CASH_CLOSE		1,677	1,677	1,644	0	0	0	0	0	0	1,643	0	34	34	15	02/04/2028
55183#-AC-7	Lynx Franchising LLC - 2021-09 Increment		12/30/2022	VARIOUS		29,514	29,514	28,924	0	0	(3,393)	0	(3,393)	0	28,924	0	590	590	406	12/23/2026
55343#-AF-5	MJX Venture Mgmt III LLC Senior TL		07/22/2022	CA_CASH_CLOSE		37,500	37,500	37,500	0	0	0	0	0	0	37,500	0	0	0	0	07/30/2032
55371#-AU-9	MRI Software LLC/Term Loan 2/20		09/30/2022	CA_CASH_CLOSE		7,049	7,049	7,049	0	0	0	0	0	0	7,049	0	0	0	86	02/10/2026
55371#-AY-1	MRI SOFTWARE LLC - SECOND AMENMENT TERM		09/30/2022	CA_CASH_CLOSE		459	459	459	0	0	0	0	0	0	459	0	0	0	8	02/10/2026
55371#-AZ-8	MRI SOFTWARE LLC - TRANCHE 3 DELAYED DRA		12/31/2021	CA_CASH_CLOSE		7	7	7	7	0	0	0	0	0	7	0	0	0	0	02/10/2026
55410#-AA-4	MMIT HOLDINGS LLC		10/31/2022	CA_CASH_CLOSE		373,125	373,125	373,125	373,125	0	0	0	0	0	373,125	0	0	0	22,854	09/15/2027
55418#-AA-4	Mac Lean-Fogg Company/Term Loan 12/18		10/11/2022	CA_CASH_CLOSE		1,633,496	1,633,496	1,616,021	1,630,975	0	(7,487)	0	(7,487)	0	1,623,489	0	10,007	10,007	70,807	12/22/2025
55418#-AB-2	Mac Lean-Fogg Company/Delayed Draw Term		10/11/2022	CA_CASH_CLOSE		191,797	191,797	191,797	191,797	0	0	0	0	0	191,797	0	0	0	0	12/22/2025
564232-CC-8	ASC Communications LLC 2022 Term Loan		12/30/2022	CA_CASH_CLOSE		54,644	54,644	53,764	0	0	0	0	0	0	53,764	0	880	880	0	07/15/2027
56629#-AA-9	MARCONI YELLOWSTONE BUYER INC. - TERM LO		09/30/2022	CA_CASH_CLOSE		2,449	2,449	2,404	2,404	0	0	0	0	0	2,404	0	45	45	68	06/23/2028
56629#-AB-7	MARCONI YELLOWSTONE BUYER INC. - DELAYED		09/30/2022	CA_CASH_CLOSE		810	810	810	810	0	0	0	0	0	810	0	0	0	21	06/23/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
57233#-AB-1	Marshall Excelsior - Term Loan		09/30/2022	CA_CASH_CLOSE		3,374	3,374	3,315	0	0	0	0	0	0	3,315	0	59	59	54	02/18/2028
57780#-AA-2	MAVERICK ACQUISITION INC. - TERM LOAN		09/30/2022	CA_CASH_CLOSE		2,341	2,341	2,341	2,341	0	0	0	0	0	2,341	0	0	0	67	06/01/2027
57810J-AC-2	Amynta Agency Borrower I-MAYAGE TL B 1L		12/30/2022	CA_CASH_CLOSE		9,463	9,463	9,463	9,463	0	0	0	0	0	9,463	0	0	0	185	02/28/2025
59509#-AA-6	Micromeritics Instrument Corp./Term Loan		12/08/2022	CA_CASH_CLOSE		133,929	133,929	133,929	133,929	0	0	0	0	0	133,929	0	0	0	2,613	12/18/2025
60367#-AA-9	Ministry Brands LLC/Delayed Draw Term L		02/24/2022	CA_CASH_CLOSE		2,331,138	2,331,138	2,331,138	2,319,539	0	5,807	0	5,807	0	2,325,346	0	5,792	5,792	17,807	12/02/2022
60367#-AB-7	Ministry Brands LLC/Incremental Term Lo		02/24/2022	CA_CASH_CLOSE		265,173	265,173	262,503	266,707	0	(2,105)	0	(2,105)	0	264,602	0	571	571	2,026	12/02/2022
60367#-AD-3	Ministry Brands LLC/Delayed Draw Term L		02/24/2022	CA_CASH_CLOSE		51,283	51,283	51,283	51,281	0	1	1	1	0	51,282	0	1	1	392	12/02/2022
60937#-AA-8	MONICA HOLDCO (US) INC. - TERM LOAN		09/30/2022	CA_CASH_CLOSE		11,874	11,874	11,874	11,874	0	0	0	0	0	11,874	0	0	0	360	01/07/2028
61554#-AA-8	MOON VALLEY NURSERY OF ARIZONA RETAIL L		11/18/2022	CA_CASH_CLOSE		302,885	302,885	302,885	302,885	0	0	0	0	0	302,885	0	0	0	21,159	10/08/2027
61554#-AB-6	MOON VALLEY NURSERY OF ARIZONA RETAIL L		11/18/2022	CA_CASH_CLOSE		11,538	11,538	11,538	11,538	0	0	0	0	0	11,538	0	0	0	705	10/08/2027
62900#-AA-9	NCWS INTERMEDIATE INC. - DELAYED DRAW T		12/30/2022	CA_CASH_CLOSE		763	763	763	763	0	0	0	0	0	763	0	0	0	31	12/29/2026
62900#-AB-7	NCWS INTERMEDIATE INC. - CLOSING DATE T		12/30/2022	CA_CASH_CLOSE		2,888	2,888	2,888	2,888	0	0	0	0	0	2,888	0	0	0	106	12/29/2026
62901#-AA-6	National Auto Care - Term Loan		12/30/2022	CA_CASH_CLOSE		203,075	203,075	200,537	200,537	0	0	0	0	0	200,537	0	2,538	2,538	3,517	09/28/2024
62901#-AB-4	National Auto Care - Delayed Draw Term L		09/30/2022	CA_CASH_CLOSE		2,862	2,862	2,862	2,862	0	0	0	0	0	2,862	0	0	0	70	09/28/2024
62929#-AA-2	NI GRC Holdco LLC/Term Loan 1/18		05/26/2022	CA_CASH_CLOSE		2,860,537	2,860,537	2,860,537	2,860,179	0	0	0	0	0	2,860,537	0	0	0	95,730	02/09/2024
62929#-AB-0	NI GRC Holdco LLC/Delayed Draw Term Loa		05/26/2022	VARIOUS		795,087	795,087	795,087	795,087	0	0	0	0	0	795,087	0	0	0	24,585	02/09/2024
62931#-AA-2	NMC Skincare Intermediate Holdings II L		12/30/2022	CA_CASH_CLOSE		5,839	5,839	5,703	5,844	0	(71)	0	(71)	0	5,774	0	65	65	162	10/31/2024
62931#-AC-8	NMC Skincare Intermediate Holdings II L		12/30/2022	CA_CASH_CLOSE		1,946	1,946	1,946	1,946	0	0	0	0	0	1,946	0	0	0	54	10/31/2024
62976#-AB-6	NSM Insurance Group LLC/Dollar Term Loa		08/01/2022	CA_CASH_CLOSE		4,026,651	4,026,651	4,026,651	4,026,651	0	0	0	0	0	4,026,651	0	0	0	156,656	05/11/2026
63086#-AA-3	Narda-MITEQ - Incremental Term Loan		09/30/2022	CA_CASH_CLOSE		4,152	4,152	4,079	4,079	0	0	0	0	0	4,079	0	73	73	66	12/06/2027
64027#-AA-3	NELIPAK HOLDINGS US TL L+425 07/02/2026		12/30/2022	CA_CASH_CLOSE		12,581	12,581	12,330	12,509	0	(90)	0	(90)	0	12,419	0	162	162	290	07/02/2026
64027#-AB-1	NELIPAK HOLDING INC TL L+425 07/02/2026		09/30/2022	CA_CASH_CLOSE		1,406	1,406	1,378	1,398	0	(10)	0	(10)	0	1,388	0	18	18	31	07/02/2026
65658#-AA-2	NORTH HAVEN FALCON BUYER LLC - TERM LOA		09/30/2022	CA_CASH_CLOSE		2,125	2,125	2,125	2,125	0	0	0	0	0	2,125	0	0	0	78	05/19/2027
65658#-AB-0	NORTH HAVEN FALCON BUYER LLC - DELAYED		12/30/2022	CA_CASH_CLOSE		381	381	381	381	0	0	0	0	0	381	0	0	0	5	05/19/2027
65716#-AB-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		12/30/2022	CA_CASH_CLOSE		733	733	733	733	0	0	0	0	0	733	0	0	0	14	09/15/2027
65716#-AA-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		12/30/2022	CA_CASH_CLOSE		3,852	3,852	3,852	3,852	0	0	0	0	0	3,852	0	0	0	147	09/15/2027
65716#-AB-2	NORTH AMERICAN SCIENCE ASSOCIATES INC.		12/30/2022	CA_CASH_CLOSE		559	559	559	559	0	0	0	0	0	559	0	0	0	21	09/15/2027
66703#-AA-9	Northstar Recycling - Senior Term Loan		12/30/2022	CA_CASH_CLOSE		12,928	12,928	12,670	12,670	0	11	0	11	0	12,680	0	248	248	276	10/01/2028
67008#-AA-9	TERM LOAN - LX191049		06/30/2022	CA_CASH_CLOSE		8,345	8,345	8,345	8,345	0	0	0	0	0	8,345	0	0	0	159	12/01/2026
67096#-AA-0	OMH-HealthEdge Holdings LLC/Term Loan 9		12/30/2022	CA_CASH_CLOSE		2,579	2,579	2,579	2,579	0	0	0	0	0	2,579	0	0	0	77	10/24/2025
67096#-AC-6	OMH-HEALTHEDGE HOLDINGS LLC - FIRST AME		12/30/2022	CA_CASH_CLOSE		1,999	1,999	1,999	1,999	0	0	0	0	0	1,999	0	0	0	33	10/24/2025
67100#-AA-2	OC III LVS XXVI LP - Secured Loan Facili		11/15/2022	CA_CASH_CLOSE		1,611,811	1,611,811	1,611,811	1,611,811	0	0	0	0	0	1,611,811	0	0	0	15,683	11/09/2030
67101#-AA-3	OR TECH FING I LLC Term Loan		12/22/2022	CA_CASH_CLOSE		54,777,778	54,777,778	54,777,778	54,777,778	0	0	0	0	0	54,777,778	0	0	0	1,686,641	08/11/2030
67114#-AA-0	ORCC Financing IV LLC		10/03/2022	CA_CASH_CLOSE		12,400,000	12,400,000	12,400,000	12,400,000	0	0	0	0	0	12,400,000	0	0	0	0	10/02/2029
67115#-AC-4	Omega Holdings - Senior Term Loan		09/30/2022	CA_CASH_CLOSE		1,015	1,015	995	995	0	0	0	0	0	995	0	20	20	15	03/31/2029
67116#-AA-4	OSP HAMILTON PURCHASER LLC INITIAL TERM		12/30/2022	CA_CASH_CLOSE		43,967	43,967	43,088	43,088	0	2	0	2	0	43,089	0	878	878	878	12/27/2027
67117#-AA-7	OA BUYER INC INITIAL TERM LN		12/30/2022	CA_CASH_CLOSE		28,084	28,084	27,523	27,523	0	0	0	0	0	27,522	0	562	562	487	12/20/2028
68144#-AA-8	OLYMPIA ACQUISITION INC. - PIK TERM LOA		02/28/2022	BANK LOANS BARBON CA		11,639	11,639	11,639	10,701	0	0	0	0	0	11,639	0	0	0	0	09/24/2026
69345Y-AB-0	Wok Holdings Inc-PF08 TL B 1L USD		12/21/2022	VARIOUS		4,289,846	4,841,398	4,613,689	4,613,689	0	81,346	0	81,346	0	4,695,035	0	(405,189)	(405,189)	133,625	03/02/2026
69398#-AD-7	POI TA Holdings Inc. - 2019 1st Lien Ter		09/30/2022	CA_CASH_CLOSE		41,999	41,999	41,953	41,999	0	(23)	0	(23)	0	41,976	0	23	23	0	10/24/2025
69429#-AA-4	PDQ (PDQ TOPCO LP) First Lien Term		12/30/2022	CA_CASH_CLOSE		44,373	44,373	44,373	44,373	0	0	0	0	0	44,373	0	0	0	505	08/27/2027
69429#-AB-2	PDQ (PDQ TOPCO LP) DDTL		09/30/2022	CA_CASH_CLOSE		22,789	22,789	22,789	22,789	0	0	0	0	0	22,789	0	0	0	514	08/27/2027
70216#-AA-1	PARTNERS GROUP PRIVATE EQUITY II, LLC -		10/24/2022	CA_CASH_CLOSE		17,500,000	17,500,000	17,500,000	17,500,000	0	0	0	0	0	17,500,000	0	0	0	275,832	06/09/2032
70466#-AA-6	Polymer Solutions Group Holdings LLC - T		12/30/2022	CA_CASH_CLOSE		70,097	70,097	70,097	70,097	0	0	0	0	0	70,097	0	0	0	2,230	01/01/2023
70476X-AJ-4	PetVet Care Centers, LLC - 2020 Incremen		03/31/2022	CA_CASH_CLOSE		3,954	3,954	3,954	3,954	0	0	0	0	0	3,954	0	0	0	0	02/14/2025
70559#-AA-4	Pegasus Global Enterprise Holdings LLC/		09/30/2022	CA_CASH_CLOSE		12,417	12,417	12,097	12,373	0	(138)	0	(138)	0	12,235	0	182	182	325	05/29/2025
70559#-AB-2	Pegasus Global Enterprise Holdings LLC/		09/30/2022	CA_CASH_CLOSE		3,587	3,587	3,587	3,587	0	0	0	0	0	3,587	0	0	0	117	05/29/2025
70559#-AD-8	Pegasus Global Enterprise Holdings LLC		09/30/2022	CA_CASH_CLOSE		3,587	3,587	3,587	3,587	0	0	0	0	0	3,587	0	0	0	126	05/29/2025
70559#-AE-6	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC		09/30/2022	CA_CASH_CLOSE		3,360	3,360	3,360	3,360	0	0	0	0	0	3,360	0	0	0	118	05/29/2025

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
70559@-AF-3	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC		..06/30/2022	CA_CASH_CLOSE		506	506	506	506	0	0	0	0	0	506	0	0	0	13	..05/29/2025
71384P-A#-8	Perimeter Master Note Business Trust - S		..05/13/2022	BANK LOANS BABSON CA		11	11	11	0	0	0	0	0	0	11	0	0	0	0	..11/15/2030
71384P-A#-8	Perimeter Master Note Business Trust - S		..05/13/2022	BANK LOANS BABSON CA		34	34	34	0	0	0	0	0	0	34	0	0	0	0	..11/15/2030
71384P-A#-8	Perimeter Master Note Business Trust - S		..05/13/2022	BANK LOANS BABSON CA		26	26	26	0	0	0	0	0	0	26	0	0	0	0	..11/15/2030
71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		..12/31/2022	VARIOUS	1,901,208	1,901,208	52,283	0	0	0	1,556,131	1,494,907	61,224	0	52,283	0	1,848,925	1,848,925	0	..12/31/2022
71667*-AA-3	Petroleum Service Group LLC/Delayed Draw		..10/03/2022	CA_CASH_CLOSE	545	545	545	545	0	0	0	0	0	0	545	0	0	0	12	..07/23/2025
71667*-AB-1	Petroleum Service Group LLC/Term Loan 7/		..07/01/2022	CA_CASH_CLOSE	20,501	20,501	20,045	20,230	0	0	0	0	0	0	20,230	0	271	271	367	..07/23/2025
73103@-AA-9	Polara - Term Loan		..12/30/2022	CA_CASH_CLOSE	14,535	14,535	14,244	14,244	0	0	2	0	2	0	14,244	0	289	289	196	..12/03/2027
73103@-AB-7	Polara - 2022 Incremental Term Loan		..12/30/2022	CA_CASH_CLOSE	10,025	10,025	9,825	0	0	0	0	0	0	0	9,824	0	201	201	101	..03/24/2028
73112@-AB-6	Policy Services Company, 1L PIK Toggle T		..01/31/2022	BANK LOANS BABSON CA	7,147,368	7,368,421	7,147,368	0	0	0	0	0	0	0	7,147,368	0	0	0	0	..06/21/2026
73112@-AC-4	Policy Services Company, 1L PIK Toggle D		..01/31/2022	BANK LOANS BABSON CA	1,236,842	1,315,789	1,236,842	0	0	0	0	0	0	0	1,236,842	0	0	0	0	..06/21/2026
74066*-AA-4	PREMIER SPECIALTIES INC. - TERM LOAN		..12/30/2022	CA_CASH_CLOSE	2,952	2,952	2,952	0	0	0	0	0	0	0	2,952	0	0	0	108	..08/20/2027
74140#-AA-0	Project Potter Buyer LLC - Term Loan		..12/30/2022	CA_CASH_CLOSE	13,676	13,676	13,676	0	0	0	0	0	0	0	13,676	0	0	0	602	..04/17/2027
74140#-AB-8	PROJECT POTTER BUYER LLC - 2020 INCREME		..12/30/2022	CA_CASH_CLOSE	3,005	3,005	3,005	3,005	0	0	0	0	0	0	3,005	0	0	0	120	..04/23/2027
74140#-AC-6	PROJECT POTTER BUYER LLC - TERM LOAN		..12/30/2022	CA_CASH_CLOSE	3,416	3,416	3,416	3,416	0	0	0	0	0	0	3,416	0	0	0	150	..04/23/2027
74140#-AD-1	PROJECT POTTER BUYER LLC - DELAYED DRAW		..12/30/2022	CA_CASH_CLOSE	1,159	1,159	1,159	0	0	0	0	0	0	0	1,159	0	0	0	46	..04/23/2027
74142K-AF-6	Pretium Packaging, LLC First lien term		..12/30/2022	CA_CASH_CLOSE	5,918	5,918	5,889	5,889	0	0	0	0	0	0	5,889	0	29	29	118	..10/02/2028
74273J-AE-3	Pro Mach Inc. First Lien Term		..12/30/2022	VARIOUS	20,170	20,170	20,170	0	0	0	(395)	0	(395)	0	20,170	0	0	0	356	..08/31/2028
74273J-AF-0	Pro Mach Inc. Delayed Draw Te		..12/31/2021	VARIOUS	0	0	0	0	0	0	(73)	0	(73)	0	0	0	0	0	0	..08/31/2028
74309#-AA-7	PRODUCTION RESOURCE GROUP L.L.C. - DELA		..07/01/2022	CA_CASH_CLOSE	8	8	8	8	0	0	0	0	0	0	8	0	0	0	21	..08/21/2024
74309#-AC-3	PRODUCTION RESOURCE GROUP L.L.C. - DELA		..09/30/2022	CA_CASH_CLOSE	674	674	674	674	0	0	0	0	0	0	674	0	0	0	0	..08/21/2024
74309#-AD-1	PRODUCTION RESOURCE GROUP L.L.C. - SECO		..09/30/2022	CA_CASH_CLOSE	920	920	920	(460)	0	0	0	0	0	0	920	0	0	0	4	..08/21/2024
74354#-AA-1	PROJECT ESSENTIAL BIDCO LLC - TERM LOAN		..09/30/2022	CA_CASH_CLOSE	2,813	2,813	2,813	2,813	0	0	0	0	0	0	2,813	0	0	0	96	..04/20/2028
74719#-AA-1	Pyramid Management Advisors LLC/Term Lo		..09/30/2022	CA_CASH_CLOSE	11,194	11,194	11,194	11,194	0	0	0	0	0	0	11,194	0	0	0	158	..07/15/2023
74719#-AB-9	Pyramid Management Advisors LLC/Delayed		..09/30/2022	CA_CASH_CLOSE	4,145	4,145	4,145	4,145	0	0	0	0	0	0	4,145	0	0	0	148	..07/15/2023
74719#-AC-7	Pyramid Management Advisors LLC/Delayed		..09/30/2022	CA_CASH_CLOSE	639	639	639	639	0	0	0	0	0	0	639	0	0	0	17	..07/15/2023
74741@-AA-5	Olympia Acquisition Inc./Term Loan 9/19		..02/28/2022	CA_CASH_CLOSE	830	830	830	830	0	0	0	0	0	0	830	0	0	0	5	..09/24/2026
75000#-AE-8	RSC Acquisition Inc./Term Loan 10/19		..12/30/2022	CA_CASH_CLOSE	6,444	6,444	6,444	6,444	0	0	0	0	0	0	6,444	0	0	0	66	..10/30/2026
75046T-AB-0	Radius Aerospace Inc-RADAER TL 1L USD		..01/31/2022	CA_CASH_CLOSE	39,191	39,191	38,505	38,821	0	0	0	0	0	0	38,821	0	370	370	0	..03/29/2025
75333*-AA-8	RFS ASSET SECURITIZATION III, LLC - 1st		..11/03/2022	CA_CASH_CLOSE	948,257	948,257	948,257	0	0	0	0	0	0	0	948,257	0	0	0	0	..03/30/2029
75333*-AB-6	RFS ASSET SECURITIZATION III, LLC - 1st		..11/03/2022	CA_CASH_CLOSE	98,125	98,125	98,125	0	0	0	0	0	0	0	98,125	0	0	0	0	..03/30/2029
75445@-AA-1	RAWLINGS SPORTING GOODS COMPANY INC - T		..12/30/2022	CA_CASH_CLOSE	8,470	8,470	8,470	8,470	0	0	0	0	0	0	8,470	0	0	0	289	..12/31/2026
75734@-AB-9	Reddy Ice Holdings Inc./Term Loan 7/19		..09/30/2022	CA_CASH_CLOSE	35,529	35,529	34,395	35,340	0	0	(473)	0	(473)	0	34,867	0	662	662	1,351	..07/01/2025
75734@-AC-7	Reddy Ice Holdings Inc./Delayed Draw Te		..09/30/2022	CA_CASH_CLOSE	3,149	3,149	3,149	3,149	0	0	0	0	0	0	3,149	0	0	0	0	..07/01/2025
75988*-AA-6	RENOVATION ACQUISITION INC TERM LOAN		..12/30/2022	CA_CASH_CLOSE	48,544	48,544	47,330	47,354	0	0	0	0	0	0	47,355	0	1,189	1,189	592	..11/15/2027
7602@-AA-4	REPAIRIFY INC. - INITIAL TERM LOAN		..12/30/2022	CA_CASH_CLOSE	3,750	3,750	3,750	3,750	0	0	0	0	0	0	3,750	0	0	0	146	..06/14/2027
76252@-AA-1	Rialto Management Group LLC/Term Loan 1		..06/30/2022	CA_CASH_CLOSE	399,974	399,974	395,974	397,992	0	0	0	0	0	0	397,992	0	1,982	1,982	6,860	..12/02/2024
76252@-AB-9	RIALTO MANAGEMENT GROUP LLC - TERM LOAN		..06/30/2022	CA_CASH_CLOSE	3,265	3,265	3,265	3,265	0	0	0	0	0	0	3,265	0	0	0	71	..12/02/2024
78432@-AB-8	SFE Intermediate HoldCo LLC/Incremental		..09/30/2022	CA_CASH_CLOSE	2,727	2,727	2,672	2,732	0	0	(30)	0	(30)	0	2,703	0	24	24	81	..07/31/2024
78433*-AB-9	SG Acquisition Inc.(Safe-Guard)-Incremen		..08/02/2022	CA_CASH_CLOSE	21,838	21,838	21,838	0	0	0	0	0	0	0	21,838	0	0	0	599	..01/27/2027
7848@-AA-5	SSE BUYER INC.		..09/30/2022	CA_CASH_CLOSE	6,520	6,520	6,520	6,520	0	0	0	0	0	0	6,520	0	0	0	176	..06/30/2026
7848@-AH-3	SealWorld Parks & Entertainment Inc. - 2		..12/30/2022	CA_CASH_CLOSE	30,000	30,000	29,700	29,700	0	0	14	0	14	0	29,714	0	286	286	535	..08/25/2028
78494*-AA-7	SPC RECEIVABLES FDG II TR SECD REV LN FA		..12/20/2022	VARIOUS	21,151,729	21,151,729	21,151,729	0	0	0	8,340	0	8,340	0	21,151,729	0	0	0	0	..10/19/2029
78642#-AA-4	SAFE HOME SECURITY INC. - TERM LOAN		..10/03/2022	CA_CASH_CLOSE	5,760	5,760	5,760	5,760	0	0	0	0	0	0	5,760	0	0	0	215	..08/04/2024
78642#-AB-2	SAFE HOME SECURITY INC. - DELAYED DRAW T		..07/01/2022	CA_CASH_CLOSE	270	270	270	270	0	0	0	0	0	0	270	0	0	0	13	..08/04/2024
79400@-AA-6	Saldon Holdings Inc./First Amendment Te		..12/30/2022	CA_CASH_CLOSE	3,501	3,501	3,466	3,495	0	0	(15)	0	(15)	0	3,481	0	20	20	126	..03/13/2025
79400@-AB-4	Saldon Holdings Inc./Term Loan 3/19		..12/30/2022	CA_CASH_CLOSE	21,703	21,703	21,161	21,667	0	0	(254)	0	(254)	0	21,413	0	290	290	699	..03/13/2025
79400@-AC-2	SALDON HOLDINGS INC. - SECOND AMENMENT		..12/30/2022	CA_CASH_CLOSE	1,875	1,875	1,875	1,875	0	0	0	0	0	0	1,875	0	0	0	62	..03/13/2025
80586#-AB-6	Scaled Agile Inc. - 2021 Unitranche Term		..12/30/2022	CA_CASH_CLOSE	26,220	26,220	25,695	25,698	0	0	0	0	0	0	25,698	0	522	522	431	..12/16/2028

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21	
										11	12	13	14	15							
CUSIP Identifi- cation	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	
809000--ZZ-8	Standard Elevator Systems		12/31/2021	DIRECT		0	0	0	0	0	(576)	0	(576)	0	0	0	0	0	0	12/02/2027	
809000--ZZ-8	Standard Elevator Systems		12/31/2021	DIRECT		0	0	0	0	0	(678)	0	(678)	0	0	0	0	0	0	12/02/2027	
816307--A0-1	SelectQuote Inc./Term Loan 10/19		09/30/2022	CA_CASH_CLOSE		14,377	14,377	14,377	0	0	0	0	0	0	14,377	0	0	0	302	11/05/2024	
82565#--AA-9	SHUR-CO ACQUISITION INC. - TERM LOAN		12/30/2022	CA_CASH_CLOSE		16,875	16,875	16,875	16,875	0	0	0	0	0	16,875	0	0	0	519	06/30/2027	
83176#--AA-2	Smartling Inc. - Term Loan		12/30/2022	CA_CASH_CLOSE		30,344	30,344	30,344	30,344	0	0	0	0	0	30,344	0	0	0	393	11/08/2027	
83218#--TT-7	Atreides Funding Trust - Pass-Through In		10/18/2022	CA_CASH_CLOSE		2,637,885	2,637,885	2,637,885	0	0	0	0	0	0	2,637,885	0	0	0	0	11/18/2083	
84967#--AA-9	SPRING INSURANCE SOLUTIONS LLC - INITIA		12/30/2022	CA_CASH_CLOSE		3,324	3,324	3,324	3,324	0	0	0	0	0	3,324	0	0	0	175	11/24/2025	
84967#--AB-7	SPRING INSURANCE SOLUTIONS LLC - DELAYE		12/30/2022	CA_CASH_CLOSE		417	417	417	417	0	0	0	0	0	417	0	0	0	27	11/24/2025	
85780#--YY-3	Tencarva Machinery Company		12/30/2022	CA_CASH_CLOSE		2,015	2,015	2,015	0	0	0	0	0	0	2,015	0	0	0	0	12/20/2027	
85789#--AA-2	STEALTH HOLDING LLC - U.S. INITIAL TERM		10/03/2022	CA_CASH_CLOSE		1,717	1,717	1,717	1,717	0	0	0	0	0	1,717	0	0	0	46	03/02/2026	
85789#--AB-0	STEALTH HOLDING LLC - DELAYED DRAW TERM		10/03/2022	CA_CASH_CLOSE		486	486	486	0	0	0	0	0	0	486	0	0	0	47	03/02/2026	
86662#--AA-2	SUN ACQUIRER CORP		12/30/2022	CA_CASH_CLOSE		12,420	12,420	12,420	12,420	0	0	0	0	0	12,420	0	0	0	329	09/08/2028	
86738#--AA-6	Sunk Rock Foundry Partners LP/Term Loan		09/30/2022	CA_CASH_CLOSE		9,165	9,165	8,981	9,225	0	(122)	0	(122)	0	9,103	0	62	62	144	10/31/2023	
868030--AA-4	Sunshine Sub LLC/Term Loan 5/18		06/22/2022	VARIOUS		1,617,903	1,617,904	1,585,546	1,631,424	0	(22,969)	0	(22,969)	0	1,608,455	0	9,448	9,448	10,574	05/27/2024	
868030--AB-2	Sunshine Sub LLC/Delayed Draw Term Loan		02/10/2022	CA_CASH_CLOSE		957,597	957,597	957,597	957,597	0	0	0	0	0	957,597	0	0	0	6,271	05/27/2024	
868220--AA-1	SUPERJET BUYER LLC INITIAL TERM LN		12/30/2022	CA_CASH_CLOSE		46,349	46,349	45,422	0	0	0	0	0	0	45,422	0	927	927	594	12/30/2027	
87300*-AB-0	THG Acquisition LLC - 2019 Term Loan		12/30/2022	CA_CASH_CLOSE		4,251	4,251	4,251	4,251	0	0	0	0	0	4,251	0	0	0	126	12/02/2026	
87300*-AC-8	THG ACQUISITION LLC Delayed Draw Term Ln		12/30/2022	CA_CASH_CLOSE		1,192	1,192	1,192	1,192	0	0	0	0	0	1,192	0	0	0	35	12/02/2026	
87300*-AD-6	THG Acquisition LLC - 2020 Term Loan		12/30/2022	CA_CASH_CLOSE		3,501	3,501	3,501	3,501	0	0	0	0	0	3,501	0	0	0	102	12/02/2026	
87300*-AE-4	THG Acquisition LLC - 2020 Delayed Draw		12/30/2022	CA_CASH_CLOSE		5,417	5,417	5,417	5,417	0	0	0	0	0	5,417	0	0	0	169	12/02/2026	
873040--AA-6	SECOND AMENDMENT INCREMENTAL TERM LOAN -		12/30/2022	CA_CASH_CLOSE		1,505	1,505	1,505	1,505	0	0	0	0	0	1,505	0	0	0	44	08/30/2026	
873040--AB-4	TOP HAWKER INTERMEDIATE LLC - DELAYED DR		12/30/2022	CA_CASH_CLOSE		1,672	1,672	1,672	1,672	0	0	0	0	0	1,672	0	0	0	49	08/28/2026	
87326#--AC-4	TA/WEG HOLDINGS LLC - AUGUST 2021 DELAY		07/01/2022	CA_CASH_CLOSE		226	226	226	226	0	0	0	0	0	226	0	0	0	0	10/04/2027	
87583F--AN-8	Tank Holding Corp. - 2022 Term Loan		09/30/2022	CA_CASH_CLOSE		11,846	11,846	11,579	0	0	0	0	0	0	11,579	0	267	267	(11,537)	03/31/2028	
88033#--AA-0	Tencarva Machinery Company - Senior Term		12/30/2022	CA_CASH_CLOSE		24,951	24,951	24,479	24,479	3	3	0	3	0	24,482	0	469	469	304	12/20/2027	
880840--AB-8	TerSera Therapeutics LLC/First Amendment		09/30/2022	CA_CASH_CLOSE		1,233	1,233	1,218	1,236	0	(9)	0	(9)	0	1,227	0	6	6	20	03/30/2025	
880840--AC-6	TerSera Therapeutics LLC/Second Amendmen		06/30/2022	CA_CASH_CLOSE		783	783	773	787	0	(7)	0	(7)	0	780	0	3	3	13	03/30/2025	
880840--AD-4	TerSera Therapeutics LLC/First Amendment		09/30/2022	CA_CASH_CLOSE		1,233	1,233	1,233	1,233	0	0	0	0	0	1,233	0	0	0	20	03/30/2025	
880840--AE-2	TerSera Therapeutics LLC/Third Amendment		06/30/2022	CA_CASH_CLOSE		307	307	297	311	0	(7)	0	(7)	0	304	0	3	3	5	03/30/2025	
88233F--AK-6	Vistra Operations Co LLC-VST TL B3 1L US		12/30/2022	CA_CASH_CLOSE		54,781	54,781	49,851	49,851	0	1,504	0	1,504	0	51,355	0	3,426	3,426	544	12/31/2025	
884300--AA-1	36TH STREET CAPITAL LLC TERM LOAN CLASS		09/15/2022	CA_CASH_CLOSE		8,046,967	8,046,967	8,046,967	8,046,967	0	0	0	0	0	8,046,967	0	0	0	74,621	03/01/2027	
88732#--AA-4	TIMECLOCK PLUS LLC - DELAYED DRAW TERM		12/30/2022	CA_CASH_CLOSE		1,677	1,677	1,677	1,677	0	0	0	0	0	1,677	0	0	0	49	08/28/2026	
88732#--AC-0	TimeClock Plus LLC/Term Loan 8/19		12/30/2022	CA_CASH_CLOSE		8,028	8,028	7,867	7,974	0	(54)	0	(54)	0	7,921	0	107	107	237	08/28/2026	
89617*-AB-4	Trident Maritime Systems Inc. - 2021 Ter		12/30/2022	CA_CASH_CLOSE		6,068	6,068	5,977	0	0	0	0	0	0	5,977	0	91	91	0	02/26/2027	
89989#--AF-1	Portfolio Group - Agency 1st Lien Term L		12/30/2022	CA_CASH_CLOSE		14,010	14,010	13,730	13,739	0	0	0	0	0	13,738	0	272	272	186	12/02/2025	
89989#--AG-9	TURBO BUYER INC AMEND NO 4 DDTL		12/30/2022	CA_CASH_CLOSE		8,091	8,091	8,039	0	0	0	0	0	0	8,038	0	53	53	111	12/02/2025	
89989#--AH-7	TURBO BUYER INC AMEND NO 5 - Delayed Dra		09/30/2022	CA_CASH_CLOSE		70	70	70	0	0	0	0	0	0	70	0	0	0	0	11	12/02/2025
901399--MX-0	Twin Brook Capital Funding XIV WSPV, LLC		11/25/2022	CA_CASH_CLOSE		136,837	136,837	136,837	0	0	0	0	0	0	136,837	0	0	0	0	10/18/2028	
901399--MY-8	Twin Brook Capital Funding XIII WSPV, LL		11/25/2022	CA_CASH_CLOSE		170,047	170,047	170,047	0	0	0	0	0	0	170,047	0	0	0	1,282	10/18/2028	
90212T--AD-3	2U INC. - INITIAL TERM LOAN		12/30/2022	CA_CASH_CLOSE		3,750	3,750	3,684	3,701	0	(8)	0	(8)	0	3,692	0	58	58	88	12/30/2024	
903666--ZY-4	US SFE Asset - Term Loan		02/25/2022	CA_CASH_CLOSE		20,271,523	20,271,523	20,271,523	0	0	0	0	0	0	20,271,523	0	0	0	0	03/02/2023	
903800--AA-7	US SALT INVESTORS LLC - INITIAL TERM LO		09/30/2022	CA_CASH_CLOSE		25,313	25,313	25,313	25,313	0	0	0	0	0	25,313	0	0	0	673	07/19/2028	
90385P--AC-4	Ultimus Group Midco LLC/-ULTGRP TL 1L US		09/30/2022	CA_CASH_CLOSE		8,683	8,683	8,509	8,654	0	(73)	0	(73)	0	8,581	0	102	102	258	02/01/2026	
905301--ZZ-3	RMA Companies - Term Loan		09/30/2022	CA_CASH_CLOSE		12,899	12,899	12,641	0	0	0	0	0	0	12,641	0	258	258	103	01/21/2028	
918300--AD-5	VLS Recovery Services LLC/Term Loan 10/		08/17/2022	CA_CASH_CLOSE		2,748,230	2,748,230	2,678,568	2,725,882	0	0	0	0	0	2,725,882	0	22,348	22,348	135,110	10/17/2024	
918300--AF-0	VLS Recovery Services LLC/Delayed Draw		08/17/2022	CA_CASH_CLOSE		462,286	462,286	456,507	460,234	0	0	0	0	0	460,234	0	2,052	2,052	22,731	10/17/2024	
918300--AH-6	VLS Recovery Services LLC/Second Amendm		08/17/2022	CA_CASH_CLOSE		404,202	404,202	390,231	398,352	0	0	0	0	0	398,352	0	5,850	5,850	19,874	10/17/2024	
918300--AJ-2	VLS RECOVERY SERVICES LLC - DELAYED DRA		08/17/2022	CA_CASH_CLOSE		601,289	601,289	601,289	601,289	0	0	0	0	0	601,289	0	0	0	21,305	10/17/2024	
918340--QQ-6	Van Pool Transportation LLC - 2022 Delay		12/30/2022	CA_CASH_CLOSE		18,482	18,482	18,482	0	0	0	0	0	0	18,482	0	0	0	0	05/22/2024	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
91839*-AE-6	VPROP OPERATING LLC - TRANCHE A		.09/29/2022	CA_CASH_CLOSE		102,782	102,782	102,782	.0	0	0	0	0	0	102,782	0	0	0	0	.11/06/2024
928400-AC-3	VistaPharm Inc./Term B-1 Loans 10/17		.04/30/2022	MATURITY		2,202,608	2,202,608	925,095	2,202,608	0	(40,348)	1,277,513	(1,317,861)	0	884,747	0	1,317,861	1,317,861	0	.04/30/2022
928432-A*-4	Visual Edge Technology Inc./Term Loan 0		.08/31/2022	VARIOUS		2,683,661	2,683,661	2,630,764	2,704,593	0	(73,829)	0	(73,829)	0	2,630,764	0	52,897	52,897	98,072	.08/31/2022
928432-A0-2	Visual Edge Technology Inc./Delayed Dra		.08/31/2022	VARIOUS		2,985,068	2,985,068	2,937,241	3,003,547	0	(66,306)	0	(66,306)	0	2,937,240	0	47,828	47,828	54,135	.08/31/2022
92943H-AB-5	W.R. Grace & Co. TL B		.12/30/2022	VARIOUS		3,488	3,488	3,480	0	0	(39)	0	(39)	0	3,479	0	9	9	69	.09/22/2028
92974*-AA-7	WSHP FC ACQUISITION 2A TL L+625 03/30/20		.09/30/2022	CA_CASH_CLOSE		9,986	9,986	9,986	9,986	0	0	0	0	0	9,986	0	0	0	365	.03/28/2024
92974*-AB-5	WSHP FC ACQUISITION LLC - SECOND AMENDME		.09/30/2022	CA_CASH_CLOSE		3,277	3,277	3,277	3,277	0	0	0	0	0	3,277	0	0	0	143	.03/28/2024
92974*-AC-3	WSHP FC Acquisition LLC/Third Amendment		.09/30/2022	CA_CASH_CLOSE		2,988	2,988	2,988	2,988	0	0	0	0	0	2,988	0	0	0	109	.03/30/2027
92974*-AD-1	WSHP FC ACQUISITION 1A TL L+650 03/30/20		.09/30/2022	CA_CASH_CLOSE		1,250	1,250	1,209	1,255	0	(23)	0	(23)	0	1,232	0	18	18	46	.03/28/2024
92974*-AE-9	WSHP FC ACQUISITION 1A DDTL L+625 03/30/		.09/30/2022	CA_CASH_CLOSE		1,562	1,562	1,562	1,562	0	0	0	0	0	1,562	0	0	0	57	.03/28/2024
929750-AA-4	TA/WEG Holdings LLC/Term Loan 9/19		.07/01/2022	CA_CASH_CLOSE		11,213	11,213	11,213	11,213	0	0	0	0	0	11,213	0	0	0	0	.10/02/2025
93279#-AA-3	WALNUT PARENT INC. - INITIAL TERM LOAN		.12/23/2022	CA_CASH_CLOSE		6,018	6,018	6,018	6,018	0	0	0	0	0	6,018	0	0	0	137	.11/09/2027
94184#-AA-5	WATERMILL EXPRESS LLC - TERM LOAN FACIL		.12/30/2022	CA_CASH_CLOSE		3,424	3,424	3,424	3,424	0	0	0	0	0	3,424	0	0	0	130	.04/20/2027
949700-AA-6	WELLNESS ACQUISITIONCO INC. - TERM LOAN		.12/30/2022	CA_CASH_CLOSE		4,286	4,286	4,286	0	0	0	0	0	0	4,286	0	0	0	19	.01/20/2027
96525Z-MN-3	WHITEHORSE LIQUIDITY PARTNERS V-R LP, -C		.12/15/2022	VARIOUS		1,532,565	1,532,565	1,532,565	0	0	0	0	0	0	1,532,565	0	0	0	0	.12/15/2032
96811*-AA-5	Wildcat BuyerCo Inc./Term Loan 2/20		.12/30/2022	CA_CASH_CLOSE		2,461	2,461	2,461	2,461	0	0	0	0	0	2,461	0	0	0	73	.02/27/2026
96811*-AB-3	Wildcat BuyerCo Inc./Delayed Draw Term		.12/30/2022	CA_CASH_CLOSE		1,494	1,494	1,494	1,494	0	0	0	0	0	1,494	0	0	0	45	.02/27/2026
97383*-AA-1	WINEBOW HOLDINGS INC. (VINTNER GROUP I		.12/30/2022	CA_CASH_CLOSE		3,750	3,750	3,750	3,750	0	0	0	0	0	3,750	0	0	0	96	.07/01/2025
979590-AA-3	Woodland Foods Inc - Term Loan		.12/30/2022	VARIOUS		17,411	17,411	17,063	0	0	(524)	0	(524)	0	17,067	0	344	344	217	.12/02/2027
98415D-A0-3	XIFIN Inc./Term Loan 02/20		.12/30/2022	CA_CASH_CLOSE		3,250	3,250	3,250	3,250	0	0	0	0	0	3,250	0	0	0	117	.02/06/2026
98876*-AA-3	ZB Holdco LLC - Term Loan		.12/30/2022	CA_CASH_CLOSE		3,596	3,596	3,524	0	0	0	0	0	0	3,524	0	72	72	84	.02/09/2028
	Scaled Agile Inc		.12/31/2021	DIRECT		0	0	0	0	0	(365)	0	(365)	0	0	0	0	0	0	.12/15/2023
	Opendoor Property Trust I		.12/31/2021	DIRECT		0	0	0	0	0	(109,093)	0	(109,093)	0	0	0	0	0	0	.07/08/2023
41049#-TT-0	Hanley Wood LLC		.12/31/2021	DIRECT		0	0	0	0	0	(285)	0	(285)	0	0	0	0	0	0	.12/10/2024
	BDP International Inc. (BDP Buyer LLC)		.12/31/2021	DIRECT		0	0	0	0	0	(135)	0	(135)	0	0	0	0	0	0	.12/19/2024
B06548-73-1	WVEC Holdings II Corp - Term Loan		.12/30/2022	CA_CASH_CLOSE		4,503	4,503	4,391	0	0	0	0	0	0	4,390	0	113	113	0	.10/03/2029
	Infrastripe LLC		.12/31/2021	DIRECT		0	0	0	0	0	(8,624)	0	(8,624)	0	0	0	0	0	0	.10/02/2024
	eShipping DDTL		.12/31/2021	DIRECT		0	0	0	0	0	(324)	0	(324)	0	0	0	0	0	0	.11/05/2027
	Polara (VSC Polara LLC)		.12/31/2021	DIRECT		0	0	0	0	0	(385)	0	(385)	0	0	0	0	0	0	.12/03/2027
C9300#-AA-9	STEALTH HOLDING LLC - CANADIAN INITIAL T		.10/03/2022	CA_CASH_CLOSE		2,812	2,812	2,812	2,812	0	0	0	0	0	2,814	0	0	0	71	.03/02/2026
CB4569-87-0	Sparus Holdings LLC - 1st Lien Term Loan		.12/30/2022	CA_CASH_CLOSE		3,226	3,226	3,153	0	0	0	0	0	0	3,153	0	73	73	0	.03/19/2027
G7740#-AA-7	SCL XL I FUND L.P. - Senior Secured Revo		.11/14/2022	CA_CASH_CLOSE		5,789,474	5,789,474	5,789,474	5,789,474	0	0	0	0	0	5,789,474	0	0	0	141,429	.10/05/2029
G9341J-AN-0	Veritas US Inc. - 2021 USD Term Loan B		.12/30/2022	VARIOUS		12,060	12,060	12,000	0	0	(528)	0	(528)	0	12,000	0	60	60	23	.09/01/2025
G4800#-AA-5	IntraPac Canada Corporation/Canadian Ter		.12/30/2022	CA_CASH_CLOSE		7,544	7,544	7,374	7,500	0	(63)	0	(63)	0	7,437	0	107	107	211	.01/11/2026
CB655*-AA-6	Syntax Systems Ltd - Senior Term Loan		.12/30/2022	VARIOUS		13,490	13,490	13,355	0	0	(332)	0	(332)	0	13,355	0	135	135	340	.10/29/2028
03979*-AA-9	RTI Surgical		.09/30/2022	CA_CASH_CLOSE		15,553	15,553	15,553	15,553	0	0	0	0	0	15,553	0	0	0	1,467	.07/20/2026
85914#-NM-1	STEPSTONE GROUP EUROPE ALTERNATIVE INVES		.12/06/2022	CA_CASH_CLOSE		3,000,000	3,000,000	3,000,000	0	0	0	0	0	0	3,000,000	0	0	0	86,954	.02/28/2034
923459-XX-4	Veritas Bermuda Ltd Inc USD TLB (Aug 21)		.12/28/2021	DIRECT		0	0	0	0	0	(519)	0	(519)	0	0	0	0	0	0	.09/01/2025
G3166*-AA-5	CIP VIII Holdings SPV L.P - Term Loan		.12/28/2021	DIRECT		0	0	0	0	0	(2,265)	0	(2,265)	0	0	0	0	0	0	.12/14/2026
G4301U-AF-1	Harbour Aircraft Investm Series 2017-1 C		.09/23/2022	VARIOUS		5,986,884	6,023,660	5,985,181	0	0	0	0	0	0	845,360	0	5,141,523	5,141,523	0	.11/15/2037
G7349*-AA-6	Radius Aerospace Europe Limited/U.K. Ter		.12/30/2022	CA_CASH_CLOSE		4,067	4,067	4,067	4,067	0	0	0	0	0	4,067	0	0	0	121	.03/29/2025
G7741#-AA-6	SSG CREDIT STRATEGIES VII ICAV - Senior		.11/18/2022	CA_CASH_CLOSE		4,200,000	4,200,000	4,200,000	0	0	0	0	0	0	4,200,000	0	0	0	124,031	.02/28/2034
N1603L-AD-9	Bright Bidco BV-BRIGBI TL B 1L USD		.06/30/2022	CA_CASH_CLOSE		8,163	8,163	5,020	5,020	0	(260)	0	(260)	0	4,760	0	3,403	3,403	82	.06/30/2024
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans						417,260,362	419,539,218	414,196,071	208,406,682	0	2,405,548	2,772,420	(366,872)	0	409,592,448	0	7,667,915	7,667,915	5,162,284	XXX
2509999997. Total - Bonds - Part 4						13,009,834,442	12,714,210,850	12,666,568,665	12,220,385,568	0	65,455,432	4,303,660	61,151,772	0	12,901,673,199	85,619	108,075,635	108,161,254	286,723,357	XXX
2509999998. Total - Bonds - Part 5						1,531,687,203	1,627,868,728	1,620,389,428	0	0	(495,701)	62,720	(558,421)	0	1,590,182,199	13,014	(58,508,018)	(58,495,004)	32,137,166	XXX
2509999999. Total - Bonds						14,541,521,645	14,342,079,578	14,286,958,093	12,220,385,568	0	64,959,731	4,366,380	60,593,351	0	14,491,855,398	98,633	49,567,617	49,666,250	318,860,523	XXX
28852N-20-8	Ellington Financial Inc-ELLINGTON FIN		.06/09/2022	PIPERJAFFRAY		3,260,000	0.00	81,500	85,477	0	0	0	0	0	81,500	0	(4,640)	(4,640)	2,758	
90187B-50-7	Two Harbors Investment C-PREFERRED STOCK		.12/15/2022	MORGAN		18,602,000	0.00	251,127	472,491	0	0	0	0	0	251,127	0	93,010	93,010	33,717	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 4

Showing All Long-Term Bonds and Stocks SOLD, REDEEMED or Otherwise DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identi- fication	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Con- sideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date
94988U-65-6 ...	Wells Fargo & Co-PREFERRED STOCK .....	.....	.07/26/2022 .	JONES TRADING INST	250,000.000	6,140,782	0.00	4,750,000	6,410,000	.....	.....0	0	0	0	4,750,000	0	1,390,782	1,390,782	87,890	.....
4019999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Perpetual Preferred						6,561,779	XXX	5,082,627	6,967,968	0	0	0	0	0	5,082,627	0	1,479,152	1,479,152	124,365	XXX
4509999997. Total - Preferred Stocks - Part 4						6,561,779	XXX	5,082,627	6,967,968	0	0	0	0	0	5,082,627	0	1,479,152	1,479,152	124,365	XXX
4509999998. Total - Preferred Stocks - Part 5							XXX													XXX
4509999999. Total - Preferred Stocks						6,561,779	XXX	5,082,627	6,967,968	0	0	0	0	0	5,082,627	0	1,479,152	1,479,152	124,365	XXX
05591L-10-7 ...	BM Technologies Inc-COMMON STOCK .....	.....	.04/21/2022 .	JONES TRADING INST	19,473.000	162,810	.....	.....251,981	179,346	.....	.....0	0	0	0	251,981	0	(89,171)	(89,171)	0	.....
16411R-20-8 ...	CHENIERE ENERGY INC-COMMON STOCK .....	.....	.11/16/2022 .	BLOOMBERG TRADEBOOK	2,696.000	444,494	.....	.....358,973	0	0	0	0	0	0	358,973	0	85,521	85,521	1,955	.....
35671D-85-7 ...	FREEMPORT-MCMORAN INC-COMMON STOCK .....	.....	.09/29/2022 .	BLOOMBERG TRADEBOOK	4,432.000	120,148	.....	.....132,310	0	0	0	0	0	0	132,310	0	(12,162)	(12,162)	0	.....
684023-30-2 ...	Oragenics Inc-COMMON STOCK .....	.....	.11/07/2022 .	JONES TRADING INST	10,311.000	1,755	.....	.....2,474	0	0	0	0	0	0	2,474	0	(719)	(719)	0	.....
74017N-10-5 ...	Precigen Inc-COMMON STOCK .....	.....	.11/08/2022 .	JONES TRADING INST	74,171.000	116,813	.....	.....149,825	0	0	0	0	0	0	149,826	0	(33,013)	(33,013)	0	.....
5019999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded						846,020	XXX	895,563	179,346	0	0	0	0	0	895,564	0	(49,544)	(49,544)	1,955	XXX
313360-ZZ-5 ...	FEDERAL HOME LOAN BANK CINCINNATI-R .....	.....	.07/26/2022 .	CALL 100	42,385.000	4,238,500	.....	.....4,238,500	4,238,500	0	0	0	0	0	4,238,500	0	0	0	52,720	.....
5029999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Other						4,238,500	XXX	4,238,500	4,238,500	0	0	0	0	0	4,238,500	0	0	0	52,720	XXX
5989999997. Total - Common Stocks - Part 4						5,084,520	XXX	5,134,063	4,417,846	0	0	0	0	0	5,134,064	0	(49,544)	(49,544)	54,675	XXX
5989999998. Total - Common Stocks - Part 5						6,571,713	XXX	6,277,759	0	0	0	0	0	0	6,277,759	(33)	293,984	293,951	59,777	XXX
5989999999. Total - Common Stocks						11,656,233	XXX	11,411,822	4,417,846	0	0	0	0	0	11,411,823	(33)	244,440	244,407	114,452	XXX
5999999999. Total - Preferred and Common Stocks						18,218,012	XXX	16,494,449	11,385,814	0	0	0	0	0	16,494,450	(33)	1,723,592	1,723,559	238,817	XXX
6009999999 - Totals						14,559,739,657	XXX	14,303,452,542	12,231,771,382	0	64,959,731	4,366,380	60,593,351	0	14,508,349,848	98,600	51,291,209	51,389,809	319,099,340	XXX

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	11	Change in Book/Adjusted Carrying Value					17	18	19	20	21
											12	13	14	15	16					
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Disposal Date	Name of Purchaser	Par Value (Bonds) or Number of Shares (Stock)	Actual Cost	Consideration	Book/ Adjusted Carrying Value at Disposal	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Interest and Dividends Received During Year	Paid for Accrued Interest and Dividends
00206R-CN-0	AT&T Inc-SR UNSECURED		01/20/2022	VARIOUS	05/11/2022	CALL 100.527212	15,000,000	15,702,225	15,079,082	15,635,073	0	(67,152)	0	(67,152)	0	0	(555,991)	(555,991)	249,333	95,625
00287Y-AQ-2	AbbVie Inc-SR UNSECURED		01/19/2022	MORGAN	06/23/2022	BNP PARIBAS	7,500,000	7,890,000	7,383,375	7,836,199	0	(53,801)	0	(53,801)	0	0	(452,824)	(452,824)	167,250	50,250
00287Y-BZ-1	AbbVie Inc-SENIOR UNSECURED		01/20/2022	MORGAN	05/11/2022	BARCLAYS CAPITAL INC	10,000,000	10,245,300	9,793,000	10,218,855	0	(26,445)	0	(26,445)	0	0	(425,855)	(425,855)	124,222	45,500
031162-BY-5	Amgen Inc-SENIOR UNSECURED		01/20/2022	CITIGROUP GLOBAL MAR	05/10/2022	MITSUBISHI UFJ SEC I	7,500,000	7,811,925	7,456,275	7,781,739	0	(30,186)	0	(30,186)	0	0	(325,464)	(325,464)	124,349	54,036
053332-BA-9	AutoZone Inc-SENIOR UNSECURED		03/18/2022	VARIOUS	08/11/2022	WELLS FARGO	7,263,000	6,227,269	5,885,863	6,267,591	0	40,321	0	40,321	0	0	(381,728)	(381,728)	69,906	22,081
05565E-CB-9	BMW US Capital LLC-SENIOR UNSECURED		03/29/2022	VARIOUS	06/13/2022	VARIOUS	25,000,000	25,021,070	23,300,600	25,019,676	0	(1,394)	0	(1,394)	0	0	(1,719,076)	(1,719,076)	188,083	0
090572-AQ-1	Bio-Rad Laboratories Inc-SENIOR UNSECURE		03/10/2022	JP MORGAN SECURITIES	08/25/2022	JP MORGAN SECURITIES	25,000,000	24,719,250	22,524,320	24,729,873	0	10,623	0	10,623	0	0	(2,205,553)	(2,205,553)	448,522	30,833
090572-AR-9	BlackRock Inc-SENIOR UNSECURED		04/05/2022	GOLDMAN	07/11/2022	MORGAN	11,440,000	11,191,638	10,807,254	11,203,809	0	12,172	0	12,172	0	0	(396,556)	(396,556)	137,375	36,703
09247X-AS-0	Blackstone Private Credi-SENIOR UNSECURE		03/29/2022	WELLS FARGO	06/06/2022	SUSQUEHANNA BANCSHAR	5,320,000	4,788,479	4,478,961	4,796,929	0	8,450	0	8,450	0	0	(317,968)	(317,968)	31,964	11,172
09261H-AA-5	Blackstone Private Credi-SENIOR UNSECURE		01/20/2022	GOLDMAN	07/08/2022	EXCHANGE OFFER	9,129,000	8,924,865	8,965,371	8,965,371	0	40,506	0	40,506	0	0	0	0	143,338	57,246
09261H-AQ-2	Blackstone Private Credi-SENIOR UNSECURE		01/19/2022	BARCLAYS CAPITAL INC	08/11/2022	EXCHANGE OFFER	7,500,000	7,449,750	7,459,267	7,459,267	0	9,517	0	9,517	0	0	0	0	126,802	28,885
09261H-AJ-6	Boeing Co/The-SENIOR UNSECURED		02/24/2022	BARCLAYS CAPITAL INC	08/10/2022	EXCHANGE OFFER	5,000,000	4,765,300	4,784,119	4,784,119	0	18,819	0	18,819	0	0	0	0	116,458	43,333
097023-CT-0	Boeing Co/The-SENIOR UNSECURED		01/20/2022	VARIOUS	08/04/2022	JEFFERIESLLC	17,500,000	18,943,900	17,697,400	18,705,299	0	(238,601)	0	(238,601)	0	0	(1,007,899)	(1,007,899)	656,432	193,646
09857L-AR-9	Booking Holdings Inc-SENIOR UNSECURED		03/31/2022	DEUTSCHE BANK SECURI	06/07/2022	MORGAN	10,000,000	10,882,500	10,253,700	10,864,160	0	(18,340)	0	(18,340)	0	0	(610,460)	(610,460)	303,194	219,688
125523-AH-3	Cigna Corp-SENIOR UNSECURED		02/28/2022	CITIGROUP GLOBAL MAR	09/13/2022	GOLDMAN	14,950,000	16,193,840	14,561,599	16,097,924	0	(95,916)	0	(95,916)	0	0	(1,536,325)	(1,536,325)	599,557	248,907
125523-AV-2	Cigna Corp-SENIOR UNSECURED		01/20/2022	JANE	05/11/2022	TORONTO DOMINION SEC	7,500,000	7,830,300	7,435,725	7,797,511	0	(32,789)	0	(32,789)	0	0	(361,786)	(361,786)	140,833	67,031
126650-CL-2	CVS Health Corp-SENIOR UNSECURED		01/19/2022	GOLDMAN	05/17/2022	CITIGROUP GLOBAL MAR	7,500,000	7,977,300	7,522,425	7,930,274	0	(47,026)	0	(47,026)	0	0	(407,849)	(407,849)	96,068	807
126650-DR-8	CVS Health Corp-SENIOR UNSECURED		01/21/2022	DAIWA SECURITIES AME	06/10/2022	BOFAMILSEC	5,000,000	4,756,100	4,079,150	4,764,713	0	8,613	0	8,613	0	0	(685,563)	(685,563)	87,361	46,337
14040H-BN-4	Capital One Financial Co-SENIOR UNSECURE		04/05/2022	VARIOUS	09/13/2022	VARIOUS	14,028,000	14,326,376	13,400,054	14,297,536	0	(28,840)	0	(28,840)	0	0	(897,482)	(897,482)	333,480	128,036
14040H-BW-4	Capital One Financial Co-SENIOR UNSECURE		02/28/2022	GOLDMAN	09/13/2022	GOLDMAN	7,567,000	7,884,965	7,056,228	7,857,926	0	(27,040)	0	(27,040)	0	0	(801,698)	(801,698)	179,716	25,560
14040H-CH-6	Capital One Financial Co-SENIOR UNSECURE		04/04/2022	GOLDMAN	08/22/2022	U. S. BANCORP	3,650,000	3,370,374	3,230,871	3,387,939	0	17,566	0	17,566	0	0	(157,069)	(157,069)	55,599	29,323
14040H-CU-7	Cargill Inc-SENIOR UNSECURED		07/25/2022	MORGAN	12/13/2022	GOLDMAN	4,405,000	4,405,000	4,372,315	4,405,000	0	0	0	0	0	0	(32,685)	(32,685)	84,176	0
141781-BQ-6	Carlisle Cos Inc-SENIOR UNSECURED		03/29/2022	BOFAMILSEC	06/02/2022	JEFFERIESLLC	7,000,000	6,111,280	5,816,510	6,126,936	0	15,656	0	15,656	0	0	(310,426)	(310,426)	40,989	19,503
142339-AJ-9	Celanese US Holdings LLC-SENIOR UNSECURE		03/30/2022	DEUTSCHE BANK SECURI	08/22/2022	DEUTSCHE BANK SECURI	10,000,000	9,287,800	8,615,900	9,318,828	0	31,028	0	31,028	0	0	(702,928)	(702,928)	132,153	22,917
15089Q-AM-6	Citigroup Inc-SENIOR UNSECURED		07/07/2022	BOFAMILSEC	10/31/2022	JP MORGAN SECURITIES	10,000,000	10,000,000	9,447,400	10,000,000	0	0	0	0	0	0	(552,600)	(552,600)	184,950	0
172967-ME-8	Comcast Corp-SR UNSECURED		02/28/2022	BOFAMILSEC	09/13/2022	CITIGROUP GLOBAL MAR	10,000,000	10,523,400	9,235,100	10,487,607	0	(35,793)	0	(35,793)	0	0	(1,252,507)	(1,252,507)	392,472	179,100
20030N-BH-3	Comcast Corp-SR UNSECURED		03/29/2022	CITIGROUP GLOBAL MAR	06/06/2022	GOLDMAN	6,000,000	6,366,840	6,043,620	6,361,710	0	(5,130)	0	(5,130)	0	0	(318,090)	(318,090)	101,292	53,833
20030N-DR-9	Comcast Corp-SENIOR UNSECURED		01/19/2022	CREDIT SUISSE SECURI	06/07/2022	EXCHANGE OFFER	20,000,000	18,452,200	18,464,077	18,464,077	0	11,877	0	11,877	0	0	0	0	346,440	128,311
21871X-AG-4	Deii International LLC /-SENIOR UNSECURE		03/31/2022	JP MORGAN SECURITIES	08/16/2022	MORGAN	2,500,000	2,496,300	2,348,975	2,496,321	0	21	0	21	0	0	(147,346)	(147,346)	36,021	0
24703T-AE-6	Dollar Tree Inc-SENIOR UNSECURED		04/04/2022	STIFEL NICOLAUS	07/25/2022	CREDIT SUISSE SECURI	10,000,000	10,488,200	10,112,100	10,455,413	0	(32,787)	0	(32,787)	0	0	(343,313)	(343,313)	157,889	6,806
256746-AG-3	Duke Realty LP-SENIOR UNSECURED		01/19/2022	JANE	05/17/2022	FTS	7,500,000	7,960,425	7,547,400	7,913,991	0	(46,434)	0	(46,434)	0	0	(366,591)	(366,591)	153,333	55,000
26441Y-BB-2	Federal Realty Investmen-SENIOR UNSECURE		04/06/2022	WELLS FARGO	07/11/2022	CITIGROUP GLOBAL MAR	13,000,000	13,169,650	12,624,360	13,162,968	0	(6,682)	0	(6,682)	0	0	(538,608)	(538,608)	169,333	33,222
313747-BA-4	FEDEX CORP-SENIOR UNSECURED		03/29/2022	U. S. BANCORP	08/15/2022	WELLS FARGO	5,700,000	5,589,363	5,268,510	5,593,741	0	4,378	0	4,378	0	0	(325,231)	(325,231)	141,867	66,500
31428X-AX-4	General Motors Co-SENIOR UNSECURED		03/17/2022	U. S. BANCORP	08/15/2022	GOLDMAN	1,100,000	1,223,442	1,156,859	1,220,055	0	(3,387)	0	(3,387)	0	0	(63,196)	(63,196)	31,741	9,882
37045V-AS-9	GILEAD SCIENCES INC-SENIOR UNSECURED		04/05/2022	MORGAN	11/02/2022	JP MORGAN SECURITIES	10,980,000	11,364,190	10,082,275	11,332,615	0	(31,575)	0	(31,575)	0	0	(1,250,340)	(1,250,340)	324,825	9,150
375558-AZ-6	Helmerich & Payne Inc-SENIOR UNSECURED		01/20/2022	CITIGROUP GLOBAL MAR	05/16/2022	GOLDMAN	10,000,000	10,489,600	9,960,100	10,434,630	0	(54,970)	0	(54,970)	0	0	(474,530)	(474,530)	279,028	168,194
423452-AE-1	Helmerich & Payne Inc-SENIOR UNSECURED		01/25/2022	VARIOUS	06/02/2022	EXCHANGE OFFER	18,450,000	17,847,087	17,866,222	17,866,222	0	19,135	0	19,135	0	0	0	0	361,159	169,183

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	11	Change in Book/Adjusted Carrying Value					17	18	19	20	21
											12	13	14	15	16					
CUSIP Identification	Description	For- eign	Date Acquired	Name of Vendor	Disposal Date	Name of Purchaser	Par Value (Bonds) or Number of Shares (Stock)	Actual Cost	Consid- eration	Book/ Adjusted Carrying Value at Disposal	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amort- ization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Interest and Dividends Received During Year	Paid for Accrued Interest and Dividends
42981C-AA-6	HIGH STREET FUNDING TRUS-SENIOR UNSECURE		02/24/2022	GOLDMAN	09/13/2022	WELLS FARGO	10,225,000	10,854,860	9,732,053	10,798,887	0	(55,973)	0	(55,973)	0	0	(1,066,835)	(1,066,835)	245,204	15,179
444859-BD-3	Humana Inc-SENIOR UNSECURED		01/20/2022	GOLDMAN	05/16/2022	CITIGROUP GLOBAL MAR	2,170,000	2,285,097	2,179,808	2,270,397	0	(14,699)	0	(14,699)	0	0	(90,589)	(90,589)	52,680	26,224
	JCP Direct Lending CLO 2-JCPDL 2022-1I S																			
46655H-AK-9			12/05/2022	DIRECT	12/30/2022	DIRECT	5,203,506	5,203,506	0	0	0	0	0	0	0	0	0	0	0	0
46817M-AK-3	Jackson Financial Inc-SENIOR UNSECURED		07/27/2022	VARIOUS	09/23/2022	EXCHANGE OFFER	83,853,000	79,042,016	79,207,393	79,207,393	0	165,377	0	165,377	0	0	0	0	2,027,422	566,157
46817M-AM-9	Jackson Financial Inc-SENIOR UNSECURED		03/10/2022	BARCLAYS CAPITAL INC	09/23/2022	EXCHANGE OFFER	5,000,000	4,255,850	4,261,767	4,261,767	0	5,917	0	5,917	0	0	0	0	166,667	61,667
46817M-AR-8	Jackson Financial Inc-SENIOR UNSECURED		06/03/2022	VARIOUS	10/28/2022	GOLDMAN	4,993,000	4,991,640	4,783,094	4,991,546	0	(94)	0	(94)	0	0	(208,452)	(208,452)	102,538	0
49271V-AF-7	Keurig Dr Pepper Inc-SENIOR UNSECURED		04/05/2022	WELLS FARGO	07/13/2022	MORGAN	17,290,000	18,149,140	17,404,114	18,113,284	0	(35,856)	0	(35,856)	0	0	(709,170)	(709,170)	507,803	291,434
49271V-AH-3	Keurig Dr Pepper Inc-SENIOR UNSECURED		01/19/2022	RBC CAPITAL MARKETS	05/17/2022	BOFAMLSEC	7,500,000	8,078,325	7,624,575	8,020,415	0	(57,910)	0	(57,910)	0	0	(395,840)	(395,840)	160,116	51,532
52107Q-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED		01/20/2022	VARIOUS	09/07/2022	VARIOUS	11,725,000	12,339,078	11,517,253	12,217,205	0	(121,873)	0	(121,873)	0	0	(699,952)	(699,952)	446,158	172,552
	Loan Asset Issuer LLC, Series 2021 M-2																			
53950T-10-5			06/16/2022	DIRECT	12/30/2022	DIRECT	572,500	5,725,000	0	0	0	0	0	0	0	0	0	0	464	0
	Loan Asset Issuer LLC - Series 2022 NG-1																			
53950X-10-6			02/28/2022	DIRECT	12/30/2022	DIRECT	6,261	6,171,781	0	0	0	0	0	0	0	0	0	0	5,536,229	0
548661-DT-1	Lowe's Cos Inc-SENIOR UNSECURED		01/19/2022	CITIGROUP GLOBAL MAR	05/16/2022	TORONTO DOMINION SEC	7,500,000	8,034,000	7,615,950	7,980,245	0	(53,755)	0	(53,755)	0	0	(364,295)	(364,295)	177,500	80,000
55903V-AG-8	Magallanes Inc-SENIOR UNSECURED		04/04/2022	U B S SECURITIES	11/02/2022	CITIGROUP GLOBAL MAR	10,000,000	9,982,600	8,892,300	9,984,284	0	1,684	0	1,684	0	0	(1,091,984)	(1,091,984)	238,860	21,904
59217G-EG-0	Metropolitan Life Global-SECURED		03/31/2022	VARIOUS	06/10/2022	WELLS FARGO	15,756,000	15,307,606	14,196,156	15,317,078	0	9,472	0	9,472	0	0	(1,120,922)	(1,120,922)	316,324	222,923
	MOLSON COORS BREWING CO-SENIOR UNSECURED																			
60871R-AG-5			07/21/2022	MORGAN	08/22/2022	VARIOUS	14,300,000	13,463,307	13,574,062	13,477,413	0	14,106	0	14,106	0	0	96,649	96,649	43,975	11,917
651639-AY-2	Newmont Corp-SENIOR UNSECURED		01/19/2022	JP MORGAN SECURITIES	06/10/2022	BOFAMLSEC	10,000,000	9,620,100	8,400,100	9,635,555	0	15,455	0	15,455	0	0	(1,235,455)	(1,235,455)	158,125	68,750
	O'Reilly Automotive Inc-SENIOR UNSECURED																			
67103H-AJ-6			03/10/2022	U. S. BANCORP	08/09/2022	CITIGROUP GLOBAL MAR	5,000,000	5,258,150	4,932,950	5,246,170	0	(11,980)	0	(11,980)	0	0	(313,220)	(313,220)	180,833	95,083
	Oklahoma Gas and Electri-SENIOR UNSECURE																			
678858-BV-2			03/30/2022	WELLS FARGO	07/19/2022	JP MORGAN SECURITIES	9,710,000	9,587,071	8,966,020	9,590,858	0	3,787	0	3,787	0	0	(624,839)	(624,839)	96,426	0
	OWL Rock Core Income Cor-SENIOR UNSECURE																			
69120V-AN-1			09/09/2022	SMBC NIKKO SECURITIE	11/01/2022	BARINGSLLC	7,500,000	7,480,125	7,401,394	7,479,494	0		0	(631)	0	0	(78,100)	(78,100)	72,656	0
718547-AG-7	Phillips 66 Co-SENIOR UNSECURED		05/05/2022	EXCHANGE OFFER	11/17/2022	SUNTRUST CAPITAL MAR	7,000,000	6,976,976	6,402,690	6,978,875	0	1,899	0	1,899	0	0	(576,185)	(576,185)	189,583	46,667
743315-AL-7	PROGRESSIVE CORP-SENIOR UNSECURED		03/03/2022	WELLS FARGO	09/14/2022	WELLS FARGO	6,975,000	8,981,917	7,783,682	8,898,302	0	(83,615)	0	(83,615)	0	0	(1,114,620)	(1,114,620)	345,117	116,250
743315-AZ-6	Progressive Corp/The-SENIOR UNSECURED		03/30/2022	WELLS FARGO	06/02/2022	BARCLAYS CAPITAL INC	7,120,000	6,925,695	6,519,357	6,928,554	0	2,858	0	2,858	0	0	(409,197)	(409,197)	51,620	13,053
756109-AH-4	Realty Income Corp-SENIOR UNSECURED		03/29/2022	BOFAMLSEC	07/19/2022	WELLS FARGO	12,688,000	12,554,649	11,769,769	12,559,796	0	5,147	0	5,147	0	0	(790,027)	(790,027)	247,416	121,417
75884R-BA-0	Regency Centers LP-SENIOR UNSECURED		03/18/2022	VARIOUS	08/23/2022	CITIGROUP GLOBAL MAR	28,520,000	28,843,588	26,192,672	28,828,597	0	(14,991)	0	(14,991)	0	0	(2,635,925)	(2,635,925)	731,264	282,425
78108Y-AL-6	RR 1 LLC-RRAM 2017-1A A1AB		07/07/2022	WELLS FARGO	09/19/2022	JP MORGAN SECURITIES	4,300,000	4,164,550	4,164,550	4,170,405	0	5,855	0	5,855	0	0	(5,855)	(5,855)	53,594	22,802
78355H-KT-5	Ryder System Inc-SENIOR UNSECURED		04/06/2022	GOLDMAN	07/05/2022	JANE	5,000,000	4,815,300	4,669,300	4,823,842	0	8,542	0	8,542	0	0	(154,542)	(154,542)	52,646	17,417
	Schlumberger Holdings Co-SENIOR UNSECURE																			
806851-AH-4			01/19/2022	VARIOUS	12/08/2022	VARIOUS	16,000,000	17,406,460	15,252,510	17,246,143	0	(160,317)	0	(160,317)	0	0	(1,993,633)	(1,993,633)	756,203	151,694
	Charles Schwab Corp/The-SENIOR UNSECURED																			
808513-CA-1			03/31/2022	MORGAN	06/10/2022	VARIOUS	25,000,000	24,134,500	22,203,500	24,148,091	0	13,591	0	13,591	0	0	(1,944,591)	(1,944,591)	198,569	62,431
	Simon Property Group LP-SENIOR UNSECURED																			
828807-DF-1			03/29/2022	CITIGROUP GLOBAL MAR	08/11/2022	MORGAN	1,235,000	1,147,500	1,087,998	1,151,344	0	3,844	0	3,844	0	0	(63,346)	(63,346)	12,775	1,513
	Simon Property Group LP-SENIOR UNSECURED																			
828807-DQ-7			03/31/2022	MORGAN	08/23/2022	U. S. BANCORP	8,000,000	7,178,800	6,497,040	7,206,466	0	27,666	0	27,666	0	0	(709,426)	(709,426)	109,500	39,500
87264A-BB-0	T-Mobile USA Inc-FIRST LIEN		01/20/2022	GOLDMAN	07/21/2022	MORGAN	10,000,000	10,444,800	9,782,100	10,375,486	0	(69,314)	0	(69,314)	0	0	(593,386)	(593,386)	272,222	96,250
87264A-CP-8	T-Mobile USA Inc-SECURED		01/19/2022	VARIOUS	07/01/2022	EXCHANGE OFFER	20,000,000	19,360,500	19,385,236	19,385,236	0	24,736	0	24,736	0	0	0	0	307,500	66,750
883203-BV-2	Textron Inc-SENIOR UNSECURED		01/20/2022	CITIGROUP GLOBAL MAR	07/21/2022	DEUTSCHE BANK SECURI	3,500,000	3,710,560	3,482,955	3,674,193	0	(36,367)	0	(36,367)	0	0	(191,238)	(191,238)	122,063	53,873
887389-AL-8	Timken Co/The-SENIOR UNSECURED		03/22/2022	BOFAMLSEC	07/28/2022	SUNTRUST CAPITAL MAR	5,770,000	5,676,122	5,406,086	5,678,431	0	2,309	0	2,309	0	0	(272,345)	(272,345)	81,321	0
	Toyota Motor Credit Corp-SENIOR UNSECURE																			
89236T-JQ-9			03/31/2022	CITIGROUP GLOBAL MAR	05/31/2022	BOFAMLSEC	10,000,000	8,893,900	8,439,200	8,909,969	0	16,069	0	16,069	0	0	(470,769)	(470,769)	42,222	11,611
90184L-AP-7	Twitter Inc-SENIOR UNSECURED		02/23/2022	JP MORGAN SECURITIES	11/30/2022	CALL 101	7,343,000	7,343,000	7,416,430	7,343,000	0	0	0	0	0	0	73,430	73,430	280,462	0
91324P-CP-5	UNITEDHEALTH GROUP INC-SR UNSECURED		04/25/2022	MORGAN	09/13/2022	WELLS FARGO	8,393,000	8,528,799	8,295,725	8,513,332	0	(15,467)	0	(15,467)	0	0	(217,607)	(217,607)	209,825	89,176
91913Y-BC-3	Valero Energy Corp-SENIOR UNSECURED		03/18/2022	MORGAN	08/15/2022	BARCLAYS CAPITAL INC	7,000,000	6,499,850	6,119,470	6,517,298	0	17,448	0	17,448	0	0	(397,828)	(397,828)	140,467	61,522

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	11	Change in Book/Adjusted Carrying Value					17	18	19	20	21
											12	13	14	15	16					
CUSIP Identi- fication	Description	For- eign	Date Acquired	Name of Vendor	Disposal Date	Name of Purchaser	Par Value (Bonds) or Number of Shares (Stock)	Actual Cost	Consid- eration	Book/ Adjusted Carrying Value at Disposal	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amort- ization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Interest and Dividends Received During Year	Paid for Accrued Interest and Dividends
919794-AG-2	Valley National Bancorp-SUBORDINATED ... Verizon Communications I-SENIOR UNSECURE		09/15/2022	PIPERJAFFRAY	11/22/2022	VARIOUS	15,000,000	15,000,000	14,663,544	15,000,000	0	0	0	0	0	0	(336,456)	(336,456)	158,333	0
92343V-GM-0			03/16/2022	VARIOUS	04/28/2022	EXCHANGE OFFER	40,200,000	37,923,140	37,960,596	37,960,596	0	37,456	0	37,456	0	0	0	0	456,517	246,660
92939U-AE-6	WEC Energy Group Inc-SENIOR UNSECURED		03/29/2022	JP MORGAN SECURITIES	08/11/2022	WELLS FARGO	20,000,000	17,205,400	16,651,800	17,309,490	0	104,090	0	104,090	0	0	(657,690)	(657,690)	300,000	166,000
95040Q-AR-5	Welltower Inc-SENIOR UNSECURED		03/29/2022	WELLS FARGO	08/23/2022	WELLS FARGO	10,000,000	9,994,800	9,171,200	9,994,626	0	(174)	0	(174)	0	0	(823,426)	(823,426)	154,535	0
970648-AL-5	Willis North America Inc-SENIOR UNSECURE		05/12/2022	CITIGROUP GLOBAL MAR	09/20/2022	GOLDMAN	10,000,000	9,995,500	9,629,500	9,995,158	0	(342)	0	(342)	0	0	(365,658)	(365,658)	158,875	0
98138H-AJ-0	Workday Inc-SENIOR UNSECURED		03/31/2022	VARIOUS	08/09/2022	VARIOUS	27,690,000	27,710,074	26,166,521	27,708,563	0	(1,511)	0	(1,511)	0	0	(1,542,042)	(1,542,042)	369,202	6,333
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED	A	02/28/2022	VARIOUS	09/14/2022	JANE	7,293,000	7,665,445	6,765,060	7,632,438	0	(33,007)	0	(33,007)	0	0	(867,378)	(867,378)	182,507	29,233
11271L-AH-5	Brookfield Finance Inc-SENIOR UNSECURED	A	03/10/2022	BOFAMLSEC	08/15/2022	BOFAMLSEC	10,000,000	9,340,700	8,744,100	9,366,933	0	26,233	0	26,233	0	0	(622,833)	(622,833)	228,513	112,743
559222-AV-6	Magna International Inc-SENIOR UNSECURED	A	03/29/2022	VARIOUS	06/13/2022	DEUTSCHE BANK SECURI	8,105,000	7,437,605	6,802,202	7,452,248	0	14,643	0	14,643	0	0	(650,046)	(650,046)	99,286	58,469
89114T-ZV-7	Toronto-Dominion Bank/Th-SENIOR UNSECURE	A	03/31/2022	VARIOUS	08/15/2022	VARIOUS	29,252,000	28,739,428	26,277,885	28,751,992	0	12,564	0	12,564	0	0	(2,474,107)	(2,474,107)	320,495	59,738
94106B-AC-5	Waste Connections Inc-SENIOR UNSECURED	A	01/20/2022	GOLDMAN	06/13/2022	BNP PARIBAS	10,000,000	9,521,600	8,078,950	9,537,838	0	16,238	0	16,238	0	0	(1,458,888)	(1,458,888)	91,056	5,500
00119Y-AA-1	AGL CLO 10 Ltd-AGL 2021-10A A	D	05/19/2022	BNP PARIBAS	09/20/2022	MORGAN	5,000,000	4,860,000	4,853,500	4,869,900	0	9,900	0	9,900	0	0	(16,400)	(16,400)	62,383	11,475
00121G-AA-6	AGL Core CLO 15 Ltd-AGL 2021-15A A1	D	07/06/2022	BOFAMLSEC	09/20/2022	MORGAN	5,299,000	5,117,709	5,129,962	5,123,179	0	5,470	0	5,470	0	0	6,782	6,782	66,000	25,730
00182Y-AA-3	ANZ Bank New Zealand Ltd-SUBORDINATED	D	08/02/2022	BOFAMLSEC	10/28/2022	JANE	3,937,000	3,937,000	3,750,937	3,937,000	0	0	0	0	0	0	(186,063)	(186,063)	48,539	0
01750W-AC-3	Allegro CLO XIII Ltd-ALLEG 2021-1A A	D	05/19/2022	MORGAN	09/20/2022	CITIGROUP GLOBAL MAR	8,000,000	7,724,000	7,726,400	7,739,539	0	15,539	0	15,539	0	0	(13,139)	(13,139)	99,297	16,153
03329F-AN-4	Anchorage Capital CLO 15-ANGCH 2020-15A	D	06/06/2022	CITIGROUP GLOBAL MAR	09/20/2022	CREDIT SUISSE SECURI	10,400,000	10,150,400	10,067,200	10,162,435	0	12,035	0	12,035	0	0	(95,235)	(95,235)	131,773	32,030
039937-AA-5	Ares LXIII CLO Ltd-ARES 2022-63A A1A	D	07/07/2022	MORGAN	09/19/2022	CITIGROUP GLOBAL MAR	14,150,000	13,675,975	13,806,155	13,727,520	0	51,545	0	51,545	0	0	78,635	78,635	136,350	72,185
04342J-AA-5	ASB Bank Ltd-SUBORDINATED	D	06/08/2022	CITIGROUP GLOBAL MAR	10/31/2022	GOLDMAN	4,286,000	4,286,000	3,946,034	4,286,000	0	0	0	0	0	0	(339,966)	(339,966)	84,927	0
05464H-AC-4	AXIS Specialty Finance P-SENIOR UNSECURE	D	04/05/2022	WELLS FARGO	10/28/2022	VARIOUS	7,372,000	7,408,123	6,799,872	7,404,854	0	(3,269)	0	(3,269)	0	0	(604,982)	(604,982)	261,878	99,112
05683E-AN-2	Bain Capital Credit CLO -BCC 2020-2A AR	D	06/07/2022	BOFAMLSEC	09/20/2022	CITIGROUP GLOBAL MAR	8,250,000	8,080,875	8,014,050	8,088,378	0	7,503	0	7,503	0	0	(74,328)	(74,328)	104,384	25,880
05683H-AN-5	Bain Capital Credit CLO -BCC 2017-2A AR2	D	07/08/2022	BOFAMLSEC	09/19/2022	MORGAN	5,375,000	5,205,688	5,209,020	5,210,316	0	4,628	0	4,628	0	0	(1,296)	(1,296)	66,438	27,531
05684C-AL-9	Bain Capital Credit CLO -BCC 2020-3A A1R	D	05/18/2022	CREDIT SUISSE SECURI	09/20/2022	CITIGROUP GLOBAL MAR	4,950,000	4,803,975	4,800,015	4,811,559	0	7,584	0	7,584	0	0	(11,544)	(11,544)	61,317	8,058
06759U-AA-1	Barings Clo Ltd 2022-II-BABSN 2022-2A A	D	06/21/2022	CITIGMUK	07/19/2022	CA_CASH_CLOSE	955,000	1,023,092	947,838	1,020,308	0	(2,783)	0	(2,783)	0	0	(72,471)	(72,471)	87,266	24,066
12661P-AC-3	Diameter Capital CLO 1 L-DQLO 2021-1A A1	D	06/06/2022	BARCLAYS CAPITAL INC	09/20/2022	RBC CAPITAL MARKETS	4,000,000	3,922,500	3,860,800	3,927,333	0	4,833	0	4,833	0	0	(66,533)	(66,533)	51,862	13,706
13877P-AA-5	Diameter Capital Clo 2 L-DQLO 2021-2A A1	D	06/06/2022	BARCLAYS CAPITAL INC	09/20/2022	RBC CAPITAL MARKETS	4,000,000	3,922,500	3,860,800	3,927,333	0	4,833	0	4,833	0	0	(66,533)	(66,533)	51,862	13,706
25255L-AA-0		D	06/06/2022	MORGAN	09/19/2022	SIMC NIKKO SECURITIE	4,000,000	3,912,800	3,867,600	3,917,863	0	5,063	0	5,063	0	0	(50,263)	(50,263)	51,092	13,586
29002G-AB-7	Elmwood CLO IV Ltd-ELMW4 2020-1A A	D	05/20/2022	MORGAN	09/19/2022	GOLDMAN	5,000,000	4,905,000	4,903,500	4,913,509	0	3,988	0	3,988	0	0	(10,009)	(10,009)	35,436	12,373
29002Q-AA-7	Elmwood CLO VII Ltd-ELMW7 2020-4A A	D	05/20/2022	MORGAN	09/20/2022	CITIGROUP GLOBAL MAR	4,750,000	4,678,750	4,673,050	4,682,738	0	3,988	0	3,988	0	0	(9,688)	(9,688)	65,196	11,563
29278G-AF-5	Enel Finance Internation-SENIOR UNSECURE	D	08/02/2022	BOFAMLSEC	12/06/2022	VARIOUS	19,000,000	17,638,820	16,075,570	17,700,481	0	61,661	0	61,661	0	0	(1,624,911)	(1,624,911)	410,667	216,903
36319W-AC-3	Galaxy XXIII CLO Ltd-GALXY 2017-23A SUBA	D	06/22/2022	EXCHANGE OFFER	12/30/2022	EXCHANGE OFFER	2,624,999	2,313,109	0	0	0	0	0	0	0	0	0	0	80,549	0
404280-BH-1	HSBC Holdings PLC-SUBORDINATED	D	02/28/2022	VARIOUS	09/13/2022	HSBC SECURITIES INC	17,144,000	18,055,507	16,551,503	17,958,693	0	(96,815)	0	(96,815)	0	0	(1,407,190)	(1,407,190)	608,374	206,264
404280-DG-1	HSBC Holdings PLC-SENIOR UNSECURED	D	08/04/2022	HSBC SECURITIES INC	10/28/2022	MORGAN	8,278,000	8,278,000	7,598,045	8,278,000	0	0	0	0	0	0	(679,955)	(679,955)	95,841	0
456837-AV-5	ING Groep NV-SENIOR UNSECURED	D	04/04/2022	BOFAMLSEC	08/01/2022	MORGAN	4,000,000	3,699,520	3,624,520	3,717,559	0	18,039	0	18,039	0	0	(93,039)	(93,039)	23,397	959
46149M-AA-4	Invesco CLO Ltd-INVCO 2021-2A A	D	07/07/2022	BARCLAYS CAPITAL INC	09/20/2022	MORGAN	6,300,000	6,088,950	6,120,923	6,097,736	0	8,786	0	8,786	0	0	23,187	23,187	78,323	32,951

E15.3

E15.3

E15.3

E15.3

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	11	Change in Book/Adjusted Carrying Value					17	18	19	20	21
											12	13	14	15	16					
CUSIP Identi- fication	Description	For- eign	Date Acquired	Name of Vendor	Disposal Date	Name of Purchaser	Par Value (Bonds) or Number of Shares (Stock)	Actual Cost	Consid- eration	Book/ Adjusted Carrying Value at Disposal	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amort- ization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Interest and Dividends Received During Year	Paid for Accrued Interest and Dividends
36850#-AB-9	Gehl Foods LLC/Term Loan 1/18		03/01/2022	PIK NOTE BUY UP	05/31/2022	CA_CASH_CLOSE	1,609	1,609	1,609	1,609	0	0	0	0	0	0	0	0	107	0
47231#-MR-6	Jefferies Direct Lending Offshore Fund		06/17/2022	BANK LOANS BABSON CA	06/17/2022	BANK LOANS BABSON CA	2,087,924	2,087,924	2,087,924	2,087,924	0	0	0	0	0	0	0	0	0	0
47231#-MT-2	Jefferies Direct Lending Fund II C LP		06/17/2022	BANK LOANS BABSON CA	06/17/2022	BANK LOANS BABSON CA	5,374,322	5,374,322	5,374,322	5,374,322	0	0	0	0	0	0	0	0	0	0
47231#-MU-9	Jefferies Direct Lending Fund II LP - Re		06/17/2022	BANK LOANS BABSON CA	06/17/2022	BANK LOANS BABSON CA	27,070,457	27,070,457	27,070,457	27,070,457	0	0	0	0	0	0	0	0	0	0
60510M-A#-5	Mission Lane Credit Card Master Trust		11/22/2022	BANK LOANS BABSON CA	12/09/2022	CA_CASH_CLOSE	5,333,333	5,333,333	5,333,333	5,333,333	0	0	0	0	0	0	0	0	9,120	0
60510M-A#-7	Mission Lane Credit Card Master Trust		11/22/2022	BANK LOANS BABSON CA	12/09/2022	CA_CASH_CLOSE	25,333,333	25,333,333	25,333,333	25,333,333	0	0	0	0	0	0	0	0	50,708	0
60510M-B#-8	Mission Lane Credit Card Master Trust		11/22/2022	BANK LOANS BABSON CA	12/09/2022	CA_CASH_CLOSE	2,666,667	2,666,667	2,666,667	2,666,667	0	0	0	0	0	0	0	0	10,985	0
62929#-AA-2	NM GRC Holdco LLC/Term Loan 1/18		02/28/2022	PIK NOTE BUY UP	05/26/2022	CA_CASH_CLOSE	7,019	7,019	7,019	7,019	0	0	0	0	0	0	0	0	176	0
62929#-AB-0	NM GRC Holdco LLC/Delayed Draw Term Loa		04/29/2022	PIK NOTE BUY UP	06/22/2022	VARIOUS	3,937	3,937	3,932	3,937	0	0	0	0	0	(5)	0	(5)	70	0
67101#-AA-3	OR TECH FING I LLC Term Loan		07/08/2022	BANK LOANS BABSON CA	12/22/2022	CA_CASH_CLOSE	30,222,222	30,222,222	30,222,222	30,222,222	0	0	0	0	0	0	0	0	358,177	0
68144#-AA-8	OLYMPIA ACQUISITION INC. - PIK TERM LOA		02/28/2022	VARIOUS	02/28/2022	BANK LOANS BABSON CA	1,785	1,785	1,785	1,785	0	0	0	0	0	0	0	0	0	0
71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		11/30/2022	PIK NOTE BUY UP	12/31/2022	MATURITY	52,707	52,707	52,707	1,449	0	0	51,258	(51,258)	0	0	51,258	51,258	0	0
74273J-AF-0	Pro Mach Inc. Delayed Draw Te		08/11/2022	BANK LOANS BABSON CA	08/11/2022	CA_CASH_CLOSE	231,836	231,836	231,836	231,836	0	0	0	0	0	0	0	0	686	0
75333#-AA-8	RFS ASSET SECURITIZATION III, LLC - 1st		08/08/2022	BANK LOANS BABSON CA	11/03/2022	CA_CASH_CLOSE	547,484	547,484	547,484	547,484	0	0	0	0	0	0	0	0	0	0
75333#-AB-6	RFS ASSET SECURITIZATION III, LLC - 1st		07/14/2022	BANK LOANS BABSON CA	11/03/2022	CA_CASH_CLOSE	68,051	68,051	68,051	68,051	0	0	0	0	0	0	0	0	0	0
89617#-AC-2	Trident Maritime Systems Inc. - 2022 Inc		04/29/2022	BANK LOANS BABSON CA	09/30/2022	BANK LOANS BABSON CA	2,500,000	2,456,250	2,462,500	2,456,250	0	0	0	0	0	0	6,250	6,250	0	0
913625-XX-2	Marshall Excelsior - 2022 Upsize Term Lo		05/13/2022	BANK LOANS BABSON CA	05/27/2022	CA_CASH_CLOSE	23,162	22,757	23,162	22,757	0	0	0	0	0	0	405	405	0	0
91839#-AE-6	VPROP OPERATING LLC - TRANCHE A		05/03/2022	PIK NOTE BUY UP	09/29/2022	CA_CASH_CLOSE	6,755	6,755	6,755	6,755	0	0	0	0	0	0	0	0	0	0
92580#-MM-3	Vicof II LCSS SPV - Delayed Draw Term Lo		03/21/2022	FMSPLTMRG	04/19/2022	CA_CASH_CLOSE	23,929,148	23,929,148	23,929,148	23,929,148	0	0	0	0	0	0	0	0	602,445	3,656
925831-ZZ-5	Five Star Intermediate Holding LLC - 2nd		05/05/2022	BANK LOANS BABSON CA	05/19/2022	BANK LOANS BABSON CA	3,163,265	3,100,000	3,100,000	3,100,000	0	0	0	0	0	0	0	0	0	0
92840#-AC-3	VistaPharm Inc./Term B-1 Loans 10/17		01/31/2022	PIK NOTE BUY UP	04/30/2022	MATURITY	19,762	19,762	19,762	8,300	0	0	11,462	(11,462)	0	0	11,462	11,462	0	0
928432-A*-4	Visual Edge Technology Inc./Term Loan 0		05/31/2022	PIK NOTE BUY UP	08/31/2022	MATURITY	14,347	14,347	14,347	14,347	0	0	0	0	0	0	0	0	322	0
928432-A#-2	Visual Edge Technology Inc./Delayed Dra		05/31/2022	PIK NOTE BUY UP	08/31/2022	MATURITY	19,346	19,346	19,346	19,346	0	0	0	0	0	0	0	0	77	0
701334-PA-6	Piolin Bideo, S.A.U. EUR Incremental	B	12/02/2022	BANK LOANS BABSON CA	12/28/2022	CA_CASH_CLOSE	1,062,900	1,044,606	1,062,900	1,044,606	0	0	0	0	0	10,322	7,972	18,294	0	0
64301U-AF-1	Harbour Aircraft Investm Series 2017-1 C	C	09/26/2022	BANK LOANS BABSON CA	10/14/2022	BANK LOANS BABSON CA	5,746,148	5,709,441	5,709,373	5,709,441	0	0	0	0	0	0	(69)	(69)	0	0
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans							347,728,282	346,470,493	346,510,257	346,407,773	0	0	62,720	(62,720)	0	10,317	92,165	102,482	2,245,806	3,656
2509999998. Total - Bonds							1,627,868,728	1,620,389,428	1,531,687,203	1,590,182,199	0	(495,701)	62,720	(558,421)	0	13,014	(58,508,018)	(58,495,004)	32,137,166	7,355,775
4509999998. Total - Preferred Stocks								0	0	0	0	0	0	0	0	0	0	0	0	0
024835-10-0	AMERICAN CAMPUS COMMUNIT-COMMON STOCK RE		07/28/2022	BLOOMBERG TRADEBOOK	08/10/2022	CA_CASH_CLOSE	1,800,000	116,943	117,846	116,943	0	0	0	0	0	0	903	903	0	0
16411R-20-8	CHENIERE ENERGY INC-COMMON STOCK		09/16/2022	BLOOMBERG TRADEBOOK	11/15/2022	BLOOMBERG TRADEBOOK	16,670,000	2,466,054	2,782,047	2,466,054	0	0	0	0	0	0	315,993	315,993	5,514	0
212015-10-1	CONTINENTAL RESOURCES IN-COMMON STOCK		07/22/2022	BLOOMBERG TRADEBOOK	11/29/2022	CA_CASH_CLOSE	3,400,000	215,247	252,552	215,247	0	0	0	0	0	0	37,305	37,305	952	0
46121Y-20-1	Intrepid Potash Inc-COMMON STOCK		08/10/2022	BLOOMBERG TRADEBOOK	12/08/2022	BLOOMBERG TRADEBOOK	100,000	4,332	3,487	4,332	0	0	0	0	0	0	(846)	(846)	0	0
682680-10-3	ONEOK INC COMMON STK		09/15/2022	BLOOMBERG TRADEBOOK	11/02/2022	BLOOMBERG TRADEBOOK	24,800,000	1,435,369	1,437,686	1,435,369	0	0	0	0	0	0	2,316	2,316	30,169	0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1	2	3	4	5	6	7	8	9	10	11	Change in Book/Adjusted Carrying Value					17	18	19	20	21
											12	13	14	15	16					
CUSIP Identi- fication	Description	For- eign	Date Acquired	Name of Vendor	Disposal Date	Name of Purchaser	Par Value (Bonds) or Number of Shares (Stock)	Actual Cost	Consid- eration	Book/ Adjusted Carrying Value at Disposal	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amort- ization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Interest and Dividends Received During Year	Paid for Accrued Interest and Dividends
718546-10-4 ..	PHILLIPS 66-COMMON STOCK .....	.....	..07/21/2022 ..	BLOOMBERG TRADEBOOK	..09/16/2022 ..	BLOOMBERG TRADEBOOK	 8,700.000	 737,319	 702,151	 737,319	 0	 0	 0	 0	 0	 0	 (35,168)	 (35,168)	 8,439	 0
822634-10-1 ..	SHELL MIDSTREAM PARTNERS L P LTD PARTNER .....	.....	..07/22/2022 ..	BLOOMBERG TRADEBOOK	..10/19/2022 ..	CA_CASH_CLOSE	 29,573.000	 424,132	 468,732	 424,132	 0	 0	 0	 0	 0	 0	 44,600	 44,600	 8,872	 0
29250N-10-5 ..	ENBRIDGE INC-COMMON STOCK .....	.....	..07/13/2022 ..	BLOOMBERG TRADEBOOK	..11/02/2022 ..	BLOOMBERG TRADEBOOK	 11,000.000	 458,805	 430,341	 458,805	 0	 0	 0	 0	 0	 0	 (28,464)	 (28,464)	 5,389	 0
697900-10-8 ..	Pan American Silver Corp-COMMON STOCK ..	.....	..08/05/2022 ..	BLOOMBERG TRADEBOOK	..08/31/2022 ..	BLOOMBERG TRADEBOOK	 2,800.000	 57,020	 41,962	 57,020	 0	 0	 0	 0	 0	 0	 (15,058)	 (15,058)	 262	 0
87807B-10-7 ..	TC Energy Corp-COMMON STOCK .....	.....	..07/27/2022 ..	BLOOMBERG TRADEBOOK	..08/08/2022 ..	BLOOMBERG TRADEBOOK	 6,800.000	 362,496	 334,900	 362,496	 0	 0	 0	 0	 0	 0	 (27,597)	 (27,597)	 180	 0
5019999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded								6,277,717	6,571,704	6,277,717	0	0	0	0	0	0	293,984	293,984	59,777	0
704881-SS-1 ..	Policy Services Company LLC Warrants Cla .....	.....	..01/12/2022 ..	DLB ACCOUNTING ONLY	..01/31/2022 ..	DLB ACCOUNTING ONLY	 477.000	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0
704881-TT-8 ..	Policy Services Company LLC Warrants Cla .....	.....	..01/12/2022 ..	DLB ACCOUNTING ONLY	..01/31/2022 ..	DLB ACCOUNTING ONLY	 186.000	 35	 2	 35	 0	 0	 0	 0	 0	 (33)	 0	 (33)	 0	 0
704881-UU-3 ..	Policy Services Company LLC Warrants Cla .....	.....	..01/12/2022 ..	DLB ACCOUNTING ONLY	..01/31/2022 ..	DLB ACCOUNTING ONLY	 1,807.000	 2	 2	 2	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0
704881-WW-7 ..	Policy Services Company LLC Warrants Cla .....	.....	..01/12/2022 ..	DLB ACCOUNTING ONLY	..01/31/2022 ..	DLB ACCOUNTING ONLY	 5,355.000	 5	 5	 5	 0	 0	 0	 0	 0	 0	 0	 0	 0	 0
5029999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Other								42	9	42	0	0	0	0	0	(33)	0	(33)	0	0
5989999998. Total - Common Stocks								6,277,759	6,571,713	6,277,759	0	0	0	0	0	(33)	293,984	293,951	59,777	0
5999999999. Total - Preferred and Common Stocks								6,277,759	6,571,713	6,277,759	0	0	0	0	0	(33)	293,984	293,951	59,777	0
6009999999 - Totals								1,626,667,187	1,538,258,916	1,596,459,958	0	(495,701)	62,720	(558,421)	0	12,981	(58,214,034)	(58,201,053)	32,196,943	7,355,775

SCHEDULE D - PART 6 - SECTION 1

CUSIP Identification	Description, Name of Subsidiary, Controlled or Affiliated Company	Foreign	NAIC Company Code	ID Number	NAIC Valuation Method	Book/Adjusted Carrying Value	Total Amount of Goodwill Included in Book/ Adjusted Carrying Value	Nonadmitted Amount	Stock of Such Company Owned by Insurer on Statement Date	
									10	11
									Number of Shares	% of Outstanding
0999999. Total Preferred Stocks						0	0	0	XXX	XXX
03612*-10-4	Annuity Investors Life Insurance Co		93661	31-1021738	8B1.....	384,752,913			20,000,000	100.0
1299999. Subtotal - Common Stock - U.S. Life Insurer						384,752,913	0	0	XXX	XXX
55418@-10-8	MM Ascend Life Inv Svcs LLC				8B111.....	1,002,782			100,000	100.0
56313@-10-2	Manhattan National Hldg LLC				8B11.....	16,146,282			100,000	100.0
1799999. Subtotal - Common Stock - Other Affiliates						17,149,064	0	0	XXX	XXX
1899999. Total Common Stocks						401,901,977	0	0	XXX	XXX
1999999 - Totals						401,901,977	0	0	XXX	XXX

SCHEDULE D - PART 6 - SECTION 2

E16

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DA - PART 1

Showing All SHORT-TERM INVESTMENTS Owned December 31 of Current Year

1	Codes		4	5	6	7	Change in Book/Adjusted Carrying Value				12	13	Interest						20
	2	3					8	9	10	11			14	15	16	17	18	19	
Description	Code	For- eign	Date Acquired	Name of Vendor	Maturity Date	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Par Value	Actual Cost	Amount Due and Accrued Dec. 31 of Current Year on Bond Not in Default	Non- Admitted Due and Accrued	Rate of	Effective Rate of	When Paid	Amount Received During Year	Paid for Accrued Interest
0109999999. Total - U.S. Government Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
0309999999. Total - All Other Government Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
0509999999. Total - U.S. States, Territories and Possessions Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
0709999999. Total - U.S. Political Subdivisions Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
0909999999. Total - U.S. Special Revenues Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
Marlin Capital Conduit LLC - Term Loan			12/30/2022	BANK LOANS BABSON CA	01/26/2023	12,558,527	0	0	0	0	12,558,527	12,558,527	267,755	0	0.000	0.000	MAT	50,552	0
Amherst Libor Amherst Master Repo Facili			10/22/2021	DIRECT	04/19/2023	50,000,000	0	0	0	0	50,000,000	50,000,000	727,942	0	7.490	7.490	MON	0	0
PARKER-HANNIFIN CORP COMMERCIAL PAPER	@		12/20/2022	VARIOUS	03/31/2023	29,921,204	0	49,171	0	0	30,291,000	29,872,033	0	0	0.000	4.999	N/A	0	0
PARKER-HANNIFIN CORP COMMERCIAL PAPER	@		12/29/2022	CASTLEOAK	04/03/2023	24,684,898	0	10,141	0	0	25,000,000	24,674,757	0	0	0.000	4.995	N/A	0	0
PARKER-HANNIFIN CORP COMMERCIAL PAPER	@		12/23/2022	BNY CAPITAL	04/06/2023	20,922,171	0	25,943	0	0	21,200,000	20,896,228	0	0	0.000	5.032	N/A	0	0
TELUS CORP COMMERCIAL PAPER	@	A	12/15/2022	JP MORGAN SECURITIES	06/12/2023	13,173,867	0	30,980	0	0	13,500,000	13,142,888	0	0	0.000	5.495	N/A	0	0
Bank of Montreal/Chicago-COMMERCIAL PAPE		A	10/05/2022	WELLS	07/07/2023	8,897,928	0	0	0	0	8,800,000	8,897,928	(25,584)	0	3.710	3.710	JAJO	25,584	0
TORONTO-DOMINION BANK/THE COMMERCIAL PAP	@	A	12/23/2022	SEELAUS	05/22/2023	49,076,538	0	57,788	0	0	50,000,000	49,018,750	0	0	0.000	4.804	N/A	0	0
Toronto-Dominion Bank/Th-COMMERCIAL PAPE		A	11/16/2022	JP MORGAN SECURITIES	06/21/2023	5,000,000	0	0	0	0	5,000,000	5,000,000	0	0	4.430	4.430	MJSD	0	0
Skandinaviska Enskilda B-COMMERCIAL PAPE		D	11/02/2022	JP MORGAN SECURITIES	06/01/2023	6,000,501	0	(195)	0	0	6,000,000	6,000,696	24,462	0	5.020	4.510	MON	21,828	628
SWEDBANK AB COMMERCIAL PAPER	@	D	12/22/2022	WELLS FARGO	04/21/2023	49,291,728	0	63,395	0	0	50,000,000	49,228,333	0	0	0.000	4.703	N/A	0	0
MUFG BANK LTD/NEW YORK NY COMMERCIAL PAP	@	C	12/22/2022	SEELAUS	05/10/2023	49,156,816	0	64,176	0	0	50,000,000	49,092,639	0	0	0.000	4.787	N/A	0	0
Standard Chartered Bank/-COMMERCIAL PAPE		D	12/09/2022	BANK OF AMERICA SECU	07/07/2023	20,000,000	0	0	0	0	20,000,000	20,000,000	59,561	0	4.810	4.794	MON	0	0
Svenska Handelsbanken/Ne-COMMERCIAL PAPE		D	10/28/2022	WELLS FARGO SECURITI	05/26/2023	21,000,000	0	0	0	0	21,000,000	21,000,000	14,583	0	5.000	5.000	MON	155,429	0
Australia & New Zealand -COMMERCIAL PAPE		D	12/15/2022	BOFAMLSEC	09/18/2023	10,000,000	0	0	0	0	10,000,000	10,000,000	21,622	0	4.860	4.860	MON	0	0
National Australia Bank -COMMERCIAL PAPE		D	05/10/2022	BOFAMLSEC	02/10/2023	10,000,000	0	0	0	0	10,000,000	10,000,000	25,800	0	4.740	4.708	MON	162,661	0
National Australia Bank -COMMERCIAL PAPE		D	12/09/2022	BOFAMLSEC	07/12/2023	10,000,000	0	0	0	0	10,000,000	10,000,000	25,967	0	4.770	4.761	MON	0	0
1019999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations						389,684,178	0	301,399	0	0	393,349,527	389,382,779	1,142,108	0	XXX	XXX	XXX	416,054	628
1109999999. Total - Industrial and Miscellaneous (Unaffiliated) Bonds						389,684,178	0	301,399	0	0	393,349,527	389,382,779	1,142,108	0	XXX	XXX	XXX	416,054	628
1309999999. Total - Hybrid Securities						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
1509999999. Total - Parent, Subsidiaries and Affiliates Bonds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
1909999999. Subtotal - Unaffiliated Bank Loans						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2419999999. Total - Issuer Obligations						389,684,178	0	301,399	0	0	393,349,527	389,382,779	1,142,108	0	XXX	XXX	XXX	416,054	628
2429999999. Total - Residential Mortgage-Backed Securities						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2439999999. Total - Commercial Mortgage-Backed Securities						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2449999999. Total - Other Loan-Backed and Structured Securities						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2459999999. Total - SVO Identified Funds						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2469999999. Total - Affiliated Bank Loans						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2479999999. Total - Unaffiliated Bank Loans						0	0	0	0	0	0	0	0	0	XXX	XXX	XXX	0	0
2509999999. Total Bonds						389,684,178	0	301,399	0	0	393,349,527	389,382,779	1,142,108	0	XXX	XXX	XXX	416,054	628
7109999999. Total - Parent, Subsidiaries and Affiliates						0	0	0	0	0	XXX	0	0	0	XXX	XXX	XXX	0	0
7709999999 - Totals						389,684,178	0	301,399	0	0	XXX	389,382,779	1,142,108	0	XXX	XXX	XXX	416,054	628

1. Line Book/Adjusted Carrying Value by NAIC Designation Category Footnote:
Number
1A 1A ..\$ 0 1B ..\$ 21,000,000 1C ..\$ 0 1D ..\$ 211,423,010 1E ..\$ 6,000,501 1F ..\$ 62,558,527 1G ..\$ 0
1B 2A ..\$ 88,702,140 2B ..\$ 0 2C ..\$ 0
1C 3A ..\$ 0 3B ..\$ 0 3C ..\$ 0
1D 4A ..\$ 0 4B ..\$ 0 4C ..\$ 0
1E 5A ..\$ 0 5B ..\$ 0 5C ..\$ 0
1F 6\$ 0

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
0079999999. Subtotal - Purchased Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0149999999. Subtotal - Purchased Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
141932 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	04/06/2021	04/06/2028	2,560,103	4073.94000000	61,186		(8,710)	46,039		(44,232)	0	0	(8,710)				0003
141936 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	04/06/2021	04/06/2026	643,934	4073.94000000	14,875		(2,965)	9,718		(5,221)	0	0	(2,965)				0003
141931 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGQFUS7RNE97	04/20/2021	04/20/2028	2,131,255	4134.94000000	55,626		(7,919)	42,160		(2,512)	0	0	(7,919)				0003
141935 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGQFUS7RNE97	04/20/2021	04/20/2026	1,033,297	4134.94000000	25,316		(5,047)	16,734		(2,043)	0	0	(5,047)				0003
141929 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	05/06/2021	05/06/2026	2,934,227	4201.62000000	71,302		(14,213)	47,756		(1,087)	0	0	(14,213)				0003
141934 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	05/06/2021	05/06/2028	3,525,201	4201.62000000	93,418		(13,298)	71,388		(38,491)	0	0	(13,298)				0003
139414 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	05/20/2021	05/20/2026	3,238,121	4159.12000000	79,334		(15,815)	53,744		25,552	0	0	(15,815)				0003
141933 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	05/20/2021	05/19/2028	4,387,198	4159.12000000	117,577		(16,744)	90,483		(6,063)	0	0	(16,744)				0003
142030 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	06/04/2021	06/05/2026	3,793,322	4229.89000000	92,936		(18,516)	63,738		5,127	0	0	(18,516)				0003
142031 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	06/04/2021	06/06/2028	3,756,297	4229.89000000	99,542		(14,159)	77,214		(34,900)	0	0	(14,159)				0003
142042 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	06/18/2021	06/19/2026	4,246,800	4166.45000000	104,896		(20,899)	72,744		98,714	0	0	(20,899)				0003
142043 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	06/18/2021	06/20/2028	5,895,992	4166.45000000	159,192		(22,644)	124,355		141,245	0	0	(22,644)				0003
141126 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	07/06/2021	01/06/2023	6,515,310	4343.54000000	519,915		(344,716)	6,629		0	0	0	(344,716)				0003
142044 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	07/06/2021	07/06/2026	4,766,527	4343.54000000	116,303		(23,184)	81,782		97,928	0	0	(23,184)				0003
142045 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	07/06/2021	07/06/2028	3,597,757	4343.54000000	92,822		(13,214)	73,147		70,395	0	0	(13,214)				0003
141139 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	07/20/2021	01/20/2023	4,755,366	4323.06000000	391,369		(259,487)	14,970		369	0	0	(259,487)				0003
142024 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	07/20/2021	07/20/2026	4,182,637	4323.06000000	98,710		(19,677)	70,168		76,985	0	0	(19,677)				0003
142025 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	07/20/2021	07/20/2028	2,039,052	4323.06000000	50,365		(7,170)	39,965		31,271	0	0	(7,170)				0003
141171 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	08/06/2021	02/06/2023	11,534,952	4436.52000000	918,190		(608,782)	63,554		1,529	0	0	(608,782)				0003
142046 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	08/06/2021	08/06/2026	4,064,101	4436.52000000	95,100		(18,957)	68,487		48,836	0	0	(18,957)				0003
142047 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	08/06/2021	08/04/2028	3,826,358	4436.52000000	97,189		(13,846)	77,752		41,173	0	0	(13,846)				0003
141378 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	08/20/2021	02/17/2023	10,215,841	4441.67000000	845,871		(563,914)	75,912		3,050	0	0	(563,914)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
142048 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.08/20/2021	.08/20/2026	.....	1,809,340	..4441.67000000	41,977	.....	.....(8,368)	30,552	.....	.....11,679	0	0	(8,368)	.....	.....	.....	.....0003
142049 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.08/20/2021	.08/18/2028	.....	2,137,781	..4441.67000000	56,010	.....	.....(7,980)	45,115	.....	.....10,704	0	0	(7,980)	.....	.....	.....	.....0003
141411 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/03/2021	.03/06/2023	.....	7,710,231	..4535.43000000	636,871	.....	.....(422,261)	76,564	.....	.....2,262	0	0	(422,261)	.....	.....	.....	.....0003
142050 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/03/2021	.09/04/2026	.....	1,540,167	..4535.43000000	43,125	.....	.....(8,592)	31,724	.....	.....3,821	0	0	(8,592)	.....	.....	.....	.....0003
142051 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/03/2021	.09/06/2028	.....	2,111,925	..4535.43000000	61,246	.....	.....(8,708)	49,690	.....	.....(168,656)	0	0	(8,708)	.....	.....	.....	.....0003
141557 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2021	.03/20/2023	.....	7,408,141	..4357.73000000	702,287	.....	.....(468,191)	102,899	.....	.....13,079	0	0	(468,191)	.....	.....	.....	.....0003
142217 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.09/20/2021	.09/18/2026	.....	1,174,913	..4357.73000000	27,141	.....	.....(5,416)	20,207	.....	.....20,870	0	0	(5,416)	.....	.....	.....	.....0003
142219 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.09/20/2021	.09/20/2028	.....	1,873,140	..4357.73000000	46,454	.....	.....(6,613)	37,988	.....	.....30,594	0	0	(6,613)	.....	.....	.....	.....0003
141613 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.10/06/2021	.04/06/2023	.....	6,545,325	..4363.55000000	596,280	.....	.....(396,793)	105,739	.....	.....16,614	0	0	(396,793)	.....	.....	.....	.....0003
142231 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.10/06/2021	.10/06/2026	.....	1,802,801	..4363.55000000	42,366	.....	.....(8,445)	31,925	.....	.....35,248	0	0	(8,445)	.....	.....	.....	.....0003
142232 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.10/06/2021	.10/06/2028	.....	2,272,930	..4363.55000000	59,551	.....	.....(8,477)	49,071	.....	.....44,579	0	0	(8,477)	.....	.....	.....	.....0003
142242 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.10/20/2021	.10/20/2026	.....	2,142,624	..4536.19000000	51,423	.....	.....(10,251)	39,145	.....	.....33,705	0	0	(10,251)	.....	.....	.....	.....0003
142243 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.10/20/2021	.10/20/2028	.....	2,133,416	..4536.19000000	55,255	.....	.....(7,866)	45,833	.....	.....28,467	0	0	(7,866)	.....	.....	.....	.....0003
142680 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE8IBXP4ROTDBPU41	.10/20/2021	.04/20/2023	.....	7,145,543	..4536.19000000	632,375	.....	.....(420,813)	128,325	.....	.....7,437	0	0	(420,813)	.....	.....	.....	.....0003
143685 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.11/05/2021	.05/05/2023	.....	8,455,554	..4697.53000000	726,336	.....	.....(484,224)	167,616	.....	.....4,198	0	0	(484,224)	.....	.....	.....	.....0003
143735 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.11/05/2021	.11/06/2028	.....	3,225,894	..4697.53000000	80,325	.....	.....(11,430)	67,136	.....	.....60,510	0	0	(11,430)	.....	.....	.....	.....0003
143737 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.11/05/2021	.11/06/2026	.....	1,317,530	..4697.53000000	30,567	.....	.....(6,090)	23,540	.....	.....25,694	0	0	(6,090)	.....	.....	.....	.....0003
143709 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.11/19/2021	.05/19/2023	.....	7,516,736	..4697.96000000	682,512	.....	.....(455,008)	175,003	.....	.....5,224	0	0	(455,008)	.....	.....	.....	.....0003
143909 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.11/19/2021	.11/20/2026	.....	1,146,967	..4697.96000000	26,495	.....	.....(5,279)	20,607	.....	.....18,692	0	0	(5,279)	.....	.....	.....	.....0003
143911 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIISFPUBMPRO8K5P83	.11/19/2021	.11/20/2028	.....	2,303,354	..4697.96000000	60,118	.....	.....(8,555)	50,576	.....	.....39,919	0	0	(8,555)	.....	.....	.....	.....0003
144155 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.12/06/2021	.06/06/2023	.....	9,183,340	..4591.67000000	915,580	.....	.....(609,271)	264,464	.....	.....13,885	0	0	(609,271)	.....	.....	.....	.....0003
144235 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.12/06/2021	.12/04/2026	.....	729,148	..4591.67000000	16,916	.....	.....(3,376)	13,309	.....	.....9,170	0	0	(3,376)	.....	.....	.....	.....0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
144237 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	ROMUWSPUBM8MPRO8K5P83	12/06/2021	12/06/2028	752,619	4591.67000000	18,966		(2,700)	16,081		9,781	0	0	(2,700)				0003	
144700 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2021	06/20/2023	9,136,040	4568.02000000	911,780		(606,742)	286,702		19,582	0	0	(606,742)				0003	
144701 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	ROMUWSPUBM8MPRO8K5P83	12/20/2021	12/18/2026	1,060,073	4568.02000000	24,594		(4,908)	19,537		18,129	0	0	(4,908)				0003	
144703 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	ROMUWSPUBM8MPRO8K5P83	12/20/2021	12/20/2028	1,687,120	4568.02000000	44,371		(6,316)	37,864		27,452	0	0	(6,316)				0003	
145247 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	35,063,918	166.99000000		2,297,139	(2,259,378)	37,761		645,005	0	0	(2,259,378)				0003	
145252 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	812,582	78.54000000		46,040	(45,283)	757		0	0	0	(45,283)				0003	
145260 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2023	47,456,954	4696.05000000		3,711,325	(3,650,317)	61,008		0	0	0	(3,650,317)				0003	
145262 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2023	43,936,203	4696.05000000		3,435,988	(3,379,506)	56,482		0	0	0	(3,379,506)				0003	
145265 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	01/06/2022	07/06/2023	6,104,865	4696.05000000		583,622	(383,737)	199,885		10,540	0	0	(383,737)				0003	
145270 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	31,933,140	4696.05000000		2,430,116	(2,390,169)	39,947		0	0	0	(2,390,169)				0003	
145272 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2023	49,413,313	4696.05000000		3,864,320	(3,800,797)	63,523		0	0	0	(3,800,797)				0003	
145273 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	46,475,600	4696.05000000		3,536,799	(3,478,660)	58,139		0	0	0	(3,478,660)				0003	
145274 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2023	57,471,067	4696.05000000		4,494,469	(4,420,587)	73,882		0	0	0	(4,420,587)				0003	
145277 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2023	59,716,288	4696.05000000		4,670,054	(4,593,286)	76,768		0	0	0	(4,593,286)				0003	
145278 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	63,207,661	4696.05000000		4,810,111	(4,731,041)	79,070		0	0	0	(4,731,041)				0003	
145280 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2027	840,780	4696.05000000		20,431	(4,017)	16,414		(8,754)	0	0	(4,017)				0003	
145282 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	43,586,901	4696.05000000		3,316,969	(3,262,443)	54,526		0	0	0	(3,262,443)				0003	
145284 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	42,264,450	4696.05000000		3,216,330	(3,163,459)	52,871		0	0	0	(3,163,459)				0003	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
145288 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2022	01/06/2023	.....	39,916,425	..4696.05000000	.....	3,037,645	(2,987,711)	49,934		0	0	0	(2,987,711)				0003
145291 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	01/06/2022	01/05/2029	.....	2,075,217	..4696.05000000	.....	55,408	(7,782)	47,626		(38,331)	0	0	(7,782)				0003
145293 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	01/06/2022	01/06/2023	.....	21,947,708	..4696.05000000	.....	487,239	(479,230)	8,009		0	0	0	(479,230)				0003
145295 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	01/06/2022	01/06/2023	.....	35,592,949	..4696.05000000	.....	2,776,250	(2,730,613)	45,637		0	0	0	(2,730,613)				0003
145318 Call Options – S&P Equal Weight Energy	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	01/06/2022	01/06/2023	.....	42,616,988	..1237.24000000	.....	1,939,073	(1,907,198)	31,875		0	0	0	(1,907,198)				0003
145319 Call Options – S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	01/06/2022	01/06/2023	.....	10,625,025	...534.80000000	.....	336,813	(331,277)	5,537		0	0	0	(331,277)				0003
145320 Call Options – iShares U.S. Real Estate	Liability Hedge	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	01/06/2022	01/06/2023	.....	18,824,223	...111.61000000	.....	1,239,725	(1,219,346)	20,379		12	0	0	(1,219,346)				0003
145486 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPRO8K5P83	01/14/2022	01/13/2023	.....	1,018,337	..4726.34000000	.....	32,735	(31,566)	1,169		0	0	0	(31,566)				0003
145760 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	01/20/2022	01/20/2023	.....	28,635,527	..4482.73000000	.....	1,337,279	(1,264,004)	73,276		0	0	0	(1,264,004)				0003
145766 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	01/20/2022	01/20/2023	.....	18,313,859	..4482.73000000	.....	391,917	(370,442)	21,475		0	0	0	(370,442)				0003
145768 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPRO8K5P83	01/20/2022	01/20/2027	.....	1,067,105	..4482.73000000	.....	26,998	(5,101)	21,897		(7,910)	0	0	(5,101)				0003
145772 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPRO8K5P83	01/20/2022	01/19/2029	.....	2,284,303	..4482.73000000	.....	66,016	(8,911)	57,106		(25,989)	0	0	(8,911)				0003
145776 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	01/20/2022	01/20/2023	.....	17,291,678	...105.62000000	.....	1,232,897	(1,165,341)	67,556		265	0	0	(1,165,341)				0003
145777 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBU11	01/20/2022	01/20/2023	.....	694,449	...77.39000000	.....	44,306	(41,878)	2,428		5	0	0	(41,878)				0003
145780 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	01/20/2022	01/20/2023	.....	34,532,910	..4482.73000000	.....	2,776,446	(2,624,312)	152,134		63	0	0	(2,624,312)				0003
145781 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2022	01/20/2023	.....	54,010,399	..4482.73000000	.....	4,202,053	(3,971,803)	230,249		893	0	0	(3,971,803)				0003
145789 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2022	01/20/2023	.....	42,137,662	..4482.73000000	.....	3,278,344	(3,098,709)	179,635		702	0	0	(3,098,709)				0003
145792 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2022	01/20/2023	.....	54,241,033	..4482.73000000	.....	4,219,996	(3,988,763)	231,233		912	0	0	(3,988,763)				0003
145795 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2022	01/20/2023	.....	39,448,024	..4482.73000000	.....	3,069,088	(2,900,919)	168,169		666	0	0	(2,900,919)				0003
145811 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	01/20/2022	01/20/2023	.....	32,429,604	..1202.57000000	.....	1,485,276	(1,403,891)	81,385		359	0	0	(1,403,891)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
145829 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.01/20/2022	.01/20/2023	.....	.....7,227,198	... 523.80000000	.....	.....233,439	 (220,647)	12,791	.....	.....0	0	0	 (220,647)	.....	.....	.....	0003
145839 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....28,655,092	... 171.65000000	.....	.....1,844,677	 (1,743,599)	101,078	.....	.....249,407	0	0	 (1,743,599)	.....	.....	.....	0003
145875 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.07/20/2023	.....	.....4,034,457	... 4482.73000000	.....	.....394,164	 (249,060)	145,104	.....	.....21,545	0	0	 (249,060)	.....	.....	.....	0003
145877 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....58,275,490	... 4482.73000000	.....	.....4,533,880	 (4,285,448)	248,432	.....	.....798	0	0	 (4,285,448)	.....	.....	.....	0003
145879 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....47,701,891	... 4482.73000000	.....	.....3,711,245	 (3,507,890)	203,356	.....	.....723	0	0	 (3,507,890)	.....	.....	.....	0003
145881 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....54,887,486	... 4482.73000000	.....	.....4,270,291	 (4,036,302)	233,989	.....	.....864	0	0	 (4,036,302)	.....	.....	.....	0003
145883 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....50,309,108	... 4482.73000000	.....	.....3,914,089	 (3,699,618)	214,471	.....	.....817	0	0	 (3,699,618)	.....	.....	.....	0003
145886 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	.....35,994,330	... 4482.73000000	.....	.....2,800,388	 (2,646,942)	153,446	.....	.....592	0	0	 (2,646,942)	.....	.....	.....	0003
146372 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	.....43,846,900	... 168.86000000	.....	.....2,923,819	 (2,629,047)	294,772	.....	.....812,074	0	0	 (2,629,047)	.....	.....	.....	0003
146406 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.02/04/2022	.02/06/2023	.....	.....51,356,681	... 1206.97000000	.....	.....2,393,221	 (2,151,943)	241,278	.....	.....6,819	0	0	 (2,151,943)	.....	.....	.....	0003
146408 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/04/2022	.02/06/2023	.....	.....12,774,247	... 521.11000000	.....	.....433,047	 (389,388)	43,659	.....	.....1,786	0	0	 (389,388)	.....	.....	.....	0003
146411 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/04/2022	.02/06/2023	.....	.....36,376,971	... 4500.53000000	.....	.....1,800,660	 (1,619,122)	181,538	.....	.....0	0	0	 (1,619,122)	.....	.....	.....	0003
146413 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/04/2022	.02/06/2023	.....	.....27,341,755	... 105.13000000	.....	.....1,947,525	 (1,751,180)	196,344	.....	.....1,063	0	0	 (1,751,180)	.....	.....	.....	0003
146418 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57PNE97	.02/04/2022	.02/06/2023	.....	.....1,455,510	... 76.07000000	.....	.....98,101	 (88,211)	9,890	.....	.....300	0	0	 (88,211)	.....	.....	.....	0003
146420 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.02/04/2022	.02/06/2023	.....	.....24,296,932	... 4500.53000000	.....	.....529,673	 (476,273)	53,400	.....	.....0	0	0	 (476,273)	.....	.....	.....	0003
146423 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.02/04/2022	.08/04/2023	.....	.....8,790,818	... 4500.53000000	.....	.....906,773	 (548,050)	358,723	.....	.....46,357	0	0	 (548,050)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
146425 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		51,306,042	..4500.53000000		4,171,146	(3,750,622)	420,524		2,459	0	0	(3,750,622)				0003	.....
146428 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		82,938,433	..4500.53000000		6,742,838	(6,063,042)	679,796		5,560	0	0	(6,063,042)				0003	.....
146431 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPFGFNF3BB653	.02/04/2022	.02/06/2023		41,562,263	..4500.53000000		3,629,343	(3,263,442)	365,901		2,017	0	0	(3,263,442)				0003	.....
146432 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		62,503,979	..4500.53000000		5,081,531	(4,569,224)	512,307		4,815	0	0	(4,569,224)				0003	.....
146434 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.02/04/2022	.02/06/2023		53,064,309	..4500.53000000		4,420,257	(3,974,618)	445,639		734	0	0	(3,974,618)				0003	.....
146436 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		41,702,009	..4500.53000000		3,390,345	(3,048,539)	341,806		3,484	0	0	(3,048,539)				0003	.....
146438 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPFGFNF3BB653	.02/04/2022	.02/06/2023		59,520,661	..4500.53000000		5,197,526	(4,673,524)	524,001		4,885	0	0	(4,673,524)				0003	.....
146440 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		63,007,420	..4500.53000000		5,122,460	(4,606,027)	516,433		5,662	0	0	(4,606,027)				0003	.....
146442 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.02/04/2022	.02/06/2023		58,882,603	..4500.53000000		4,910,809	(4,415,714)	495,095		829	0	0	(4,415,714)				0003	.....
146445 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		50,832,471	..4500.53000000		4,132,645	(3,716,002)	416,643		4,678	0	0	(3,716,002)				0003	.....
146447 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023		48,605,724	..4500.53000000		3,951,612	(3,553,221)	398,391		4,606	0	0	(3,553,221)				0003	.....
146459 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.02/04/2022	.02/05/2027		875,187	..4500.53000000		23,367	(4,221)	19,147		(8,588)	0	0	(4,221)				0003	.....
146461 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPROBK5P83	.02/04/2022	.02/06/2029		2,205,498	..4500.53000000		62,195	(8,020)	54,175		(28,942)	0	0	(8,020)				0003	.....
146670 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPROBK5P83	.02/11/2022	.02/11/2023		1,272,979	..4585.99000000		50,728	(44,891)	5,837		0	0	0	(44,891)				0003	.....
147061 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/18/2022	.02/17/2023		38,992,793	..177.12000000		2,710,034	(2,352,667)	357,367		251,718	0	0	(2,352,667)				0003	.....
147075 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I7OUK5573	.02/18/2022	.02/17/2023		23,451,557	..101.51000000		2,059,047	(1,787,524)	271,523		1,885	0	0	(1,787,524)				0003	.....
147084 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.02/18/2022	.02/17/2023		1,058,691	..75.30000000		74,532	(64,703)	9,828		535	0	0	(64,703)				0003	.....
147090 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPFGFNF3BB653	.02/18/2022	.08/18/2023		7,524,511	..4348.87000000		802,823	(464,638)	338,186		74,479	0	0	(464,638)				0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
147092 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.02/18/2022	.02/17/2023	.....	43,256,069	..1187.57000000	.....	2,011,407	(1,746,167)	265,241	.....	43,569	0	0	(1,746,167)	.....	.....	.....	0003
147093 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.02/18/2022	.02/17/2023	.....	59,144,632	..4348.87000000	.....	5,039,072	(4,374,579)	664,493	.....	36,069	0	0	(4,374,579)	.....	.....	.....	0003
147096 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/18/2022	.02/17/2023	.....	10,301,077	..519.06000000	.....	358,478	(311,206)	47,272	.....	11,073	0	0	(311,206)	.....	.....	.....	0003
147099 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	37,620,749	..4348.87000000	.....	3,261,312	(2,831,249)	430,063	.....	15,588	0	0	(2,831,249)	.....	.....	.....	0003
147101 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/18/2022	.02/17/2023	.....	28,604,054	..4348.87000000	.....	1,538,898	(1,335,967)	202,932	.....	0	0	0	(1,335,967)	.....	.....	.....	0003
147105 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	62,584,597	..4348.87000000	.....	5,425,408	(4,709,969)	715,438	.....	28,805	0	0	(4,709,969)	.....	.....	.....	0003
147106 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.02/18/2022	.02/17/2023	.....	42,103,239	..4348.87000000	.....	3,587,160	(3,114,128)	473,032	.....	26,780	0	0	(3,114,128)	.....	.....	.....	0003
147107 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E57ODZIWZ7FF32TWIFA76	.02/18/2022	.02/17/2023	.....	20,721,465	..4348.87000000	.....	408,213	(354,383)	53,830	.....	0	0	0	(354,383)	.....	.....	.....	0003
147123 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	56,724,938	..4348.87000000	.....	4,917,439	(4,268,985)	648,453	.....	31,168	0	0	(4,268,985)	.....	.....	.....	0003
147133 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	51,840,912	..4348.87000000	.....	4,494,046	(3,901,425)	592,622	.....	31,069	0	0	(3,901,425)	.....	.....	.....	0003
147135 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	46,003,436	..4348.87000000	.....	3,988,000	(3,462,110)	525,890	.....	29,680	0	0	(3,462,110)	.....	.....	.....	0003
147137 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	51,160,088	..4348.87000000	.....	4,435,026	(3,850,188)	584,839	.....	34,860	0	0	(3,850,188)	.....	.....	.....	0003
147139 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.02/18/2022	.02/17/2023	.....	47,523,950	..4348.87000000	.....	4,119,813	(3,576,541)	543,272	.....	36,241	0	0	(3,576,541)	.....	.....	.....	0003
147142 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.02/18/2022	.02/17/2023	.....	50,012,005	..4348.87000000	.....	4,260,980	(3,699,093)	561,887	.....	32,879	0	0	(3,699,093)	.....	.....	.....	0003
147144 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.02/18/2022	.02/17/2023	.....	40,444,491	..4348.87000000	.....	3,445,836	(2,991,440)	454,396	.....	27,336	0	0	(2,991,440)	.....	.....	.....	0003
147150 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.02/18/2022	.02/19/2027	.....	1,589,414	..4348.87000000	.....	43,391	(7,505)	35,886	.....	(11,042)	0	0	(7,505)	.....	.....	.....	0003
147153 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.02/18/2022	.02/20/2029	.....	2,507,570	..4348.87000000	.....	70,713	(8,732)	61,981	.....	(32,416)	0	0	(8,732)	.....	.....	.....	0003
147803 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.03/04/2022	.03/03/2023	.....	1,328,199	..69.03000000	.....	115,830	(96,101)	19,729	.....	12,534	0	0	(96,101)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
147822 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	ROMUJSFPUBMPRO8K5P83	03/04/2022	03/03/2023	42,924,042	4328.87000000		3,981,634	(3,303,444)	678,190		53,699	0	0	(3,303,444)				0003	
147824 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/04/2022	09/01/2023	7,359,079	4328.87000000		812,447	(449,375)	363,072		66,001	0	0	(449,375)				0003	
147827 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/04/2022	03/03/2023	79,423,078	4328.87000000		7,314,885	(6,068,943)	1,245,942		81,717	0	0	(6,068,943)				0003	
147831 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/04/2022	03/03/2023	66,664,598	4328.87000000		6,139,826	(5,094,031)	1,045,795		75,525	0	0	(5,094,031)				0003	
147839 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	56,629,595	4328.87000000		5,323,182	(4,416,486)	906,696		67,654	0	0	(4,416,486)				0003	
147847 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	48,878,280	4328.87000000		4,594,558	(3,811,969)	782,590		59,653	0	0	(3,811,969)				0003	
147856 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	59,165,150	4328.87000000		5,561,524	(4,614,232)	947,293		75,232	0	0	(4,614,232)				0003	
147860 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57PNE97	03/04/2022	03/03/2023	51,083,500	1185.35000000		2,421,358	(2,008,929)	412,429		105,185	0	0	(2,008,929)				0003	
147861 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L10CEMIK50	03/04/2022	03/03/2023	12,115,885	523.29000000		428,902	(355,848)	73,055		9,229	0	0	(355,848)				0003	
147862 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	45,452,132	4328.87000000		4,272,500	(3,544,767)	727,734		59,559	0	0	(3,544,767)				0003	
147866 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	65,066,540	4328.87000000		6,116,255	(5,074,475)	1,041,780		87,326	0	0	(5,074,475)				0003	
147870 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	03/04/2022	03/03/2023	35,654,541	4328.87000000		2,157,100	(1,789,682)	367,418		0	0	0	(1,789,682)				0003	
147872 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L10CEMIK50	03/04/2022	03/03/2023	19,270,440	4328.87000000		368,065	(305,373)	62,692		0	0	0	(305,373)				0003	
147876 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/04/2022	03/03/2023	66,604,893	4328.87000000		6,260,860	(5,194,450)	1,066,410		92,779	0	0	(5,194,450)				0003	
147899 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	03/04/2022	03/03/2023	44,630,139	183.68000000		3,735,097	(3,098,899)	636,198		151,754	0	0	(3,098,899)				0003	
147901 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57PNE97	03/04/2022	03/03/2023	27,577,715	104.54000000		2,341,552	(1,942,716)	398,836		273	0	0	(1,942,716)				0003	
147903 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPFGFNF3BB653	03/04/2022	03/03/2023	44,432,035	4328.87000000		4,033,799	(3,346,723)	687,076		35,194	0	0	(3,346,723)				0003	
147905 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	03/04/2022	03/03/2023	54,854,590	4328.87000000		4,990,029	(4,140,079)	849,950		36,366	0	0	(4,140,079)				0003	
147912 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	03/04/2022	03/04/2027	2,313,933	4328.87000000		67,104	(11,098)	56,006		(17,208)	0	0	(11,098)				0003	
147914 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	03/04/2022	03/02/2029	3,147,487	4328.87000000		96,628	(11,421)	85,206		(41,225)	0	0	(11,421)				0003	
148178 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	03/11/2022	03/11/2023	1,504,068	4280.46050278		82,209	(66,443)	15,766		0	0	0	(66,443)				0003	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)					
	148430 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/18/2022	03/20/2023	.....	43,055,840	179.30000000	.....	3,611,600	(2,834,171)	.....	777,429	.....	318,560	.....	0	.....	0	.....	(2,834,171)	.....	.....	0003	.....
	148445 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/18/2022	09/20/2023	.....	10,711,488	4463.12000000	.....	1,158,984	(605,785)	.....	553,199	.....	79,180	.....	0	.....	0	.....	(605,785)	.....	.....	0003	.....
	148451 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/18/2022	03/20/2023	.....	51,772,192	4463.12000000	.....	4,504,164	(3,534,603)	.....	969,561	.....	27,849	.....	0	.....	0	.....	(3,534,603)	.....	.....	0003	.....
	148459 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/18/2022	03/20/2023	.....	62,838,430	4463.12000000	.....	5,466,923	(4,290,120)	.....	1,176,804	.....	49,998	.....	0	.....	0	.....	(4,290,120)	.....	.....	0003	.....
	148477 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFUS7RNE97	03/18/2022	03/20/2023	.....	53,704,189	1201.28000000	.....	2,604,653	(2,043,979)	.....	560,675	.....	92,216	.....	0	.....	0	.....	(2,043,979)	.....	.....	0003	.....
	148479 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCMIK50	03/18/2022	03/20/2023	.....	11,511,538	521.22000000	.....	437,438	(343,276)	.....	94,163	.....	30,078	.....	0	.....	0	.....	(343,276)	.....	.....	0003	.....
	148480 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	03/18/2022	03/20/2023	.....	30,742,454	105.83000000	.....	2,413,180	(1,893,721)	.....	519,458	.....	3,668	.....	0	.....	0	.....	(1,893,721)	.....	.....	0003	.....
	148482 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP517OUK5573	03/18/2022	03/20/2023	.....	32,562,934	4463.12000000	.....	1,790,961	(1,405,441)	.....	385,520	.....	0	.....	0	.....	0	.....	(1,405,441)	.....	.....	0003	.....
	148483 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFUS7RNE97	03/18/2022	03/20/2023	.....	1,000,707	73.77000000	.....	76,554	(60,075)	.....	16,479	.....	2,311	.....	0	.....	0	.....	(60,075)	.....	.....	0003	.....
	148490 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFNF3BB653	03/18/2022	03/20/2023	.....	48,549,211	4463.12000000	.....	4,013,932	(3,149,897)	.....	864,034	.....	27,619	.....	0	.....	0	.....	(3,149,897)	.....	.....	0003	.....
	148492 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCMIK50	03/18/2022	03/20/2023	.....	23,780,994	4463.12000000	.....	494,645	(388,168)	.....	106,477	.....	0	.....	0	.....	0	.....	(388,168)	.....	.....	0003	.....
	148494 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	03/18/2022	03/20/2023	.....	3,484,463	4463.12000000	.....	103,140	(80,938)	.....	22,202	.....	(50,759)	.....	0	.....	0	.....	(80,938)	.....	.....	0003	.....
	148496 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	03/18/2022	03/20/2023	.....	2,690,653	4463.12000000	.....	83,679	(65,667)	.....	18,013	.....	(63,307)	.....	0	.....	0	.....	(65,667)	.....	.....	0003	.....
	148498 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFNF3BB653	03/18/2022	03/20/2023	.....	81,974,920	4463.12000000	.....	6,777,489	(5,318,574)	.....	1,458,914	.....	60,131	.....	0	.....	0	.....	(5,318,574)	.....	.....	0003	.....
	148502 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFNF3BB653	03/18/2022	03/20/2023	.....	52,606,386	4463.12000000	.....	4,349,369	(3,413,129)	.....	936,240	.....	46,273	.....	0	.....	0	.....	(3,413,129)	.....	.....	0003	.....
	148504 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFNF3BB653	03/18/2022	03/20/2023	.....	55,632,813	4463.12000000	.....	4,599,587	(3,609,485)	.....	990,102	.....	51,172	.....	0	.....	0	.....	(3,609,485)	.....	.....	0003	.....
	148506 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFNF3BB653	03/18/2022	03/20/2023	.....	57,242,412	4463.12000000	.....	4,732,665	(3,713,917)	.....	1,018,748	.....	59,171	.....	0	.....	0	.....	(3,713,917)	.....	.....	0003	.....
	148508 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	03/18/2022	03/20/2023	.....	54,286,799	4463.12000000	.....	4,750,095	(3,727,595)	.....	1,022,500	.....	47,167	.....	0	.....	0	.....	(3,727,595)	.....	.....	0003	.....
	148513 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	03/18/2022	03/20/2023	.....	60,718,922	4463.12000000	.....	5,312,906	(4,169,256)	.....	1,143,650	.....	54,894	.....	0	.....	0	.....	(4,169,256)	.....	.....	0003	.....
	148515 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	03/18/2022	03/20/2023	.....	74,299,860	4463.12000000	.....	6,501,238	(5,101,789)	.....	1,399,449	.....	72,146	.....	0	.....	0	.....	(5,101,789)	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
149297 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	50,200,655	179.66000000	.....	4,157,774	(3,064,223)	1,093,552	.....	424,048	0	0	(3,064,223)	.....	.....	.....	0003	.....
149311 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	10/06/2023	.....	9,410,415	4481.15000000	.....	1,005,963	(493,803)	512,160	.....	67,837	0	0	(493,803)	.....	.....	.....	0003	.....
149325 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	04/06/2022	04/06/2023	.....	39,857,360	110.55000000	.....	3,308,161	(2,438,069)	870,092	.....	490	0	0	(2,438,069)	.....	.....	.....	0003	.....
149327 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	04/06/2022	04/06/2023	.....	1,083,647	72.70000000	.....	87,342	(64,370)	22,972	.....	5,600	0	0	(64,370)	.....	.....	.....	0003	.....
149330 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	52,429,455	4481.15000000	.....	4,634,721	(3,415,726)	1,218,995	.....	38,351	0	0	(3,415,726)	.....	.....	.....	0003	.....
149332 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	63,184,215	4481.15000000	.....	5,585,433	(4,116,388)	1,469,045	.....	48,453	0	0	(4,116,388)	.....	.....	.....	0003	.....
149335 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	38,540,488	4481.15000000	.....	3,406,948	(2,510,874)	896,074	.....	41,776	0	0	(2,510,874)	.....	.....	.....	0003	.....
149338 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZVIZ7FF32WEFA76	04/06/2022	04/06/2023	.....	79,995,606	4481.15000000	.....	7,243,100	(5,338,065)	1,905,035	.....	63,354	0	0	(5,338,065)	.....	.....	.....	0003	.....
149339 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	47,367,487	4481.15000000	.....	4,187,247	(3,085,944)	1,101,303	.....	55,986	0	0	(3,085,944)	.....	.....	.....	0003	.....
149342 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	53,167,086	4481.15000000	.....	4,699,927	(3,463,782)	1,236,145	.....	64,566	0	0	(3,463,782)	.....	.....	.....	0003	.....
149343 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	04/06/2022	04/06/2023	.....	56,635,991	4481.15000000	.....	5,153,875	(3,798,335)	1,355,540	.....	70,216	0	0	(3,798,335)	.....	.....	.....	0003	.....
149346 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	48,026,513	4481.15000000	.....	4,245,505	(3,128,879)	1,116,626	.....	59,813	0	0	(3,128,879)	.....	.....	.....	0003	.....
149348 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	04/06/2022	04/06/2023	.....	61,658,372	4481.15000000	.....	5,610,912	(4,135,165)	1,475,747	.....	90,326	0	0	(4,135,165)	.....	.....	.....	0003	.....
149349 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	48,322,046	4481.15000000	.....	4,271,629	(3,148,132)	1,123,497	.....	62,122	0	0	(3,148,132)	.....	.....	.....	0003	.....
149353 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2022	04/06/2023	.....	47,052,075	4481.15000000	.....	4,159,365	(3,065,395)	1,093,970	.....	65,683	0	0	(3,065,395)	.....	.....	.....	0003	.....
149361 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	04/06/2022	04/06/2023	.....	68,067,431	4481.15000000	.....	6,194,136	(4,564,994)	1,629,143	.....	102,563	0	0	(4,564,994)	.....	.....	.....	0003	.....
149364 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	04/06/2022	04/06/2023	.....	67,442,398	4481.15000000	.....	6,137,258	(4,523,075)	1,614,183	.....	107,849	0	0	(4,523,075)	.....	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
149381 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2022	04/06/2023		58,884,342	1202.43000000		3,014,878	(2,221,924)	792,954		214,092	0	0	(2,221,924)				0003
149382 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	04/06/2022	04/06/2023		15,938,516	522.31000000		642,322	(473,383)	168,940		59,151	0	0	(473,383)				0003
149383 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/06/2022	04/06/2029		1,256,634	4481.15000000		38,830	(4,085)	34,745		(23,010)	0	0	(4,085)				0003
149385 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/06/2022	04/06/2027		3,034,169	4481.15000000		81,923	(12,069)	69,854		(14,348)	0	0	(12,069)				0003
149390 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023		44,747,971	4481.15000000		2,340,319	(1,724,783)	615,536		0	0	0	(1,724,783)				0003
149394 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/06/2022	04/06/2023		26,713,623	4481.15000000		560,987	(413,440)	147,547		0	0	0	(413,440)				0003
149730 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/14/2022	04/14/2023		1,554,813	4092.58306698		176,096	(125,921)	50,175		112	0	0	(125,921)				0003
149935 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		42,364,775	4459.45000000		3,728,085	(2,604,553)	1,123,532		47,771	0	0	(2,604,553)				0003
149944 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		51,540,385	4459.45000000		4,535,535	(3,168,662)	1,366,874		62,325	0	0	(3,168,662)				0003
149948 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		59,467,425	4459.45000000		5,233,112	(3,656,010)	1,577,102		96,524	0	0	(3,656,010)				0003
149952 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		55,297,180	4459.45000000		4,866,132	(3,399,626)	1,466,506		97,298	0	0	(3,399,626)				0003
149955 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		65,764,301	4459.45000000		5,787,235	(4,043,137)	1,744,098		123,018	0	0	(4,043,137)				0003
149959 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		63,324,190	4459.45000000		5,572,506	(3,893,121)	1,679,385		123,841	0	0	(3,893,121)				0003
149968 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	04/20/2022	04/20/2023		38,925,123	182.71000000		3,156,182	(2,205,004)	951,178		290,638	0	0	(2,205,004)				0003
149970 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		52,530,357	4459.45000000		4,622,653	(3,229,524)	1,393,128		109,017	0	0	(3,229,524)				0003
149973 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		29,626,696	112.38000000		2,387,912	(1,668,267)	719,645		2,887	0	0	(1,668,267)				0003
149974 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023		52,805,150	4459.45000000		4,646,834	(3,246,418)	1,400,416		113,739	0	0	(3,246,418)				0003
149976 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2022	04/20/2023		1,288,206	72.42000000		93,652	(65,428)	28,224		8,378	0	0	(65,428)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
149978 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	10/20/2023	.....	7,213,078	4459.45000000	.....	642,685	(299,060)	343,625	.....	55,628	0	0	(299,060)	.....	.....	.....	0003	.....
149982 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	04/20/2022	04/20/2023	.....	69,753,344	4459.45000000	.....	6,138,269	(4,288,380)	1,849,889	.....	154,723	0	0	(4,288,380)	.....	.....	.....	0003	.....
149984 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	56,189,070	4459.45000000	.....	4,944,618	(3,454,459)	1,490,159	.....	129,302	0	0	(3,454,459)	.....	.....	.....	0003	.....
150009 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2023	.....	50,286,178	1200.40000000	.....	2,640,024	(1,844,401)	795,624	.....	255,955	0	0	(1,844,401)	.....	.....	.....	0003	.....
150010 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	04/20/2022	04/20/2023	.....	10,691,669	523.25000000	.....	444,773	(310,732)	134,041	.....	48,129	0	0	(310,732)	.....	.....	.....	0003	.....
150017 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	04/20/2022	04/20/2023	.....	31,480,978	4459.45000000	.....	2,804,955	(1,959,626)	845,329	.....	9	0	0	(1,959,626)	.....	.....	.....	0003	.....
150021 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2027	.....	3,978,366	4459.45000000	.....	125,716	(17,556)	108,160	.....	(50,114)	0	0	(17,556)	.....	.....	.....	0003	.....
150023 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2029	.....	2,397,649	4459.45000000	.....	76,485	(7,628)	68,857	.....	(37,460)	0	0	(7,628)	.....	.....	.....	0003	.....
150025 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	21,692,132	4459.45000000	.....	444,689	(310,673)	134,016	.....	0	0	0	(310,673)	.....	.....	.....	0003	.....
150374 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	05/06/2022	11/06/2023	.....	8,246,680	4123.34000000	.....	923,620	(402,086)	521,534	.....	138,007	0	0	(402,086)	.....	.....	.....	0003	.....
150384 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	05/06/2022	05/05/2023	.....	47,241,082	175.42000000	.....	4,100,527	(2,692,379)	1,408,148	.....	707,098	0	0	(2,692,379)	.....	.....	.....	0003	.....
150386 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC ROYAL BANK OF CANADA	05/06/2022	05/05/2023	.....	35,745,090	99.83000000	.....	3,420,805	(2,246,078)	1,174,727	.....	90,462	0	0	(2,246,078)	.....	.....	.....	0003	.....
150388 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2022	05/05/2023	.....	1,074,947	67.27000000	.....	96,423	(63,311)	33,112	.....	25,294	0	0	(63,311)	.....	.....	.....	0003	.....
150392 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2022	05/05/2023	.....	56,077,424	4123.34000000	.....	4,962,912	(3,258,615)	1,704,297	.....	361,930	0	0	(3,258,615)	.....	.....	.....	0003	.....
150395 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2022	05/05/2023	.....	46,593,742	4123.34000000	.....	4,123,596	(2,707,526)	1,416,070	.....	407,107	0	0	(2,707,526)	.....	.....	.....	0003	.....
150397 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	05/06/2022	05/05/2023	.....	53,867,686	4123.34000000	.....	5,225,636	(3,431,118)	1,794,518	.....	342,065	0	0	(3,431,118)	.....	.....	.....	0003	.....
150399 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	05/06/2022	05/05/2023	.....	82,470,558	4123.34000000	.....	8,382,382	(5,503,817)	2,878,565	.....	918,878	0	0	(5,503,817)	.....	.....	.....	0003	.....
150405 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	05/06/2022	05/05/2023	.....	53,300,661	4123.34000000	.....	5,399,357	(3,545,182)	1,854,175	.....	676,990	0	0	(3,545,182)	.....	.....	.....	0003	.....
150407 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	05/06/2022	05/05/2023	.....	51,772,032	4123.34000000	.....	5,244,507	(3,443,509)	1,800,998	.....	701,970	0	0	(3,443,509)	.....	.....	.....	0003	.....
150409 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	05/06/2022	05/05/2023	.....	51,986,324	4123.34000000	.....	5,266,215	(3,457,762)	1,808,453	.....	742,109	0	0	(3,457,762)	.....	.....	.....	0003	.....
150413 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	05/06/2022	05/05/2023	.....	51,791,543	4123.34000000	.....	5,246,483	(3,444,806)	1,801,677	.....	765,731	0	0	(3,444,806)	.....	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
150415 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	57,349,761	..4123.34000000	.....	5,809,531	(3,814,500)	1,995,031	.....	871,977	0	0	(3,814,500)	.....	.....	.....	0003
150417 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	57,804,307	..4123.34000000	.....	5,855,576	(3,844,733)	2,010,843	.....	927,550	0	0	(3,844,733)	.....	.....	.....	0003
150420 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	.....	51,541,750	..4123.34000000	.....	4,561,500	(2,995,051)	1,566,449	.....	536,661	0	0	(2,995,051)	.....	.....	.....	0003
150422 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	.....	50,943,866	..4123.34000000	.....	4,508,587	(2,960,308)	1,548,278	.....	565,251	0	0	(2,960,308)	.....	.....	.....	0003
150446 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUXT09	.05/06/2022	.05/05/2023	.....	57,221,839	..1159.24000000	.....	2,952,647	(1,938,688)	1,013,958	.....	1,019,495	0	0	(1,938,688)	.....	.....	.....	0003
150447 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	.05/06/2022	.05/05/2023	.....	15,676,768	..510.08000000	.....	675,670	(443,641)	232,030	.....	318,030	0	0	(443,641)	.....	.....	.....	0003
150448 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	41,938,396	..4123.34000000	.....	4,248,360	(2,789,445)	1,458,915	.....	7,791	0	0	(2,789,445)	.....	.....	.....	0003
150452 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.05/06/2022	.05/06/2027	.....	2,560,850	..4123.34000000	.....	78,874	(10,324)	68,551	.....	(1,650)	0	0	(10,324)	.....	.....	.....	0003
150453 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.05/06/2022	.05/04/2029	.....	1,806,435	..4123.34000000	.....	58,890	(5,509)	53,381	.....	(20,343)	0	0	(5,509)	.....	.....	.....	0003
150456 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.05/06/2022	.05/05/2023	.....	24,065,637	..4123.34000000	.....	452,434	(297,065)	155,369	.....	0	0	0	(297,065)	.....	.....	.....	0003
150696 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... C2RNE81BXP4R0TD8PU41	.05/13/2022	.05/13/2023	.....	1,496,901	..3937.43000000	.....	112,713	(71,643)	41,071	.....	11,199	0	0	(71,643)	.....	.....	.....	0003
150999 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	39,214,400	..172.03000000	.....	3,385,071	(2,092,421)	1,292,651	.....	812,280	0	0	(2,092,421)	.....	.....	.....	0003
151002 Call Options – Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	1,058,696	..67.77000000	.....	84,514	(52,241)	32,273	.....	23,967	0	0	(52,241)	.....	.....	.....	0003
151038 Call Options – Ishares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	.05/20/2022	.05/19/2023	.....	30,186,260	..94.88000000	.....	2,807,309	(1,735,287)	1,072,022	.....	270,779	0	0	(1,735,287)	.....	.....	.....	0003
151040 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	60,257,817	..3901.36000000	.....	6,178,134	(3,818,902)	2,359,233	.....	1,116,466	0	0	(3,818,902)	.....	.....	.....	0003
151042 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	39,792,383	..3901.36000000	.....	4,079,847	(2,521,884)	1,557,964	.....	798,652	0	0	(2,521,884)	.....	.....	.....	0003
151046 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	53,166,502	..3901.36000000	.....	5,451,074	(3,369,482)	2,081,591	.....	1,181,879	0	0	(3,369,482)	.....	.....	.....	0003
151050 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	46,001,890	..3901.36000000	.....	4,716,498	(2,915,418)	1,801,080	.....	1,145,224	0	0	(2,915,418)	.....	.....	.....	0003
151052 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	56,548,119	..3901.36000000	.....	5,797,785	(3,583,796)	2,213,989	.....	1,511,094	0	0	(3,583,796)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
151054 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	4PQUHN3JPF6NF3BB653 05/20/2022	05/19/2023	.....	46,789,391	3901.36000000	.....	4,797,239	(2,965,326)	1,831,913	.....	1,307,160	0	0	(2,965,326)	.....	.....	.....	0003
151057 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	11/20/2023	.....	6,632,312	3901.36000000	.....	814,453	(333,792)	480,661	.....	151,616	0	0	(333,792)	.....	.....	.....	0003
151059 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	46,036,048	3901.36000000	.....	4,732,508	(2,925,314)	1,807,194	.....	467,011	0	0	(2,925,314)	.....	.....	.....	0003
151061 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	49,547,272	3901.36000000	.....	5,093,462	(3,148,431)	1,945,031	.....	529,975	0	0	(3,148,431)	.....	.....	.....	0003
151063 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	42,314,151	3901.36000000	.....	4,349,897	(2,688,810)	1,661,087	.....	646,978	0	0	(2,688,810)	.....	.....	.....	0003
151065 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	54,228,904	3901.36000000	.....	5,574,734	(3,445,921)	2,128,813	.....	1,162,867	0	0	(3,445,921)	.....	.....	.....	0003
151067 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	62,421,760	3901.36000000	.....	6,416,960	(3,966,527)	2,450,433	.....	1,879,622	0	0	(3,966,527)	.....	.....	.....	0003
151069 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 05/20/2022	05/19/2023	.....	48,767,000	3901.36000000	.....	5,013,250	(3,098,850)	1,914,400	.....	1,579,756	0	0	(3,098,850)	.....	.....	.....	0003
151092 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGQFU57RNE97 05/20/2022	05/19/2023	.....	49,387,221	1137.94000000	.....	2,565,666	(1,585,920)	979,746	.....	1,354,127	0	0	(1,585,920)	.....	.....	.....	0003
151093 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50 05/20/2022	05/19/2023	.....	12,574,878	509.24000000	.....	544,492	(336,568)	207,924	.....	296,633	0	0	(336,568)	.....	.....	.....	0003
151094 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	G5GSEF7VJP5I7OUK5573 05/20/2022	05/19/2023	.....	36,643,026	3901.36000000	.....	2,268,203	(1,402,049)	866,155	.....	317,316	0	0	(1,402,049)	.....	.....	.....	0003
151098 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUIWSPU8MIPRO8K5P83	05/20/2022	05/20/2027	.....	5,069,803	3901.36000000	.....	173,894	(21,427)	152,467	.....	84,467	0	0	(21,427)	.....	.....	.....	0003
151099 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPU8MIPRO8K5P83 05/20/2022	05/18/2029	.....	1,272,358	3901.36000000	.....	44,660	(3,933)	40,727	.....	8,921	0	0	(3,933)	.....	.....	.....	0003
151102 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50 05/20/2022	05/19/2023	.....	21,232,330	3901.36000000	.....	382,182	(236,239)	145,943	.....	0	0	0	(236,239)	.....	.....	.....	0003
151614 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76 06/06/2022	06/06/2023	.....	64,110,670	4121.43000000	.....	6,261,744	(3,568,336)	2,693,408	.....	449,345	0	0	(3,568,336)	.....	.....	.....	0003
151616 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76 06/06/2022	06/06/2023	.....	59,875,755	4121.43000000	.....	5,848,731	(3,332,976)	2,515,756	.....	399,449	0	0	(3,332,976)	.....	.....	.....	0003
151618 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078 06/06/2022	06/06/2023	.....	45,558,228	171.82000000	.....	3,741,279	(2,132,017)	1,609,263	.....	978,911	0	0	(2,132,017)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
151633 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		1,171,867	69.98000000		82,891	(47,237)	35,655		18,697	0	0	(47,237)				0003
151636 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	06/06/2022	12/06/2023		4,945,716	4121.43000000		586,068	(222,449)	363,619		98,620	0	0	(222,449)				0003
151639 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ES71P3U3RH1GCT1XBU11	06/06/2022	06/06/2023		40,932,688	4121.43000000		4,044,150	(2,304,611)	1,739,538		423,534	0	0	(2,304,611)				0003
151640 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		49,460,375	4121.43000000		4,782,791	(2,725,536)	2,057,255		599,318	0	0	(2,725,536)				0003
151644 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		46,744,682	4121.43000000		4,520,185	(2,575,886)	1,944,299		600,565	0	0	(2,575,886)				0003
151646 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		49,457,160	4121.43000000		4,782,480	(2,725,358)	2,057,122		677,154	0	0	(2,725,358)				0003
151653 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	06/06/2022	06/06/2023		30,077,374	98.01000000		2,743,056	(1,563,166)	1,179,890		205,242	0	0	(1,563,166)				0003
151664 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		56,797,496	4121.43000000		5,559,657	(3,168,243)	2,391,414		836,075	0	0	(3,168,243)				0003
151668 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		55,689,074	4121.43000000		5,451,158	(3,106,413)	2,344,745		868,373	0	0	(3,106,413)				0003
151675 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		47,916,094	4121.43000000		4,690,295	(2,672,826)	2,017,469		783,599	0	0	(2,672,826)				0003
151681 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		66,661,471	4121.43000000		6,519,110	(3,715,000)	2,804,110		1,081,031	0	0	(3,715,000)				0003
151684 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		47,964,237	4121.43000000		4,692,281	(2,673,958)	2,018,324		801,337	0	0	(2,673,958)				0003
151687 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		63,503,018	4121.43000000		6,207,152	(3,537,226)	2,669,926		1,120,818	0	0	(3,537,226)				0003
151690 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		55,576,783	4121.43000000		5,437,944	(3,098,883)	2,339,061		1,042,554	0	0	(3,098,883)				0003
151698 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	06/06/2022	06/06/2023		55,620,993	1157.03000000		2,959,037	(1,686,246)	1,272,791		1,239,972	0	0	(1,686,246)				0003
151699 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	06/06/2022	06/06/2023		12,783,726	513.34000000		571,433	(325,638)	245,794		258,927	0	0	(325,638)				0003
151700 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	06/06/2022	06/06/2023		37,200,320	4121.43000000		2,190,048	(1,248,028)	942,021		19,487	0	0	(1,248,028)				0003
151704 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROMUWSPU8MPRO8K5P83	06/06/2022	06/04/2027		4,053,241	4121.43000000		143,079	(16,316)	126,763		(55,272)	0	0	(16,316)				0003
151705 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	06/06/2022	06/06/2029		1,853,944	4121.43000000		65,073	(5,293)	59,780		(10,555)	0	0	(5,293)				0003
151709 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		21,183,265	4121.43000000		446,967	(254,710)	192,257		0	0	0	(254,710)				0003
151812 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/10/2022	06/10/2023		1,224,323	4115.37000000		48,841	(27,297)	21,543		1,532	0	0	(27,297)				0003
152991 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ES71P3U3RH1GCT1XBU11	06/17/2022	06/20/2023		34,318,827	3674.84000000		2,278,770	(1,219,885)	1,058,885		820,180	0	0	(1,219,885)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
152997 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4R0TD8PU41	.06/17/2022	.12/20/2023	.....	5,592,728	..3674.84000000	.....	601,217	 (214,954)	386,263	.....	157,705	 0	 0	 (214,954)	.....	.....	.....	0003
152999 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32WFEFA76	.06/17/2022	.06/20/2023	.....	19,516,657	..3674.84000000	.....	382,526	 (204,776)	177,750	.....	0	 0	 0	 (204,776)	.....	.....	.....	0003
153001 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.06/17/2022	.06/18/2027	.....	3,972,298	..3674.84000000	.....	129,483	 (13,962)	115,521	.....	41,303	 0	 0	 (13,962)	.....	.....	.....	0003
153002 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	48,507,888	..3674.84000000	.....	5,107,872	 (2,734,377)	2,373,495	.....	624,355	 0	 0	 (2,734,377)	.....	.....	.....	0003
153006 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.06/17/2022	.06/20/2029	.....	1,273,169	..3674.84000000	.....	42,519	 (3,272)	39,247	.....	26	 0	 0	 (3,272)	.....	.....	.....	0003
153010 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	27,013,576	..87.66000000	.....	2,636,526	 (1,411,401)	1,225,125	.....	632,387	 0	 0	 (1,411,401)	.....	.....	.....	0003
153011 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.06/17/2022	.06/20/2023	.....	57,694,988	..3674.84000000	.....	6,075,272	 (3,252,252)	2,823,020	.....	1,836,947	 0	 0	 (3,252,252)	.....	.....	.....	0003
153014 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	1,178,496	..61.48000000	.....	99,465	 (53,246)	46,219	.....	37,783	 0	 0	 (53,246)	.....	.....	.....	0003
153015 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	44,833,048	..3674.84000000	.....	4,720,912	 (2,527,227)	2,193,685	.....	1,548,753	 0	 0	 (2,527,227)	.....	.....	.....	0003
153018 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	43,363,112	..3674.84000000	.....	4,566,128	 (2,444,367)	2,121,761	.....	1,963,019	 0	 0	 (2,444,367)	.....	.....	.....	0003
153019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32WFEFA76	.06/17/2022	.06/20/2023	.....	56,689,864	..3674.84000000	.....	6,081,583	 (3,255,630)	2,825,953	.....	778,576	 0	 0	 (3,255,630)	.....	.....	.....	0003
153023 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32WFEFA76	.06/17/2022	.06/20/2023	.....	66,424,383	..3674.84000000	.....	7,125,884	 (3,814,672)	3,311,213	.....	1,467,272	 0	 0	 (3,814,672)	.....	.....	.....	0003
153034 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	40,915,255	..171.27000000	.....	3,662,234	 (1,960,490)	1,701,745	.....	893,891	 0	 0	 (1,960,490)	.....	.....	.....	0003
153050 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	50,244,617	..3674.84000000	.....	5,290,749	 (2,832,276)	2,458,473	.....	1,274,553	 0	 0	 (2,832,276)	.....	.....	.....	0003
153052 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	50,672,222	..3674.84000000	.....	5,335,776	 (2,856,380)	2,479,396	.....	1,380,931	 0	 0	 (2,856,380)	.....	.....	.....	0003
153054 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	59,696,232	..3674.84000000	.....	6,286,003	 (3,365,061)	2,920,941	.....	1,749,717	 0	 0	 (3,365,061)	.....	.....	.....	0003
153057 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	58,881,226	..3674.84000000	.....	6,200,183	 (3,319,120)	2,881,063	.....	2,210,590	 0	 0	 (3,319,120)	.....	.....	.....	0003
153061 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	46,360,605	..3674.84000000	.....	4,881,764	 (2,613,335)	2,268,428	.....	1,874,042	 0	 0	 (2,613,335)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
153101 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	06/17/2022	06/20/2023		49,198,338	1113.27000000		2,656,710	(1,422,206)	1,234,504		2,258,314	0	0	(1,422,206)				0003
153102 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	06/17/2022	06/20/2023		10,315,157	500.75000000		509,569	(272,785)	236,783		439,704	0	0	(272,785)				0003
153784 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	07/06/2022	07/06/2023		55,628,138	1130.16000000		3,031,734	(1,478,489)	1,553,244		2,223,149	0	0	(1,478,489)				0003
153785 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	07/06/2022	07/06/2023		12,737,041	508.13000000		612,652	(298,773)	313,879		409,508	0	0	(298,773)				0003
153786 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2022	01/05/2024		5,767,620	3845.08000000		712,305	(231,369)	480,936		124,505	0	0	(231,369)				0003
153791 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2022	07/06/2023		62,674,804	3845.08000000		6,424,156	(3,132,876)	3,291,280		718,334	0	0	(3,132,876)				0003
153794 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2022	07/06/2023		65,366,360	3845.08000000		6,700,040	(3,267,417)	3,432,623		790,840	0	0	(3,267,417)				0003
153798 Call Options – Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2022	07/06/2023		1,431,397	61.35000000		115,492	(56,322)	59,170		56,934	0	0	(56,322)				0003
153816 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		50,903,301	3845.08000000		5,237,098	(2,553,982)	2,683,116		1,755,046	0	0	(2,553,982)				0003
153819 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2022	07/06/2023		33,663,703	3845.08000000		2,019,822	(985,009)	1,034,813		502,707	0	0	(985,009)				0003
153820 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2022	07/06/2023		69,495,328	3845.08000000		6,949,533	(3,389,087)	3,560,446		2,814,409	0	0	(3,389,087)				0003
153828 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2022	07/06/2023		40,020,022	3845.08000000		4,204,877	(2,050,598)	2,154,280		688,071	0	0	(2,050,598)				0003
153829 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	07/06/2022	07/06/2029		4,331,917	3845.08000000		156,815	(10,916)	145,899		(86,542)	0	0	(10,916)				0003
153832 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		53,887,436	3845.08000000		5,540,962	(2,702,168)	2,838,794		1,107,914	0	0	(2,702,168)				0003
153835 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		52,103,743	3845.08000000		5,360,740	(2,614,279)	2,746,461		1,119,539	0	0	(2,614,279)				0003
153837 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2027		4,143,069	3845.08000000		145,007	(14,135)	130,872		77,209	0	0	(14,135)				0003
153838 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	07/06/2022	07/06/2023		48,162,139	3845.08000000		4,917,354	(2,398,052)	2,519,302		1,111,124	0	0	(2,398,052)				0003
153841 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		61,011,743	3845.08000000		6,276,014	(3,060,631)	3,215,382		1,451,237	0	0	(3,060,631)				0003
153844 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		62,667,334	3845.08000000		6,447,570	(3,144,295)	3,303,276		1,596,395	0	0	(3,144,295)				0003
153847 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		60,409,832	3845.08000000		6,217,024	(3,031,864)	3,185,160		1,803,394	0	0	(3,031,864)				0003
153851 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023		53,202,742	3845.08000000		5,476,633	(2,670,796)	2,805,837		1,703,240	0	0	(2,670,796)				0003
153882 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	07/06/2022	07/06/2023		18,859,593	3845.08000000		407,367	(198,661)	208,706		83,976	0	0	(198,661)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
153898 Call Options - SPDR Gold shares 153907 Call Options - iShares U.S. Real Estate 154270 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB86K528	.07/06/2022	.07/06/2023	.....	46,389,557	162.14000000	.....	4,165,782	 (2,031,532)	2,134,250	.....	1,717,506	 0	 0	 (2,031,532)	.....	.....	.....	0003
154434 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC ROYAL BANK OF CANADA G5G8EF7VJP5I70UK5573	.07/06/2022	.07/06/2023	.....	30,452,804	93.31000000	.....	2,893,016	 (1,410,841)	1,482,176	.....	415,480	 0	 0	 (1,410,841)	.....	.....	.....	0003
154439 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO ES71P3U3RH1GC71XBU11	.07/15/2022	.07/14/2023	.....	1,440,309	3801.99420000	.....	100,530	 (46,675)	53,855	.....	54,739	 0	 0	 (46,675)	.....	.....	.....	0003
154454 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.01/19/2024	.....	4,751,880	3959.90000000	.....	594,456	 (177,903)	416,553	.....	86,611	 0	 0	 (177,903)	.....	.....	.....	0003
154458 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.07/20/2022	.07/20/2023	.....	29,188,206	3959.90000000	.....	1,768,805	 (794,751)	974,054	.....	265,470	 0	 0	 (794,751)	.....	.....	.....	0003
154462 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXTO9	.07/20/2022	.07/20/2023	.....	16,832,420	3959.90000000	.....	345,065	 (155,043)	190,022	.....	0	 0	 0	 (155,043)	.....	.....	.....	0003
154464 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.07/20/2022	.07/20/2027	.....	2,557,974	3959.90000000	.....	91,064	 (8,179)	82,885	.....	(15,620)	 0	 0	 (8,179)	.....	.....	.....	0003
154477 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.07/20/2022	.07/20/2029	.....	1,734,536	3959.90000000	.....	63,657	 (4,083)	59,575	.....	(44,964)	 0	 0	 (4,083)	.....	.....	.....	0003
154483 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.07/20/2023	.....	49,102,760	3959.90000000	.....	5,018,280	 (2,254,789)	2,763,491	.....	480,525	 0	 0	 (2,254,789)	.....	.....	.....	0003
154486 Call Options - iShares U.S. Real Estate 154495 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB86K528	.07/20/2022	.07/20/2023	.....	34,161,641	158.04000000	.....	3,036,975	 (1,364,559)	1,672,416	.....	1,372,637	 0	 0	 (1,364,559)	.....	.....	.....	0003
154507 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.07/20/2023	.....	62,962,410	3959.90000000	.....	6,434,730	 (2,891,221)	3,543,509	.....	651,828	 0	 0	 (2,891,221)	.....	.....	.....	0003
154515 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB86K528	.07/20/2022	.07/20/2023	.....	21,764,795	93.96000000	.....	1,978,419	 (888,933)	1,089,486	.....	292,363	 0	 0	 (888,933)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.07/20/2022	.07/20/2023	.....	1,513,597	62.91000000	.....	127,445	 (57,263)	70,182	.....	51,095	 0	 0	 (57,263)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.07/20/2023	.....	49,102,760	3959.90000000	.....	5,018,280	 (2,254,789)	2,763,491	.....	1,040,491	 0	 0	 (2,254,789)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.07/20/2023	.....	46,726,820	3959.90000000	.....	4,775,460	 (2,145,686)	2,629,774	.....	1,069,035	 0	 0	 (2,145,686)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.07/20/2022	.07/20/2023	.....	53,854,640	3959.90000000	.....	5,503,920	 (2,472,994)	3,030,926	.....	1,830,536	 0	 0	 (2,472,994)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.07/20/2022	.07/20/2023	.....	38,857,839	1143.36000000	.....	2,148,839	 (965,506)	1,183,333	.....	1,292,707	 0	 0	 (965,506)	.....	.....	.....	0003
154532 Call Options - S&P 500 154536 Call Options - S&P Equal Weight Energy 154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	.07/20/2022	.07/20/2023	.....	8,720,523	508.19000000	.....	437,770	 (196,697)	241,073	.....	296,640	 0	 0	 (196,697)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY
SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
154538 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	35,667,017	..3959.90000000	.....	3,645,153	(1,637,822)	2,007,331	.....	537,476	0	0	(1,637,822)	.....	.....	.....	0003
154544 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	35,833,294	..3959.90000000	.....	3,662,146	(1,645,458)	2,016,689	.....	645,999	0	0	(1,645,458)	.....	.....	.....	0003
154551 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	54,564,650	..3959.90000000	.....	5,576,483	(2,505,598)	3,070,885	.....	1,031,192	0	0	(2,505,598)	.....	.....	.....	0003
154557 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	44,608,155	..3959.90000000	.....	4,558,933	(2,048,397)	2,510,536	.....	868,058	0	0	(2,048,397)	.....	.....	.....	0003
154563 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	44,527,888	..3959.90000000	.....	4,550,730	(2,044,712)	2,506,018	.....	1,185,693	0	0	(2,044,712)	.....	.....	.....	0003
154572 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	.....	49,145,844	..3959.90000000	.....	5,022,683	(2,256,767)	2,765,916	.....	1,418,241	0	0	(2,256,767)	.....	.....	.....	0003
155003 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	61,273,190	..4145.19000000	.....	6,127,319	(2,491,328)	3,635,992	.....	1,353,442	0	0	(2,491,328)	.....	.....	.....	0003
155019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	.08/04/2023	.....	64,734,683	..4145.19000000	.....	6,469,736	(2,630,552)	3,839,184	.....	913,009	0	0	(2,630,552)	.....	.....	.....	0003
155024 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.08/05/2022	.08/04/2023	.....	51,090,867	..1165.05000000	.....	2,840,652	(1,154,990)	1,685,662	.....	1,298,714	0	0	(1,154,990)	.....	.....	.....	0003
155025 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.08/05/2022	.08/04/2023	.....	13,410,152	..513.77000000	.....	682,577	(277,531)	405,045	.....	369,501	0	0	(277,531)	.....	.....	.....	0003
155031 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.08/05/2022	.08/06/2029	.....	2,584,672	..4145.19000000	.....	90,464	(5,234)	85,230	.....	14,631	0	0	(5,234)	.....	.....	.....	0003
155046 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	24,855,413	..98.55000000	.....	2,236,987	(909,544)	1,327,443	.....	196,712	0	0	(909,544)	.....	.....	.....	0003
155058 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BX4R0TD8PU41	.08/05/2022	.02/06/2024	.....	7,750,577	..4145.19000000	.....	1,131,584	(304,499)	827,085	.....	153,468	0	0	(304,499)	.....	.....	.....	0003
155062 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA E571P3U3RHIGC71XBU11	.08/05/2022	.08/04/2023	.....	1,548,036	..65.01000000	.....	136,846	(55,641)	81,206	.....	45,924	0	0	(55,641)	.....	.....	.....	0003
155067 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	.08/04/2023	.....	69,240,473	..4145.19000000	.....	6,920,055	(2,813,649)	4,106,406	.....	517,293	0	0	(2,813,649)	.....	.....	.....	0003
155076 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	.08/04/2023	.....	62,383,563	..4145.19000000	.....	6,234,759	(2,535,012)	3,699,747	.....	705,601	0	0	(2,535,012)	.....	.....	.....	0003
155081 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	54,251,776	..4145.19000000	.....	5,425,178	(2,205,841)	3,219,336	.....	1,386,220	0	0	(2,205,841)	.....	.....	.....	0003
155084 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	62,161,605	..4145.19000000	.....	6,216,161	(2,527,450)	3,688,711	.....	859,104	0	0	(2,527,450)	.....	.....	.....	0003
155103 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	.08/06/2027	.....	1,336,139	..4145.19000000	.....	48,101	(3,897)	44,204	.....	8,022	0	0	(3,897)	.....	.....	.....	0003
155106 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	51,631,221	..4145.19000000	.....	5,163,122	(2,099,291)	3,063,831	.....	809,233	0	0	(2,099,291)	.....	.....	.....	0003
155114 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	52,227,546	..4145.19000000	.....	5,222,755	(2,123,538)	3,099,217	.....	865,047	0	0	(2,123,538)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
155120 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	.. 49,496,908	.. 4145.19000000	.....	..... 4,949,691	 (2,012,512)	 2,937,179	.....	..... 884,291	 0	 0	 (2,012,512)	.....	.....	.....	0003
155127 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	.08/04/2023	.....	.. 49,687,424	.. 4145.19000000	.....	..... 4,968,742	 (2,020,258)	 2,948,484	.....	..... 1,016,328	 0	 0	 (2,020,258)	.....	.....	.....	0003
155132 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.08/05/2022	.08/04/2023	.....	.. 20,434,560	.. 4145.19000000	.....	..... 433,213	 (176,141)	 257,071	.....	..... 10,722	 0	 0	 (176,141)	.....	.....	.....	0003
155142 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.08/05/2022	.08/04/2023	.....	.. 41,420,217	.. 4145.19000000	.....	..... 2,427,225	 (986,894)	 1,440,331	.....	..... 79,860	 0	 0	 (986,894)	.....	.....	.....	0003
155143 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/05/2022	.08/04/2023	.....	.. 41,282,900	.. 165.29000000	.....	..... 3,509,134	 (1,426,791)	 2,082,343	.....	..... 1,292,310	 0	 0	 (1,426,791)	.....	.....	.....	0003
155155 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/05/2022	.08/04/2023	.....	.. 57,719,284	.. 4145.19000000	.....	..... 5,731,562	 (2,330,415)	 3,401,146	.....	..... 464,135	 0	 0	 (2,330,415)	.....	.....	.....	0003
155336 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.08/12/2022	.08/11/2023	.....	.. 1,352,423	.. 4206.21000000	.....	..... 83,742	 (32,439)	 51,304	.....	..... 2,805	 0	 0	 (32,439)	.....	.....	.....	0003
155746 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.08/19/2022	.08/20/2027	.....	.. 1,556,207	.. 4228.48000000	.....	..... 56,023	 (4,109)	 51,914	.....	..... (25,053)	 0	 0	 (4,109)	.....	.....	.....	0003
155753 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.08/19/2022	.08/20/2029	.....	.. 1,396,739	.. 4228.48000000	.....	..... 51,540	 (2,700)	 48,840	.....	..... (49,206)	 0	 0	 (2,700)	.....	.....	.....	0003
155756 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.08/19/2022	.08/18/2023	.....	.. 18,643,242	.. 4228.48000000	.....	..... 410,151	 (150,990)	 259,162	.....	..... 674	 0	 0	 (150,990)	.....	.....	.....	0003
155775 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	.08/19/2022	.08/18/2023	.....	.. 31,341,369	.. 162.72000000	.....	..... 2,592,872	 (954,519)	 1,638,353	.....	..... 1,089,643	 0	 0	 (954,519)	.....	.....	.....	0003
155777 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.08/19/2022	.02/20/2024	.....	.. 5,735,110	.. 4228.48000000	.....	..... 724,230	 (176,449)	 547,781	.....	..... 93,172	 0	 0	 (176,449)	.....	.....	.....	0003
155783 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.08/19/2022	.08/18/2023	.....	.. 59,117,823	.. 4228.48000000	.....	..... 5,902,915	 (2,173,051)	 3,729,864	.....	..... 410,234	 0	 0	 (2,173,051)	.....	.....	.....	0003
155787 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 53,794,996	.. 4228.48000000	.....	..... 5,379,500	 (1,980,365)	 3,399,134	.....	..... 828,685	 0	 0	 (1,980,365)	.....	.....	.....	0003
155791 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	.08/19/2022	.08/18/2023	.....	.. 20,518,725	.. 100.66000000	.....	..... 1,815,086	 (668,191)	 1,146,895	.....	..... 146,431	 0	 0	 (668,191)	.....	.....	.....	0003
155798 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBUI1	.08/19/2022	.08/18/2023	.....	.. 1,070,731	.. 64.69000000	.....	..... 96,152	 (35,396)	 60,755	.....	..... 34,813	 0	 0	 (35,396)	.....	.....	.....	0003
155799 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 46,294,354	.. 4228.48000000	.....	..... 4,629,435	 (1,704,243)	 2,925,193	.....	..... 1,009,638	 0	 0	 (1,704,243)	.....	.....	.....	0003
155815 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.08/19/2022	.08/18/2023	.....	.. 47,750,958	.. 4228.48000000	.....	..... 4,767,933	 (1,755,228)	 3,012,705	.....	..... 346,542	 0	 0	 (1,755,228)	.....	.....	.....	0003
155837 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 49,868,482	.. 4228.48000000	.....	..... 4,986,848	 (1,835,818)	 3,151,030	.....	..... 537,999	 0	 0	 (1,835,818)	.....	.....	.....	0003
155848 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGUFU57RNE97	.08/19/2022	.08/18/2023	.....	.. 39,156,817	.. 1174.45000000	.....	..... 2,286,758	 (841,829)	 1,444,930	.....	..... 909,992	 0	 0	 (841,829)	.....	.....	.....	0003
155849 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.08/19/2022	.08/18/2023	.....	.. 9,018,288	.. 517.00000000	.....	..... 460,835	 (169,648)	 291,187	.....	..... 224,700	 0	 0	 (169,648)	.....	.....	.....	0003
155852 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 46,177,520	.. 4228.48000000	.....	..... 4,617,752	 (1,699,942)	 2,917,810	.....	..... 571,977	 0	 0	 (1,699,942)	.....	.....	.....	0003
155859 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 50,342,491	.. 4228.48000000	.....	..... 5,034,249	 (1,853,268)	 3,180,982	.....	..... 645,690	 0	 0	 (1,853,268)	.....	.....	.....	0003
155873 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	.. 52,523,919	.. 4228.48000000	.....	..... 5,252,392	 (1,933,573)	 3,318,819	.....	..... 733,819	 0	 0	 (1,933,573)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
155882 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.08/19/2022	.08/18/2023	.....	45,409,720	..4228.48000000	.....	4,540,972	 (1,671,676)	2,869,295	.....	.....793,458	0	0	 (1,671,676)	.....	.....	.....	0003
155888 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.08/19/2022	.08/18/2023	.....	47,463,742	..4228.48000000	.....	4,746,374	 (1,747,292)	2,999,083	.....	.....898,972	0	0	 (1,747,292)	.....	.....	.....	0003
156450 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	.09/06/2022	.09/06/2023	.....	35,127,192	..158.33000000	.....	3,004,880	 (954,976)	2,049,905	.....	.....1,414,686	0	0	 (954,976)	.....	.....	.....	0003
156455 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.03/06/2024	.....	4,689,828	..3908.19000000	.....	599,364	 (127,105)	472,259	.....	.....86,185	0	0	 (127,105)	.....	.....	.....	0003
156458 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.09/06/2022	.09/06/2023	.....	24,021,255	..94.28000000	.....	2,337,267	 (742,803)	1,594,464	.....	.....353,087	0	0	 (742,803)	.....	.....	.....	0003
156460 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	59,013,669	..3908.19000000	.....	6,155,062	 (1,956,129)	4,198,933	.....	.....656,515	0	0	 (1,956,129)	.....	.....	.....	0003
156474 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.09/06/2022	.09/06/2023	.....	1,621,224	..60.32000000	.....	156,935	 (49,875)	107,059	.....	.....57,331	0	0	 (49,875)	.....	.....	.....	0003
156492 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	49,634,013	..3908.19000000	.....	5,176,774	 (1,645,221)	3,531,553	.....	.....1,647,054	0	0	 (1,645,221)	.....	.....	.....	0003
156497 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPU8MPR08K5P83	.09/06/2022	.09/06/2023	.....	34,726,329	..3908.19000000	.....	2,237,070	 (710,959)	1,526,111	.....	.....446,562	0	0	 (710,959)	.....	.....	.....	0003
156500 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZWZ7FF32TWEFA76	.09/06/2022	.09/06/2027	.....	1,564,291	..3908.19000000	.....	54,750	 (3,478)	51,272	.....	.....26,208	0	0	 (3,478)	.....	.....	.....	0003
156505 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.09/06/2022	.09/06/2029	.....	987,646	..3908.19000000	.....	36,049	 (1,635)	34,414	.....	.....8,575	0	0	 (1,635)	.....	.....	.....	0003
156508 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	49,819,730	..3908.19000000	.....	5,196,144	 (1,651,377)	3,544,767	.....	.....590,525	0	0	 (1,651,377)	.....	.....	.....	0003
156526 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	29,894,449	..3908.19000000	.....	3,117,959	 (990,913)	2,127,046	.....	.....507,975	0	0	 (990,913)	.....	.....	.....	0003
156533 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	54,517,687	..3908.19000000	.....	5,686,136	 (1,807,101)	3,879,035	.....	.....1,096,508	0	0	 (1,807,101)	.....	.....	.....	0003
156541 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	49,490,074	..3908.19000000	.....	5,161,761	 (1,640,450)	3,521,311	.....	.....1,038,276	0	0	 (1,640,450)	.....	.....	.....	0003
156549 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	74,136,801	..3908.19000000	.....	7,732,388	 (2,457,417)	5,274,972	.....	.....1,676,805	0	0	 (2,457,417)	.....	.....	.....	0003
156559 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	46,654,409	..3908.19000000	.....	4,866,005	 (1,546,456)	3,319,548	.....	.....1,170,131	0	0	 (1,546,456)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
156569 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	09/06/2023	.....	63,928,804	..3908.19000000	.....	6,667,705	(2,119,052)	4,548,654	.....	1,686,942	0	0	(2,119,052)	.....	.....	.....	0003	.....
156572 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	09/06/2023	.....	46,854,214	..1127.44000000	.....	2,787,827	(885,994)	1,901,832	.....	2,327,111	0	0	(885,994)	.....	.....	.....	0003	.....
156578 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	09/06/2023	.....	43,231,812	..3908.19000000	.....	4,509,031	(1,433,007)	3,076,024	.....	1,351,777	0	0	(1,433,007)	.....	.....	.....	0003	.....
156579 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	09/06/2022	09/06/2023	.....	13,000,187	..505.76000000	.....	689,010	(218,973)	470,037	.....	580,130	0	0	(218,973)	.....	.....	.....	0003	.....
156588 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	09/06/2022	09/06/2023	.....	18,186,604	..3908.19000000	.....	383,737	(121,955)	261,782	.....	22,247	0	0	(121,955)	.....	.....	.....	0003	.....
156621 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. BANK OF AMERICA, N.A.	09/06/2022	09/06/2023	.....	48,723,171	..3908.19000000	.....	5,211,429	(1,656,235)	3,555,194	.....	1,958,886	0	0	(1,656,235)	.....	.....	.....	0003	.....
156718 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. BNP PARIBAS LONDON	09/09/2022	09/09/2023	.....	998,178	..3994.15000000	.....	68,118	(21,089)	47,029	.....	14,592	0	0	(21,089)	.....	.....	.....	0003	.....
156928 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUJISFPUB8MPRO8K5P83	09/20/2022	09/20/2023	.....	54,317,583	..3855.93000000	.....	6,000,463	(1,676,842)	4,323,622	.....	604,247	0	0	(1,676,842)	.....	.....	.....	0003	.....
156935 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	09/20/2022	09/20/2023	.....	62,240,572	..3855.93000000	.....	7,021,561	(1,962,190)	5,059,372	.....	1,231,023	0	0	(1,962,190)	.....	.....	.....	0003	.....
156943 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	09/20/2022	09/20/2023	.....	39,214,733	..3855.93000000	.....	4,423,942	(1,236,280)	3,187,662	.....	845,980	0	0	(1,236,280)	.....	.....	.....	0003	.....
156960 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	09/20/2022	09/20/2023	.....	59,815,447	..3855.93000000	.....	6,579,699	(1,838,710)	4,740,989	.....	2,455,198	0	0	(1,838,710)	.....	.....	.....	0003	.....
156969 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUJISFPUB8MPRO8K5P83	09/20/2022	09/20/2023	.....	34,678,393	..3855.93000000	.....	2,302,299	(643,382)	1,658,916	.....	517,680	0	0	(643,382)	.....	.....	.....	0003	.....
156979 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/20/2022	09/20/2027	.....	1,181,616	..3855.93000000	.....	45,492	(2,541)	42,951	.....	25,147	0	0	(2,541)	.....	.....	.....	0003	.....
156981 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	09/20/2022	09/20/2023	.....	9,746,598	..504.43000000	.....	552,632	(154,434)	398,198	.....	476,236	0	0	(154,434)	.....	.....	.....	0003	.....
156983 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. JPMORGAN CHASE	09/20/2022	09/20/2023	.....	37,811,296	..1122.20000000	.....	2,344,300	(655,120)	1,689,181	.....	2,079,817	0	0	(655,120)	.....	.....	.....	0003	.....
156984 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. JPMORGAN CHASE	09/20/2022	09/20/2029	.....	908,253	..3855.93000000	.....	35,059	(1,399)	33,660	.....	10,098	0	0	(1,399)	.....	.....	.....	0003	.....
156987 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	17,448,140	..3855.93000000	.....	383,859	(107,270)	276,589	.....	93,601	0	0	(107,270)	.....	.....	.....	0003	.....
156990 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	29,492,835	..155.07000000	.....	2,609,413	(729,206)	1,880,207	.....	1,223,704	0	0	(729,206)	.....	.....	.....	0003	.....
156998 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	03/20/2024	.....	7,326,267	..3855.93000000	.....	961,210	(179,238)	781,972	.....	143,034	0	0	(179,238)	.....	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
157000 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/20/2022	09/20/2023	.....	62,857,828	..3855.93000000	.....	5,085,121	(1,421,048)	3,664,074	.....	903,979	0	0	(1,421,048)	.....	.....	.....	0003
157014 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/20/2022	09/20/2023	.....	50,179,299	..3855.93000000	.....	4,059,444	(1,134,420)	2,925,024	.....	1,202,482	0	0	(1,134,420)	.....	.....	.....	0003
157027 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/20/2022	09/20/2023	.....	56,234,652	..3855.93000000	.....	4,549,314	(1,271,315)	3,277,999	.....	1,475,157	0	0	(1,271,315)	.....	.....	.....	0003
157038 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/20/2022	09/20/2023	.....	45,715,790	..3855.93000000	.....	3,698,351	(1,033,512)	2,664,839	.....	1,412,846	0	0	(1,033,512)	.....	.....	.....	0003
157047 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/20/2022	09/20/2023	.....	47,042,346	..3855.93000000	.....	3,805,668	(1,063,502)	2,742,166	.....	1,596,508	0	0	(1,063,502)	.....	.....	.....	0003
157067 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	09/20/2022	09/20/2023	.....	20,314,675	...89.16000000	.....	1,808,006	(505,251)	1,302,755	.....	441,205	0	0	(505,251)	.....	.....	.....	0003
157075 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	09/20/2022	09/20/2023	.....	925,831	...59.58000000	.....	90,917	(25,407)	65,510	.....	31,383	0	0	(25,407)	.....	.....	.....	0003
157991 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	45,325,656	..3744.52000000	.....	5,204,948	(1,226,371)	3,978,577	.....	830,874	0	0	(1,226,371)	.....	.....	.....	0003
158005 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8PRO8K5P83	10/06/2022	10/06/2023	.....	63,021,991	..3744.52000000	.....	7,140,392	(1,682,394)	5,457,998	.....	1,410,795	0	0	(1,682,394)	.....	.....	.....	0003
158016 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8PRO8K5P83	10/06/2022	10/06/2023	.....	50,422,349	..3744.52000000	.....	5,712,348	(1,345,923)	4,366,425	.....	1,221,131	0	0	(1,345,923)	.....	.....	.....	0003
158019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	62,122,194	..3744.52000000	.....	7,133,770	(1,680,833)	5,452,936	.....	1,609,709	0	0	(1,680,833)	.....	.....	.....	0003
158030 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	37,651,671	..3744.52000000	.....	4,323,710	(1,018,737)	3,304,973	.....	981,921	0	0	(1,018,737)	.....	.....	.....	0003
158038 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	43,939,507	..3744.52000000	.....	5,045,770	(1,188,866)	3,856,904	.....	1,517,116	0	0	(1,188,866)	.....	.....	.....	0003
158041 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	46,394,151	..3744.52000000	.....	5,327,648	(1,255,281)	4,072,367	.....	1,709,610	0	0	(1,255,281)	.....	.....	.....	0003
158061 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	10/06/2022	10/06/2023	.....	63,962,154	..3744.52000000	.....	7,345,061	(1,730,617)	5,614,444	.....	3,422,860	0	0	(1,730,617)	.....	.....	.....	0003
158073 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	10/06/2022	10/06/2023	.....	10,955,312	...498.42000000	.....	632,121	(148,938)	483,183	.....	679,466	0	0	(148,938)	.....	.....	.....	0003
158074 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZVZ7F32TWEFA76	10/06/2022	10/06/2023	.....	18,551,640	..3744.52000000	.....	352,481	(83,050)	269,431	.....	397,137	0	0	(83,050)	.....	.....	.....	0003
158075 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8PRO8K5P83	10/06/2022	10/06/2023	.....	42,815,454	..1110.16000000	.....	2,680,247	(631,510)	2,048,737	.....	2,883,009	0	0	(631,510)	.....	.....	.....	0003
158076 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8PRO8K5P83	10/06/2022	10/06/2027	.....	2,932,137	..3744.52000000	.....	137,810	(6,491)	131,320	.....	7,733	0	0	(6,491)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
158083 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	ROMUWSPU8MPR08K5P83	10/06/2022	10/05/2029	2,188,606	3744.52000000		108,555	(3,652)	104,902		(46,988)	0	0	(3,652)				0003
158086 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/06/2022	10/06/2023	34,614,121	159.63000000		3,239,585	(763,300)	2,476,286		1,325,541	0	0	(763,300)				0003
158094 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/06/2022	10/06/2023	46,775,196	3744.52000000		3,915,130	(922,469)	2,992,661		1,413,269	0	0	(922,469)				0003
158110 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/06/2022	10/06/2023	38,412,021	3744.52000000		2,612,300	(615,501)	1,996,799		734,667	0	0	(615,501)				0003
158130 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/06/2022	10/06/2023	23,095,663	80.52000000		2,498,950	(588,794)	1,910,156		780,538	0	0	(588,794)				0003
158140 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	10/06/2022	10/06/2023	1,449,217	57.75000000		147,675	(34,795)	112,881		57,525	0	0	(34,795)				0003
158141 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPR08K5P83	10/06/2022	04/05/2024	6,051,642	3744.52000000		846,625	(133,107)	713,517		128,834	0	0	(133,107)				0003
158143 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	10/06/2022	10/06/2023	63,435,360	3744.52000000		10,301,901	(2,427,297)	7,874,604		777,274	0	0	(2,427,297)				0003
158151 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	10/06/2022	10/06/2023	49,425,607	3744.52000000		5,675,764	(1,337,303)	4,338,460		623,737	0	0	(1,337,303)				0003
158397 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFTX09	10/14/2022	10/13/2023	1,552,292	3583.15000000		129,338	(27,715)	101,623		155,963	0	0	(27,715)				0003
158672 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/20/2022	10/20/2023	28,660,761	151.45000000		2,782,961	(548,968)	2,233,993		1,343,679	0	0	(548,968)				0003
158690 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/20/2022	10/20/2023	18,630,293	78.33000000		2,090,320	(412,337)	1,677,983		697,647	0	0	(412,337)				0003
158703 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	10/20/2022	10/20/2023	788,916	56.96000000		82,678	(16,309)	66,369		29,126	0	0	(16,309)				0003
158715 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	58,410,257	3665.78000000		6,892,410	(1,359,599)	5,532,812		2,981,696	0	0	(1,359,599)				0003
158720 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPR08K5P83	10/20/2022	10/20/2023	29,295,136	3665.78000000		2,079,662	(410,235)	1,669,427		599,874	0	0	(410,235)				0003
158726 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	39,211,139	3665.78000000		4,626,914	(912,706)	3,714,208		2,492,554	0	0	(912,706)				0003
158729 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	ES70DZIWZ7FF32TWEFA76	10/20/2022	10/20/2027	6,530,815	3665.78000000		321,316	(12,670)	308,646		212,264	0	0	(12,670)				0003
158732 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPR08K5P83	10/20/2022	10/19/2029	3,668,206	3665.78000000		186,345	(5,249)	181,096		(77,523)	0	0	(5,249)				0003
158743 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	04/19/2024	5,498,670	3665.78000000		780,810	(102,776)	678,034		121,947	0	0	(102,776)				0003
158752 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	59,019,058	3665.78000000		6,881,623	(1,357,471)	5,524,152		751,711	0	0	(1,357,471)				0003
158755 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	72,927,027	3665.78000000		8,503,292	(1,677,362)	6,825,931		1,204,854	0	0	(1,677,362)				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
158769 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023		38,430,560	1103.30000000		2,505,673	(494,270)	2,011,403		2,671,563	0	0	(494,270)				0003	
158771 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	10/20/2022	10/20/2023		8,641,892	496.73000000		532,341	(105,010)	427,331		579,950	0	0	(105,010)				0003	
158774 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2022	10/20/2023		17,015,922	3665.78000000		318,198	(62,768)	255,430		356,360	0	0	(62,768)				0003	
158776 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		43,043,589	3665.78000000		5,018,883	(990,026)	4,028,857		978,165	0	0	(990,026)				0003	
158792 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		79,898,021	3665.78000000		9,316,110	(1,837,698)	7,478,412		2,098,216	0	0	(1,837,698)				0003	
158810 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		31,755,149	3665.78000000		3,702,651	(730,386)	2,972,265		858,197	0	0	(730,386)				0003	
158821 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		48,197,272	3665.78000000		5,619,803	(1,108,564)	4,511,239		1,509,632	0	0	(1,108,564)				0003	
158828 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		58,285,902	3665.78000000		6,796,137	(1,340,608)	5,455,529		2,182,453	0	0	(1,340,608)				0003	
159728 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		38,842,841	3770.55000000		4,481,240	(695,996)	3,785,243		797,231	0	0	(695,996)				0003	
159745 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		43,403,478	3770.55000000		5,007,355	(777,709)	4,229,646		975,403	0	0	(777,709)				0003	
159748 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		53,801,564	3770.55000000		6,206,978	(964,027)	5,242,952		1,298,195	0	0	(964,027)				0003	
159760 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		56,716,378	3770.55000000		6,543,353	(1,016,270)	5,527,083		1,461,799	0	0	(1,016,270)				0003	
159769 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023		45,692,708	1115.53000000		3,024,857	(469,801)	2,555,057		2,970,797	0	0	(469,801)				0003	
159771 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	11/04/2022	11/06/2023		13,151,244	503.66000000		825,882	(128,270)	697,611		742,002	0	0	(128,270)				0003	
159794 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		42,547,547	3770.55000000		4,908,605	(762,372)	4,146,233		1,211,867	0	0	(762,372)				0003	
159810 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		53,553,142	3770.55000000		6,178,318	(959,575)	5,218,743		1,708,104	0	0	(959,575)				0003	
159815 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		50,254,079	3770.55000000		5,797,556	(900,438)	4,897,118		1,758,252	0	0	(900,438)				0003	
159820 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		51,856,153	3770.55000000		5,982,495	(929,161)	5,053,334		2,165,392	0	0	(929,161)				0003	
159831 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		76,202,158	3770.55000000		8,791,372	(1,365,417)	7,425,954		4,394,376	0	0	(1,365,417)				0003	
159834 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/05/2027		11,680,363	3770.55000000		496,415	(15,488)	480,928		413,953	0	0	(15,488)				0003	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
159838 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	11/04/2022	11/06/2029	.....	7,664,623	..3770.55000000	.....	.....344,908	(7,683)	337,225	.....	.....120,269	0	0	(7,683)	.....	.....	.....	0003
159842 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	05/06/2024	.....	8,295,210	..3770.55000000	.....	.....1,154,692	(119,886)	1,034,806	.....	.....168,615	0	0	(119,886)	.....	.....	.....	0003
159850 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	82,197,990	..3770.55000000	.....	.....9,271,976	(1,440,062)	7,831,914	.....	.....973,688	0	0	(1,440,062)	.....	.....	.....	0003
159852 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	47,814,156	..3770.55000000	.....	.....5,393,462	(837,677)	4,555,785	.....	.....602,864	0	0	(837,677)	.....	.....	.....	0003
159862 Call Options - SPDR Gold shares -	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	11/04/2022	11/06/2023	.....	30,915,219	..156.47000000	.....	.....2,986,410	(463,829)	2,522,580	.....	.....1,280,186	0	0	(463,829)	.....	.....	.....	0003
159884 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	11/04/2022	11/06/2023	.....	24,333,525	..82.65000000	.....	.....2,569,620	(399,096)	2,170,524	.....	.....803,254	0	0	(399,096)	.....	.....	.....	0003
159894 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1G071XBU11	11/04/2022	11/06/2023	.....	1,151,938	..60.75000000	.....	.....116,000	(18,016)	97,984	.....	.....38,574	0	0	(18,016)	.....	.....	.....	0003
159900 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	11/04/2022	11/06/2023	.....	40,610,293	..3770.55000000	.....	.....649,765	(100,917)	548,848	.....	.....753,254	0	0	(100,917)	.....	.....	.....	0003
159907 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	57,344,121	..3770.55000000	.....	.....6,615,877	(1,027,534)	5,588,343	.....	.....1,005,679	0	0	(1,027,534)	.....	.....	.....	0003
159911 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	11/04/2022	11/06/2023	.....	21,552,501	..3770.55000000	.....	.....362,082	(56,236)	305,846	.....	.....495,483	0	0	(56,236)	.....	.....	.....	0003
160252 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	11/11/2022	11/11/2023	.....	1,236,181	..3742.94162740	.....	.....131,801	(18,055)	113,746	.....	.....85,166	0	0	(18,055)	.....	.....	.....	0003
160843 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUM8MPRO8K5P83	11/18/2022	11/19/2027	.....	12,068,585	..3965.34000000	.....	.....582,913	(13,719)	569,193	.....	.....(17,339)	0	0	(13,719)	.....	.....	.....	0003
160847 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUM8MPRO8K5P83	11/18/2022	11/20/2029	.....	7,589,428	..3965.34000000	.....	.....380,230	(6,389)	373,841	.....	.....(176,574)	0	0	(6,389)	.....	.....	.....	0003
160852 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	11/18/2022	11/20/2023	.....	39,938,226	..1138.09000000	.....	.....2,643,911	(309,777)	2,334,134	.....	.....2,124,473	0	0	(309,777)	.....	.....	.....	0003
160853 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	29,389,556	..162.79000000	.....	.....2,729,714	(319,830)	2,409,883	.....	.....959,047	0	0	(319,830)	.....	.....	.....	0003
160854 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	11/18/2022	11/20/2023	.....	11,578,651	..508.36000000	.....	.....722,508	(84,654)	637,854	.....	.....579,707	0	0	(84,654)	.....	.....	.....	0003
160855 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNBB6K528	11/18/2022	11/20/2023	.....	18,373,857	..86.59000000	.....	.....1,803,823	(211,347)	1,592,476	.....	.....490,846	0	0	(211,347)	.....	.....	.....	0003
160872 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNGJPFGFNF3BB653	11/18/2022	05/20/2024	.....	6,584,397	..3965.34000000	.....	.....737,256	(57,745)	679,511	.....	.....127,919	0	0	(57,745)	.....	.....	.....	0003
160874 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	1,027,143	..65.15000000	.....	.....96,487	(11,305)	85,182	.....	.....34,002	0	0	(11,305)	.....	.....	.....	0003
160893 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWI7FF32TWEFA76	11/18/2022	11/20/2023	.....	68,905,179	..3965.34000000	.....	.....7,620,277	(892,839)	6,727,438	.....	.....710,216	0	0	(892,839)	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
160896 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	47,256,107	..3965.34000000	.....	5,169,840	 (605,731)	 4,564,109	.....	784,876	 0	 0	 (605,731)	.....	.....	.....	0003	.....
160908 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	60,874,627	..3965.34000000	.....	6,732,172	 (788,783)	 5,943,389	.....	757,498	 0	 0	 (788,783)	.....	.....	.....	0003	.....
160909 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	46,984,640	..3965.34000000	.....	5,140,141	 (602,251)	 4,537,890	.....	1,037,399	 0	 0	 (602,251)	.....	.....	.....	0003	.....
160921 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	32,843,563	..3965.34000000	.....	3,593,101	 (420,990)	 3,172,111	.....	801,722	 0	 0	 (420,990)	.....	.....	.....	0003	.....
160932 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	65,871,276	..3965.34000000	.....	7,206,348	 (844,340)	 6,362,007	.....	1,601,731	 0	 0	 (844,340)	.....	.....	.....	0003	.....
160936 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	45,564,355	..3965.34000000	.....	5,038,997	 (590,400)	 4,448,597	.....	934,828	 0	 0	 (590,400)	.....	.....	.....	0003	.....
160943 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/18/2022	11/20/2023	.....	50,496,533	..3965.34000000	.....	5,662,772	 (663,485)	 4,999,286	.....	2,398,697	 0	 0	 (663,485)	.....	.....	.....	0003	.....
160972 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	34,842,921	..3965.34000000	.....	2,132,684	 (249,879)	 1,882,806	.....	424,723	 0	 0	 (249,879)	.....	.....	.....	0003	.....
160985 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	45,997,944	..3965.34000000	.....	5,032,196	 (589,603)	 4,442,593	.....	1,333,080	 0	 0	 (589,603)	.....	.....	.....	0003	.....
160992 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	51,071,041	..3965.34000000	.....	5,587,195	 (654,631)	 4,932,565	.....	1,633,594	 0	 0	 (654,631)	.....	.....	.....	0003	.....
160993 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	11/18/2022	11/20/2023	.....	17,723,482	..3965.34000000	.....	342,063	 (40,078)	 301,985	.....	249,187	 0	 0	 (40,078)	.....	.....	.....	0003	.....
161833 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BX4R0TD8PU41	12/06/2022	12/06/2023	.....	18,574,287	86.37000000	.....	1,727,409	 (118,316)	 1,609,093	.....	505,329	 0	 0	 (118,316)	.....	.....	.....	0003	.....
161845 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2023	.....	16,030,576	..3941.26000000	.....	312,596	 (21,411)	 291,186	.....	218,842	 0	 0	 (21,411)	.....	.....	.....	0003	.....
161847 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	12/06/2023	.....	28,693,189	..164.84000000	.....	2,579,672	 (176,690)	 2,402,982	.....	881,370	 0	 0	 (176,690)	.....	.....	.....	0003	.....
161858 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	12/06/2023	.....	786,120	66.53000000	.....	69,833	 (4,783)	 65,050	.....	28,565	 0	 0	 (4,783)	.....	.....	.....	0003	.....
161868 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	12/06/2022	12/06/2023	.....	41,734,898	..1137.22000000	.....	2,739,896	 (187,664)	 2,552,232	.....	2,317,250	 0	 0	 (187,664)	.....	.....	.....	0003	.....
161869 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	06/06/2024	.....	6,306,016	..3941.26000000	.....	831,136	 (37,917)	 793,219	.....	129,231	 0	 0	 (37,917)	.....	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
161871 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	BFM8T61CT2L10CEMIK50	12/06/2022	12/06/2023	10,850,695	511.36000000		671,658	(46,004)	625,654		510,760	0	0	(46,004)				0003	
161874 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	42,938,254	3941.26000000		4,585,843	(314,099)	4,271,744		490,513	0	0	(314,099)				0003	
161884 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	62,999,881	3941.26000000		6,868,308	(470,432)	6,397,876		653,437	0	0	(470,432)				0003	
161886 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	42,233,596	3941.26000000		4,510,585	(308,944)	4,201,641		665,361	0	0	(308,944)				0003	
161899 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	49,507,062	3941.26000000		5,397,308	(369,679)	5,027,629		947,626	0	0	(369,679)				0003	
161902 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	29,559,450	3941.26000000		1,658,250	(113,579)	1,544,671		372,103	0	0	(113,579)				0003	
161925 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	38,579,747	3941.26000000		4,206,002	(288,082)	3,917,919		830,838	0	0	(288,082)				0003	
161940 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	50,076,725	3941.26000000		5,459,413	(373,932)	5,085,481		1,121,083	0	0	(373,932)				0003	
161942 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	42,726,240	3941.26000000		4,658,056	(319,045)	4,339,011		1,028,461	0	0	(319,045)				0003	
161957 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	59,655,691	3941.26000000		6,503,721	(445,460)	6,058,261		1,627,400	0	0	(445,460)				0003	
161962 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	66,457,345	3941.26000000		7,245,244	(496,250)	6,748,995		2,037,752	0	0	(496,250)				0003	
161964 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76		12/06/2022	12/06/2023	52,186,877	3941.26000000		5,689,464	(389,689)	5,299,775		2,374,490	0	0	(389,689)				0003	
161965 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2027	8,250,589	3941.26000000		391,903	(5,366)	386,537		302,512	0	0	(5,366)				0003	
161970 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2029	10,495,862	3941.26000000		524,793	(5,131)	519,662		428,980	0	0	(5,131)				0003	
162048 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CANADA BNP PARIBAS LONDON	KB1H1DSPRFMYMCUFXT09	12/09/2022	12/09/2023	2,301,254	3937.33544339		157,725	(9,507)	148,218		98,615	0	0	(9,507)				0003	
162527 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	12/20/2022	12/20/2023	29,854,890	3821.62000000		1,916,684	(57,763)	1,858,921		471,941	0	0	(57,763)				0003	
162533 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPFU8MPRO8K5P83	12/20/2022	12/20/2027	6,695,471	3821.62000000		321,383	(1,936)	319,447		179,634	0	0	(1,936)				0003	
162536 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPFU8MPRO8K5P83	12/20/2022	12/20/2029	10,151,085	3821.62000000		507,554	(2,183)	505,371		248,426	0	0	(2,183)				0003	
162540 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	27,730,919	169.08000000		2,496,242	(75,229)	2,421,013		736,621	0	0	(75,229)				0003	
162559 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	511,690	65.52000000		47,795	(1,440)	46,355		15,086	0	0	(1,440)				0003	
162574 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	06/20/2024	6,114,592	3821.62000000		813,248	(16,324)	796,924		126,955	0	0	(16,324)				0003	

SCHEDULE DB - PART A - SECTION 1

E18.28

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
162578 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	52,356,194	3821.62000000		5,654,401	(170,407)	5,483,994		594,279	0	0	(170,407)				0003	
162586 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	47,703,372	3821.62000000		5,151,902	(155,263)	4,996,639		599,477	0	0	(155,263)				0003	
162587 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	12/20/2022	12/20/2023	41,531,267	1123.49000000		2,707,839	(81,606)	2,626,233		2,714,368	0	0	(81,606)				0003	
162590 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFM8T61CT2L10CEMIK50	12/20/2022	12/20/2023	10,505,238	508.98000000		650,274	(19,597)	630,677		554,064	0	0	(19,597)				0003	
162601 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	44,369,085	3821.62000000		4,791,804	(144,411)	4,647,393		767,707	0	0	(144,411)				0003	
162614 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	45,763,135	3821.62000000		4,942,359	(148,948)	4,793,411		956,394	0	0	(148,948)				0003	
162625 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	49,857,963	3821.62000000		5,384,595	(162,275)	5,222,320		1,148,608	0	0	(162,275)				0003	
162644 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	63,641,591	3821.62000000		6,873,209	(207,138)	6,666,071		1,801,344	0	0	(207,138)				0003	
162656 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	49,681,060	3821.62000000		5,365,490	(161,700)	5,203,790		1,603,347	0	0	(161,700)				0003	
162660 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	47,089,467	3821.62000000		5,085,601	(153,265)	4,932,337		1,729,114	0	0	(153,265)				0003	
162677 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGFU57RNE97	12/20/2022	12/20/2023	19,054,087	83.29000000		1,953,043	(58,859)	1,894,184		558,609	0	0	(58,859)				0003	
162692 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	65GSEF7VJP5170UK5573	12/20/2022	12/20/2023	32,587,007	3821.62000000		3,588,735	(108,154)	3,480,582		1,800,189	0	0	(108,154)				0003	
162698 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFM8T61CT2L10CEMIK50	12/20/2022	12/20/2023	19,414,179	3821.62000000		423,229	(12,755)	410,474		527,302	0	0	(12,755)				0003	
162699 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	52,322,182	3821.62000000		5,650,728	(170,296)	5,480,432		1,293,914	0	0	(170,296)				0003	
Adoption of OAC 3901-1-67 Accounting Guidance												1,326,292				(454,367,259)		1,326,292					
0159999999. Subtotal - Purchased Options - Hedging Other - Call Options and Warrants										10,791,953	1,657,567,041	(818,733,458)	846,759,487	XXX	287,374,142	(454,367,259)	0	(818,733,458)	0	0	XXX	XXX	
0219999999. Subtotal - Purchased Options - Hedging Other										10,791,953	1,657,567,041	(818,733,458)	846,759,487	XXX	287,374,142	(454,367,259)	0	(818,733,458)	0	0	XXX	XXX	
0289999999. Subtotal - Purchased Options - Replications										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX	
0359999999. Subtotal - Purchased Options - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX	
0429999999. Subtotal - Purchased Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
0439999999. Total Purchased Options - Call Options and Warrants										10,791,953	1,657,567,041	(818,733,458)	846,759,487	XXX	287,374,142	(454,367,259)	0	(818,733,458)	0	0	XXX	XXX
0449999999. Total Purchased Options - Put Options										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0459999999. Total Purchased Options - Caps										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0469999999. Total Purchased Options - Floors										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0479999999. Total Purchased Options - Collars										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0489999999. Total Purchased Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0499999999. Total Purchased Options										10,791,953	1,657,567,041	(818,733,458)	846,759,487	XXX	287,374,142	(454,367,259)	0	(818,733,458)	0	0	XXX	XXX
0569999999. Subtotal - Written Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0639999999. Subtotal - Written Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
141924 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.04/06/2021	.04/06/2028	2,662,509	..4236.90000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141928 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.04/06/2021	.04/06/2026	669,047	..4232.82000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141923 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE	7H6GLXDRUGOFU57RNE97	.04/20/2021	.04/20/2028	2,225,032	..4316.88000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141927 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE	7H6GLXDRUGOFU57RNE97	.04/20/2021	.04/20/2026	1,074,629	..4300.34000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141922 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.05/06/2021	.05/06/2026	3,051,593	..4369.68000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141926 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.05/06/2021	.05/06/2028	3,678,547	..4384.39000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141921 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.05/20/2021	.05/20/2026	3,369,262	..4327.56000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141925 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.05/20/2021	.05/19/2028	4,582,427	..4344.20000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142028 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.06/04/2021	.06/05/2026	3,946,952	..4401.20000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142029 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.06/04/2021	.06/06/2028	3,919,696	..4413.89000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142032 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.06/18/2021	.06/19/2026	4,418,795	..4335.19000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142033 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.06/18/2021	.06/20/2028	6,158,364	..4351.86000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141127 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/06/2021	.01/06/2023	6,935,548	..4623.70000000	(300,870)	199,484	(3,836)	.....	.....	.....0	0	199,484	.....	.....	.....	0003
142034 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.07/06/2021	.07/06/2026	4,959,571	..4519.45000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142035 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUISFPUBM8PRO8K5P83	.07/06/2021	.07/06/2028	3,750,662	..4528.14000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141142 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2021	.01/20/2023	5,057,332	..4587.57000000	(232,298)	154,019	(8,886)	.....	.....	.....0	0	154,019	.....	.....	.....	0003
142026 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.07/20/2021	.07/20/2026	4,354,125	..4500.31000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142027 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.07/20/2021	.07/20/2028	2,123,673	..4502.47000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141170 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/06/2021	.02/06/2023	12,100,165	..4653.91000000	(612,846)	406,331	(42,419)	.....	.....	.....0	0	406,331	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
142036 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..08/06/2021	..08/06/2026	.....	..4,218,537	..4605.11000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142037 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..08/06/2021	..08/04/2028	.....	..3,983,239	..4618.42000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141372 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..08/20/2021	..02/17/2023	.....	..10,747,065	..4672.64000000	(556,876)	.....	.....371,251	(49,976)	.....	.....	.....0	0	371,251	.....	.....	.....	0003
142038 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	..08/20/2021	..08/20/2026	.....	..1,876,286	..4606.01000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142039 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	..08/20/2021	..08/18/2028	.....	..2,228,637	..4630.44000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141410 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..09/03/2021	..03/06/2023	.....	..8,045,626	..4732.72000000	(452,132)	.....	.....299,774	(54,355)	.....	.....	.....0	0	299,774	.....	.....	.....	0003
142040 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	..09/03/2021	..09/04/2026	.....	..1,597,923	..4705.51000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142041 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	..09/03/2021	..09/06/2028	.....	..2,196,401	..4716.85000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141587 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..09/20/2021	..03/20/2023	.....	..7,704,467	..4532.03920000	(535,381)	.....	.....356,921	(78,444)	.....	.....	.....0	0	356,921	.....	.....	.....	0003
142220 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..09/20/2021	..09/18/2026	.....	..1,218,385	..4518.96601000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142222 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..09/20/2021	..09/20/2028	.....	..1,947,129	..4529.86033500	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
141615 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..10/06/2021	..04/06/2023	.....	..6,816,960	..4544.63732500	(446,460)	.....	.....297,096	(79,171)	.....	.....	.....0	0	297,096	.....	.....	.....	0003
142233 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..10/06/2021	..10/06/2026	.....	..1,870,404	..4527.18312500	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142234 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..10/06/2021	..10/06/2028	.....	..2,368,393	..4546.81910000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142244 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	..10/20/2021	..10/20/2026	.....	..2,221,902	..4704.02903000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142245 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	..10/20/2021	..10/20/2028	.....	..2,219,393	..4718.99845700	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
142679 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	..10/20/2021	..04/20/2023	.....	..7,397,784	..4696.31750700	(489,470)	.....	.....325,717	(99,326)	.....	.....	.....0	0	325,717	.....	.....	.....	0003
143686 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..11/05/2021	..05/05/2023	.....	..8,723,595	..4846.44170100	(574,218)	.....	.....382,812	(132,512)	.....	.....	.....0	0	382,812	.....	.....	.....	0003
143734 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..11/05/2021	..11/06/2028	.....	..3,354,930	..4885.43120000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
143736 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..11/05/2021	..11/06/2026	.....	..1,366,674	..4872.75000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
143710 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	..11/19/2021	..05/19/2023	.....	..7,774,560	..4859.10002800	(536,176)	.....	.....357,451	(137,481)	.....	.....	.....0	0	357,451	.....	.....	.....	0003
143910 Call Options – S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	..11/19/2021	..11/20/2026	.....	..1,189,404	..4871.78000000	0	.....	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
143912 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	ROMUJSFPUBMPRO8K5P83	11/19/2021	11/20/2028	 2,401,016	..4897.15000000	 0			 0			 0	 0					0003
144157 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2021	06/06/2023	 9,453,330	..4726.66509800	 (760,560)		 506,113	 (219,686)			 0	 0	 506,113				0003
144236 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	12/06/2021	12/04/2026	 755,616	..4758.35000000	 0			 0			 0	 0					0003
144238 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	12/06/2021	12/06/2028	 782,197	..4772.12000000	 0			 0			 0	 0					0003
144702 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	12/20/2021	12/18/2026	 1,098,660	..4734.30000000	 0			 0			 0	 0					0003
144704 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPUBMPRO8K5P83	12/20/2021	12/20/2028	 1,756,967	..4757.14000000	 0			 0			 0	 0					0003
144705 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2021	06/20/2023	 9,415,603	..4707.80141200	 (751,080)		 499,805	 (236,171)			 0	 0	 499,805				0003
145251 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 36,857,025	..175.52957873	 (1,587,420)		 1,561,325	 (26,095)			 0	 0	 1,561,325				0003
145264 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 848,934	..82.05354100	 (25,969)		 25,542	 (427)			 0	 0	 25,542				0003
145267 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	07/06/2023	 6,359,162	..4891.66323581	 (438,633)		 288,405	 (150,228)			 0	 0	 288,405				0003
145271 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 32,549,235	..4786.65220374	 (2,058,088)		 2,024,256	 (33,832)			 0	 0	 2,024,256				0003
145275 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 47,457,097	..4795.22367768	 (2,946,062)		 2,897,634	 (48,428)			 0	 0	 2,897,634				0003
145279 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 65,814,102	..4889.69705917	 (3,300,735)		 3,246,476	 (54,259)			 0	 0	 3,246,476				0003
145283 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 45,623,062	..4915.42579469	 (2,150,178)		 2,114,832	 (35,345)			 0	 0	 2,114,832				0003
145285 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 44,764,038	..4973.78204106	 (1,821,600)		 1,791,656	 (29,944)			 0	 0	 1,791,656				0003
145287 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	01/06/2022	01/06/2027	 872,078	..4870.86049988	 0			 0			 0	 0					0003
145289 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/06/2022	01/06/2023	 42,468,777	..4996.32675137	 (1,628,600)		 1,601,828	 (26,772)			 0	 0	 1,601,828				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
145292 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/05/2029	.....	2,158,669	.. 4884.89463634	.....	..... 0	.....	..... 0	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
145296 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE8IBXP4ROTDBPU41	.01/06/2022	.01/06/2023	.....	36,652,211	.. 4835.80648239	.....	..... (2,174,729)	 2,138,980	 (35,749)	.....	.....	..... 0	 0	 2,138,980	.....	.....	.....	0003
145301 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2023	.....	48,825,818	.. 4831.50445368	.....	..... (2,899,811)	 2,852,143	 (47,668)	.....	.....	..... 0	 0	 2,852,143	.....	.....	.....	0003
145303 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2023	.....	45,320,601	.. 4844.01909885	.....	..... (2,618,774)	 2,575,726	 (43,048)	.....	.....	..... 0	 0	 2,575,726	.....	.....	.....	0003
145304 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2023	.....	51,230,035	.. 4868.70421671	.....	..... (2,801,934)	 2,755,874	 (46,059)	.....	.....	..... 0	 0	 2,755,874	.....	.....	.....	0003
145305 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2023	.....	59,994,845	.. 4902.27184824	.....	..... (3,040,451)	 2,990,471	 (49,980)	.....	.....	..... 0	 0	 2,990,471	.....	.....	.....	0003
145306 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2023	.....	62,797,229	.. 4938.33319493	.....	..... (2,908,423)	 2,860,614	 (47,810)	.....	.....	..... 0	 0	 2,860,614	.....	.....	.....	0003
145321 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	.01/06/2022	.01/06/2023	.....	19,827,970	.. 117.56127897	.....	..... (772,884)	 760,179	 (12,705)	.....	.....	..... 0	 0	 760,179	.....	.....	.....	0003
145762 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.01/20/2022	.01/20/2023	.....	29,533,049	.. 4623.23208459	.....	..... (830,430)	 784,927	 (45,503)	.....	.....	..... 0	 0	 784,927	.....	.....	.....	0003
145771 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPU8MPRO8K5P83	.01/20/2022	.01/20/2027	.....	1,109,017	.. 4658.79505485	.....	..... 0	.....	..... 0	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
145774 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPU8MPRO8K5P83	.01/20/2022	.01/19/2029	.....	2,388,575	.. 4687.35252513	.....	..... 0	.....	..... 0	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
145778 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	.01/20/2022	.01/20/2023	.....	18,271,027	.. 111.60199670	.....	..... (772,937)	 730,585	 (42,353)	.....	.....	..... 0	 0	 730,585	.....	.....	.....	0003
145779 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBU11	.01/20/2022	.01/20/2023	.....	722,427	.. 80.50794588	.....	..... (29,236)	 27,634	 (1,602)	.....	.....	..... 0	 0	 27,634	.....	.....	.....	0003
145782 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.01/20/2022	.01/20/2023	.....	35,205,908	.. 4570.09214940	.....	..... (2,372,411)	 2,242,416	 (129,995)	.....	.....	..... 0	 0	 2,242,416	.....	.....	.....	0003
145785 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.01/20/2023	.....	56,587,969	.. 4696.66196729	.....	..... (2,729,117)	 2,579,577	 (149,541)	.....	.....	..... 0	 0	 2,579,577	.....	.....	.....	0003
145791 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.01/20/2023	.....	44,303,797	.. 4713.16990223	.....	..... (2,048,730)	 1,936,471	 (112,259)	.....	.....	..... 0	 0	 1,936,471	.....	.....	.....	0003
145793 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.01/20/2023	.....	57,416,978	.. 4745.20477479	.....	..... (2,440,812)	 2,307,069	 (133,743)	.....	.....	..... 0	 0	 2,307,069	.....	.....	.....	0003
145796 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.01/20/2023	.....	41,973,678	.. 4769.73615366	.....	..... (1,671,824)	 1,580,217	 (91,607)	.....	.....	..... 0	 0	 1,580,217	.....	.....	.....	0003
145874 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.01/20/2023	.....	30,153,719	.. 180.62708954	.....	..... (1,252,043)	 1,183,438	 (68,605)	.....	.....	..... 0	 0	 1,183,438	.....	.....	.....	0003
145876 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2022	.07/20/2023	.....	4,208,827	.. 4676.47472112	.....	..... (295,767)	 186,886	 (108,881)	.....	.....	..... 0	 0	 186,886	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
145878 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	59,596,145	..4584.31888098	.....	.....(3,743,610)	3,538,481	(205,129)	.....	.....	.....0	0	3,538,481	.....	.....	.....	.....0003
145880 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	49,144,212	..4618.27050527	.....	.....(2,861,647)	2,704,845	(156,803)	.....	.....	.....0	0	2,704,845	.....	.....	.....	.....0003
145882 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	56,830,148	..4641.38967635	.....	.....(3,134,640)	2,962,879	(171,761)	.....	.....	.....0	0	2,962,879	.....	.....	.....	.....0003
145885 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	52,396,848	..4668.75547264	.....	.....(2,706,620)	2,558,312	(148,308)	.....	.....	.....0	0	2,558,312	.....	.....	.....	.....0003
145887 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/20/2022	.01/20/2023	.....	37,630,723	..4686.52620033	.....	.....(1,860,528)	1,758,582	(101,947)	.....	.....	.....0	0	1,758,582	.....	.....	.....	.....0003
146414 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/04/2022	.02/06/2023	.....	37,468,280	..4635.54590000	.....	.....(1,182,252)	1,063,060	(119,192)	.....	.....	.....0	0	1,063,060	.....	.....	.....	.....0003
146416 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/04/2022	.02/06/2023	.....	28,935,780	..111.25907900	.....	.....(1,168,283)	1,050,500	(117,783)	.....	.....	.....0	0	1,050,500	.....	.....	.....	.....0003
146419 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	.02/04/2022	.02/06/2023	.....	1,520,717	79.47793600	.....	.....(62,150)	55,884	(6,266)	.....	.....	.....0	0	55,884	.....	.....	.....	.....0003
146422 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	46,153,247	..177.74203600	.....	.....(2,004,608)	1,802,508	(202,099)	.....	.....	.....0	0	1,802,508	.....	.....	.....	.....0003
146424 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPU8MIPR08K5P83	.02/04/2022	.08/04/2023	.....	9,139,814	..4679.20104100	.....	.....(709,507)	428,823	(280,684)	.....	.....	.....0	0	428,823	.....	.....	.....	.....0003
146427 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	52,373,208	..4594.14102400	.....	.....(3,534,456)	3,178,121	(356,335)	.....	.....	.....0	0	3,178,121	.....	.....	.....	.....0003
146430 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	85,376,823	..4632.84558200	.....	.....(5,309,646)	4,774,341	(535,305)	.....	.....	.....0	0	4,774,341	.....	.....	.....	.....0003
146433 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUH3JPFNF3B8653	.02/04/2022	.02/06/2023	.....	42,368,571	..4587.84028200	.....	.....(3,147,221)	2,829,926	(317,295)	.....	.....	.....0	0	2,829,926	.....	.....	.....	.....0003
146435 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	64,710,369	..4659.39870900	.....	.....(3,796,461)	3,413,712	(382,750)	.....	.....	.....0	0	3,413,712	.....	.....	.....	.....0003
146437 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.02/04/2022	.02/06/2023	.....	55,404,445	..4699.00337300	.....	.....(3,077,730)	2,767,441	(310,289)	.....	.....	.....0	0	2,767,441	.....	.....	.....	.....0003
146439 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/04/2022	.02/06/2023	.....	43,382,600	..4681.90135900	.....	.....(2,419,173)	2,175,278	(243,895)	.....	.....	.....0	0	2,175,278	.....	.....	.....	.....0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
146441 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/04/2022	02/06/2023	.....	63,139,517	4774.16222400	.....	(3,179,775)	2,859,198	(320,577)	.....	.....	0	0	2,859,198	.....	.....	.....	0003
146443 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/04/2022	02/06/2023	.....	65,949,867	4710.70475100	.....	(3,440,780)	3,093,889	(346,891)	.....	.....	0	0	3,093,889	.....	.....	.....	0003
146444 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	02/04/2022	02/06/2023	.....	62,709,972	4793.06445000	.....	(2,796,924)	2,514,945	(281,979)	.....	.....	0	0	2,514,945	.....	.....	.....	0003
146446 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/04/2022	02/06/2023	.....	53,348,678	4723.30623500	.....	(2,701,258)	2,428,924	(272,334)	.....	.....	0	0	2,428,924	.....	.....	.....	0003
146448 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	02/04/2022	02/06/2023	.....	51,215,851	4742.20846100	.....	(2,477,952)	2,228,131	(249,821)	.....	.....	0	0	2,228,131	.....	.....	.....	0003
146460 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	02/04/2022	02/05/2027	.....	911,857	4689.10220700	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
146462 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	02/04/2022	02/06/2029	.....	2,301,878	4697.20316100	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
147079 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUISFPU8M908K5P83	02/04/2022	02/06/2029	.....	24,771,880	107.22501300	.....	(1,395,369)	1,211,364	(184,005)	.....	.....	0	0	1,211,364	.....	.....	.....	0003
147087 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/18/2022	02/17/2023	.....	41,004,821	186.25939200	.....	(1,913,095)	1,660,819	(252,276)	.....	.....	0	0	1,660,819	.....	.....	.....	0003
147089 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	02/18/2022	02/17/2023	.....	1,104,321	78.54543000	.....	(49,229)	42,737	(6,492)	.....	.....	0	0	42,737	.....	.....	.....	0003
147094 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	08/18/2023	.....	7,830,759	4525.86900900	.....	(630,512)	364,912	(265,600)	.....	.....	0	0	364,912	.....	.....	.....	0003
147102 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	02/17/2023	.....	38,350,591	4433.23807800	.....	(2,827,545)	2,454,682	(372,863)	.....	.....	0	0	2,454,682	.....	.....	.....	0003
147103 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/18/2022	02/17/2023	.....	61,746,996	4540.22028000	.....	(3,549,872)	3,081,757	(468,115)	.....	.....	0	0	3,081,757	.....	.....	.....	0003
147104 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	02/18/2022	02/17/2023	.....	29,459,315	4478.90121300	.....	(1,049,769)	911,338	(138,431)	.....	.....	0	0	911,338	.....	.....	.....	0003
147112 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	02/17/2023	.....	63,999,009	4447.15446200	.....	(4,592,407)	3,986,815	(605,592)	.....	.....	0	0	3,986,815	.....	.....	.....	0003
147128 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	02/17/2023	.....	58,426,686	4479.33610000	.....	(3,923,051)	3,405,725	(517,325)	.....	.....	0	0	3,405,725	.....	.....	.....	0003
147134 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	02/17/2023	.....	53,660,528	4501.51533700	.....	(3,439,084)	2,985,578	(453,506)	.....	.....	0	0	2,985,578	.....	.....	.....	0003
147136 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	02/17/2023	.....	47,875,776	4525.86900900	.....	(2,910,600)	2,526,785	(383,815)	.....	.....	0	0	2,526,785	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
147138 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.02/18/2022	.02/17/2023	.....	53,513,452	..4548.91802000	.....	(3,090,539)	2,682,996	.....	(407,544)	0	0	2,682,996	.....	.....	.....	0003	.....
147140 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.02/18/2022	.02/17/2023	.....	50,517,958	..4622.84881000	.....	(2,457,425)	2,133,369	.....	(324,056)	0	0	2,133,369	.....	.....	.....	0003	.....
147141 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/18/2022	.02/17/2023	.....	44,157,877	..4561.09485600	.....	(2,419,290)	2,100,263	.....	(319,027)	0	0	2,100,263	.....	.....	.....	0003	.....
147143 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/18/2022	.02/17/2023	.....	52,682,646	..4581.09965800	.....	(2,753,675)	2,390,553	.....	(363,122)	0	0	2,390,553	.....	.....	.....	0003	.....
147145 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/18/2022	.02/17/2023	.....	42,798,360	..4601.97423400	.....	(2,127,747)	1,847,165	.....	(280,582)	0	0	1,847,165	.....	.....	.....	0003	.....
147152 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPU8MPRO8K5P83	.02/18/2022	.02/19/2027	.....	1,656,805	..4533.26208800	.....	0	0	.....	0	0	0	.....	.....	.....	.....	0003	.....
147156 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPU8MPRO8K5P83	.02/18/2022	.02/20/2029	.....	2,616,900	..4538.48073200	.....	0	0	.....	0	0	0	.....	.....	.....	.....	0003	.....
147823 Call Options – Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.03/04/2022	.03/03/2023	.....	1,385,843	72.02590200	.....	(82,543)	68,484	.....	(14,060)	0	0	68,484	.....	.....	.....	0003	.....
147826 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.03/04/2022	.09/01/2023	.....	7,605,608	..4473.88714500	.....	(673,642)	372,601	.....	(301,041)	0	0	372,601	.....	.....	.....	0003	.....
147828 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPU8MPRO8K5P83	.03/04/2022	.03/03/2023	.....	44,683,927	..4506.35367000	.....	(2,972,919)	2,466,543	.....	(506,376)	0	0	2,466,543	.....	.....	.....	0003	.....
147830 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.03/04/2022	.03/03/2023	.....	81,805,770	..4458.73610000	.....	(5,928,196)	4,918,449	.....	(1,009,748)	0	0	4,918,449	.....	.....	.....	0003	.....
147843 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	59,143,949	..4521.07182800	.....	(3,888,754)	3,226,384	.....	(662,370)	0	0	3,226,384	.....	.....	.....	0003	.....
147844 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.03/04/2022	.03/03/2023	.....	69,051,191	..4483.84354600	.....	(4,762,450)	3,951,263	.....	(811,187)	0	0	3,951,263	.....	.....	.....	0003	.....
147851 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	51,146,232	..4529.72956800	.....	(3,304,661)	2,741,779	.....	(562,882)	0	0	2,741,779	.....	.....	.....	0003	.....
147859 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	62,164,823	..4548.34370900	.....	(3,867,034)	3,208,364	.....	(658,671)	0	0	3,208,364	.....	.....	.....	0003	.....
147863 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	47,920,183	..4563.92764100	.....	(2,886,210)	2,394,603	.....	(491,607)	0	0	2,394,603	.....	.....	.....	0003	.....
147869 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFX09	.03/04/2022	.03/03/2023	.....	36,742,005	..4460.90053500	.....	(1,529,580)	1,269,047	.....	(260,533)	0	0	1,269,047	.....	.....	.....	0003	.....
147873 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	68,807,866	..4577.78002500	.....	(4,025,016)	3,339,437	.....	(685,580)	0	0	3,339,437	.....	.....	.....	0003	.....
147878 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.03/04/2022	.03/03/2023	.....	70,814,323	..4602.45458400	.....	(3,927,691)	3,258,688	.....	(669,002)	0	0	3,258,688	.....	.....	.....	0003	.....
147900 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPU8MPRO8K5P83	.03/04/2022	.03/03/2023	.....	46,946,443	193.21299200	.....	(2,847,849)	2,362,776	.....	(485,073)	0	0	2,362,776	.....	.....	.....	0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
147902 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/04/2022	.03/03/2023	.....	29,130,341	110.42560200	.....	(1,583,165)	1,313,505	(269,660)	.....	.....	0	.....	1,313,505	.....	.....	.....	0003
147904 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/04/2022	.03/03/2023	.....	45,298,460	4413.28296500	.....	(3,522,830)	2,922,788	(600,043)	.....	.....	0	.....	2,922,788	.....	.....	.....	0003
147906 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.03/04/2022	.03/03/2023	.....	56,044,934	4422.80647900	.....	(4,287,891)	3,557,536	(730,355)	.....	.....	0	.....	3,557,536	.....	.....	.....	0003
147913 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.03/04/2022	.03/04/2027	.....	2,419,217	4525.83358500	.....	0	.....	0	.....	.....	0	.....	.....	.....	.....	.....	0003
147915 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBMPRO8K5P83	.03/04/2022	.03/02/2029	.....	3,298,567	4536.65576000	.....	0	.....	0	.....	.....	0	.....	.....	.....	.....	.....	0003
148443 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/18/2022	.03/20/2023	.....	45,277,521	188.55188000	.....	(2,780,740)	2,182,161	(588,579)	.....	.....	0	.....	2,182,161	.....	.....	.....	0003
148449 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/18/2022	.09/20/2023	.....	11,109,955	4629.14806400	.....	(931,248)	486,750	(444,498)	.....	.....	0	.....	486,750	.....	.....	.....	0003
148456 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/18/2022	.03/20/2023	.....	52,781,750	4550.15084000	.....	(3,896,904)	3,058,061	(838,843)	.....	.....	0	.....	3,058,061	.....	.....	.....	0003
148462 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/18/2022	.03/20/2023	.....	65,113,181	4624.68494400	.....	(4,133,455)	3,243,692	(889,763)	.....	.....	0	.....	3,243,692	.....	.....	.....	0003
148481 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	.03/18/2022	.03/20/2023	.....	32,430,215	111.64006700	.....	(1,582,779)	1,242,072	(340,707)	.....	.....	0	.....	1,242,072	.....	.....	.....	0003
148484 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.03/18/2022	.03/20/2023	.....	33,546,334	4597.90622400	.....	(1,228,274)	963,877	(264,397)	.....	.....	0	.....	963,877	.....	.....	.....	0003
148487 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/18/2022	.03/20/2023	.....	1,043,437	76.91997900	.....	(51,636)	40,521	(11,115)	.....	.....	0	.....	40,521	.....	.....	.....	0003
148491 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/18/2022	.03/20/2023	.....	49,559,034	4555.95289600	.....	(3,407,067)	2,673,665	(733,401)	.....	.....	0	.....	2,673,665	.....	.....	.....	0003
148495 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.03/18/2022	.03/20/2023	.....	3,639,522	4661.72884000	.....	0	.....	0	.....	.....	0	.....	.....	.....	.....	.....	0003
148497 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.03/18/2022	.03/20/2023	.....	2,815,500	4670.20876800	.....	0	.....	0	.....	.....	0	.....	.....	.....	.....	.....	0003
148499 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/18/2022	.03/20/2023	.....	84,425,971	4596.56728800	.....	(5,326,533)	4,179,949	(1,146,583)	.....	.....	0	.....	4,179,949	.....	.....	.....	0003
148503 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/18/2022	.03/20/2023	.....	54,731,684	4643.43004800	.....	(3,113,119)	2,442,993	(670,126)	.....	.....	0	.....	2,442,993	.....	.....	.....	0003
148505 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/18/2022	.03/20/2023	.....	58,075,093	4659.05096800	.....	(3,186,513)	2,500,588	(685,925)	.....	.....	0	.....	2,500,588	.....	.....	.....	0003
148507 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.03/18/2022	.03/20/2023	.....	60,453,711	4713.50103200	.....	(2,912,356)	2,285,445	(626,910)	.....	.....	0	.....	2,285,445	.....	.....	.....	0003
148510 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02NE81BX/P490TD8PU41	.03/18/2022	.03/20/2023	.....	56,854,564	4674.22557600	.....	(3,273,494)	2,568,845	(704,649)	.....	.....	0	.....	2,568,845	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Refer- ence Entity	Hedge Effectiveness at Inception and at Year-end (b)	
148514 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE8IBXP4ROTDBPU41	.03/18/2022	.03/20/2023	.....	63,870,234	..4694.75592800	.....	.....(3,515,626)	2,758,856	(756,770)	.....	.....	.....0	0	2,758,856	.....	.....	.....	.....0003	
148516 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE8IBXP4ROTDBPU41	.03/18/2022	.03/20/2023	.....	78,958,461	..4742.95762400	.....	.....(3,893,313)	3,055,243	(838,070)	.....	.....	.....0	0	3,055,243	.....	.....	.....	.....0003	
149310 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	52,816,109	..189.02028600	.....	.....(3,165,832)	2,333,175	(832,657)	.....	.....	.....0	0	2,333,175	.....	.....	.....	.....0003
149326 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.04/06/2022	.04/06/2023	.....	42,137,201	..116.87346000	.....	.....(2,160,269)	1,592,089	(568,180)	.....	.....	.....0	0	1,592,089	.....	.....	.....	.....0003
149328 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.04/06/2022	.04/06/2023	.....	1,138,263	..76.36408000	.....	.....(52,665)	38,814	(13,852)	.....	.....	.....0	0	38,814	.....	.....	.....	.....0003
149329 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.10/06/2023	.....	9,739,780	..4637.99025000	.....	.....(814,275)	399,708	(414,567)	.....	.....	.....0	0	399,708	.....	.....	.....	.....0003
149331 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	53,441,343	..4567.63619500	.....	.....(4,018,716)	2,961,739	(1,056,977)	.....	.....	.....0	0	2,961,739	.....	.....	.....	.....0003
149333 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	64,485,810	..4573.46169000	.....	.....(4,794,423)	3,533,424	(1,260,999)	.....	.....	.....0	0	3,533,424	.....	.....	.....	.....0003
149337 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	39,873,989	..4636.19779000	.....	.....(2,614,232)	1,926,653	(687,579)	.....	.....	.....0	0	1,926,653	.....	.....	.....	.....0003
149340 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	49,281,133	..4662.18846000	.....	.....(3,058,964)	2,254,415	(804,549)	.....	.....	.....0	0	2,254,415	.....	.....	.....	.....0003
149341 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32WFEA76	.04/06/2022	.04/06/2023	.....	82,347,477	..4612.89581000	.....	.....(5,835,177)	4,300,446	(1,534,732)	.....	.....	.....0	0	4,300,446	.....	.....	.....	.....0003
149344 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	55,437,321	..4672.49510500	.....	.....(3,366,582)	2,481,125	(885,457)	.....	.....	.....0	0	2,481,125	.....	.....	.....	.....0003
149345 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.04/06/2022	.04/06/2023	.....	58,759,840	..4649.19312500	.....	.....(3,896,556)	2,871,709	(1,024,848)	.....	.....	.....0	0	2,871,709	.....	.....	.....	.....0003
149347 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	50,182,904	..4682.35363500	.....	.....(2,983,417)	2,198,738	(784,680)	.....	.....	.....0	0	2,198,738	.....	.....	.....	.....0003
149350 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.04/06/2022	.04/06/2023	.....	64,827,612	..4711.48111000	.....	.....(3,779,658)	2,785,556	(994,102)	.....	.....	.....0	0	2,785,556	.....	.....	.....	.....0003
149351 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	50,631,840	..4695.34897000	.....	.....(2,925,861)	2,156,319	(769,541)	.....	.....	.....0	0	2,156,319	.....	.....	.....	.....0003
149354 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	.....	49,790,506	..4741.95293000	.....	.....(2,591,190)	1,909,672	(681,518)	.....	.....	.....0	0	1,909,672	.....	.....	.....	.....0003
149363 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.04/06/2022	.04/06/2023	.....	71,790,720	..4726.26890500	.....	.....(4,050,012)	2,984,804	(1,065,209)	.....	.....	.....0	0	2,984,804	.....	.....	.....	.....0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
149365 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	71,711,502	4764.80679500	.....	(3,716,076)	2,738,697	(977,379)	.....	.....	0	0	2,738,697	.....	.....	.....	0003
149384 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/06/2022	04/06/2029	.....	1,315,067	4689.52347500	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
149386 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/06/2022	04/06/2027	.....	3,167,976	4678.76871500	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
149391 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	46,018,813	4608.41466000	.....	(1,624,351)	1,197,125	(427,227)	.....	.....	0	0	1,197,125	.....	.....	.....	0003
149943 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	43,182,415	4545.51738500	.....	(3,232,470)	2,258,301	(974,169)	.....	.....	0	0	2,258,301	.....	.....	.....	0003
149947 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	52,633,041	4553.99034000	.....	(3,874,789)	2,707,045	(1,167,745)	.....	.....	0	0	2,707,045	.....	.....	.....	0003
149950 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	61,406,063	4604.82807000	.....	(4,080,689)	2,850,892	(1,229,797)	.....	.....	0	0	2,850,892	.....	.....	.....	0003
149953 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	57,359,765	4625.78748500	.....	(3,649,072)	2,549,352	(1,099,720)	.....	.....	0	0	2,549,352	.....	.....	.....	0003
149957 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	68,480,367	4643.62528500	.....	(4,193,802)	2,929,917	(1,263,886)	.....	.....	0	0	2,929,917	.....	.....	.....	0003
149969 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	66,180,111	4660.57119500	.....	(3,907,698)	2,730,036	(1,177,662)	.....	.....	0	0	2,730,036	.....	.....	.....	0003
149971 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	04/20/2022	04/20/2023	.....	41,089,360	192.86867600	.....	(2,330,970)	1,628,486	(702,484)	.....	.....	0	0	1,628,486	.....	.....	.....	0003
149972 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	55,219,912	4687.77384000	.....	(3,069,871)	2,144,704	(925,167)	.....	.....	0	0	2,144,704	.....	.....	.....	0003
149975 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	04/20/2022	04/20/2023	.....	31,451,701	119.30260800	.....	(1,472,448)	1,028,696	(443,751)	.....	.....	0	0	1,028,696	.....	.....	.....	0003
149977 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2022	04/20/2023	.....	1,357,769	76.33068000	.....	(57,067)	39,869	(17,198)	.....	.....	0	0	39,869	.....	.....	.....	0003
149980 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	10/20/2023	.....	7,445,339	4603.04429000	.....	(507,224)	236,026	(271,198)	.....	.....	0	0	236,026	.....	.....	.....	0003
149981 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	55,746,397	4707.84136500	.....	(2,961,361)	2,068,896	(892,465)	.....	.....	0	0	2,068,896	.....	.....	.....	0003
149983 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	73,952,495	4727.90889000	.....	(3,750,565)	2,620,258	(1,130,307)	.....	.....	0	0	2,620,258	.....	.....	.....	0003
149985 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2022	04/20/2023	.....	59,942,500	4757.34126000	.....	(2,835,252)	1,980,792	(854,460)	.....	.....	0	0	1,980,792	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
150019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	G5GSEF7VJP5170UK5573	.04/20/2022	.04/20/2023	32,406,519	..4590.55783000	.....	.....(2,273,871)	1,588,585	(685,276)	.....	.....	.....0	0	1,588,585	.....	.....	.....	0003
150022 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUB8MPR08K5P83	.04/20/2022	.04/20/2027	4,166,941	..4670.82793000	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
150024 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUB8MPR08K5P83	.04/20/2022	.04/20/2029	2,515,134	..4677.96305000	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
150385 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	49,924,375	..185.38385600	.....	.....(3,042,326)	1,997,571	(1,044,755)	.....	.....	.....0	0	1,997,571	.....	.....	.....	0003
150387 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	37,882,646	..105.79983400	.....	.....(2,330,581)	1,530,244	(800,337)	.....	.....	.....0	0	1,530,244	.....	.....	.....	0003
150389 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G071XB011	.05/06/2022	.05/05/2023	1,133,639	..70.94294200	.....	.....(62,884)	41,290	(21,595)	.....	.....	.....0	0	41,290	.....	.....	.....	0003
150390 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.11/06/2023	8,569,125	..4284.56259400	.....	.....(743,600)	323,717	(419,883)	.....	.....	.....0	0	323,717	.....	.....	.....	0003
150394 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	57,232,619	..4208.28080400	.....	.....(4,291,616)	2,817,847	(1,473,769)	.....	.....	.....0	0	2,817,847	.....	.....	.....	0003
150398 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHNGJPF6GNF3BB653	.05/06/2022	.05/05/2023	54,912,719	..4203.33279600	.....	.....(4,616,931)	3,031,447	(1,585,485)	.....	.....	.....0	0	3,031,447	.....	.....	.....	0003
150400 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.05/06/2022	.05/05/2023	86,082,769	..4303.94229200	.....	.....(6,354,431)	4,172,277	(2,182,153)	.....	.....	.....0	0	4,172,277	.....	.....	.....	0003
150406 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	55,763,152	..4313.83830800	.....	.....(4,021,002)	2,640,163	(1,380,839)	.....	.....	.....0	0	2,640,163	.....	.....	.....	0003
150408 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	54,412,405	..4333.63034000	.....	.....(3,775,217)	2,478,782	(1,296,434)	.....	.....	.....0	0	2,478,782	.....	.....	.....	0003
150410 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	54,866,366	..4351.77303600	.....	.....(3,675,953)	2,413,606	(1,262,346)	.....	.....	.....0	0	2,413,606	.....	.....	.....	0003
150414 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	54,836,885	..4365.79239200	.....	.....(3,573,616)	2,346,413	(1,227,203)	.....	.....	.....0	0	2,346,413	.....	.....	.....	0003
150416 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	60,893,976	..4378.16241200	.....	.....(3,871,109)	2,541,745	(1,329,364)	.....	.....	.....0	0	2,541,745	.....	.....	.....	0003
150418 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	61,763,902	..4405.78879000	.....	.....(3,711,615)	2,437,022	(1,274,593)	.....	.....	.....0	0	2,437,022	.....	.....	.....	0003
150419 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	47,968,257	..4244.97853000	.....	.....(3,335,195)	2,189,867	(1,145,328)	.....	.....	.....0	0	2,189,867	.....	.....	.....	0003
150421 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	53,443,641	..4275.49124600	.....	.....(3,481,750)	2,286,094	(1,195,656)	.....	.....	.....0	0	2,286,094	.....	.....	.....	0003
150423 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.05/05/2023	52,991,809	..4289.09826800	.....	.....(3,351,170)	2,200,356	(1,150,814)	.....	.....	.....0	0	2,200,356	.....	.....	.....	0003
150450 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	43,192,354	..4246.62786600	.....	.....(3,547,988)	2,329,586	(1,218,403)	.....	.....	.....0	0	2,329,586	.....	.....	.....	0003
150454 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.05/06/2022	.05/06/2027	2,684,539	..4322.49732200	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti-zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
150455 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.05/06/2022	.05/04/2029	.....	1,896,215	4328.26999800	.....	0	.....	0	.....	.....	0	.....	0	.....	.....	.....	0003
151001 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	41,610,400	182.54103300	.....	(2,439,075)	1,507,670	(931,405)	.....	.....	0	.....	0	1,507,670	.....	.....	0003
151039 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/20/2022	.05/19/2023	.....	32,084,976	100.84795200	.....	(1,856,449)	1,147,530	(708,919)	.....	.....	0	.....	0	1,147,530	.....	.....	0003
151041 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	62,547,614	4049.61168000	.....	(4,912,720)	3,036,709	(1,876,011)	.....	.....	0	.....	0	3,036,709	.....	.....	0003
151043 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	41,447,746	4063.65657600	.....	(3,168,602)	1,958,614	(1,209,988)	.....	.....	0	.....	0	1,958,614	.....	.....	0003
151047 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	55,654,695	4083.94364800	.....	(4,095,328)	2,531,453	(1,563,875)	.....	.....	0	.....	0	2,531,453	.....	.....	0003
151051 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	48,462,991	4110.08276000	.....	(3,391,643)	2,096,483	(1,295,161)	.....	.....	0	.....	0	2,096,483	.....	.....	0003
151053 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	59,844,874	4128.80928800	.....	(4,027,829)	2,489,730	(1,538,100)	.....	.....	0	.....	0	2,489,730	.....	.....	0003
151055 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	49,671,618	4141.68377600	.....	(3,257,868)	2,013,792	(1,244,076)	.....	.....	0	.....	0	2,013,792	.....	.....	0003
151056 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	1,118,301	71.58545100	.....	(50,615)	31,287	(19,328)	.....	.....	0	.....	0	31,287	.....	.....	0003
151058 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	11/20/2023	.....	6,916,838	4068.72834400	.....	(658,648)	269,938	(388,710)	.....	.....	0	.....	0	269,938	.....	.....	0003
151060 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	46,933,751	3977.43652000	.....	(4,223,810)	2,610,872	(1,612,938)	.....	.....	0	.....	0	2,610,872	.....	.....	0003
151062 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	50,567,946	3981.72801600	.....	(4,515,231)	2,791,008	(1,724,223)	.....	.....	0	.....	0	2,791,008	.....	.....	0003
151064 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	43,600,501	4019.96134400	.....	(3,631,783)	2,244,921	(1,386,862)	.....	.....	0	.....	0	2,244,921	.....	.....	0003
151066 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	56,614,976	4073.01984000	.....	(4,264,520)	2,636,036	(1,628,484)	.....	.....	0	.....	0	2,636,036	.....	.....	0003
151068 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/20/2022	.05/19/2023	.....	66,641,471	4165.09193600	.....	(4,177,920)	2,582,505	(1,595,415)	.....	.....	0	.....	0	2,582,505	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
151070 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2022	05/19/2023		52,409,895	4192.79159200	(3,101,125)	1,916,904	(1,184,221)				0	0	1,916,904				0003
151096 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	05/20/2022	05/19/2023		37,753,309	4019.57120800	(1,665,059)	1,029,226	(635,833)				0	0	1,029,226				0003
151100 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/20/2022	05/20/2027		5,349,149	4116.32493600	0	0	0				0	0	0				0003
151101 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/20/2022	05/18/2029		1,342,084	4115.15452800	0	0	0				0	0	0				0003
151615 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		65,431,349	4206.33145800	(5,505,238)	3,137,231	(2,368,006)				0	0	3,137,231				0003
151617 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		61,043,332	4201.79788500	(5,178,123)	2,950,821	(2,227,302)				0	0	2,950,821				0003
151632 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		48,319,056	182.23229200	(2,635,600)	1,501,931	(1,133,669)				0	0	1,501,931				0003
151635 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		1,231,398	73.53498400	(49,735)	28,342	(21,393)				0	0	28,342				0003
151638 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	12/06/2023		5,173,219	4311.01578000	(460,296)	174,711	(285,585)				0	0	174,711				0003
151643 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		51,295,355	4274.33505300	(3,751,084)	2,137,604	(1,613,480)				0	0	2,137,604				0003
151645 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		48,619,144	4286.69934300	(3,471,290)	1,978,160	(1,493,130)				0	0	1,978,160				0003
151648 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	06/06/2023		51,618,438	4301.53649100	(3,579,240)	2,039,676	(1,539,564)				0	0	2,039,676				0003
151655 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	06/06/2022	06/06/2023		31,975,257	104.19443100	(1,777,573)	1,012,973	(764,600)				0	0	1,012,973				0003
151657 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	06/06/2022	06/06/2023		42,164,762	4245.48504300	(3,344,201)	1,905,736	(1,438,464)				0	0	1,905,736				0003
151667 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		59,404,501	4310.60363700	(4,112,456)	2,343,537	(1,768,920)				0	0	2,343,537				0003
151670 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		58,451,253	4325.85292800	(3,926,948)	2,237,822	(1,689,126)				0	0	2,237,822				0003
151676 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/06/2022	06/06/2023		50,455,647	4339.86579000	(3,296,895)	1,878,779	(1,418,117)				0	0	1,878,779				0003
151683 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		70,581,165	4363.77008400	(4,392,609)	2,503,185	(1,889,424)				0	0	2,503,185				0003
151686 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		50,918,834	4375.31008800	(3,095,072)	1,763,767	(1,331,305)				0	0	1,763,767				0003
151689 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		67,783,122	4399.21438200	(3,921,044)	2,234,458	(1,686,586)				0	0	2,234,458				0003
151692 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	06/06/2022	06/06/2023		59,750,599	4430.94939300	(3,231,546)	1,841,538	(1,390,007)				0	0	1,841,538				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)		
151702 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	G5GSEF7VJP5I70UK5573	.06/06/2022	.06/06/2023	.....	38,305,169 ..	4243.83647100	.....	(1,585,915)	.....	903,754	.....	(682,161)	.....	0	.....	0	.....	903,754	.....	0003
151706 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBM8P08K5P83	.06/06/2022	.06/04/2027	.....	4,280,628 ..	4352.64222300	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0003
151708 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBM8P08K5P83	.06/06/2022	.06/06/2029	.....	1,953,500 ..	4342.75079100	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0003
152993 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G71XBU11	.06/17/2022	.06/20/2023	.....	35,348,391 ..	3785.08520000	.....	(1,729,669)	.....	925,937	.....	(803,732)	.....	0	.....	0	.....	925,937	.....	0003
152998 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... JPMORGAN CHASE	O2RNE81BX4P0TD8PU41	.06/17/2022	.12/20/2023	.....	5,850,553 ..	3844.25012400	.....	(461,399)	.....	164,965	.....	(296,434)	.....	0	.....	0	.....	164,965	.....	0003
153004 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. JPMORGAN CHASE	7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/18/2027	.....	4,183,227 ..	3674.84000000	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0003
153008 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/20/2029	.....	1,343,448 ..	3877.69116800	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0	.....	0003
153009 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	49,453,792 ..	3746.49938000	.....	(4,575,780)	.....	2,449,534	.....	(2,126,246)	.....	0	.....	0	.....	2,449,534	.....	0003
153012 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	G5GSEF7VJP5I70UK5573	.06/17/2022	.06/20/2023	.....	28,650,599 ..	92.97219600	.....	(1,782,896)	.....	954,431	.....	(828,465)	.....	0	.....	0	.....	954,431	.....	0003
153013 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	60,625,893 ..	3861.52187200	.....	(4,503,702)	.....	2,410,949	.....	(2,092,753)	.....	0	.....	0	.....	2,410,949	.....	0003
153016 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	47,316,799 ..	3878.42613600	.....	(3,398,310)	.....	1,819,204	.....	(1,579,106)	.....	0	.....	0	.....	1,819,204	.....	0003
153017 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/20/2023	.....	1,234,121 ..	64.38185600	.....	(67,056)	.....	35,897	.....	(31,159)	.....	0	.....	0	.....	35,897	.....	0003
153020 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	46,580,655 ..	3947.51312800	.....	(2,900,086)	.....	1,552,492	.....	(1,347,594)	.....	0	.....	0	.....	1,552,492	.....	0003
153021 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.06/17/2022	.06/20/2023	.....	57,891,689 ..	3752.74660800	.....	(5,412,643)	.....	2,897,529	.....	(2,515,114)	.....	0	.....	0	.....	2,897,529	.....	0003
153025 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	E570DZIWZ7FF32TWEFA76	.06/17/2022	.06/20/2023	.....	68,735,951 ..	3802.72443200	.....	(5,857,179)	.....	3,135,501	.....	(2,721,678)	.....	0	.....	0	.....	3,135,501	.....	0003
153047 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	43,259,700 ..	181.08377100	.....	(2,663,660)	.....	1,425,927	.....	(1,237,733)	.....	0	.....	0	.....	1,425,927	.....	0003
153051 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	52,244,353 ..	3821.09863200	.....	(4,201,453)	.....	2,249,148	.....	(1,952,306)	.....	0	.....	0	.....	2,249,148	.....	0003
153053 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	52,851,127 ..	3832.85812000	.....	(4,154,062)	.....	2,223,778	.....	(1,930,284)	.....	0	.....	0	.....	2,223,778	.....	0003
153055 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	62,472,107 ..	3845.72006000	.....	(4,788,252)	.....	2,563,276	.....	(2,224,976)	.....	0	.....	0	.....	2,563,276	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
153059 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	62,443,541	..3897.16782000	.....	..... (4,317,824)	 2,311,444	 (2,006,380)	.....	.....	..... 0	 0	 2,311,444	.....	.....	.....	0003
153062 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	49,392,589	..3915.17453600	.....	..... (3,290,674)	 1,761,584	 (1,529,090)	.....	.....	..... 0	 0	 1,761,584	.....	.....	.....	0003
153789 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/06/2022	.01/05/2024	.....	5,991,404	..3994.26910400	.....	..... (589,455)	 191,465	 (397,990)	.....	.....	..... 0	 0	 191,465	.....	.....	.....	0003
153793 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/06/2022	.07/06/2023	.....	63,896,963	..3920.05906000	.....	..... (5,730,265)	 2,794,485	 (2,935,780)	.....	.....	..... 0	 0	 2,794,485	.....	.....	.....	0003
153795 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/06/2022	.07/06/2023	.....	66,712,907	..3924.28864800	.....	..... (5,935,210)	 2,894,431	 (3,040,779)	.....	.....	..... 0	 0	 2,894,431	.....	.....	.....	0003
153799 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/06/2022	.07/06/2023	.....	1,509,981	..64.71811500	.....	..... (71,862)	 35,045	 (36,817)	.....	.....	..... 0	 0	 35,045	.....	.....	.....	0003
153818 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	54,430,900	..4111.54404400	.....	..... (3,374,037)	 1,645,421	 (1,728,616)	.....	.....	..... 0	 0	 1,645,421	.....	.....	.....	0003
153822 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.07/06/2022	.07/06/2023	.....	75,249,541	..4163.45262400	.....	..... (3,970,268)	 1,936,186	 (2,034,083)	.....	.....	..... 0	 0	 1,936,186	.....	.....	.....	0003
153825 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.07/06/2022	.07/06/2023	.....	34,687,079	..3961.97043200	.....	..... (1,462,688)	 713,311	 (749,377)	.....	.....	..... 0	 0	 713,311	.....	.....	.....	0003
153830 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHJNPFFGNF3BB653	.07/06/2022	.07/06/2023	.....	41,272,649	..3965.43100400	.....	..... (3,504,527)	 1,709,057	 (1,795,470)	.....	.....	..... 0	 0	 1,709,057	.....	.....	.....	0003
153833 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	55,956,713	..3992.73107200	.....	..... (4,398,549)	 2,145,046	 (2,253,503)	.....	.....	..... 0	 0	 2,145,046	.....	.....	.....	0003
153836 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	54,203,524	..4000.03672400	.....	..... (4,201,432)	 2,048,917	 (2,152,514)	.....	.....	..... 0	 0	 2,048,917	.....	.....	.....	0003
153840 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.07/06/2022	.07/06/2023	.....	50,218,662	..4009.26491600	.....	..... (3,785,544)	 1,846,101	 (1,939,443)	.....	.....	..... 0	 0	 1,846,101	.....	.....	.....	0003
153842 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	63,763,372	..4018.49310800	.....	..... (4,769,023)	 2,325,716	 (2,443,308)	.....	.....	..... 0	 0	 2,325,716	.....	.....	.....	0003
153846 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	65,719,233	..4032.33539600	.....	..... (4,783,753)	 2,332,899	 (2,450,854)	.....	.....	..... 0	 0	 2,332,899	.....	.....	.....	0003
153848 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8MPRO8K5P83	.07/06/2022	.07/06/2029	.....	4,579,270	..4064.63406800	.....	..... 0	.....	..... 0	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
153849 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	63,937,766	..4069.63267200	.....	..... (4,320,155)	 2,106,815	 (2,213,340)	.....	.....	..... 0	 0	 2,106,815	.....	.....	.....	0003
153852 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2023	.....	56,575,795	..4088.85807200	.....	..... (3,675,720)	 1,792,543	 (1,883,177)	.....	.....	..... 0	 0	 1,792,543	.....	.....	.....	0003
153854 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WFEA76	.07/06/2022	.07/06/2027	.....	4,382,124	..4066.94111600	.....	..... 0	.....	..... 0	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
153902 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.07/06/2022	.07/06/2023	.....	49,298,182	..172.30617800	.....	..... (2,922,542)	 1,425,240	 (1,497,302)	.....	.....	..... 0	 0	 1,425,240	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
153908 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	G5GSEF7VJP5I70UK5573	.07/06/2022	.07/06/2023	32,346,968	99.11388200	.....	.....(1,939,845)	946,006	(993,838)	.....	.....	.....0	0	946,006	.....	.....	.....	0003
154440 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	01/19/2024	4,921,522	..4101.26843000	.....	.....(499,176)	149,388	(349,788)	.....	.....	.....0	0	149,388	.....	.....	.....	0003
154444 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBUI1	.07/20/2022	.07/20/2023	30,072,609	..4079.88497000	.....	.....(1,284,281)	577,047	(707,234)	.....	.....	.....0	0	577,047	.....	.....	.....	0003
154460 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	.07/20/2022	.07/20/2027	2,701,988	..4182.84237000	.....	.....0	.....	.....0	.....	.....	.....0	0	0	.....	.....	.....	0003
154465 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMPRO8K5P83	.07/20/2022	.07/20/2029	1,833,751	..4186.40628000	.....	.....0	.....	.....0	.....	.....	.....0	0	0	.....	.....	.....	0003
154474 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	50,055,354	..4036.72210000	.....	.....(4,464,372)	2,005,910	.....	.....(2,458,462)	0	0	2,005,910	.....	.....	.....	0003
154481 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROIIP21HZNB6K528	.07/20/2022	.07/20/2023	36,173,762	...167.34855600	.....	.....(2,159,016)	970,079	(1,188,938)	.....	.....	.....0	0	970,079	.....	.....	.....	0003
154487 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	64,259,436	4041.47390000	.....	.....(5,681,070)	2,552,590	.....	.....(3,128,480)	0	0	2,552,590	.....	.....	.....	0003
154488 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROIIP21HZNB6K528	.07/20/2022	.07/20/2023	23,033,683	99.43786800	.....	.....(1,332,005)	598,490	(733,515)	.....	.....	.....0	0	598,490	.....	.....	.....	0003
154496 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.07/20/2022	.07/20/2023	1,595,634	66.31972200	.....	.....(82,037)	36,860	(45,176)	.....	.....	.....0	0	36,860	.....	.....	.....	0003
154508 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	51,302,564	..4137.30352000	.....	.....(3,784,852)	1,700,591	.....	.....(2,084,261)	0	0	1,700,591	.....	.....	.....	0003
154518 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	49,016,434	..4153.93500000	.....	.....(3,499,408)	1,572,337	.....	.....(1,927,071)	0	0	1,572,337	.....	.....	.....	0003
154535 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	58,157,626	..4276.29600000	.....	.....(3,221,024)	1,447,255	.....	.....(1,773,769)	0	0	1,447,255	.....	.....	.....	0003
154541 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	36,761,995	..4081.46890000	.....	.....(3,018,803)	1,356,394	.....	.....(1,662,409)	0	0	1,356,394	.....	.....	.....	0003
154548 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	37,173,459	..4108.00030000	.....	.....(2,902,842)	1,304,290	.....	.....(1,598,551)	0	0	1,304,290	.....	.....	.....	0003
154554 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.07/20/2022	.07/20/2023	56,714,497	..4115.92010000	.....	.....(4,360,735)	1,959,344	.....	.....(2,401,391)	0	0	1,959,344	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
154560 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	07/20/2023	.....	46,423,707	..4121.06790000	.....	..... (3,534,272)	 1,588,002	 (1,946,270)	.....	.....	..... 0	 0	 1,588,002	.....	.....	.....	0003
154568 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	07/20/2023	.....	47,146,127	..4192.74210000	.....	..... (3,113,320)	 1,398,862	 (1,714,458)	.....	.....	..... 0	 0	 1,398,862	.....	.....	.....	0003
154575 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	07/20/2023	.....	52,330,494	..4216.50150000	.....	..... (3,291,241)	 1,478,804	 (1,812,437)	.....	.....	..... 0	 0	 1,478,804	.....	.....	.....	0003
155009 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.07/20/2022	07/20/2023	.....	52,330,494	..4216.50150000	.....	..... (3,291,241)	 1,478,804	 (1,812,437)	.....	.....	..... 0	 0	 1,478,804	.....	.....	.....	0003
155014 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFT09	.08/05/2022	08/04/2023	.....	42,729,096	..4276.17800400	.....	..... (1,706,513)	 693,857	 (1,012,656)	.....	.....	..... 0	 0	 693,857	.....	.....	.....	0003
155021 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	08/04/2023	.....	67,311,123	..4310.16860000	.....	..... (5,011,263)	 2,037,547	 (2,973,717)	.....	.....	..... 0	 0	 2,037,547	.....	.....	.....	0003
155026 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBU11	.08/05/2022	08/04/2023	.....	1,632,094	..68.54000000	.....	..... (91,179)	 37,073	 (54,106)	.....	.....	..... 0	 0	 37,073	.....	.....	.....	0003
155028 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	08/04/2023	.....	64,304,977	..4272.86185200	.....	..... (5,133,690)	 2,087,324	 (3,046,365)	.....	.....	..... 0	 0	 2,087,324	.....	.....	.....	0003
155035 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	08/06/2027	.....	1,414,170	..4387.26909600	.....	..... 0	 0	 0	.....	.....	..... 0	 0	 0	.....	.....	.....	0003
155056 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.08/05/2022	08/06/2029	.....	2,732,774	..4382.70938700	.....	..... 0	 0	 0	.....	.....	..... 0	 0	 0	.....	.....	.....	0003
155061 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	26,321,882	..104.36445000	.....	..... (1,478,898)	 601,310	 (877,588)	.....	.....	..... 0	 0	 601,310	.....	.....	.....	0003
155069 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BX4R0TD8PU41	.08/05/2022	02/06/2024	.....	8,098,578	..4331.30903100	.....	..... (935,495)	 251,733	 (683,762)	.....	.....	..... 0	 0	 251,733	.....	.....	.....	0003
155087 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.08/05/2022	08/04/2023	.....	70,590,662	..4226.02120500	.....	..... (6,134,176)	 2,494,115	 (3,640,060)	.....	.....	..... 0	 0	 2,494,115	.....	.....	.....	0003
155100 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	58,673,295	..4483.02298500	.....	..... (3,092,351)	 1,257,330	 (1,835,022)	.....	.....	..... 0	 0	 1,257,330	.....	.....	.....	0003
155109 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	64,436,720	..4296.90400000	.....	..... (4,921,334)	 2,000,982	 (2,920,352)	.....	.....	..... 0	 0	 2,000,982	.....	.....	.....	0003
155117 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	53,820,384	..4320.94605600	.....	..... (3,929,136)	 1,597,561	 (2,331,575)	.....	.....	..... 0	 0	 1,597,561	.....	.....	.....	0003
155123 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	54,593,454	..4332.96710000	.....	..... (3,895,653)	 1,583,947	 (2,311,706)	.....	.....	..... 0	 0	 1,583,947	.....	.....	.....	0003
155130 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	51,956,905	..4351.20594300	.....	..... (3,579,616)	 1,455,448	 (2,124,168)	.....	.....	..... 0	 0	 1,455,448	.....	.....	.....	0003
155138 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.08/05/2022	08/04/2023	.....	52,623,950	..4390.17072900	.....	..... (3,358,373)	 1,365,492	 (1,992,881)	.....	.....	..... 0	 0	 1,365,492	.....	.....	.....	0003
155147 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/05/2022	08/04/2023	.....	43,768,130	..175.24045800	.....	..... (2,432,666)	 989,106	 (1,443,560)	.....	.....	..... 0	 0	 989,106	.....	.....	.....	0003
155159 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/05/2022	08/04/2023	.....	58,919,845	..4231.40995200	.....	..... (5,031,443)	 2,045,751	 (2,985,691)	.....	.....	..... 0	 0	 2,045,751	.....	.....	.....	0003
155751 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPU8M1PRO8K5P83	.08/19/2022	08/20/2027	.....	1,644,288	..4467.81200000	.....	..... 0	 0	 0	.....	.....	..... 0	 0	 0	.....	.....	.....	0003
155755 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPU8M1PRO8K5P83	.08/19/2022	08/20/2029	.....	1,477,052	..4471.61760000	.....	..... 0	 0	 0	.....	.....	..... 0	 0	 0	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
155768 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	35,000,020	..4359.14003200	.....	.....(1,449,026)	533,433	(915,593)	.....	.....0	0	533,433	.....	.....	.....	.....0003	.....
155781 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNB6K528	.08/19/2022	.08/18/2023	.....	33,231,253	172.53201600	.....	.....(1,762,640)	648,884	(1,113,756)	.....	.....0	0	648,884	.....	.....	.....	.....0003	.....
155782 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPRO8K5P83	.08/19/2022	.02/20/2024	.....	5,965,661	..4398.46489600	.....	.....(591,003)	143,990	(447,013)	.....	.....0	0	143,990	.....	.....	.....	.....0003	.....
155784 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPRO8K5P83	.08/19/2022	.08/18/2023	.....	60,300,180	..4313.04960000	.....	.....(5,196,457)	1,912,981	(3,283,475)	.....	.....0	0	1,912,981	.....	.....	.....	.....0003	.....
155790 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	56,436,331	..4436.09836800	.....	.....(3,872,702)	1,425,665	(2,447,037)	.....	.....0	0	1,425,665	.....	.....	.....	.....0003	.....
155795 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNB6K528	.08/19/2022	.08/18/2023	.....	21,756,005	..106.72979800	.....	.....(1,187,418)	437,126	(750,291)	.....	.....0	0	437,126	.....	.....	.....	.....0003	.....
155800 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	50,076,603	..4573.94681600	.....	.....(2,583,688)	951,138	(1,632,550)	.....	.....0	0	951,138	.....	.....	.....	.....0003	.....
155806 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.08/19/2022	.08/18/2023	.....	1,133,155	68.46142700	.....	.....(60,175)	22,152	(38,023)	.....	.....0	0	22,152	.....	.....	.....	.....0003	.....
155825 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPRO8K5P83	.08/19/2022	.08/18/2023	.....	48,753,728	..4317.27808000	.....	.....(4,169,614)	1,534,968	(2,634,646)	.....	.....0	0	1,534,968	.....	.....	.....	.....0003	.....
155846 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	51,459,287	..4363.36851200	.....	.....(4,054,308)	1,492,520	(2,561,788)	.....	.....0	0	1,492,520	.....	.....	.....	.....0003	.....
155855 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	47,909,177	..4387.04800000	.....	.....(3,611,544)	1,329,524	(2,282,019)	.....	.....0	0	1,329,524	.....	.....	.....	.....0003	.....
155866 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	52,310,882	..4393.81356800	.....	.....(3,893,488)	1,433,317	(2,460,171)	.....	.....0	0	1,433,317	.....	.....	.....	.....0003	.....
155879 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	54,803,457	..4411.99603200	.....	.....(3,940,344)	1,450,566	(2,489,778)	.....	.....0	0	1,450,566	.....	.....	.....	.....0003	.....
155885 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	48,048,024	..4474.15468800	.....	.....(3,057,436)	1,125,540	(1,931,897)	.....	.....0	0	1,125,540	.....	.....	.....	.....0003	.....
155891 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	50,558,379	..4504.17689600	.....	.....(3,025,814)	1,113,898	(1,911,915)	.....	.....0	0	1,113,898	.....	.....	.....	.....0003	.....
156454 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNB6K528	.09/06/2022	.09/06/2023	.....	37,273,464	168.00396300	.....	.....(2,035,720)	646,969	(1,388,751)	.....	.....0	0	646,969	.....	.....	.....	.....0003	.....
156459 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.03/06/2024	.....	4,851,158	..4042.63173600	.....	.....(510,252)	108,207	(402,045)	.....	.....0	0	108,207	.....	.....	.....	.....0003	.....
156461 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	60,193,942	..3986.35380000	.....	.....(5,479,941)	1,741,570	(3,738,371)	.....	.....0	0	1,741,570	.....	.....	.....	.....0003	.....
156466 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGQFU57RNE97	.09/06/2022	.09/06/2023	.....	25,452,922	99.89908800	.....	.....(1,631,043)	518,359	(1,112,684)	.....	.....0	0	518,359	.....	.....	.....	.....0003	.....
156486 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.09/06/2022	.09/06/2023	.....	1,702,447	63.34203200	.....	.....(111,864)	35,551	(76,313)	.....	.....0	0	35,551	.....	.....	.....	.....0003	.....
156493 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	52,934,675	..4168.08463500	.....	.....(3,408,807)	1,083,347	(2,325,460)	.....	.....0	0	1,083,347	.....	.....	.....	.....0003	.....
156499 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPU8MPRO8K5P83	.09/06/2022	.09/06/2023	.....	35,837,571	..4033.25208000	.....	.....(1,636,652)	520,141	(1,116,510)	.....	.....0	0	520,141	.....	.....	.....	.....0003	.....
156503 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWFA76	.09/06/2022	.09/06/2027	.....	1,651,422	..4125.87618300	.....	.....0	0	.....	.....	.....0	0	.....	.....	.....	.....	.....0003	.....

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
156506 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/06/2022	.09/06/2029	.....	1,044,140	..4131.73846800	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
156522 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	50,885,872	..3991.83000000	.....	(4,587,832)	1,458,051	(3,129,782)	.....	.....	0	0	1,458,051	.....	.....	.....	0003
156529 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	30,833,134	..4030.90716600	.....	(2,590,012)	823,127	(1,766,885)	.....	.....	0	0	823,127	.....	.....	.....	0003
156537 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	56,573,004	..4055.52876300	.....	(4,540,176)	1,442,905	(3,097,271)	.....	.....	0	0	1,442,905	.....	.....	.....	0003
156546 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	51,444,932	..4062.56000000	.....	(4,074,502)	1,294,910	(2,779,591)	.....	.....	0	0	1,294,910	.....	.....	.....	0003
156555 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	77,317,270	..4075.85135100	.....	(5,971,630)	1,897,833	(4,073,797)	.....	.....	0	0	1,897,833	.....	.....	.....	0003
156563 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	48,898,486	..4096.17393900	.....	(3,632,492)	1,154,436	(2,478,056)	.....	.....	0	0	1,154,436	.....	.....	.....	0003
156573 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	67,189,173	..4107.50769000	.....	(4,882,759)	1,551,781	(3,330,978)	.....	.....	0	0	1,551,781	.....	.....	.....	0003
156584 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	45,912,184	..4150.49778000	.....	(3,064,243)	973,842	(2,090,401)	.....	.....	0	0	973,842	.....	.....	.....	0003
156623 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.09/06/2022	.09/06/2023	.....	52,781,811	..4233.74222700	.....	(3,093,921)	983,273	(2,110,647)	.....	.....	0	0	983,273	.....	.....	.....	0003
156930 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPRO8K5P83	.09/20/2022	.09/20/2023	.....	55,376,776	..3931.12063500	.....	(5,399,168)	1,508,809	(3,890,359)	.....	.....	0	0	1,508,809	.....	.....	.....	0003
156939 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	.09/20/2022	.09/20/2023	.....	64,481,233	..3994.74348000	.....	(5,782,974)	1,616,064	(4,166,910)	.....	.....	0	0	1,616,064	.....	.....	.....	0003
156949 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	.09/20/2022	.09/20/2023	.....	40,763,715	..4008.23923500	.....	(3,569,060)	997,381	(2,571,679)	.....	.....	0	0	997,381	.....	.....	.....	0003
156963 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON G5GSEF7VJP5I7OUK5573	.09/20/2022	.09/20/2023	.....	64,660,499	..4168.26033000	.....	(4,057,282)	1,133,816	(2,923,466)	.....	.....	0	0	1,133,816	.....	.....	.....	0003
156971 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUWSFPU8MPRO8K5P83	.09/20/2022	.09/20/2023	.....	35,743,020	..3974.30705100	.....	(1,732,533)	484,160	(1,248,373)	.....	.....	0	0	484,160	.....	.....	.....	0003
156982 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/20/2022	.09/20/2027	.....	1,254,640	..4094.22647400	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
156986 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/20/2022	.09/20/2029	.....	964,383	..4094.22647400	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
156995 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	31,209,318	164.09507400	.....	(1,816,319)	507,574	(1,308,745)	.....	.....	.....0	0	507,574	.....	.....	.....	0003
156999 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	03/20/2024	.....	7,584,884	3992.04432900	.....	(819,888)	152,886	(667,002)	.....	.....	.....0	0	152,886	.....	.....	.....	0003
157005 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	64,391,560	3950.01469200	.....	(4,221,462)	1,179,696	(3,041,766)	.....	.....	.....0	0	1,179,696	.....	.....	.....	0003
157019 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	52,321,955	4020.57821100	.....	(2,882,759)	805,593	(2,077,166)	.....	.....	.....0	0	805,593	.....	.....	.....	0003
157034 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	58,883,304	4037.54430300	.....	(3,103,025)	867,147	(2,235,878)	.....	.....	.....0	0	867,147	.....	.....	.....	0003
157043 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	48,303,304	4074.17563800	.....	(2,304,445)	643,982	(1,660,463)	.....	.....	.....0	0	643,982	.....	.....	.....	0003
157048 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	09/20/2023	.....	50,001,310	4098.46799700	.....	(2,226,012)	622,064	(1,603,948)	.....	.....	.....0	0	622,064	.....	.....	.....	0003
157070 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2022	09/20/2023	.....	21,509,178	94.40260800	.....	(1,214,818)	339,483	(875,335)	.....	.....	.....0	0	339,483	.....	.....	.....	0003
157078 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	09/20/2022	09/20/2023	.....	969,253	62.37430200	.....	(66,012)	18,447	(47,565)	.....	.....	.....0	0	18,447	.....	.....	.....	0003
157994 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	46,699,024	3857.97895600	.....	(4,438,944)	1,045,888	(3,393,056)	.....	.....	.....0	0	1,045,888	.....	.....	.....	0003
158009 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	65,360,107	3883.44169200	.....	(5,844,659)	1,377,098	(4,467,562)	.....	.....	.....0	0	1,377,098	.....	.....	.....	0003
158018 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	52,454,369	3895.42415600	.....	(4,591,459)	1,081,823	(3,509,636)	.....	.....	.....0	0	1,081,823	.....	.....	.....	0003
158023 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	64,830,722	3907.78107200	.....	(5,649,049)	1,331,009	(4,318,040)	.....	.....	.....0	0	1,331,009	.....	.....	.....	0003
158034 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	39,304,579	3908.90442800	.....	(3,416,305)	804,938	(2,611,367)	.....	.....	.....0	0	804,938	.....	.....	.....	0003
158040 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	46,549,514	3966.94448800	.....	(3,644,100)	858,610	(2,785,490)	.....	.....	.....0	0	858,610	.....	.....	.....	0003
158046 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	49,354,098	3983.42037600	.....	(3,750,247)	883,620	(2,866,627)	.....	.....	.....0	0	883,620	.....	.....	.....	0003
158065 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	70,204,861	4109.98515200	.....	(4,178,934)	984,626	(3,194,308)	.....	.....	.....0	0	984,626	.....	.....	.....	0003
158081 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2027	.....	3,163,776	4040.33708000	.....	0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
158084 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	ROMUWSPUBM8PRO8K5P83	10/06/2022	10/05/2029	2,372,230	4058.68522800		0		0			0	0					0003
158090 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/06/2022	10/06/2023	36,718,660	169.33550400		(2,287,659)	539,010	(1,748,649)			0	0	539,010				0003
158098 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/06/2022	10/06/2023	49,137,343	3933.61826000		(2,630,240)	619,728	(2,010,512)			0	0	619,728				0003
158115 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/06/2022	10/06/2023	49,137,343	3933.61826000		(2,630,240)	619,728	(2,010,512)			0	0	619,728				0003
158133 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/06/2022	10/06/2023	39,645,046	3864.71909200		(1,950,077)	459,470	(1,490,607)			0	0	459,470				0003
158142 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/06/2022	10/06/2023	24,467,545	85.30288800		(1,810,701)	426,631	(1,384,070)			0	0	426,631				0003
158146 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPUBM8PRO8K5P83	10/06/2022	04/05/2024	6,268,896	3878.94826800		(726,742)	114,259	(612,482)			0	0	114,259				0003
158147 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	10/06/2022	10/06/2023	1,525,591	60.79342500		(106,373)	25,063	(81,309)			0	0	25,063				0003
158157 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	10/06/2022	10/06/2023	64,704,067	3819.41040000		(9,580,007)	2,257,207	(7,322,800)			0	0	2,257,207				0003
158680 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHNSJPF6GNF3BB653	10/06/2022	10/06/2023	50,443,774	3821.65711200		(5,097,484)	1,201,051	(3,896,433)			0	0	1,201,051				0003
158696 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/20/2022	10/20/2023	30,460,657	160.96106000		(1,946,067)	383,882	(1,562,185)			0	0	383,882				0003
158710 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	10/20/2022	10/20/2023	19,770,467	83.12379600		(1,522,095)	300,249	(1,221,846)			0	0	300,249				0003
158721 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	10/20/2022	10/20/2023	826,862	59.69977600		(60,825)	11,998	(48,827)			0	0	11,998				0003
158722 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	63,468,586	3983.23654800		(4,339,882)	856,086	(3,483,796)			0	0	856,086				0003
158728 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPUBM8PRO8K5P83	10/20/2022	10/20/2023	30,182,779	3776.85313400		(1,612,697)	318,121	(1,294,576)			0	0	318,121				0003
158730 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	43,575,339	4073.78131400		(2,505,984)	494,331	(2,011,653)			0	0	494,331				0003
158734 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	10/20/2022	10/20/2027	7,088,546	3978.83761200		0		0			0	0					0003
158746 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPUBM8PRO8K5P83	10/20/2022	10/19/2029	3,982,571	3979.93734600		0		0			0	0					0003
158754 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	04/19/2024	5,699,921	3799.94754800		(672,270)	88,489	(583,781)			0	0	88,489				0003
158762 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	60,187,635	3738.36244400		(6,234,725)	1,229,864	(5,004,861)			0	0	1,229,864				0003
158762 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	74,808,545	3760.35712400		(7,471,391)	1,473,809	(5,997,582)			0	0	1,473,809				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY
SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
158779 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	44,588,854	..3797.38150200	.....	.....(4,182,970)	825,134	(3,357,836)	.....	.....	.....0	0	825,134	.....	.....	.....	0003
158795 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	83,245,748	..3819.37618200	.....	.....(7,520,804)	1,483,556	(6,037,248)	.....	.....	.....0	0	1,483,556	.....	.....	.....	0003
158815 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	33,126,972	..3824.14169600	.....	.....(2,967,803)	585,430	(2,382,374)	.....	.....	.....0	0	585,430	.....	.....	.....	0003
158825 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	50,631,234	..3850.90189000	.....	.....(4,328,548)	853,851	(3,474,698)	.....	.....	.....0	0	853,851	.....	.....	.....	0003
158829 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	61,835,513	..3889.02600200	.....	.....(4,936,791)	973,833	(3,962,958)	.....	.....	.....0	0	973,833	.....	.....	.....	0003
159732 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	40,206,225	..3902.89630500	.....	.....(3,731,185)	579,503	(3,151,682)	.....	.....	.....0	0	579,503	.....	.....	.....	0003
159746 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	45,078,853	..3916.09323000	.....	.....(4,090,674)	635,336	(3,455,338)	.....	.....	.....0	0	635,336	.....	.....	.....	0003
159752 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	56,039,710	..3927.40488000	.....	.....(4,987,835)	774,677	(4,213,157)	.....	.....	.....0	0	774,677	.....	.....	.....	0003
159764 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	59,245,929	..3938.71653000	.....	.....(5,171,384)	803,185	(4,368,199)	.....	.....	.....0	0	803,185	.....	.....	.....	0003
159803 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	44,657,906	..3957.56928000	.....	.....(3,772,585)	585,933	(3,186,653)	.....	.....	.....0	0	585,933	.....	.....	.....	0003
159813 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	56,552,118	..3981.70080000	.....	.....(4,578,686)	711,131	(3,867,555)	.....	.....	.....0	0	711,131	.....	.....	.....	0003
159818 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	53,364,806	..4003.94704500	.....	.....(4,152,740)	644,976	(3,507,764)	.....	.....	.....0	0	644,976	.....	.....	.....	0003
159826 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	55,755,735	..4054.09536000	.....	.....(3,959,586)	614,977	(3,344,610)	.....	.....	.....0	0	614,977	.....	.....	.....	0003
159833 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	84,508,193	..4181.53995000	.....	.....(4,695,506)	729,275	(3,966,231)	.....	.....	.....0	0	729,275	.....	.....	.....	0003
159835 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	11/04/2022	11/05/2027	.....	12,677,866	..4092.55497000	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
159839 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	11/04/2022	11/06/2029	.....	8,325,314	..4095.57141000	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
159844 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	05/06/2024	.....	8,588,031	..3903.65041500	.....	.....(995,434)	103,351	(892,083)	.....	.....	.....0	0	103,351	.....	.....	.....	0003
159851 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	83,833,730	..3845.58394500	.....	.....(8,352,234)	1,297,213	(7,055,021)	.....	.....	.....0	0	1,297,213	.....	.....	.....	0003
159856 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	48,827,816	..3850.48566000	.....	.....(4,823,960)	749,225	(4,074,735)	.....	.....	.....0	0	749,225	.....	.....	.....	0003
159873 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPFMVMOJFXTO9	11/04/2022	11/06/2023	.....	32,797,956	..165.99902300	.....	.....(2,120,784)	329,386	(1,791,398)	.....	.....	.....0	0	329,386	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
159887 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	11/04/2022	11/06/2023	.....	25,791,103	...87.60073500	.....	.... (1,876,116)	291,386	(1,584,730)	.....	.....	.....0	0	291,386	.....	.....	.....	0003
159899 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	11/04/2022	11/06/2023	.....	1,207,807	...63.69637500	.....	.....(83,285)	12,935	(70,350)	.....	.....	.....0	0	12,935	.....	.....	.....	0003
159904 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFUS7RNE97	11/04/2022	11/06/2023	.....	41,881,396	...3888.56821500	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
159910 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	11/04/2022	11/06/2023	.....	59,052,975	...3882.91239000	.....	.....(5,667,405)	880,224	(4,787,181)	.....	.....	.....0	0	880,224	.....	.....	.....	0003
160845 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPU8M9R08K5P83	11/18/2022	11/19/2027	.....	13,083,553	...4298.82509400	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
160848 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPU8M9R08K5P83	11/18/2022	11/20/2029	.....	8,257,298	...4314.28992000	.....	.....0	.....	.....0	.....	.....	.....0	0	.....	.....	.....	.....	0003
160861 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	31,067,700	...172.08530900	.....	.....(1,946,185)	228,027	(1,718,158)	.....	.....	.....0	0	228,027	.....	.....	.....	0003
160867 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	11/18/2022	11/20/2023	.....	19,457,914	...91.69881000	.....	.....(1,252,240)	146,720	(1,105,520)	.....	.....	.....0	0	146,720	.....	.....	.....	0003
160891 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPF6FNF3BB653	11/18/2022	05/20/2024	.....	6,833,287	...4115.22985200	.....	.....(597,009)	46,760	(550,248)	.....	.....	.....0	0	46,760	.....	.....	.....	0003
160892 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	1,084,663	...68.79840000	.....	.....(63,536)	7,444	(56,092)	.....	.....	.....0	0	7,444	.....	.....	.....	0003
160900 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	48,796,656	...4094.61008400	.....	.....(4,287,603)	502,362	(3,785,240)	.....	.....	.....0	0	502,362	.....	.....	.....	0003
160903 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	11/18/2022	11/20/2023	.....	70,276,392	...4044.25026600	.....	.....(6,822,355)	799,349	(6,023,005)	.....	.....	.....0	0	799,349	.....	.....	.....	0003
160914 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	49,047,265	...4139.41842600	.....	.....(3,976,349)	465,894	(3,510,455)	.....	.....	.....0	0	465,894	.....	.....	.....	0003
160915 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	11/18/2022	11/20/2023	.....	62,347,792	...4061.30122800	.....	.....(5,879,927)	688,929	(5,190,998)	.....	.....	.....0	0	688,929	.....	.....	.....	0003
160927 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	34,446,329	...4158.84859200	.....	.....(2,694,846)	315,745	(2,379,101)	.....	.....	.....0	0	315,745	.....	.....	.....	0003
160937 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	69,072,620	...4158.05552400	.....	.....(5,411,945)	634,097	(4,777,848)	.....	.....	.....0	0	634,097	.....	.....	.....	0003
160940 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	11/18/2022	11/20/2023	.....	47,437,050	...4128.31547400	.....	.....(3,978,259)	466,118	(3,512,141)	.....	.....	.....0	0	466,118	.....	.....	.....	0003
160957 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	11/18/2022	11/20/2023	.....	55,904,712	...4390.02791400	.....	.....(2,887,987)	338,375	(2,549,613)	.....	.....	.....0	0	338,375	.....	.....	.....	0003
160978 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	11/18/2022	11/20/2023	.....	35,895,178	...4085.09326800	.....	.....(1,558,822)	182,641	(1,376,180)	.....	.....	.....0	0	182,641	.....	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
160991 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023		48,721,022	4200.08812800		(3,528,024)	413,365	(3,114,659)			0	0	413,365				0003	
160996 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023		54,462,159	4228.63857600		(3,733,855)	437,482	(3,296,374)			0	0	437,482				0003	
161837 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41	12/06/2022	12/06/2023		19,655,311	91.39673400		(1,188,754)	81,422	(1,107,333)			0	0	81,422				0003	
161851 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023		30,337,309	174.28533200		(1,805,074)	123,635	(1,681,439)			0	0	123,635				0003	
161863 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023		837,139	70.84779700		(42,183)	2,889	(39,294)			0	0	2,889				0003	
161873 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	06/06/2024		6,553,212	4095.75739200		(690,832)	31,516	(659,316)			0	0	31,516				0003	
161879 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023		43,870,014	4026.78534200		(4,035,777)	276,423	(3,759,354)			0	0	276,423				0003	
161887 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		64,234,679	4018.50869600		(6,143,810)	420,809	(5,723,001)			0	0	420,809				0003	
161890 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023		43,509,051	4060.28605200		(3,765,625)	257,920	(3,507,706)			0	0	257,920				0003	
161905 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		51,348,725	4087.87487200		(4,332,906)	296,774	(4,036,132)			0	0	296,774				0003	
161932 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		40,207,813	4107.58117200		(3,272,372)	224,135	(3,048,237)			0	0	224,135				0003	
161939 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023		30,425,542	4056.73891800		(1,182,375)	80,985	(1,101,390)			0	0	80,985				0003	
161941 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		52,280,101	4114.67544000		(4,197,480)	287,499	(3,909,981)			0	0	287,499				0003	
161947 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		44,760,010	4128.86397600		(3,500,175)	239,738	(3,260,437)			0	0	239,738				0003	
161958 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		62,912,892	4156.45279600		(4,678,257)	320,429	(4,357,829)			0	0	320,429				0003	
161963 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		70,590,992	4186.40637200		(4,952,466)	339,210	(4,613,256)			0	0	339,210				0003	
161967 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57PNE97	12/06/2022	12/06/2027		8,949,414	4275.08472200		0	0	0			0	0	0				0003	
161971 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57PNE97	12/06/2022	12/06/2029		11,421,597	4288.87913200		0	0	0			0	0	0				0003	
161972 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		57,358,597	4331.83886600		(2,975,747)	203,818	(2,771,928)			0	0	203,818				0003	
162528 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	12/20/2022	12/20/2023		30,723,667	3932.82914200		(1,439,006)	43,367	(1,395,638)			0	0	43,367				0003	

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
162534 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBM8PRO8K5P83	12/20/2022	12/20/2027	.....	7,255,213	4141.10743200	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
162538 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBM8PRO8K5P83	12/20/2022	12/20/2029	.....	11,042,350	4157.15823600	.....	0	.....	0	.....	.....	0	0	.....	.....	.....	.....	0003
162544 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	29,319,901	178.76828400	.....	(1,751,634)	.....	52,789	.....	(1,698,845)	0	0	.....	52,789	.....	0003
162569 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	538,093	68.90083200	.....	(32,723)	.....	986	.....	(31,736)	0	0	.....	986	.....	0003
162577 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	06/20/2024	.....	6,342,055	3963.78426400	.....	(686,736)	.....	13,785	.....	(672,951)	0	0	.....	13,785	.....	0003
162581 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	53,382,375	3896.52375200	.....	(5,062,835)	.....	152,579	.....	(4,910,256)	0	0	.....	152,579	.....	0003
162591 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	48,738,535	3904.54915400	.....	(4,556,113)	.....	137,308	.....	(4,418,805)	0	0	.....	137,308	.....	0003
162606 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	45,704,594	3936.65076200	.....	(4,031,347)	.....	121,493	.....	(3,909,855)	0	0	.....	121,493	.....	0003
162617 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	47,442,642	3961.87345400	.....	(3,994,195)	.....	120,373	.....	(3,873,822)	0	0	.....	120,373	.....	0003
162631 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	51,887,182	3977.15993400	.....	(4,244,871)	.....	127,928	.....	(4,116,944)	0	0	.....	127,928	.....	0003
162639 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	54,624,358	3989.77128000	.....	(4,363,080)	.....	131,490	.....	(4,231,590)	0	0	.....	131,490	.....	0003
162649 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	66,887,312	4016.52262000	.....	(5,074,681)	.....	152,936	.....	(4,921,745)	0	0	.....	152,936	.....	0003
162658 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	52,602,306	4046.33125600	.....	(3,763,240)	.....	113,413	.....	(3,649,827)	0	0	.....	113,413	.....	0003
162665 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	50,272,715	4079.96151200	.....	(3,359,802)	.....	101,254	.....	(3,258,547)	0	0	.....	101,254	.....	0003
162689 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57PNE97	12/20/2022	12/20/2023	.....	20,180,184	88.21243900	.....	(1,385,231)	.....	41,747	.....	(1,343,485)	0	0	.....	41,747	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti-zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
162695 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	12/20/2022	12/20/2023	.....	36,116,180	4235.50144600	.....	(1,789,770)	53,938	(1,735,831)	.....	.....	0	0	53,938	.....	.....	.....	0003
0649999999. Subtotal - Written Options - Hedging Other - Call Options and Warrants										(6,248,367)	(1,162,904,499	569,598,719	(598,604,817)	XXX	0	0	0	569,598,719	0	0	XXX	XXX
0709999999. Subtotal - Written Options - Hedging Other										(6,248,367)	(1,162,904,499	569,598,719	(598,604,817)	XXX	0	0	0	569,598,719	0	0	XXX	XXX
0779999999. Subtotal - Written Options - Replications										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0849999999. Subtotal - Written Options - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0919999999. Subtotal - Written Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0929999999. Total Written Options - Call Options and Warrants										(6,248,367)	(1,162,904,499	569,598,719	(598,604,817)	XXX	0	0	0	569,598,719	0	0	XXX	XXX
0939999999. Total Written Options - Put Options										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0949999999. Total Written Options - Caps										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0959999999. Total Written Options - Floors										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0969999999. Total Written Options - Collars										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0979999999. Total Written Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0989999999. Total Written Options										(6,248,367)	(1,162,904,499	569,598,719	(598,604,817)	XXX	0	0	0	569,598,719	0	0	XXX	XXX
1049999999. Subtotal - Swaps - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1109999999. Subtotal - Swaps - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
Interest Rate Swap /140377	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME	06/04/2015	06/23/2030	.....	79,000,000	2.434% [LIBOR]	.....	0	478,649	(5,964,306)	.....	(5,964,306)	(11,105,997)	.....	.....	.....	1,080,309	.....	0001
Interest Rate Swap /140456	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME	10/06/2016	06/23/2030	.....	184,000,000	1.618% [LIBOR]	.....	0	(413,941)	(20,217,494)	.....	(20,217,494)	(22,295,574)	.....	.....	.....	2,516,162	.....	0001
Interest Rate Swap /140458	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME	11/10/2016	12/25/2023	.....	16,000,000	1.385% [LIBOR]	.....	0	(34,459)	(456,218)	.....	(456,218)	(693,397)	.....	.....	.....	79,599	.....	0001
Interest Rate Swap /140462	LIABILITY HEDGE	Exhibit 5 ...	Interest	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME	07/14/2017	04/15/2024	.....	239,000,000	2.005% [LIBOR]	.....	0	1,158,145	(7,140,333)	.....	(7,140,333)	(14,888,302)	.....	.....	.....	1,357,259	.....	0001
Interest Rate Swap /140467	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY & COMPANY / MORGAN STANLEY/CLEARED THROUGH CME	10/25/2017	06/23/2030	.....	73,000,000	2.4175% [LIBOR]	.....	0	434,919	(5,364,863)	.....	(5,364,863)	(9,265,252)	.....	.....	.....	998,260	.....	0001
Interest Rate Swap /140473	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY & COMPANY / MORGAN STANLEY/CLEARED THROUGH CME	10/25/2017	10/25/2025	.....	107,000,000	2.233% [LIBOR]	.....	0	514,035	(3,938,981)	.....	(3,938,981)	(8,467,464)	.....	.....	.....	900,009	.....	0001

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti-zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
Interest Rate Swap /140474	LIABILITY HEDGE	Exhibit 5 ...	Interest	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.07/23/2018	.04/15/2024	.....	.....267,000,000	2.9741% [LIBOR]	0	.....	.....3,132,304	(5,386,601)	.....	.....(5,386,601)	 (18,233,195)	.....	.....	.....	.....1,516,269	.....	0001
Interest Rate Swap /140476	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.09/11/2018	.04/15/2024	.....	.....132,000,000	2.998% [LIBOR]	0	.....	.....2,110,111	(2,692,676)	.....	.....(2,692,676)	 (10,140,301)	.....	.....	.....	.....749,616	.....	0001
Interest Rate Swap /140488	LIABILITY HEDGE	Exhibit 5 ...	Interest	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.10/05/2018	.05/15/2024	.....	.....67,000,000	3.1675% [LIBOR]	0	.....	.....1,203,652	(1,302,202)	.....	.....(1,302,202)	 (5,178,876)	.....	.....	.....	.....393,536	.....	0001
Interest Rate Swap /145139	LIABILITY HEDGE	Exhibit 5 ...	Interest	BNP PARIBAS LONDON / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/15/2021	.05/15/2024	.....	.....6,836,735	LIBOR [3.1675%]	(402,000)	.....	.....(122,822)	132,878	.....	.....132,878	490,020	.....	.....	.....	.....40,157	.....	0001
Interest Rate Swap /145478	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.01/13/2022	.01/18/2030	.....	.....286,000,000	.. 1.481% [SOFR]	0	.....	.....(671,213)	(37,093,295)	.....	.....(37,093,295)	 (37,093,295)	.....	.....	.....	.....3,796,913	.....	0001
Interest Rate Swap /162729	Portfolio Hedge .....	.....	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2042	.....	.....240,000,000	.. SOFR [3.28%]	0	.....	.....61,266	5,159,888	.....	.....5,159,888	5,159,888	.....	.....	.....	.....5,365,221	.....	0001
Interest Rate Swap /162730	Portfolio Hedge .....	.....	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2032	.....	.....280,000,000	.. SOFR [3.36%]	0	.....	.....65,877	3,733,699	.....	.....3,733,699	3,733,699	.....	.....	.....	.....4,424,975	.....	0001
Interest Rate Swap /162731	Portfolio Hedge .....	.....	Interest	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2024	.....	.....855,000,000	.4.2535% [SOFR]	0	.....	.....(10,175)	(3,311,117)	.....	.....(3,311,117)	 (3,311,117)	.....	.....	.....	.....6,030,630	.....	0001
Interest Rate Swap /162732	Portfolio Hedge .....	.....	Interest	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2032	.....	.....195,000,000	.SOFR [3.354%]	0	.....	.....46,171	2,697,644	.....	.....2,697,644	2,697,644	.....	.....	.....	.....3,081,679	.....	0001
Interest Rate Swap /162733	Portfolio Hedge .....	.....	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2042	.....	.....240,000,000	.SOFR [3.276%]	0	.....	.....61,506	5,297,204	.....	.....5,297,204	5,297,204	.....	.....	.....	.....5,365,221	.....	0001
Interest Rate Swap /162734	Portfolio Hedge .....	.....	Interest	JPMORGAN CHASE BANK, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2023	.....	.. 1,625,000,000	.4.7705% [SOFR]	0	.....	.....190,693	(2,096,438)	.....	.....(2,096,438)	 (2,096,438)	.....	.....	.....	.....8,084,273	.....	0001
Interest Rate Swap /162735	Portfolio Hedge .....	.....	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2032	.....	.....400,000,000	.SOFR [3.3545%]	0	.....	.....94,660	5,516,981	.....	.....5,516,981	5,516,981	.....	.....	.....	.....6,321,392	.....	0001
Interest Rate Swap /162736	Portfolio Hedge .....	.....	Interest	JPMORGAN CHASE BANK, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2032	.....	.....190,000,000	.SOFR [3.354%]	0	.....	.....44,987	2,628,474	.....	.....2,628,474	2,628,474	.....	.....	.....	.....3,002,661	.....	0001

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)
Conversion Adjustment																5,556,033						
1119999999. Subtotal - Swaps - Hedging Other - Interest Rate										(402,000)	0	8,344,367	(69,797,756)	XXX	(69,797,756)	(111,689,266)	0	0	0	55,104,141	XXX	XXX
Currency Swap /154919	ASSET HEDGE	Schedule D	Currency	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.08/04/2022	.08/20/2027	22,972,500	5.214% [3.33%]		0	166,028	(323,446)		(323,446)	(340,123)	16,677			247,421		0002
Currency Swap /156715	ASSET HEDGE	Schedule D	Currency	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.09/09/2022	.09/20/2032	19,669,000	6.78% [6.66%]		0	3,940	(891,152)		(891,152)	(905,273)	14,121			306,609		0002
Currency Swap /158392	ASSET HEDGE	Schedule D	Currency	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.10/13/2022	.10/30/2027	21,802,500	7.672% [6.04%]		0	47,769	(2,219,845)		(2,219,845)	(2,228,397)	8,552			239,828		0002
Currency Swap /158652	ASSET HEDGE	Schedule D	Currency	CITIBANK N.A.	E570DZVZ7FF32WEFA76	.10/20/2022	.10/19/2027	4,895,000	7.7987% [6.408%]		0		(22,531)		(22,531)	(22,531)				53,622		0002
Currency Swap /158899	ASSET HEDGE	Schedule D	Currency	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.10/25/2022	.01/31/2030	27,528,000	6.22485% [6.22%]		0		(105,432)		(105,432)	(105,432)				366,236		0002
Currency Swap /158983	ASSET HEDGE	Schedule D	Currency	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.10/26/2022	.05/02/2025	5,785,000	9.495% [9.2279%]		0	(2,044)	(264,274)		(264,274)	(265,249)	975			44,247		0002
Currency Swap /159089	ASSET HEDGE	Schedule D	Currency	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.10/27/2022	.11/09/2037	18,528,000	6.282% [6.07%]		0	(967)	(942,191)		(942,191)	(942,831)	640			357,115		0002
Currency Swap /159812	ASSET HEDGE	Schedule D	Currency	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.11/07/2022	.01/31/2030	20,000,000	6.691% [5.01%]		0		543,426		543,426	543,426				266,083		0002
Currency Swap /161475	ASSET HEDGE	Schedule D	Currency	MORGAN STANLEY CAPITAL SERVICES	I7331LCVZKQKX57XV54	.12/02/2022	.06/27/2030	18,445,000	6.418% [5.08%]		0		388,988		388,988	388,988				252,400		0002
Currency Swap /162602	ASSET HEDGE	Schedule D	Currency	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.12/21/2022	.01/04/2032	21,180,000	6.6425% [5.478%]		0		(24,612)		(24,612)	(24,612)				317,876		0002
1139999999. Subtotal - Swaps - Hedging Other - Foreign Exchange										0	0	214,726	(3,861,069)	XXX	(3,861,069)	(3,902,035)	40,966	0	0	2,451,437	XXX	XXX
1169999999. Subtotal - Swaps - Hedging Other										(402,000)	0	8,559,092	(73,658,824)	XXX	(73,658,824)	(115,591,301)	40,966	0	0	57,555,578	XXX	XXX
1229999999. Subtotal - Swaps - Replication										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1289999999. Subtotal - Swaps - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1349999999. Subtotal - Swaps - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1359999999. Total Swaps - Interest Rate										(402,000)	0	8,344,367	(69,797,756)	XXX	(69,797,756)	(111,689,266)	0	0	0	55,104,141	XXX	XXX
1369999999. Total Swaps - Credit Default										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1379999999. Total Swaps - Foreign Exchange										0	0	214,726	(3,861,069)	XXX	(3,861,069)	(3,902,035)	40,966	0	0	2,451,437	XXX	XXX
1389999999. Total Swaps - Total Return										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1399999999. Total Swaps - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1409999999. Total Swaps										(402,000)	0	8,559,092	(73,658,824)	XXX	(73,658,824)	(115,591,301)	40,966	0	0	57,555,578	XXX	XXX
REC 169479.00 USD PAY [150000.00] GBP /157772	Asset Hedge	Schedule D	Currency	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.10/05/2022	.01/05/2023	169,479	1.12986000		0		(11,852)		(11,852)	(11,852)				85		0002
REC 168646.20 USD PAY [150000.00] GBP /157630	Asset Hedge	Schedule D	Currency	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.10/06/2022	.01/05/2023	168,646	1.12430800		0		(12,684)		(12,684)	(12,684)				84		0002
REC 4483820.42 USD PAY [4043000.00] GBP /158218	Asset Hedge	Schedule D	Currency	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	.10/11/2022	.01/05/2023	4,483,820	1.10903300		0		(403,600)		(403,600)	(403,600)				2,242		0002
REC 198325.41 USD PAY [201000.00] EUR /158414	Asset Hedge	Schedule D	Currency	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.10/17/2022	.01/17/2023	198,325	.98669358		0		(17,193)		(17,193)	(17,193)				222		0002
REC 10167128.19 USD PAY [10263000.00] EUR /158473	Asset Hedge	Schedule D	Currency	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.10/18/2022	.01/17/2023	10,167,128	.99065850		0		(779,719)		(779,719)	(779,719)				11,367		0002
REC 53000.00 GBP PAY [61423.22] USD /159145	Asset Hedge	Schedule D	Currency	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.10/28/2022	.01/11/2023	61,423	1.15892868		0		2,654		2,654	2,654				53		0002

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Year-end (b)	
REC 3222723.34 USD PAY [3236000.00] EUR /159321	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.11/01/2022	.02/01/2023	.....	.....3,222,723	99589720	.....	.....0	.....	.....(250,237)	.....	.....(250,237)	(250,237)	.....	.....	.....	.....4,834	.....	0002	
REC 397374.37 USD PAY [394000.00] EUR /159966	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.11/08/2022	.02/08/2023	.....	.....397,374	1.00856439	.....	.....0	.....	.....(25,707)	.....	.....(25,707)	(25,707)	.....	.....	.....	.....659	.....	0002	
REC 1011561.55 USD PAY [1001000.00] EUR /160136	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.11/09/2022	.02/09/2023	.....	.....1,011,562	1.01055100	.....	.....0	.....	.....(62,834)	.....	.....(62,834)	(62,834)	.....	.....	.....	.....1,677	.....	0002	
REC 13668972.67 USD PAY [11291000.00] GBP /161253	Asset Hedge	Schedule D ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. I7331LVCZKQKX5T7XV54	.11/23/2022	.02/24/2023	.....	.....13,668,973	1.21060780	.....	.....0	.....	.....(3,866)	.....	.....(3,866)	(3,866)	.....	.....	.....	.....26,470	.....	0002	
REC 15603060.00 USD PAY [15000000.00] EUR /161415	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.11/29/2022	.01/17/2023	.....	.....15,603,060	1.04020400	.....	.....0	.....	.....(473,721)	.....	.....(473,721)	(473,721)	.....	.....	.....	.....17,445	.....	0002	
REC 10404711.00 USD PAY [10000000.00] EUR /161431	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.11/30/2022	.01/17/2023	.....	.....10,404,711	1.04047110	.....	.....0	.....	.....(318,741)	.....	.....(318,741)	(318,741)	.....	.....	.....	.....11,633	.....	0002	
REC 1085848.63 USD PAY [1026000.00] EUR /161515	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.12/05/2022	.02/08/2023	.....	.....1,085,849	1.05833200	.....	.....0	.....	.....(15,552)	.....	.....(15,552)	(15,552)	.....	.....	.....	.....1,801	.....	0002	
REC 6250000.00 EUR PAY [6561141.88] USD /161709	ASSET HEDGE	Schedule D ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.12/06/2022	.01/11/2023	.....	.....6,561,142	1.04978270	.....	.....0	.....	.....103,264	.....	.....103,264	103,264	.....	.....	.....	.....5,682	.....	0002	
REC 6587241.25 USD PAY [6250000.00] EUR /161726	ASSET HEDGE	Schedule D ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.12/06/2022	.03/08/2023	.....	.....6,587,241	1.05395860	.....	.....0	.....	.....(102,351)	.....	.....(102,351)	(102,351)	.....	.....	.....	.....14,357	.....	0002	
REC 1083504.95 USD PAY [1025000.00] EUR /161777	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.12/07/2022	.02/09/2023	.....	.....1,083,505	1.05707800	.....	.....0	.....	.....(16,888)	.....	.....(16,888)	(16,888)	.....	.....	.....	.....1,797	.....	0002	
REC 804000.00 EUR PAY [860319.48] USD /162229	Asset Hedge	Schedule BA ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.12/13/2022	.03/20/2023	.....	.....860,319	1.07004910	.....	.....0	.....	.....969	.....	.....969	969	.....	.....	.....	.....2,018	.....	0002	
REC 600000.00 GBP PAY [744413.46] USD /162249	Asset Hedge	Schedule BA ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.12/13/2022	.03/20/2023	.....	.....744,413	1.24068910	.....	.....0	.....	.....(17,569)	.....	.....(17,569)	(17,569)	.....	.....	.....	.....1,746	.....	0002	
REC 6415.75 USD PAY [6000.00] EUR /162905	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.12/29/2022	.02/09/2023	.....	.....6,416	1.06929167	.....	.....0	.....	.....(29)	.....	.....(29)	(29)	.....	.....	.....	.....11	.....	0002	
1439999999. Subtotal - Forwards - Hedging Other										0	0	0	(2,405,656)	XXX	(2,405,656)	(2,405,656)	0	0	0	104,183	XXX	XXX	
1479999999. Subtotal - Forwards										0	0	0	(2,405,656)	XXX	(2,405,656)	(2,405,656)	0	0	0	104,183	XXX	XXX	
1509999999. Subtotal - SSAP No. 108 Adjustments										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1689999999. Subtotal - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1699999999. Subtotal - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1709999999. Subtotal - Hedging Other										4,141,586	494,662,542	(240,575,646)	172,090,190	XXX	211,309,661	(572,364,216)	40,966	(249,134,738)	0	57,659,761	XXX	XXX	
1719999999. Subtotal - Replication										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1729999999. Subtotal - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1739999999. Subtotal - Other										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1749999999. Subtotal - Adjustments for SSAP No. 108 Derivatives										0	0	0	0	XXX	0	0	0	0	0	0	0	XXX	XXX
1759999999 - Totals										4,141,586	494,662,542	(240,575,646)	172,090,190	XXX	211,309,661	(572,364,216)	40,966	(249,134,738)	0	57,659,761	XXX	XXX	

(a)	Code	Description of Hedged Risk(s)

(b)	Code	Financial or Economic Impact of the Hedge at the End of the Reporting Period
	0001	Interest rate hedges reduced the portfolio's interest rate risk (duration, convexity, volatility, yield curve)

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

0002	Currency derivatives hedging foreign investments or liabilities back to USD
0003	Equity derivatives hedging portfolio's exposure to equity markets

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
0079999999. Subtotal - Purchased Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0149999999. Subtotal - Purchased Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
140736 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2020	01/06/2022	01/06/2022	Maturity		6,471,461	...3179.72000000	661,414		3,032,660	3,025,431			0		(7,229)	3,032,660			0003
140733 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2020	01/20/2022	01/20/2022	Maturity		4,224,592	...3251.84000000	392,323		1,600,157	1,585,865			0		(14,292)	1,600,157			0003
140740 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2020	02/04/2022	02/04/2022	Maturity		9,247,816	...3349.16000000	750,252		3,223,836	3,175,831			0		(48,005)	3,223,836			0003
140737 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/20/2020	02/18/2022	02/18/2022	Maturity		7,848,355	...3385.51000000	756,118		2,215,728	2,147,995			0		(67,733)	2,215,728			0003
140744 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/04/2020	03/04/2022	03/04/2022	Maturity		7,253,126	...3426.96000000	794,550		1,894,011	1,802,332			0		(91,679)	1,894,011			0003
140741 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/18/2020	03/18/2022	03/18/2022	Maturity		9,626,463	...3319.47000000	969,432		3,316,585	3,179,870			0		(136,715)	3,316,585			0003
140334 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2020	04/06/2022	04/06/2022	Maturity		9,074,565	...3360.95000000	905,680		3,024,540	2,865,591			0		(158,949)	3,024,540			0003
140330 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2020	04/20/2022	04/20/2022	Maturity		7,919,176	...3443.12000000	784,040		2,337,559	2,179,891			0		(157,668)	2,337,559			0003
143618 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/06/2020	05/06/2022	05/06/2022	Maturity		9,826,432	...3509.44000000	933,568		1,718,920	1,503,481			0		(215,439)	1,718,920			0003
140337 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/20/2020	05/20/2022	05/20/2022	Maturity		7,826,588	...3557.54000000	709,120		756,404	574,578			0		(181,826)	756,404			0003
140345 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/04/2020	06/06/2022	06/06/2022	Maturity		5,918,592	...3699.12000000	528,555		675,696	524,543			0		(151,153)	675,696			0003
140340 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/18/2020	06/17/2022	06/17/2022	Expiry		7,047,879	...3709.41000000	642,099		0	(197,569)			0		(197,569)	0			0003
140335 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Expiry		29,076,972	...179.90000000	2,486,218		0	(40,869)			0		(40,869)	0			0003
140429 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		59,851,209	...3748.14000000	4,504,113		15,166,560	15,092,520			0		(74,040)	15,166,560			0003
140494 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		58,577,088	...3748.14000000	4,391,510		14,787,396	14,715,207			0		(72,189)	14,787,396			0003
140625 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		15,706,674	...82.68000000	1,195,276		5,493,252	5,473,604			0		(19,648)	5,493,252			0003
140684 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		56,024,303	...3748.14000000	4,194,455		14,123,859	14,054,909			0		(68,950)	14,123,859			0003
140689 Call Options - iShares MSCI EMFE	Liability Hedge	Exhibit 5	Equity/Index	N.A. K81H1DSPPRMMNCUFXTO9	01/06/2021	01/06/2022	01/06/2022	Maturity		882,687	...74.95000000	65,319		42,279	41,206			0		(1,074)	42,279			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140748 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	07/06/2022	07/06/2022	Maturity		7,496,280	...3748.14000000	676,954		193,880	(37,971)			0	(231,851)	193,880				0003
140760 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		53,813,989	...3748.14000000	4,053,702		13,649,904	13,583,268			0	(66,636)	13,649,904				0003
140768 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		50,935,206	...3748.14000000	3,828,496		12,891,576	12,828,642			0	(62,934)	12,891,576				0003
140828 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		54,260,591	...3748.14000000	4,081,852		13,744,695	13,677,596			0	(67,099)	13,744,695				0003
140850 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		43,531,757	...3748.14000000	3,265,482		10,995,756	10,942,077			0	(53,679)	10,995,756				0003
140884 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		58,122,154	...3748.14000000	4,363,359		14,692,605	14,620,879			0	(71,726)	14,692,605				0003
140900 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		51,639,022	...3748.14000000	3,884,797		13,081,158	13,017,298			0	(63,860)	13,081,158				0003
141708 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	01/06/2021	01/06/2022	01/06/2022	Maturity		46,001,946	...3748.14000000	3,751,817		11,633,958	11,572,285			0	(61,674)	11,633,958				0003
141943 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	01/06/2021	01/06/2022	01/06/2022	Maturity		25,478,346	...3748.14000000	428,036		1,700,595	1,693,559			0	(7,036)	1,700,595				0003
142108 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	01/06/2021	01/06/2022	01/06/2022	Maturity		46,594,956	...3748.14000000	2,115,411		6,618,171	6,583,398			0	(34,774)	6,618,171				0003
142565 Call Options - S&P	Liability Hedge	Exhibit 5	Equity/Index	CREDIT SUISSE	01/06/2021	01/06/2022	01/06/2022	Maturity		38,066,440	...1075.16000000	1,614,017		5,738,503	5,711,971			0	(26,532)	5,738,503				0003
142578 Call Options - S&P	Liability Hedge	Exhibit 5	Equity/Index	INTERNATIONAL	01/06/2021	01/06/2022	01/06/2022	Maturity																
U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	01/06/2021	01/06/2022	01/06/2022	Maturity		8,205,199	...510.74000000	241,234		386,531	382,566			0	(3,965)	386,531				0003
142165 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	01/19/2021	01/14/2022	01/14/2022	Maturity		1,009,429	...3809.74000000	45,467		146,023	144,255			0	(1,768)	146,023				0003
140329 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	01/20/2021	01/20/2022	01/20/2022	Expiry		22,067,166	...175.39000000	1,732,271			(94,919)			0	(94,919)	0				0003
140426 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		48,105,350	...3851.85000000	3,635,338		7,886,000	7,686,803			0	(199,197)	7,886,000				0003
140491 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		56,162,380	...3851.85000000	4,246,075		9,210,848	8,978,186			0	(232,662)	9,210,848				0003
140612 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON CREDIT SUISSE	01/20/2021	01/20/2022	01/20/2022	Maturity		15,171,604	...86.06000000	1,080,218		3,448,252	3,389,062			0	(59,190)	3,448,252				0003
140678 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	INTERNATIONAL	01/20/2021	01/20/2022	01/20/2022	Maturity		396,787	...75.45000000	37,338		10,202	8,156			0	(2,046)	10,202				0003
140745 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	07/20/2022	07/20/2022	Maturity		5,777,775	...3851.85000000	534,476		162,075	(34,683)			0	(196,758)	162,075				0003
140757 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		58,334,231	...3851.85000000	4,391,489		9,526,288	9,285,658			0	(240,630)	9,526,288				0003
140765 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		51,734,526	...3851.85000000	3,897,083		8,453,792	8,240,253			0	(213,539)	8,453,792				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140825 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		50,523,898	3851.85000000	3,809,834		8,264,528	8,055,770			0		(208,758)	8,264,528			0003
140847 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		56,120,838	3851.85000000	4,246,075		9,210,848	8,978,186			0		(232,662)	9,210,848			0003
140881 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		52,531,700	3851.85000000	3,955,248		8,579,968	8,363,242			0		(216,726)	8,579,968			0003
140897 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		43,430,616	3851.85000000	3,286,346		7,128,944	6,948,870			0		(180,074)	7,128,944			0003
140911 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		65,576,821	3851.85000000	4,944,060		10,724,960	10,454,053			0		(270,907)	10,724,960			0003
141496 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	01/20/2021	01/20/2022	01/20/2022	Maturity		5,884,982	511.33000000	173,018		143,519	134,039			0		(9,480)	143,519			0003
141942 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	01/20/2021	01/20/2022	01/20/2022	Maturity		22,152,280	3851.85000000	381,019		958,309	937,431			0		(20,878)	958,309			0003
142107 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	01/20/2021	01/20/2022	01/20/2022	Maturity		38,248,936	3851.85000000	1,763,276		4,522,694	4,426,076			0		(96,618)	4,522,694			0003
142564 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	01/20/2021	01/20/2022	01/20/2022	Maturity		33,058,454	1101.44000000	1,451,266		3,035,301	2,955,779			0		(79,521)	3,035,301			0003
140347 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		50,296,369	3886.83000000	4,105,926		7,941,403	7,546,602			0		(394,801)	7,941,403			0003
140579 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	02/05/2021	02/04/2022	02/04/2022	Expiry		37,245,198	169.81000000	2,875,329		0	(276,474)			0		(276,474)	0			0003
140654 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		26,565,374	88.24000000	1,963,182		5,084,873	4,896,105			0		(188,768)	5,084,873			0003
140706 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		72,407,142	3886.83000000	5,910,932		11,432,520	10,864,162			0		(568,359)	11,432,520			0003
140752 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/05/2021	08/05/2022	08/05/2022	Maturity		9,328,392	3886.83000000	901,169		620,064	261,907			0		(358,157)	620,064			0003
140762 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/05/2021	02/04/2022	02/04/2022	Maturity		69,944,588	3886.83000000	5,541,427		11,046,600	10,513,770			0		(532,830)	11,046,600			0003
140798 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/05/2021	02/04/2022	02/04/2022	Maturity		86,459,552	3886.83000000	6,834,427		13,624,140	12,966,984			0		(657,156)	13,624,140			0003
140914 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/05/2021	02/04/2022	02/04/2022	Maturity		57,526,763	3886.83000000	4,556,284		9,082,760	8,644,656			0		(438,104)	9,082,760			0003
141657 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		57,923,591	3886.83000000	4,709,188		9,145,681	8,692,875			0		(452,807)	9,145,681			0003
141682 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	02/05/2021	02/04/2022	02/04/2022	Maturity		1,117,661	74.71000000	76,001		20,346	13,038			0		(7,308)	20,346			0003
141847 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		65,806,558	3886.83000000	5,372,095		10,390,340	9,873,792			0		(516,548)	10,390,340			0003
141945 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		31,150,071	3886.83000000	479,711		377,280	331,154			0		(46,126)	377,280			0003
142112 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		45,035,355	3886.83000000	2,058,116		5,668,044	5,470,149			0		(197,896)	5,668,044			0003
142198 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		46,465,016	3886.83000000	3,793,155		7,336,462	6,971,735			0		(364,726)	7,336,462			0003
142391 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		59,946,934	3886.83000000	4,893,747		9,465,151	8,994,599			0		(470,553)	9,465,151			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
142415 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUH3JFFGNF3B8653	02/05/2021	02/04/2022	02/04/2022	Maturity		54,510,813	...3886.83000000	4,449,971		8,606,830	8,178,948			0		(427,882)	8,606,830			0003
142567 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMVMJUFXT09	02/05/2021	02/04/2022	02/04/2022	Maturity		49,633,450	...1099.17000000	2,094,531		4,867,751	4,666,354			0		(201,397)	4,867,751			0003
142580 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	02/05/2021	02/04/2022	02/04/2022	Maturity		11,848,307	...512.13000000	347,155		207,755	174,375			0		(33,380)	207,755			0003
142166 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI6C71YBU11	02/12/2021	02/11/2022	02/11/2022	Maturity		1,337,335	...3908.85000000	66,934		161,661	153,938			0		(7,723)	161,661			0003
140338 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		40,249,427	...3906.71000000	3,310,836		4,555,415	4,109,726			0		(445,689)	4,555,415			0003
140438 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		45,671,901	...3906.71000000	3,758,275		5,169,129	4,663,207			0		(505,922)	5,169,129			0003
140574 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMJWSFPU8MPPR08KSP83	02/19/2021	02/18/2022	02/18/2022	Maturity		29,867,106	...167.01000000	2,341,581		1,808,014	1,492,801			0		(315,213)	1,808,014			0003
140640 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJUFU57RNE97	02/19/2021	02/18/2022	02/18/2022	Maturity		22,599,789	...88.71000000	1,931,455		3,260,932	3,000,929			0		(260,004)	3,260,932			0003
140749 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	08/19/2022	08/19/2022	Maturity		5,860,065	...3906.71000000	579,581		482,655	237,448			0		(245,207)	482,655			0003
140769 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		66,186,534	...3906.71000000	5,381,248		7,472,504	6,748,105			0		(724,399)	7,472,504			0003
140829 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		48,830,869	...3906.71000000	3,980,213		5,527,000	4,991,202			0		(535,798)	5,527,000			0003
140851 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		60,026,620	...3906.71000000	4,903,623		6,809,264	6,149,161			0		(660,103)	6,809,264			0003
140901 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		55,284,088	...3906.71000000	4,521,522		6,278,672	5,670,006			0		(608,666)	6,278,672			0003
141301 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMJWSFPU8MPPR08KSP83	02/19/2021	02/18/2022	02/18/2022	Maturity		62,933,330	...3906.71000000	5,267,520		7,122,771	6,413,682			0		(709,089)	7,122,771			0003
141566 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMVMJUFXT09	02/19/2021	02/18/2022	02/18/2022	Expiry		818,764	...76.25000000	56,740						0		(7,638)	0			0003
141846 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		50,821,531	...3906.71000000	4,178,173		5,751,962	5,189,516			0		(562,446)	5,751,962			0003
141875 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMJWSFPU8MPPR08KSP83	02/19/2021	02/18/2022	02/18/2022	Maturity		64,368,077	...3906.71000000	5,374,734		7,285,155	6,561,633			0		(723,522)	7,285,155			0003
141944 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Expiry		25,384,363	...3906.71000000	383,304			(51,599)			0		(51,599)	0			0003
142109 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMVMJUFXT09	02/19/2021	02/18/2022	02/18/2022	Maturity		36,696,701	...3906.71000000	1,803,643		4,109,015	3,866,217			0		(242,798)	4,109,015			0003
142412 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		47,762,694	...3906.71000000	3,926,538		5,405,764	4,877,192			0		(528,572)	5,405,764			0003
142586 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMVMJUFXT09	02/19/2021	02/18/2022	02/18/2022	Maturity		41,990,498	...1102.50000000	1,805,581		3,240,029	2,996,968			0		(243,060)	3,240,029			0003
142579 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	02/19/2021	02/18/2022	02/18/2022	Maturity		8,925,658	...511.66000000	260,629		129,089	94,005			0		(35,085)	129,089			0003
140359 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity		52,329,205	...3841.94000000	4,238,666		6,632,238	5,898,623			0		(733,615)	6,632,238			0003
140529 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity		51,270,311	...3841.94000000	4,139,187		6,476,169	5,759,771			0		(716,398)	6,476,169			0003
140610 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMJWSFPU8MPPR08KSP83	03/05/2021	03/04/2022	03/04/2022	Maturity		34,760,277	...159.14000000	2,728,682		5,360,168	4,887,897			0		(472,272)	5,360,168			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140673 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	26,655,179	86.33000000	1,985,815	.....	5,622,504	5,278,806	.....	.....	0	.....	(343,699)	5,622,504	.....	.....	0003
140756 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	09/06/2022	09/06/2022	Maturity .....	.....	5,762,910	3841.94000000	560,756	.....	99,375	(154,494)	.....	.....	0	.....	(253,869)	99,375	.....	.....	0003
140802 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	70,391,319	3841.94000000	5,695,272	.....	8,910,819	7,925,099	.....	.....	0	.....	(985,720)	8,910,819	.....	.....	0003
141653 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	50,864,277	3841.94000000	4,120,006	.....	6,446,572	5,733,494	.....	.....	0	.....	(713,078)	6,446,572	.....	.....	0003
141654 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	45,061,961	3841.94000000	3,650,019	.....	5,711,182	5,079,448	.....	.....	0	.....	(631,734)	5,711,182	.....	.....	0003
141688 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . WELLS FARGO BANK, N.A.	03/05/2021	03/04/2022	03/04/2022	Expiry .....	.....	903,461	74.63000000	61,978	.....	.....	(10,727)	.....	.....	0	.....	(10,727)	0	.....	.....	0003
141851 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	54,525,621	3841.94000000	4,416,575	.....	6,910,613	6,146,206	.....	.....	0	.....	(764,407)	6,910,613	.....	.....	0003
141857 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	70,712,885	3841.94000000	5,727,744	.....	8,962,198	7,970,857	.....	.....	0	.....	(991,340)	8,962,198	.....	.....	0003
141878 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	77,858,437	3841.94000000	6,219,450	.....	9,867,829	8,791,386	.....	.....	0	.....	(1,076,443)	9,867,829	.....	.....	0003
141947 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFGFM38B653	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	22,227,242	3841.94000000	360,081	.....	.....	(62,322)	.....	.....	0	.....	(62,322)	0	.....	.....	0003
142114 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFGFM38B653	03/05/2021	03/04/2022	03/04/2022	Expiry .....	.....	44,005,278	3841.94000000	2,213,465	.....	6,582,052	6,198,953	.....	.....	0	.....	(383,100)	6,582,052	.....	.....	0003
142223 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	29,246,151	3841.94000000	2,336,227	.....	3,706,676	3,302,329	.....	.....	0	.....	(404,347)	3,706,676	.....	.....	0003
142411 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFGFM38B653	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	68,367,674	3841.94000000	5,537,782	.....	8,664,964	7,706,502	.....	.....	0	.....	(958,462)	8,664,964	.....	.....	0003
142417 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	47,659,409	3841.94000000	3,860,412	.....	6,040,386	5,372,238	.....	.....	0	.....	(668,148)	6,040,386	.....	.....	0003
142569 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . WELLS FARGO BANK, N.A.	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	43,756,925	1090.58000000	1,877,172	.....	3,802,421	3,477,525	.....	.....	0	.....	(324,895)	3,802,421	.....	.....	0003
142582 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	03/05/2021	03/04/2022	03/04/2022	Maturity .....	.....	9,324,001	511.61000000	273,193	.....	212,866	165,583	.....	.....	0	.....	(47,283)	212,866	.....	.....	0003
142168 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/12/2021	03/11/2022	03/11/2022	Maturity .....	.....	1,615,799	3899.94000000	84,326	.....	208,938	192,722	.....	.....	0	.....	(16,217)	208,938	.....	.....	0003
140430 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	61,044,360	3913.10000000	4,572,470	.....	8,580,312	7,613,059	.....	.....	0	.....	(967,253)	8,580,312	.....	.....	0003
140590 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	33,542,784	163.24000000	2,509,000	.....	3,300,031	2,769,281	.....	.....	0	.....	(530,750)	3,300,031	.....	.....	0003
140656 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	23,763,355	90.04000000	1,718,090	.....	4,167,296	3,803,854	.....	.....	0	.....	(363,442)	4,167,296	.....	.....	0003
140703 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	54,151,624	3913.10000000	4,118,352	.....	7,611,478	6,740,289	.....	.....	0	.....	(871,190)	7,611,478	.....	.....	0003
140753 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	09/20/2022	09/20/2022	Expiry .....	.....	9,000,130	3913.10000000	830,753	.....	.....	(397,251)	.....	.....	0	.....	(397,251)	0	.....	.....	0003
140763 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	93,131,780	3913.10000000	6,975,948	.....	13,090,476	11,614,795	.....	.....	0	.....	(1,475,681)	13,090,476	.....	.....	0003
140799 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	75,914,140	3913.10000000	5,686,277	.....	10,670,388	9,467,522	.....	.....	0	.....	(1,202,866)	10,670,388	.....	.....	0003
140831 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/19/2021	03/18/2022	03/18/2022	Maturity .....	.....	29,348,250	3913.10000000	2,198,303	.....	4,125,150	3,660,124	.....	.....	0	.....	(465,026)	4,125,150	.....	.....	0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140853 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity		51,652,920	...3913.10000000	3,869,013		7,260,264	6,441,819			0		(818,445)	7,260,264			0003
140886 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity		63,000,910	...3913.10000000	4,719,024		8,855,322	7,857,067			0		(998,255)	8,855,322			0003
140903 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity		50,087,680	...3913.10000000	3,751,770		7,040,256	6,246,612			0		(793,644)	7,040,256			0003
141663 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUG3FU57RNE97	03/19/2021	03/18/2022	03/18/2022	Expiry		649,706	...76.43000000	39,406		0	(8,336)			0		(8,336)	0			0003
141797 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRFMMJCUFX0T9	03/19/2021	03/18/2022	03/18/2022	Maturity		53,761,872	...3913.10000000	4,169,233		7,556,695	6,674,742			0		(881,953)	7,556,695			0003
141850 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TWEFA76	03/19/2021	03/18/2022	03/18/2022	Maturity		72,285,016	...3913.10000000	5,497,437		10,160,283	8,997,364			0		(1,162,919)	10,160,283			0003
141946 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TWEFA76	03/19/2021	03/18/2022	03/18/2022	Maturity		28,710,053	...3913.10000000	445,006		244,628	150,492			0		(94,136)	244,628			0003
142113 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . WELLS FARGO BANK, N.A. G5GSEF7VJP5I7OUK5573	03/19/2021	03/18/2022	03/18/2022	Maturity		41,508,657	...3913.10000000	3,226,675		5,058,645	4,376,079			0		(682,566)	5,058,645			0003
142568 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRFMMJCUFX0T9	03/19/2021	03/18/2022	03/18/2022	Maturity		45,678,559	...1103.01000000	1,950,474		4,069,620	3,657,020			0		(412,600)	4,069,620			0003
142581 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	03/19/2021	03/18/2022	03/18/2022	Maturity		9,616,012	...516.96000000	282,711		79,241	19,436			0		(59,804)	79,241			0003
142024 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRFMMJCUFX0T9	04/06/2021	04/06/2022	04/06/2022	Expiry		299,699	...77.15000000	19,690		0	(5,179)			0		(5,179)	0			0003
140275 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	04/06/2021	04/06/2022	04/06/2022	Expiry		13,015,384	...522.49000000	383,954		0	(100,985)			0		(100,985)	0			0003
140350 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		29,332,368	...4073.94000000	1,965,363		2,931,912	2,414,995			0		(516,917)	2,931,912			0003
140353 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		85,960,134	...4073.94000000	5,759,605		8,592,131	7,077,276			0		(1,514,855)	8,592,131			0003
140417 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		68,442,192	...4073.94000000	4,585,846		6,841,128	5,634,988			0		(1,206,140)	6,841,128			0003
140435 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		48,887,280	...4073.94000000	3,275,605		4,886,520	4,024,991			0		(861,529)	4,886,520			0003
140532 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		42,368,976	...4073.94000000	2,838,857		4,234,984	3,488,326			0		(746,658)	4,234,984			0003
140687 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		60,294,312	...4073.94000000	4,039,912		6,026,708	4,964,156			0		(1,062,552)	6,026,708			0003
140718 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		61,516,494	...4073.94000000	4,121,802		6,148,871	5,064,781			0		(1,084,091)	6,148,871			0003
140840 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		93,293,226	...4073.94000000	6,250,945		9,325,109	7,681,025			0		(1,644,084)	9,325,109			0003
140859 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	04/06/2021	04/06/2022	04/06/2022	Maturity		96,959,772	...4073.94000000	6,496,616		9,691,598	7,982,899			0		(1,708,699)	9,691,598			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140892 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		80,607,931	4073.94000000	5,400,990		8,057,152	6,636,618			0		(1,420,534)	8,057,152			0003
140908 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		50,516,856	4073.94000000	3,384,791		5,049,404	4,159,158			0		(890,247)	5,049,404			0003
141672 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/06/2021	04/06/2022	04/06/2022	Maturity		36,741,529	163.22000000	2,546,188		3,700,715	3,031,033			0		(669,682)	3,700,715			0003
141938 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2021	04/06/2022	04/06/2022	Expiry		31,159,220	4073.94000000	523,475			(137,681)			0		(137,681)	0			0003
142161 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	04/06/2021	04/06/2022	04/06/2022	Maturity		54,197,437	4073.94000000	2,167,897		5,009,935	4,439,748			0		(570,187)	5,009,935			0003
142196 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	04/06/2021	10/06/2022	10/06/2022	Expiry		7,986,759	4073.94000000	692,039			(352,334)			0		(352,334)	0			0003
142573 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2021	04/06/2022	04/06/2022	Maturity		26,541,988	94.20000000	1,597,828		4,606,810	4,186,559			0		(420,251)	4,606,810			0003
142584 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2021	04/06/2022	04/06/2022	Maturity		52,736,981	1130.23000000	2,246,595		3,368,881	2,777,995			0		(590,885)	3,368,881			0003
142169 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	04/06/2021	04/06/2022	04/06/2022	Maturity										0						0003
140201 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/09/2021	04/08/2022	04/08/2022	Maturity		1,665,410	4077.99000000	70,329		156,068	137,134			0		(18,935)	156,068			0003
140211 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Expiry		378,253	77.73000000	23,830			(7,182)			0		(7,182)	0			0003
140346 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	04/20/2021	04/20/2022	04/20/2022	Expiry		8,184,626	527.78000000	241,446			(72,765)			0		(72,765)	0			0003
140432 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		64,918,558	4134.94000000	4,505,540		5,094,807	3,736,973			0		(1,357,834)	5,094,807			0003
140707 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		48,378,798	4134.94000000	3,357,631		3,796,767	2,784,878			0		(1,011,889)	3,796,767			0003
140819 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		46,596,675	4134.94000000	3,293,453		3,656,906	2,664,359			0		(992,547)	3,656,906			0003
140855 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	10/20/2022	10/20/2022	Expiry		8,269,880	4134.94000000	699,674			(374,096)			0		(374,096)	0			0003
140888 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		33,906,508	4134.94000000	2,353,212		2,660,982	1,951,795			0		(709,187)	2,660,982			0003
140905 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		63,678,076	4134.94000000	4,419,447		4,997,454	3,665,566			0		(1,331,888)	4,997,454			0003
141689 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		43,830,364	4134.94000000	3,041,957		3,439,806	2,523,052			0		(916,754)	3,439,806			0003
141854 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		29,313,189	166.48000000	1,881,907		2,857,719	2,290,569			0		(567,150)	2,857,719			0003
141860 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		60,728,401	4134.94000000	4,289,247		4,765,964	3,473,314			0		(1,292,650)	4,765,964			0003
141937 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		59,638,190	4134.94000000	4,180,637		4,680,404	3,420,486			0		(1,259,918)	4,680,404			0003
142115 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	04/20/2021	04/20/2022	04/20/2022	Expiry		23,701,433	4134.94000000	395,814			(119,286)			0		(119,286)	0			0003
	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		38,281,071	4134.94000000	1,584,836		2,611,583	2,133,961			0		(477,622)	2,611,583			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
142225 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		72,344,215	4134.94000000	5,102,438		5,677,572	4,139,852			0		(1,537,721)	5,677,572			0003
142570 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		18,251,253	97.56000000	1,023,896		2,772,484	2,463,913			0		(308,571)	2,772,484			0003
142583 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		42,304,914	1141.43000000	1,840,264		2,185,610	1,631,010			0		(554,600)	2,185,610			0003
140208 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		528,769	79.51000000	31,991		0	(11,043)			0		(11,043)	0			0003
140210 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		44,860,237	4201.62000000	3,122,272		0	(1,077,826)			0		(1,077,826)	0			0003
140212 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		74,530,456	4201.62000000	5,187,320		0	(1,790,691)			0		(1,790,691)	0			0003
140311 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	05/06/2021	05/06/2022	05/06/2022	Expiry		11,910,047	529.17000000	350,155		0	(120,875)			0		(120,875)	0			0003
140425 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		41,175,876	4201.62000000	2,783,661		0	(960,935)			0		(960,935)	0			0003
140490 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		59,242,842	4201.62000000	4,005,063		0	(1,382,570)			0		(1,382,570)	0			0003
140538 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		65,545,272	4201.62000000	4,431,134		0	(1,529,652)			0		(1,529,652)	0			0003
140824 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	11/04/2022	11/04/2022	Expiry		11,764,536	4201.62000000	972,964		0	(547,848)			0		(547,848)	0			0003
140880 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		71,007,378	4201.62000000	4,800,395		0	(1,657,123)			0		(1,657,123)	0			0003
140896 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		43,696,848	4201.62000000	2,954,089		0	(1,019,768)			0		(1,019,768)	0			0003
140910 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		39,915,390	4201.62000000	2,698,447		0	(931,519)			0		(931,519)	0			0003
141676 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2022	05/06/2022	Maturity		38,452,909	170.06000000	2,410,997		1,211,970	379,680			0		(832,289)	1,211,970			0003
141855 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		57,076,959	4201.62000000	3,972,556		0	(1,371,348)			0		(1,371,348)	0			0003
141861 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		48,531,396	4201.62000000	3,377,785		0	(1,166,030)			0		(1,166,030)	0			0003
141941 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	05/06/2021	05/06/2022	05/06/2022	Expiry		26,926,004	4201.62000000	460,435		0	(158,945)			0		(158,945)	0			0003
142164 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Maturity		50,246,797	4201.62000000	2,060,119		2,898,670	2,187,506			0		(711,164)	2,898,670			0003
142504 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	05/06/2021	05/06/2022	05/06/2022	Expiry		97,166,565	4201.62000000	6,752,785		0	(2,331,098)			0		(2,331,098)	0			0003
142577 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2022	05/06/2022	Maturity		22,413,845	97.23000000	1,304,487		599,362	149,046			0		(450,316)	599,362			0003
142586 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Maturity		46,724,201	1154.17000000	2,032,503		205,249	(496,383)			0		(701,631)	205,249			0003
142172 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	05/06/2021	05/06/2022	05/06/2022	Maturity		3,090,116	4063.75000000	179,989		265,181	199,416			0		(65,765)	265,181			0003
140205 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		699,536	79.92000000	45,959		0	(17,628)			0		(17,628)	0			0003
140298 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	05/20/2021	05/20/2022	05/20/2022	Expiry		10,074,461	527.98000000	295,182		0	(113,220)			0		(113,220)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140351 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		56,564,032	4159.12000000	3,903,160		0	(1,497,102)			0		(1,497,102)	0			0003
140357 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		39,927,552	4159.12000000	2,755,172		0	(1,056,778)			0		(1,056,778)	0			0003
140361 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		55,768,890	4159.12000000	3,996,399		0	(1,532,865)			0		(1,532,865)	0			0003
140420 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		63,218,624	4159.12000000	4,362,355		0	(1,673,232)			0		(1,673,232)	0			0003
140534 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		44,918,496	4159.12000000	3,099,568		0	(1,188,875)			0		(1,188,875)	0			0003
140717 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		49,077,616	4159.12000000	3,386,565		0	(1,298,957)			0		(1,298,957)	0			0003
140722 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		48,245,792	4159.12000000	3,329,166		0	(1,276,940)			0		(1,276,940)	0			0003
140821 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	11/18/2022	11/18/2022	Expiry		9,565,976	4159.12000000	796,874		0	(469,092)			0		(469,092)	0			0003
140841 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		63,218,624	4159.12000000	4,362,355		0	(1,673,232)			0		(1,673,232)	0			0003
140860 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		51,157,176	4159.12000000	3,530,064		0	(1,353,997)			0		(1,353,997)	0			0003
140893 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		42,838,936	4159.12000000	2,956,070		0	(1,133,835)			0		(1,133,835)	0			0003
141673 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/20/2022	05/20/2022	Expiry		31,326,762	175.96000000	2,033,106		0	(779,821)			0		(779,821)	0			0003
141794 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		45,297,614	4159.12000000	3,246,027		0	(1,245,051)			0		(1,245,051)	0			0003
141939 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		22,352,294	4159.12000000	377,754		0	(144,892)			0		(144,892)	0			0003
142163 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Maturity		42,341,894	4159.12000000	1,812,233		2,406,982	1,711,879			0		(695,103)	2,406,982			0003
142574 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		17,725,462	98.48000000	1,068,841		0	(409,966)			0		(409,966)	0			0003
142585 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		44,258,772	1142.96000000	1,903,127		0	(729,967)			0		(729,967)	0			0003
140273 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		19,911,815	102.80000000	1,129,000		0	(482,978)			0		(482,978)	0			0003
140380 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		586,113	81.68000000	35,753		0	(15,295)			0		(15,295)	0			0003
140916 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/04/2021	06/06/2022	06/06/2022	Expiry		36,583,540	177.16000000	2,325,190		0	(994,700)			0		(994,700)	0			0003
140919 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/04/2021	12/06/2022	12/06/2022	Expiry		10,574,725	4229.89000000	848,075		0	(524,265)			0		(524,265)	0			0003
141237 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	06/04/2021	06/06/2022	06/06/2022	Expiry		11,335,939	528.82000000	331,009		0	(141,603)			0		(141,603)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141307 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		54,611,278	4229.89000000	3,713,567		0	1,588,638			0		(1,588,638)	0			0003
141308 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		54,764,189	4229.89000000	3,723,965		0	1,593,086			0		(1,593,086)	0			0003
141309 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		48,860,767	4229.89000000	3,322,532		0	1,421,356			0		(1,421,356)	0			0003
141310 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		48,928,974	4229.89000000	3,327,170		0	1,423,340			0		(1,423,340)	0			0003
141311 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		51,091,580	4229.89000000	3,474,227		0	1,486,250			0		(1,486,250)	0			0003
141312 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		54,489,912	4229.89000000	3,705,314		0	1,585,107			0		(1,585,107)	0			0003
141313 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		40,580,277	4229.89000000	2,760,139		0	1,180,768			0		(1,180,768)	0			0003
141314 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		51,827,018	4229.89000000	3,524,237		0	1,507,644			0		(1,507,644)	0			0003
141315 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		59,570,226	4229.89000000	4,050,775		0	1,732,893			0		(1,732,893)	0			0003
141316 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/04/2021	06/06/2022	06/06/2022	Expiry		44,428,998	4229.89000000	3,021,172		0	1,292,436			0		(1,292,436)	0			0003
141798 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMYMCUFXT09	06/04/2021	06/06/2022	06/06/2022	Expiry		77,993,028	4229.89000000	5,287,927		0	2,262,138			0		(2,262,138)	0			0003
141802 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMYMCUFXT09	06/04/2021	06/06/2022	06/06/2022	Expiry		74,123,591	4229.89000000	5,025,579		0	2,149,907			0		(2,149,907)	0			0003
141954 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZWZFF32THEFA76	06/04/2021	06/06/2022	06/06/2022	Expiry		21,753,847	4229.89000000	389,420		0	166,591			0		166,591	0			0003
142174 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMYMCUFXT09	06/04/2021	06/06/2022	06/06/2022	Maturity		42,686,110	4229.89000000	1,626,722		2,070,033	1,374,133			0		(695,900)	2,070,033			0003
142640 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUWSFPUBMPPR08K5P83	06/04/2021	06/06/2022	06/06/2022	Maturity		50,009,450	1156.95000000	2,136,652		3,458	(910,587)			0		(914,045)	3,458			0003
142175 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQJUF57RNE97	06/11/2021	06/10/2022	06/10/2022	Maturity		1,299,130	4219.05000000	51,943		50,147	27,173			0		(22,975)	50,147			0003
140295 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	06/18/2021	06/17/2022	06/17/2022	Expiry		21,071,342	101.41000000	1,232,676		0	(568,927)			0		(568,927)	0			0003
140386 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		732,119	78.52000000	43,561		0	(20,105)			0		(20,105)	0			0003
140927 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Maturity		30,409,008	164.93000000	2,002,315		1,164,856	240,711			0		(924,145)	1,164,856			0003
141079 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	12/20/2022	12/20/2022	Expiry		8,749,545	4166.45000000	751,590		0	(483,751)			0		(483,751)	0			0003
141085 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		30,831,730	4166.45000000	2,136,602		0	(986,124)			0		(986,124)	0			0003
141088 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		50,759,527	4166.45000000	3,517,574		0	(1,623,496)			0		(1,623,496)	0			0003
141089 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		49,967,402	4166.45000000	3,462,681		0	(1,598,161)			0		(1,598,161)	0			0003
141111 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		55,413,785	4166.45000000	3,840,109		0	(1,772,358)			0		(1,772,358)	0			0003
141113 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		51,663,980	4166.45000000	3,580,252		0	(1,652,424)			0		(1,652,424)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141115 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/18/2021	06/17/2022	06/17/2022	Expiry		46,664,240	4166.45000000	3,233,776		0	(1,492,512)			0		(1,492,512)	0			0003
141236 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	06/18/2021	06/17/2022	06/17/2022	Expiry		9,238,867	523.49000000	271,623		0	(125,364)			0		(125,364)	0			0003
141264 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	06/18/2021	06/17/2022	06/17/2022	Expiry		68,097,377	4166.45000000	4,678,290		0	(2,159,211)			0		(2,159,211)	0			0003
141296 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/17/2022	06/17/2022	Expiry		37,617,245	4166.45000000	2,588,066		0	(1,194,492)			0		(1,194,492)	0			0003
141811 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/18/2021	06/17/2022	06/17/2022	Expiry		63,771,225	4166.45000000	4,342,821		0	(2,004,379)			0		(2,004,379)	0			0003
141812 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/18/2021	06/17/2022	06/17/2022	Expiry		51,284,779	4166.45000000	3,497,622		0	(1,614,287)			0		(1,614,287)	0			0003
141813 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/18/2021	06/17/2022	06/17/2022	Expiry		53,808,528	4166.45000000	3,675,123		0	(1,696,210)			0		(1,696,210)	0			0003
141814 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/18/2021	06/17/2022	06/17/2022	Expiry		51,489,092	4166.45000000	3,516,705		0	(1,623,095)			0		(1,623,095)	0			0003
141955 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	06/18/2021	06/17/2022	06/17/2022	Expiry		24,377,059	4166.45000000	431,474		0	(199,142)			0		(199,142)	0			0003
142177 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/18/2021	06/21/2022	06/21/2022	Maturity		43,150,273	4166.45000000	1,786,853		0	2,026,054	1,190,894		0		(835,159)	2,026,054			0003
142641 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/17/2022	06/17/2022	Expiry		43,021,149	1141.21000000	1,888,628		0	(871,674)			0		(871,674)	0			0003
140274 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	07/06/2021	07/06/2022	07/06/2022	Expiry		23,344,886	103.46000000	1,320,152		0	(676,352)			0		(676,352)	0			0003
141073 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	07/06/2021	07/06/2022	07/06/2022	Expiry		869,864	78.82000000	51,757		0	(26,516)			0		(26,516)	0			0003
141124 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2021	07/06/2022	07/06/2022	Expiry		34,302,124	168.12000000	2,144,393		0	(1,098,634)			0		(1,098,634)	0			0003
141130 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2021	07/06/2022	07/06/2022	Expiry		46,041,524	4343.54000000	3,140,038		0	(1,608,732)			0		(1,608,732)	0			0003
141131 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2021	07/06/2022	07/06/2022	Expiry		52,556,834	4343.54000000	3,584,383		0	(1,836,383)			0		(1,836,383)	0			0003
141235 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	07/06/2021	07/06/2022	07/06/2022	Expiry		10,008,335	529.49000000	292,243		0	(149,724)			0		(149,724)	0			0003
141272 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	07/06/2021	07/06/2022	07/06/2022	Expiry		30,619,327	4343.54000000	2,008,628		0	(1,029,078)			0		(1,029,078)	0			0003
141352 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		67,680,494	4343.54000000	4,737,635		0	(2,427,226)			0		(2,427,226)	0			0003
141353 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		53,458,767	4343.54000000	3,742,114		0	(1,917,192)			0		(1,917,192)	0			0003
141354 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		44,100,806	4343.54000000	3,087,056		0	(1,581,588)			0		(1,581,588)	0			0003
141355 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		56,620,350	4343.54000000	3,963,425		0	(2,030,576)			0		(2,030,576)	0			0003
141712 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		35,987,905	4343.54000000	2,366,969		0	(1,212,666)			0		(1,212,666)	0			0003
141713 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		47,125,935	4343.54000000	3,099,531		0	(1,587,979)			0		(1,587,979)	0			0003
141714 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		56,881,823	4343.54000000	3,741,188		0	(1,916,718)			0		(1,916,718)	0			0003
141715 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		43,530,532	4343.54000000	2,863,057		0	(1,466,826)			0		(1,466,826)	0			0003
141716 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	07/06/2021	07/06/2022	07/06/2022	Expiry		59,000,065	4343.54000000	3,880,507		0	(1,988,096)			0		(1,988,096)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141829 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMMJCUFT09	07/06/2021	07/06/2022	07/06/2022	Expiry		49,390,750	4343.54000000	3,244,972												0003
141956 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57RNE97	07/06/2021	07/06/2022	07/06/2022	Expiry		20,048,908	4343.54000000	370,905												0003
142178 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Maturity		40,790,091	4343.54000000	1,631,604		468,508										0003
142642 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMJNSFPUBMPRO8K5P83	07/06/2021	07/06/2022	07/06/2022	Expiry		43,191,012	1183.48000000	1,878,810												0003
142906 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL 02RNE81BXP4R0TD8PU41	07/16/2021	07/15/2022	07/15/2022	Expiry		1,532,732	4357.82000000	57,197												0003
140249 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHNGJFFG9NF38B653	07/20/2021	07/20/2022	07/20/2022	Expiry		18,911,819	106.27000000	1,192,333												0003
140395 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPRMMJCUFT09	07/20/2021	07/20/2022	07/20/2022	Expiry		802,224	77.46000000	49,899												0003
141109 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNBB8K528	07/20/2021	07/20/2022	07/20/2022	Expiry		32,447,096	169.39000000	2,096,081												0003
141234 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	07/20/2021	07/20/2022	07/20/2022	Expiry		7,117,438	530.60000000	207,829												0003
141504 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		67,166,469	4323.06000000	4,701,653												0003
141506 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		60,277,038	4323.06000000	4,219,393												0003
141509 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		50,550,801	4323.06000000	3,538,556												0003
141510 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		53,565,028	4323.06000000	3,749,552												0003
141511 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		60,138,580	4323.06000000	4,209,701												0003
141515 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		57,519,126	4323.06000000	4,026,339												0003
141516 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		44,609,282	4323.06000000	3,122,650												0003
141517 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		50,370,731	4323.06000000	3,525,951												0003
141518 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		51,407,798	4323.06000000	3,598,546												0003
141519 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		50,358,196	4323.06000000	3,525,074												0003
141957 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TIEFA76	07/20/2021	07/20/2022	07/20/2022	Expiry		16,853,804	4323.06000000	306,739												0003
142181 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	SOCIETE GENERAL 02RNE81BXP4R0TD8PU41	07/20/2021	07/20/2022	07/20/2022	Maturity		35,801,167	4323.06000000	1,460,688		10,435										0003
142643 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57RNE97	07/20/2021	07/20/2022	07/20/2022	Expiry		31,006,480	1177.30000000	1,323,977												0003
140278 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57RNE97	08/06/2021	08/05/2022	08/05/2022	Expiry		20,808,098	107.08000000	1,186,061												0003
141083 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57RNE97	08/06/2021	08/05/2022	08/05/2022	Expiry		857,135	80.31000000	52,799												0003
141169 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Maturity		38,665,915	164.64000000	2,529,348		152,653										0003
141173 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		58,118,412	4436.52000000	3,748,696												0003
141174 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		44,477,267	4436.52000000	2,868,828												0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141187 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		63,087,314	4436.52000000	4,069,195		0	(2,425,866)			0		(2,425,866)	0			0003
141188 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		52,593,969	4436.52000000	3,392,364		0	(2,022,371)			0		(2,022,371)	0			0003
141191 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		52,988,020	4436.52000000	3,417,781		0	(2,037,523)			0		(2,037,523)	0			0003
141229 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	08/06/2021	08/05/2022	08/05/2022	Expiry		10,326,029	532.82000000	317,947		0	(189,545)			0		(189,545)	0			0003
141333 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		71,206,545	4436.52000000	4,592,894		0	(2,738,071)			0		(2,738,071)	0			0003
141341 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		52,657,322	4436.52000000	3,396,450		0	(2,024,807)			0		(2,024,807)	0			0003
141343 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		55,900,152	4436.52000000	3,605,616		0	(2,149,502)			0		(2,149,502)	0			0003
141357 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		53,681,892	4436.52000000	3,462,536		0	(2,064,204)			0		(2,064,204)	0			0003
141358 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		55,456,500	4436.52000000	3,577,000		0	(2,132,442)			0		(2,132,442)	0			0003
141363 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2021	08/05/2022	08/05/2022	Expiry		49,689,024	4436.52000000	3,204,992		0	(1,910,668)			0		(1,910,668)	0			0003
141749 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	08/06/2021	08/05/2022	08/05/2022	Expiry		41,629,256	4436.52000000	2,814,994		0	(1,678,169)			0		(1,678,169)	0			0003
141958 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	08/06/2021	08/05/2022	08/05/2022	Expiry		22,519,744	4436.52000000	407,607		0	(242,996)			0		(242,996)	0			0003
142182 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	08/06/2021	08/05/2022	08/05/2022	Expiry		47,595,049	4436.52000000	1,903,802		0	(1,134,959)			0		(1,134,959)	0			0003
142644 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	08/06/2021	08/05/2022	08/05/2022	Expiry		40,455,400	1205.77000000	1,735,537		0	(1,034,647)			0		(1,034,647)	0			0003
142905 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	08/13/2021	08/12/2022	08/12/2022	Expiry		1,447,976	4446.69000000	57,438		0	(35,347)			0		(35,347)	0			0003
140294 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	08/20/2021	08/19/2022	08/19/2022	Expiry		17,748,540	107.00000000	1,075,562		0	(682,568)			0		(682,568)	0			0003
140877 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	08/20/2021	08/19/2022	08/19/2022	Expiry		736,102	79.45000000	53,073		0	(33,681)			0		(33,681)	0			0003
141230 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	08/20/2021	08/19/2022	08/19/2022	Expiry		8,562,176	535.53000000	250,016		0	(158,664)			0		(158,664)	0			0003
141369 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/20/2021	08/19/2022	08/19/2022	Expiry		31,689,027	166.70000000	1,996,009		0	(1,266,698)			0		(1,266,698)	0			0003
141563 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	08/20/2021	08/19/2022	08/19/2022	Expiry		54,051,035	4441.67000000	3,816,003		0	(2,421,694)			0		(2,421,694)	0			0003
141567 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	08/20/2021	08/19/2022	08/19/2022	Expiry		55,429,435	4441.67000000	3,913,318		0	(2,483,452)			0		(2,483,452)	0			0003
141573 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC.	08/20/2021	08/19/2022	08/19/2022	Expiry		43,628,611	4441.67000000	3,080,180		0	(1,954,730)			0		(1,954,730)	0			0003
141762 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	08/20/2021	08/19/2022	08/19/2022	Expiry		78,893,954	4441.67000000	5,559,577		0	(3,528,193)			0		(3,528,193)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141763 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		27,590,164	...4441.67000000	1,944,251		0	1,233,852			0		(1,233,852)	0			0003
141764 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		37,897,981	...4441.67000000	2,670,632		0	1,694,824			0		(1,694,824)	0			0003
141765 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		52,222,825	...4441.67000000	3,680,090		0	2,335,442			0		(2,335,442)	0			0003
141766 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		52,546,622	...4441.67000000	3,702,907		0	2,349,922			0		(2,349,922)	0			0003
141767 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		53,518,957	...4441.67000000	3,771,427		0	2,393,406			0		(2,393,406)	0			0003
141768 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		53,659,851	...4441.67000000	3,781,356		0	2,399,706			0		(2,399,706)	0			0003
141959 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	08/20/2021	08/19/2022	08/19/2022	Expiry		18,615,628	...4517.17839000	346,251		0	219,736			0		(219,736)	0			0003
142183 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I7OUK5573	08/20/2021	08/19/2022	08/19/2022	Expiry		39,561,479	...4441.67000000	1,592,350		0	1,010,530			0		(1,010,530)	0			0003
142645 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMVWCJFX09	08/20/2021	08/19/2022	08/19/2022	Expiry		33,096,297	...1207.56000000	1,456,237		0	924,150			0		(924,150)	0			0003
140291 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	09/03/2021	09/06/2022	09/06/2022	Expiry		21,258,412	...111.27000000	1,245,625		0	842,827			0		(842,827)	0			0003
141231 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	09/03/2021	09/06/2022	09/06/2022	Expiry		10,453,632	...537.99000000	306,291		0	207,246			0		(207,246)	0			0003
141396 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		37,784,403	...171.06000000	2,418,679		0	1,636,552			0		(1,636,552)	0			0003
141397 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		737,719	...82.07000000	40,899		0	27,674			0		(27,674)	0			0003
141399 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		35,829,897	...4535.43000000	2,382,719		0	1,612,220			0		(1,612,220)	0			0003
141400 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		46,998,666	...4535.43000000	3,125,452		0	2,114,776			0		(2,114,776)	0			0003
141401 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		43,910,083	...4535.43000000	2,920,058		0	1,975,800			0		(1,975,800)	0			0003
141402 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		61,160,954	...4535.43000000	4,067,256		0	2,752,029			0		(2,752,029)	0			0003
141403 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		48,407,778	...4535.43000000	3,219,159		0	2,178,181			0		(2,178,181)	0			0003
141404 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		49,824,873	...4535.43000000	3,313,397		0	2,241,945			0		(2,241,945)	0			0003
141405 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		52,089,640	...4535.43000000	3,464,006		0	2,343,852			0		(2,343,852)	0			0003
141406 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		61,669,512	...4535.43000000	4,101,076		0	2,774,913			0		(2,774,913)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141407 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/03/2021	09/06/2022	09/06/2022	Expiry		58,960,590	4535.43000000	3,920,930		0	(2,653,021)			0	(2,653,021)	0				0003
141408 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/03/2021	09/06/2022	09/06/2022	Expiry		50,796,816	4535.43000000	3,378,032		0	(2,285,679)			0	(2,285,679)	0				0003
141409 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/03/2021	09/06/2022	09/06/2022	Expiry		58,960,590	4535.43000000	3,920,930		0	(2,653,021)			0	(2,653,021)	0				0003
142017 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	09/03/2021	09/06/2022	09/06/2022	Expiry		18,192,397	4535.43000000	354,752		0	(240,036)			0	(240,036)	0				0003
142184 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	09/03/2021	09/06/2022	09/06/2022	Expiry		42,536,497	4535.43000000	1,644,036		0	(1,112,405)			0	(1,112,405)	0				0003
142646 Call Options - S&P	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	09/03/2021	09/06/2022	09/06/2022	Expiry		38,088,582	1233.01000000	1,679,706		0	(1,136,540)			0	(1,136,540)	0				0003
142904 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	09/10/2021	09/09/2022	09/09/2022	Expiry		1,136,179	4506.68000000	43,839		0	(30,350)			0	(30,350)	0				0003
141556 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		829,558	79.01000000	50,922		0	(36,692)			0	(36,692)	0				0003
141560 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		71,466,772	4357.73000000	5,581,576		0	(4,021,793)			0	(4,021,793)	0				0003
141561 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		44,522,753	4357.73000000	3,477,240		0	(2,505,518)			0	(2,505,518)	0				0003
141562 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		49,908,428	4357.73000000	3,897,863		0	(2,808,597)			0	(2,808,597)	0				0003
141564 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		50,448,569	4357.73000000	3,940,048		0	(2,838,994)			0	(2,838,994)	0				0003
141565 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		50,975,244	4357.73000000	3,981,182		0	(2,868,632)			0	(2,868,632)	0				0003
141568 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		55,438,692	4357.73000000	4,329,778		0	(3,119,813)			0	(3,119,813)	0				0003
141569 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		47,063,484	4357.73000000	3,675,672		0	(2,648,498)			0	(2,648,498)	0				0003
141570 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		58,393,582	4357.73000000	4,560,556		0	(3,286,099)			0	(3,286,099)	0				0003
141571 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		53,600,079	4357.73000000	4,186,182		0	(3,016,345)			0	(3,016,345)	0				0003
142226 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	09/20/2021	09/20/2022	09/20/2022	Expiry		40,601,826	4357.73000000	2,026,031		0	(1,459,853)			0	(1,459,853)	0				0003
142248 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	09/20/2021	09/20/2022	09/20/2022	Expiry		19,024,317	4357.73000000	196,784		0	(141,792)			0	(141,792)	0				0003
142828 Call Options - S&P	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/20/2021	09/20/2022	09/20/2022	Expiry		30,769,406	1184.74000000	1,353,854		0	(975,517)			0	(975,517)	0				0003
142829 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	09/20/2021	09/20/2022	09/20/2022	Expiry		7,520,322	527.75000000	219,593		0	(158,228)			0	(158,228)	0				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
142900 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2021	09/20/2022	09/20/2022	Expiry		30,776,910	164.94000000	1,989,794		0	(1,433,742)			0		(1,433,742)	0			0003
142902 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2021	09/20/2022	09/20/2022	Expiry		17,324,112	106.23000000	1,142,525		0	(823,244)			0		(823,244)	0			0003
141617 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		36,653,820	4363.55000000	2,954,280		0	(2,258,203)			0		(2,258,203)	0			0003
141619 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		52,931,869	4363.55000000	4,266,283		0	(3,261,076)			0		(3,261,076)	0			0003
141620 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		48,871,760	4363.55000000	3,939,040		0	(3,010,937)			0		(3,010,937)	0			0003
141622 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		61,888,055	4363.55000000	4,988,147		0	(3,812,858)			0		(3,812,858)	0			0003
141623 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		52,608,879	4363.55000000	4,240,250		0	(3,241,177)			0		(3,241,177)	0			0003
141625 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		53,671,665	4363.55000000	4,325,910		0	(3,306,654)			0		(3,306,654)	0			0003
142235 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		19,376,660	4363.55000000	346,842		0	(265,120)			0		(265,120)	0			0003
142236 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		46,350,195	4363.55000000	2,099,665		0	(1,604,949)			0		(1,604,949)	0			0003
142830 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		22,469,307	104.05000000	1,363,212		0	(1,042,017)			0		(1,042,017)	0			0003
142832 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		55,739,464	4363.55000000	4,236,200		0	(3,238,082)			0		(3,238,082)	0			0003
142834 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		36,489,647	165.03000000	2,321,845		0	(1,774,780)			0		(1,774,780)	0			0003
142836 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		873,936	77.39000000	57,330		0	(43,822)			0		(43,822)	0			0003
142838 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2021	10/06/2022	10/06/2022	Expiry		51,645,625	4363.55000000	3,906,368		0	(2,985,964)			0		(2,985,964)	0			0003
142845 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		53,594,517	4363.55000000	4,089,262		0	(3,125,765)			0		(3,125,765)	0			0003
142849 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		48,861,744	4363.55000000	3,728,152		0	(2,849,738)			0		(2,849,738)	0			0003
142853 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		78,214,714	4363.55000000	5,967,783		0	(4,561,675)			0		(4,561,675)	0			0003
142866 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		35,375,815	1184.94000000	1,503,472		0	(1,149,229)			0		(1,149,229)	0			0003
142868 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	10/06/2021	10/06/2022	10/06/2022	Expiry		9,915,388	526.60000000	290,521		0	(222,070)			0		(222,070)	0			0003
142867 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/15/2021	10/14/2022	10/14/2022	Expiry		1,643,094	4365.75000000	89,325		0	(70,430)			0		(70,430)	0			0003
141913 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		54,662,859	4536.19000000	3,706,087		0	(2,975,032)			0		(2,975,032)	0			0003
141914 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		59,718,034	4536.19000000	4,048,834		0	(3,250,160)			0		(3,250,160)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141915 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		63,506,660	4536.19000000	4,305,700		0	(3,456,356)			0		(3,456,356)	0			0003
141916 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		57,609,613	4536.19000000	3,905,885		0	(3,135,409)			0		(3,135,409)	0			0003
142246 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	SOCIETE GENERAL	10/20/2021	10/20/2022	10/20/2022	Expiry		35,772,893	4536.19000000	1,452,384		0	(1,165,886)			0		(1,165,886)	0			0003
142651 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/20/2021	10/20/2022	10/20/2022	Expiry		17,734,511	109.26000000	1,027,324		0	(824,674)			0		(824,674)	0			0003
142654 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/20/2021	10/20/2022	10/20/2022	Expiry		29,071,988	166.90000000	1,843,774		0	(1,480,070)			0		(1,480,070)	0			0003
142664 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		38,844,121	4536.19000000	2,697,394		0	(2,165,305)			0		(2,165,305)	0			0003
142665 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		54,702,184	4536.19000000	3,798,605		0	(3,049,291)			0		(3,049,291)	0			0003
142666 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		44,062,577	4536.19000000	3,059,773		0	(2,456,201)			0		(2,456,201)	0			0003
142667 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		58,779,064	4536.19000000	4,081,708		0	(3,276,549)			0		(3,276,549)	0			0003
142668 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		55,587,516	4536.19000000	3,860,082		0	(3,098,641)			0		(3,098,641)	0			0003
142686 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/20/2021	10/20/2022	10/20/2022	Expiry		576,911	80.40000000	33,519		0	(26,907)			0		(26,907)	0			0003
142702 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/20/2021	10/20/2022	10/20/2022	Expiry		33,844,088	1215.52000000	1,465,449		0	(1,176,374)			0		(1,176,374)	0			0003
142703 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	10/20/2021	10/20/2022	10/20/2022	Expiry		8,275,184	529.46000000	244,118		0	(195,963)			0		(195,963)	0			0003
142873 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	10/20/2021	10/20/2022	10/20/2022	Expiry		16,725,784	4536.19000000	346,224		0	(277,928)			0		(277,928)	0			0003
143631 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		33,095,887	169.84000000	2,104,543		0	(1,780,767)			0		(1,780,767)	0			0003
143673 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	11/05/2021	11/04/2022	11/04/2022	Expiry		23,196,834	110.24000000	1,382,415		0	(1,169,736)			0		(1,169,736)	0			0003
143675 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	11/05/2021	11/04/2022	11/04/2022	Expiry		884,225	81.83000000	49,959		0	(42,273)			0		(42,273)	0			0003
143687 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		60,598,137	4697.53000000	4,138,836		0	(3,502,092)			0		(3,502,092)	0			0003
143689 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		67,346,797	4697.53000000	4,599,768		0	(3,892,111)			0		(3,892,111)	0			0003
143691 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		65,719,384	4697.53000000	4,488,616		0	(3,798,060)			0		(3,798,060)	0			0003
143693 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		48,712,447	4697.53000000	3,327,047		0	(2,815,193)			0		(2,815,193)	0			0003
143695 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		55,430,854	4697.53000000	3,785,912		0	(3,203,464)			0		(3,203,464)	0			0003
143697 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		53,659,650	4697.53000000	3,664,939		0	(3,101,102)			0		(3,101,102)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
143699 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry	53,665,052	4697.53000000	3,665,308		0	(3,101,415)			0		(3,101,415)	0			0003
143701 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry	69,650,841	4697.53000000	4,757,133		0	(4,025,267)			0		(4,025,267)	0			0003
143703 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry	69,523,444	4697.53000000	4,748,432		0	(4,017,904)			0		(4,017,904)	0			0003
143705 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry	46,505,547	4697.53000000	3,176,316		0	(2,687,652)			0		(2,687,652)	0			0003
143707 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry	61,067,890	4697.53000000	4,170,920		0	(3,529,240)			0		(3,529,240)	0			0003
143738 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TIEFA76	11/05/2021	11/04/2022	11/04/2022	Expiry	22,480,734	4697.53000000	490,080		0	(414,683)			0		(414,683)	0			0003
143746 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	K81H1DSPRPFMYMCUFXT09	11/05/2021	11/04/2022	11/04/2022	Expiry	51,829,410	4697.53000000	2,052,445		0	(1,736,684)			0		(1,736,684)	0			0003
143749 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	BFM8T61CT2L10CEMIK50	11/05/2021	11/04/2022	11/04/2022	Expiry	10,597,666	536.33000000	314,751		0	(266,327)			0		(266,327)	0			0003
143752 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGGFU57RNE97	11/05/2021	11/04/2022	11/04/2022	Expiry	39,398,855	1248.08000000	1,753,249		0	(1,483,518)			0		(1,483,518)	0			0003
143915 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	33,045,608	172.61000000	2,107,828		0	(1,864,617)			0		(1,864,617)	0			0003
143638 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	52,406,683	4697.96000000	3,809,947		0	(3,370,338)			0		(3,370,338)	0			0003
143711 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	74,881,724	4697.96000000	5,443,874		0	(4,815,735)			0		(4,815,735)	0			0003
143713 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	50,664,680	4697.96000000	3,683,304		0	(3,258,307)			0		(3,258,307)	0			0003
143715 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	54,662,456	4697.96000000	3,973,941		0	(3,515,409)			0		(3,515,409)	0			0003
143717 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	59,194,296	4697.96000000	4,303,404		0	(3,806,857)			0		(3,806,857)	0			0003
143719 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry	51,677,560	4697.96000000	3,756,940		0	(3,323,447)			0		(3,323,447)	0			0003
143780 Call Options - iShares U.S. Real Estate ...	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	11/19/2021	11/18/2022	11/18/2022	Expiry	18,163,282	109.88000000	1,124,307		0	(994,579)			0		(994,579)	0			0003
143795 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGGFU57RNE97	11/19/2021	11/18/2022	11/18/2022	Expiry	854,939	80.34000000	51,296		0	(45,378)			0		(45,378)	0			0003
143799 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	45,015,628	4697.96000000	3,362,671		0	(2,974,671)			0		(2,974,671)	0			0003
143822 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	53,560,437	4697.96000000	4,000,969		0	(3,539,319)			0		(3,539,319)	0			0003
143831 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	38,106,882	4697.96000000	2,846,587		0	(2,518,135)			0		(2,518,135)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
143837 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	11/19/2021	11/18/2022	11/18/2022	Expiry		63,227,348	4697.96000000	4,723,088		0	(4,178,116)			0		(4,178,116)	0			0003
143866 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	11/19/2021	11/18/2022	11/18/2022	Expiry		10,537,559	531.19000000	318,234		0	(281,515)			0		(281,515)	0			0003
143869 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	11/19/2021	11/18/2022	11/18/2022	Expiry		35,928,918	1248.41000000	1,652,730		0	(1,462,031)			0		(1,462,031)	0			0003
143907 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	11/19/2021	11/18/2022	11/18/2022	Expiry		40,137,982	4697.96000000	1,605,519		0	(1,420,267)			0		(1,420,267)	0			0003
143913 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	11/19/2021	11/18/2022	11/18/2022	Expiry		18,640,506	4697.96000000	397,043		0	(351,230)			0		(351,230)	0			0003
144151 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2021	12/06/2022	12/06/2022	Expiry		33,004,643	166.22000000	2,202,030		(3,111)	(2,054,317)			0		(2,051,206)	(3,111)			0003
144158 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2021	12/06/2022	12/06/2022	Expiry		42,702,531	4591.67000000	3,608,400		(356)	(3,361,605)			0		(3,361,249)	(356)			0003
144163 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2021	12/06/2022	12/06/2022	Expiry		57,372,917	4591.67000000	4,848,060		(1,240)	(4,517,241)			0		(4,516,001)	(1,240)			0003
144165 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2021	12/06/2022	12/06/2022	Expiry		48,350,469	4591.67000000	4,085,656		(403)	(3,806,219)			0		(3,805,816)	(403)			0003
144185 Call Options - S&P Equal Weight Energy	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	12/06/2021	12/06/2022	12/06/2022	Expiry		36,310,432	1221.41000000	1,633,969		0	(1,522,054)			0		(1,522,054)	0			0003
144186 Call Options - S&P U.S. Retiree Spending Index	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	12/06/2021	12/06/2022	12/06/2022	Expiry		10,814,639	527.81000000	330,928		0	(308,262)			0		(308,262)	0			0003
144187 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		55,212,723	4591.67000000	4,693,081		0	(4,371,638)			0		(4,371,638)	0			0003
144189 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		49,562,694	4591.67000000	4,212,829		0	(3,924,279)			0		(3,924,279)	0			0003
144202 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		50,578,788	4591.67000000	4,299,197		0	(4,004,731)			0		(4,004,731)	0			0003
144208 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	12/06/2021	12/06/2022	12/06/2022	Expiry		842,450	77.77000000	55,097		0	(51,323)			0		(51,323)	0			0003
144220 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	12/06/2021	12/06/2022	12/06/2022	Expiry		18,412,818	110.00000000	1,310,993		0	(1,221,199)			0		(1,221,199)	0			0003
144223 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		47,105,850	4591.67000000	4,003,997		0	(3,729,751)			0		(3,729,751)	0			0003
144227 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		80,473,969	4591.67000000	6,840,287		0	(6,371,775)			0		(6,371,775)	0			0003
144229 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		44,379,277	4591.67000000	3,772,239		0	(3,513,866)			0		(3,513,866)	0			0003
144231 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	12/06/2021	12/06/2022	12/06/2022	Expiry		54,617,129	4591.67000000	4,642,456		0	(4,324,480)			0		(4,324,480)	0			0003
144239 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	12/06/2021	12/06/2022	12/06/2022	Expiry		17,863,558	4591.67000000	385,853		0	(359,425)			0		(359,425)	0			0003
144243 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	12/06/2021	12/06/2022	12/06/2022	Expiry		34,429,808	4591.67000000	1,738,705		0	(1,619,616)			0		(1,619,616)	0			0003
144402 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	12/10/2021	12/09/2022	12/09/2022	Expiry		2,451,500	4698.61081376	103,171		0	(97,219)			0		(97,219)	0			0003
144667 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	12/20/2021	12/20/2022	12/20/2022	Maturity		29,398,057	167.09000000	1,977,921		350,123	(1,568,189)			0		(1,918,313)	350,123			0003
144669 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	12/20/2021	12/20/2022	12/20/2022	Expiry		17,770,187	110.32000000	1,209,263		0	(1,172,820)			0		(1,172,820)	0			0003
144673 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	12/20/2021	12/20/2022	12/20/2022	Expiry		912,277	76.48000000	61,066		0	(59,226)			0		(59,226)	0			0003
144679 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/20/2021	12/20/2022	12/20/2022	Expiry		56,827,434	4568.02000000	4,717,477		0	(4,575,307)			0		(4,575,307)	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
144680 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TIEFA76	12/20/2021	12/20/2022	12/20/2022	Expiry		55,475,036	...4568.02000000	4,605,209		0	(4,466,422)			0		(4,466,422)	0			0003
144681 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TIEFA76	12/20/2021	12/20/2022	12/20/2022	Expiry		49,191,525	...4568.02000000	4,083,589		0	(3,960,522)			0		(3,960,522)	0			0003
144690 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUG3UFU57RNE97	12/20/2021	12/20/2022	12/20/2022	Expiry		37,686,588	...1221.01000000	1,692,128		0	(1,641,132)			0		(1,641,132)	0			0003
144691 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG BF1M8T61CT2L1QCEMIK50	12/20/2021	12/20/2022	12/20/2022	Expiry		9,883,042	...531.16000000	306,380		0	(297,147)			0		(297,147)	0			0003
144706 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/20/2021	12/20/2022	12/20/2022	Expiry		20,660,136	...4568.02000000	458,655		0	(444,833)			0		(444,833)	0			0003
144707 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2021	12/20/2022	12/20/2022	Expiry		74,915,528	...4568.02000000	6,165,580		0	(5,979,768)			0		(5,979,768)	0			0003
144711 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/20/2021	12/20/2022	12/20/2022	Expiry		47,284,123	...4568.02000000	3,891,504		0	(3,774,225)			0		(3,774,225)	0			0003
144713 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2021	12/20/2022	12/20/2022	Expiry		34,967,588	...4568.02000000	618,926		0	(600,274)			0		(600,274)	0			0003
144714 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/20/2021	12/20/2022	12/20/2022	Expiry		48,421,012	...4568.02000000	3,985,070		0	(3,864,972)			0		(3,864,972)	0			0003
144716 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2021	12/20/2022	12/20/2022	Expiry		46,534,877	...4568.02000000	3,829,840		0	(3,714,420)			0		(3,714,420)	0			0003
144719 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/20/2021	12/20/2022	12/20/2022	Expiry		46,593,804	...4568.02000000	3,834,690		0	(3,719,124)			0		(3,719,124)	0			0003
144721 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2021	12/20/2022	12/20/2022	Expiry		47,507,408	...4568.02000000	3,909,880		0	(3,792,048)			0		(3,792,048)	0			0003
144725 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/20/2021	12/20/2022	12/20/2022	Expiry		52,989,032	...4568.02000000	4,361,020		0	(4,229,592)			0		(4,229,592)	0			0003
0159999999. Subtotal - Purchased Options - Hedging Other - Call Options and Warrants												1,218,711,130	0	817,323,094	234,291,557	0	XXX	0	0	(583,031,536)	817,323,094	0	0	XXX
0219999999. Subtotal - Purchased Options - Hedging Other												1,218,711,130	0	817,323,094	234,291,557	0	XXX	0	0	(583,031,536)	817,323,094	0	0	XXX
0289999999. Subtotal - Purchased Options - Replications												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0359999999. Subtotal - Purchased Options - Income Generation												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0429999999. Subtotal - Purchased Options - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0439999999. Total Purchased Options - Call Options and Warrants												1,218,711,130	0	817,323,094	234,291,557	0	XXX	0	0	(583,031,536)	817,323,094	0	0	XXX
0449999999. Total Purchased Options - Put Options												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0459999999. Total Purchased Options - Caps												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0469999999. Total Purchased Options - Floors												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0479999999. Total Purchased Options - Collars												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0489999999. Total Purchased Options - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0499999999. Total Purchased Options												1,218,711,130	0	817,323,094	234,291,557	0	XXX	0	0	(583,031,536)	817,323,094	0	0	XXX
0569999999. Subtotal - Written Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0639999999. Subtotal - Written Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
140735 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED		07/06/2020	01/06/2022	01/06/2022	Maturity		6,471,461	...3367.32000000	(460,386)		(2,657,460)	(2,652,428)			0		5,032	(2,657,460)		0003
140734 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	07/20/2020	01/20/2022	01/20/2022	Maturity		4,224,592	...3446.95000000	(257,001)			(1,346,514)	(1,337,151)			0		9,363	(1,346,514)		0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140739 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/06/2020	02/04/2022	02/04/2022	Maturity		9,247,816	3553.46000000	(447,252)		(2,651,796)	(2,623,178)			0		28,618	(2,651,796)			0003
140738 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/20/2020	02/18/2022	02/18/2022	Maturity		7,848,355	3597.10000000	(499,084)		(1,729,071)	(1,684,363)			0		44,708	(1,729,071)			0003
140743 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/04/2020	03/04/2022	03/04/2022	Maturity		7,253,126	3637.72000000	(558,417)		(1,451,415)	(1,386,982)			0		64,433	(1,451,415)			0003
140742 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/18/2020	03/18/2022	03/18/2022	Maturity		10,223,312	3525.28000000	(660,339)		(2,719,736)	(2,626,611)			0		93,125	(2,719,736)			0003
140336 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2020	04/06/2022	04/06/2022	Maturity		9,632,655	3567.65000000	(618,848)		(2,466,450)	(2,357,840)			0		108,610	(2,466,450)			0003
140332 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2020	04/20/2022	04/20/2022	Maturity		8,398,289	3651.43000000	(533,722)		(1,858,446)	(1,751,116)			0		107,330	(1,858,446)			0003
143619 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/06/2020	05/06/2022	05/06/2022	Maturity		10,337,404	3691.93000000	(665,204)		(1,207,948)	(1,054,439)			0		153,509	(1,207,948)			0003
140339 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/20/2020	05/20/2022	05/20/2022	Maturity		8,245,314	3747.87000000	(488,340)		(337,678)	(212,462)			0		125,216	(337,678)			0003
140343 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/04/2020	06/06/2022	06/06/2022	Maturity		6,235,232	3897.02000000	(359,829)		(359,056)	(256,154)			0		102,902	(359,056)			0003
140341 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/18/2020	06/17/2022	06/17/2022	Expiry		7,435,517	3913.43000000	(434,118)		0	133,575			0		133,575	0			0003
140333 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	01/06/2021	01/06/2022	01/06/2022	Expiry		30,588,199	189.25000000	(1,878,479)		0	30,879			0		30,879	0			0003
140428 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		59,851,209	3935.55000000	(2,824,367)		(12,168,000)	(12,121,572)			0		46,428	(12,168,000)			0003
140493 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		58,577,088	3956.16000000	(2,595,886)		(11,542,284)	(11,499,612)			0		42,672	(11,542,284)			0003
140622 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	01/06/2021	01/06/2022	01/06/2022	Maturity		16,570,930	87.24000000	(779,046)		(4,628,995)	(4,616,189)			0		12,806	(4,628,995)			0003
140685 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		56,024,303	3984.27000000	(2,278,254)		(10,605,522)	(10,568,071)			0		37,451	(10,605,522)			0003
140686 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	01/06/2021	01/06/2022	01/06/2022	Maturity		919,784	78.10000000	(39,721)		(5,182)	(4,529)			0		653	(5,182)			0003
140747 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	07/06/2022	07/06/2022	Expiry		7,852,360	3926.18000000	(481,986)		0	165,076			0		165,076	0			0003
140759 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		53,813,989	3823.10000000	(3,405,498)		(12,570,480)	(12,514,499)			0		55,981	(12,570,480)			0003
140767 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		50,935,206	3856.84000000	(2,966,472)		(11,413,256)	(11,364,492)			0		48,764	(11,413,256)			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140827 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		54,260,591	3864.33000000	(3,103,043)		(12,059,940)	(12,008,931)			0		51,009	(12,059,940)			0003
140849 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		43,531,757	3879.32000000	(2,386,734)		(9,474,068)	(9,434,834)			0		39,234	(9,474,068)			0003
140883 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		58,122,154	3892.44000000	(3,078,811)		(12,455,955)	(12,405,344)			0		50,611	(12,455,955)			0003
140899 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2021	01/06/2022	01/06/2022	Maturity		51,639,022	3907.44000000	(2,632,529)		(10,882,818)	(10,839,544)			0		43,274	(10,882,818)			0003
141707 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	01/06/2021	01/06/2022	01/06/2022	Maturity		48,141,055	3922.43000000	(2,541,966)		(9,494,850)	(9,453,064)			0		41,786	(9,494,850)			0003
142200 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	01/06/2021	01/06/2022	01/06/2022	Maturity		48,155,854	3873.70000000	(1,262,723)		(5,057,274)	(5,036,516)			0		20,757	(5,057,274)			0003
140331 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	01/20/2021	01/20/2022	01/20/2022	Expiry		23,247,336	184.77000000	(1,266,657)		0	69,406			0		69,406	0			0003
140427 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		48,105,350	4069.48000000	(2,147,162)		(5,165,625)	(5,047,972)			0		117,653	(5,165,625)			0003
140492 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		56,162,380	4094.52000000	(2,339,255)		(5,667,866)	(5,539,688)			0		128,178	(5,667,866)			0003
140616 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON CREDIT SUISSE INTERNATIONAL PLC.	01/20/2021	01/20/2022	01/20/2022	Maturity		16,067,162	91.14000000	(656,931)		(2,553,127)	(2,517,131)			0		35,996	(2,553,127)			0003
140683 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	INTERNATIONAL PLC.	01/20/2021	01/20/2022	01/20/2022	Expiry		412,249	78.39000000	(27,735)		0	1,520			0		1,520	0			0003
140746 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	07/20/2022	07/20/2022	Expiry		6,043,560	4029.04000000	(389,389)		0	143,347			0		143,347	0			0003
140758 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		58,334,231	3928.89000000	(3,698,940)		(8,362,984)	(8,160,302)			0		202,682	(8,362,984)			0003
140766 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		51,734,526	3963.55000000	(3,024,419)		(6,957,012)	(6,791,290)			0		165,722	(6,957,012)			0003
140826 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		50,523,898	3973.18000000	(2,891,078)		(6,675,105)	(6,516,690)			0		158,415	(6,675,105)			0003
140848 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		56,120,938	3990.52000000	(3,081,519)		(7,186,266)	(7,017,416)			0		168,850	(7,186,266)			0003
140882 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		52,531,700	4011.70000000	(2,723,848)		(6,406,008)	(6,256,756)			0		149,252	(6,406,008)			0003
140898 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		43,430,616	4030.96000000	(2,149,971)		(5,105,001)	(4,987,194)			0		117,807	(5,105,001)			0003
140912 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2021	01/20/2022	01/20/2022	Maturity		65,576,821	4050.22000000	(3,077,390)		(7,352,670)	(7,184,046)			0		168,624	(7,352,670)			0003
142199 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	01/20/2021	01/20/2022	01/20/2022	Maturity		39,549,371	3982.81000000	(1,059,496)		(3,222,258)	(3,164,204)			0		58,055	(3,222,258)			0003
140344 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	02/05/2021	02/04/2022	02/04/2022	Maturity		52,861,505	4085.06000000	(2,697,628)		(5,376,266)	(5,116,879)			0		259,387	(5,376,266)			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140577 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	02/05/2021	02/04/2022	02/04/2022	Expiry		39,256,496	178.98000000	(2,104,355)		0	202,342			0		202,342	0			0003
140647 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	02/05/2021	02/04/2022	02/04/2022	Maturity		28,157,972	93.53000000	(1,229,976)		(3,492,275)	(3,374,008)			0		118,267	(3,492,275)			0003
140706 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		76,715,434	4118.10000000	(3,593,903)		(7,124,228)	(6,778,660)			0		345,568	(7,124,228)			0003
140751 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/05/2021	08/05/2022	08/05/2022	Maturity		9,738,840	4057.85000000	(678,127)		(209,616)	59,896			0		269,512	(209,616)			0003
140761 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/05/2021	02/04/2022	02/04/2022	Maturity		69,944,588	3964.57000000	(4,722,173)		(9,647,280)	(9,193,225)			0		454,055	(9,647,280)			0003
140793 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/05/2021	02/04/2022	02/04/2022	Maturity		86,459,552	4001.49000000	(5,375,351)		(11,078,688)	(10,561,827)			0		516,861	(11,078,688)			0003
140913 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/05/2021	02/04/2022	02/04/2022	Maturity		57,526,763	4075.34000000	(3,019,836)		(6,292,812)	(6,002,443)			0		290,369	(6,292,812)			0003
141658 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . WELLS FARGO BANK, N.A. K81H1DSPPFM1MCUFXT09	02/05/2021	02/04/2022	02/04/2022	Expiry		60,559,103	4063.68000000	(3,243,721)		(6,510,169)	(6,198,273)			0		311,896	(6,510,169)			0003
141660 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		1,162,990	77.74000000	(49,177)		0	4,729			0		4,729	0			0003
141848 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		70,051,072	4137.53000000	(3,114,930)		(6,145,826)	(5,846,313)			0		299,513	(6,145,826)			0003
142197 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		47,951,914	4011.21000000	(2,947,492)		(5,849,564)	(5,566,152)			0		283,413	(5,849,564)			0003
142202 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	02/05/2021	02/04/2022	02/04/2022	Maturity		46,521,575	4015.10000000	(1,256,486)		(4,181,825)	(4,061,009)			0		120,816	(4,181,825)			0003
142390 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		62,105,087	4026.76000000	(3,676,824)		(7,306,998)	(6,953,457)			0		353,541	(7,306,998)			0003
142414 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFG9NF38B653	02/05/2021	02/04/2022	02/04/2022	Maturity		56,745,756	4046.19000000	(3,201,673)		(6,371,887)	(6,064,034)			0		307,853	(6,371,887)			0003
140342 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E57ODZIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		42,402,782	4115.72000000	(2,127,503)		(2,402,061)	(2,115,666)			0		286,395	(2,402,061)			0003
140575 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	02/19/2021	02/18/2022	02/18/2022	Maturity		31,449,789	175.86000000	(1,735,279)		(225,058)	8,538			0		233,595	(225,058)			0003
140644 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUG3UF57RNE97	02/19/2021	02/18/2022	02/18/2022	Maturity		23,978,042	94.12000000	(1,273,802)		(1,882,679)	(1,711,206)			0		171,473	(1,882,679)			0003
140693 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E57ODZIZ7FF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		48,343,678	4135.25000000	(2,305,909)		(2,497,352)	(2,186,942)			0		310,411	(2,497,352)			0003
140750 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	08/19/2022	08/19/2022	Maturity		6,103,260	4068.84000000	(447,094)		(239,460)	(50,305)			0		189,155	(239,460)			0003
140770 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		66,186,534	4021.96000000	(4,258,174)		(5,524,779)	(4,951,563)			0		573,216	(5,524,779)			0003
140830 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		48,830,869	4031.72000000	(3,081,162)		(3,964,375)	(3,549,603)			0		414,772	(3,964,375)			0003
140852 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		60,026,620	4049.30000000	(3,651,693)		(4,613,378)	(4,121,804)			0		491,574	(4,613,378)			0003
140902 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	02/19/2021	02/18/2022	02/18/2022	Maturity		55,284,088	4082.51000000	(3,128,586)		(3,782,312)	(3,361,156)			0		421,156	(3,782,312)			0003
141300 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	02/19/2021	02/18/2022	02/18/2022	Maturity		65,954,096	4094.23000000	(3,593,493)		(4,102,005)	(3,618,265)			0		483,739	(4,102,005)			0003
141642 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. K81H1DSPPFM1MCUFXT09	02/19/2021	02/18/2022	02/18/2022	Expiry		849,903	79.15000000	(38,318)		0	5,158			0		5,158	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141845 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		54,023,252	...4152.83000000	 (2,460,405	 (2,550,241	 (2,219,033				0		331,208	 (2,550,241			0003
141876 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMR08K5P83	02/19/2021	02/18/2022	02/18/2022	Maturity		65,655,369	...3984.84000000	 (4,621,628	 (5,997,863	 (5,375,721				0		622,142	 (5,997,863			0003
142201 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRFMYMCUFXT09	02/19/2021	02/18/2022	02/18/2022	Maturity		37,907,679	...4035.63000000	 (1,137,598	 (2,898,037	 (2,744,899				0		153,138	 (2,898,037			0003
142413 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TIEFA76	02/19/2021	02/18/2022	02/18/2022	Maturity		49,744,865	...4068.84000000	 (2,808,891	 (3,423,594	 (3,045,474				0		378,120	 (3,423,594			0003
140356 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	03/05/2021	03/04/2022	03/04/2022	Maturity		54,840,964	...4026.35000000	 (2,858,744	 (4,120,478	 (3,625,696				0		494,783	 (4,120,478			0003
140526 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity		51,270,311	...4047.48000000	 (2,656,847	 (3,742,487	 (3,282,648				0		459,839	 (3,742,487			0003
140601 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMR08K5P83	03/05/2021	03/04/2022	03/04/2022	Maturity		36,568,842	...167.42000000	 (2,005,668	 (3,552,634	 (3,205,499				0		347,135	 (3,552,634			0003
140666 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	03/05/2021	03/04/2022	03/04/2022	Maturity		28,214,413	...91.38000000	 (1,252,790	 (4,063,271	 (3,846,442				0		216,829	 (4,063,271			0003
140755 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	09/06/2022	09/06/2022	Expiry		6,022,245	...4014.83000000	 (421,819	 0	 190,969				0		190,969	 0			0003
140801 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/05/2021	03/04/2022	03/04/2022	Maturity		70,391,319	...3955.28000000	 (4,513,383	 (6,836,697	 (6,055,535				0		781,162	 (6,836,697			0003
141655 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I70UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity		46,977,065	...4005.22000000	 (2,586,106	 (3,796,078	 (3,348,483				0		447,595	 (3,796,078			0003
141656 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I70UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity		53,153,205	...4014.83000000	 (2,854,503	 (4,157,644	 (3,663,595				0		494,049	 (4,157,644			0003
141666 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRFMYMCUFXT09	03/05/2021	03/04/2022	03/04/2022	Expiry		939,173	...77.58000000	 (40,294	 0	 6,974				0		6,974	 0			0003
141852 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	03/05/2021	03/04/2022	03/04/2022	Maturity		57,742,569	...4068.61000000	 (2,697,928	 (3,693,665	 (3,226,716				0		466,949	 (3,693,665			0003
141858 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	03/05/2021	03/04/2022	03/04/2022	Maturity		75,167,756	...4083.98000000	 (3,371,590	 (4,507,327	 (3,923,782				0		583,544	 (4,507,327			0003
141877 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFGFNF38B653	03/05/2021	03/04/2022	03/04/2022	Maturity		79,415,630	...3918.78000000	 (5,316,292	 (8,310,636	 (7,390,509				0		920,128	 (8,310,636			0003
142204 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I70UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity		45,479,398	...3970.64000000	 (1,416,970	 (5,107,933	 (4,862,688				0		245,245	 (5,107,933			0003
142221 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUHN3JFFGFNF38B653	03/05/2021	03/04/2022	03/04/2022	Maturity		30,196,628	...3966.80000000	 (1,798,098	 (2,756,200	 (2,444,990				0		311,209	 (2,756,200			0003
142410 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I70UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity		70,760,580	...3976.41000000	 (4,188,204	 (6,272,058	 (5,547,177				0		724,881	 (6,272,058			0003
142416 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5I70UK5573	03/05/2021	03/04/2022	03/04/2022	Maturity		49,494,238	...3989.85000000	 (2,832,399	 (4,205,556	 (3,715,333				0		490,223	 (4,205,556			0003
140431 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity		64,157,652	...4112.67000000	 (2,880,430	 (5,467,020	 (4,857,698				0		609,322	 (5,467,020			0003
140596 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMR08K5P83	03/19/2021	03/18/2022	03/18/2022	Maturity		35,235,950	...171.48000000	 (1,824,728	 (1,606,121	 (1,220,121				0		386,000	 (1,606,121			0003
140659 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRFMYMCUFXT09	03/19/2021	03/18/2022	03/18/2022	Maturity		25,130,461	...95.22000000	 (1,097,868	 (2,800,191	 (2,567,950				0		232,241	 (2,800,191			0003
140704 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A. E570DZIWZFF32TIEFA76	03/19/2021	03/18/2022	03/18/2022	Maturity		57,292,421	...4140.06000000	 (2,445,067	 (4,470,681	 (3,953,456				0		517,226	 (4,470,681			0003
140754 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	09/20/2022	09/20/2022	Expiry		9,382,643	...4079.41000000	 (623,215	 0	 298,010				0		298,010	 0			0003
140764 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/19/2021	03/18/2022	03/18/2022	Maturity		94,994,368	...3991.36000000	 (5,891,998	 (11,227,888	 (9,981,504				0		1,246,384	 (11,227,888			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140800 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/19/2021	03/18/2022	03/18/2022	Maturity		78,153,676	4028.54000000	(4,411,035)		(8,430,852)	(7,497,748)			0		933,104	(8,430,852)			0003
140832 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/19/2021	03/18/2022	03/18/2022	Maturity		30,316,725	4042.23000000	(1,650,087)		(3,156,675)	(2,807,616)			0		349,059	(3,156,675)			0003
140854 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/19/2021	03/18/2022	03/18/2022	Maturity		53,460,792	4050.06000000	(2,850,975)		(5,452,392)	(4,849,301)			0		603,091	(5,452,392)			0003
140887 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/19/2021	03/18/2022	03/18/2022	Maturity		65,426,375	4063.75000000	(3,362,693)		(6,429,857)	(5,718,518)			0		711,339	(6,429,857)			0003
140904 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/19/2021	03/18/2022	03/18/2022	Maturity		52,191,360	4077.45000000	(2,583,846)		(4,936,576)	(4,389,993)			0		546,583	(4,936,576)			0003
141664 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	03/19/2021	03/18/2022	03/18/2022	Expiry		671,468	78.99000000	(25,502)			5,395			0		5,395	0			0003
141796 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	03/19/2021	03/18/2022	03/18/2022	Maturity		56,208,091	4091.15000000	(2,822,498)		(5,110,476)	(4,513,409)			0		597,067	(5,110,476)			0003
141849 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	CITIBANK N.A.	03/19/2021	03/18/2022	03/18/2022	Maturity		76,839,059	4159.63000000	(3,104,803)		(5,606,240)	(4,949,455)			0		656,785	(5,606,240)			0003
142203 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	03/19/2021	03/18/2022	03/18/2022	Maturity		42,899,209	4044.19000000	(2,489,482)		(3,668,094)	(3,141,473)			0		526,621	(3,668,094)			0003
140203 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2021	04/06/2022	04/06/2022	Expiry		310,926	80.04000000	(11,718)			3,082			0		3,082	0			0003
140349 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		31,062,960	4314.30000000	(1,070,805)		(1,201,320)	(919,684)			0		281,636	(1,201,320)			0003
140354 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		91,332,616	4328.56000000	(3,014,197)		(3,219,649)	(2,426,874)			0		792,775	(3,219,649)			0003
140413 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		71,248,296	4240.97000000	(3,054,290)		(4,035,024)	(3,231,704)			0		803,320	(4,035,024)			0003
140434 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		50,989,440	4249.12000000	(2,134,235)		(2,784,360)	(2,223,027)			0		561,333	(2,784,360)			0003
140531 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		44,317,936	4261.34000000	(1,789,871)		(2,286,024)	(1,815,263)			0		470,761	(2,286,024)			0003
140688 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		63,218,644	4271.53000000	(2,477,268)		(3,102,376)	(2,450,821)			0		651,555	(3,102,376)			0003
140719 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		64,961,408	4302.08000000	(2,324,388)		(2,703,957)	(2,092,611)			0		611,346	(2,703,957)			0003
140835 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		95,159,118	4155.42000000	(5,173,636)		(7,459,217)	(6,098,480)			0		1,360,737	(7,459,217)			0003
140857 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		99,820,056	4194.12000000	(4,886,448)		(6,831,314)	(5,546,111)			0		1,285,203	(6,831,314)			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140891 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		83,348,523	4212.45000000	(3,876,973)		(5,316,561)	(4,296,864)			0		1,019,697	(5,316,561)			0003
140907 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2021	04/06/2022	04/06/2022	Maturity		52,411,204	4226.71000000	(2,341,281)		(3,155,056)	(2,539,267)			0		615,789	(3,155,056)			0003
141671 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/06/2021	04/06/2022	04/06/2022	Maturity		38,652,665	171.70744000	(1,789,312)		(1,790,156)	(1,319,542)			0		470,614	(1,790,156)			0003
142195 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	04/06/2021	10/06/2022	10/06/2022	Expiry		8,326,191	4247.08000000	(509,142)		0	259,217			0		259,217	0			0003
142206 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	04/06/2021	04/06/2022	04/06/2022	Maturity		55,958,813	4206.34000000	(1,263,884)		(3,248,558)	(2,916,140)			0		332,419	(3,248,558)			0003
142572 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/06/2021	04/06/2022	04/06/2022	Maturity		28,094,497	99.71000000	(921,007)		(3,054,301)	(2,812,063)			0		242,237	(3,054,301)			0003
140202 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Expiry		392,268	80.61000000	(14,752)		0	4,446			0		4,446	0			0003
140348 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		69,008,408	4395.44000000	(2,379,695)		(1,004,957)	(287,789)			0		717,168	(1,004,957)			0003
140412 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		45,561,662	4298.27000000	(2,082,189)		(1,708,508)	(1,080,999)			0		627,509	(1,708,508)			0003
140433 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		50,410,737	4308.61000000	(2,236,373)		(1,764,828)	(1,090,853)			0		673,975	(1,764,828)			0003
140708 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		48,716,826	4323.08000000	(2,134,128)		(1,536,755)	(893,593)			0		643,162	(1,536,755)			0003
140820 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	10/20/2022	10/20/2022	Expiry		8,704,040	4352.02000000	(468,946)		0	250,732			0		250,732	0			0003
140856 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		34,957,584	4263.12000000	(1,758,268)		(1,609,906)	(1,080,017)			0		529,889	(1,609,906)			0003
140890 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		51,355,920	4279.66000000	(2,471,315)		(2,157,480)	(1,412,700)			0		744,780	(2,157,480)			0003
140906 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2021	04/20/2022	04/20/2022	Maturity		66,066,000	4290.00000000	(3,089,439)		(2,609,530)	(1,678,466)			0		931,064	(2,609,530)			0003
141670 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		30,866,182	175.30344000	(1,278,055)		(1,304,120)	(918,953)			0		385,167	(1,304,120)			0003
141853 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		63,734,464	4339.62000000	(2,665,977)		(1,759,901)	(956,456)			0		803,445	(1,759,901)			0003
141859 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		63,007,688	4368.56411000	(2,397,455)		(1,310,846)	(588,325)			0		722,521	(1,310,846)			0003
142205 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		39,563,482	4273.46000000	(907,261)		(1,329,172)	(1,055,750)			0		273,421	(1,329,172)			0003
142227 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	04/20/2021	04/20/2022	04/20/2022	Maturity		73,791,120	4217.64000000	(4,261,074)		(4,230,667)	(2,946,508)			0		1,284,159	(4,230,667)			0003
142571 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	04/20/2021	04/20/2022	04/20/2022	Maturity		19,319,463	103.26726000	(553,013)		(1,704,786)	(1,538,125)			0		166,661	(1,704,786)			0003
140207 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		552,843	83.13000000	(18,771)		0	6,480			0		6,480	0			0003
140209 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		47,417,246	4441.11000000	(1,771,979)		0	611,697			0		611,697	0			0003
140213 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		79,225,838	4466.32000000	(2,750,174)		0	949,375			0		949,375	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140424 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		42,802,284	4367.58000000	(1,882,805)		0	649,955			0		649,955	0			0003
140489 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		61,760,679	4380.19000000	(2,621,232)		0	904,864			0		904,864	0			0003
140537 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		68,462,004	4388.59000000	(2,835,814)		0	978,939			0		978,939	0			0003
140823 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	11/04/2022	11/04/2022	Expiry		12,346,880	4409.60000000	(662,180)		0	372,855			0		372,855	0			0003
140863 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		73,066,643	4323.47000000	(3,631,015)		0	1,253,446			0		1,253,446	0			0003
140895 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		45,204,432	4346.58000000	(2,108,631)		0	727,911			0		727,911	0			0003
140909 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2021	05/06/2022	05/06/2022	Expiry		41,412,210	4359.18000000	(1,865,448)		0	643,963			0		643,963	0			0003
141675 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2022	05/06/2022	Expiry		40,451,755	178.90312000	(1,641,939)		0	566,806			0		566,806	0			0003
141856 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		59,816,683	4403.30000000	(2,488,555)		0	859,063			0		859,063	0			0003
141862 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Expiry		51,079,351	4422.21000000	(2,014,053)		0	695,262			0		695,262	0			0003
142208 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/06/2021	05/06/2022	05/06/2022	Maturity		51,904,900	4340.27000000	(1,180,800)		(1,240,567)	(832,949)			0		407,619	(1,240,567)			0003
142252 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC.	05/06/2021	05/06/2022	05/06/2022	Expiry		99,109,841	4285.65000000	(5,625,653)		0	1,942,006			0		1,942,006	0			0003
142576 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2022	05/06/2022	Expiry		23,679,421	102.72349500	(737,416)		0	254,560			0		254,560	0			0003
140206 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		731,397	83.56000000	(27,422)		0	10,518			0		10,518	0			0003
140352 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		59,986,200	4410.75000000	(2,102,192)		0	806,320			0		806,320	0			0003
140355 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		42,542,784	4431.54000000	(1,398,940)		0	536,580			0		536,580	0			0003
140362 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		58,194,814	4340.04000000	(2,660,176)		0	1,020,341			0		1,020,341	0			0003
140423 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		65,778,912	4327.56000000	(2,940,637)		0	1,127,916			0		1,127,916	0			0003
140535 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		47,007,216	4352.52000000	(1,956,884)		0	750,586			0		750,586	0			0003
140715 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		51,531,544	4367.08000000	(2,057,129)		0	789,036			0		789,036	0			0003
140720 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		50,899,292	4387.87000000	(1,910,786)		0	732,904			0		732,904	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140822 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	11/18/2022	11/18/2022	Expiry		10,087,317	4385.79000000	(521,384)		0	306,927			0		306,927	0			0003
140842 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		64,514,576	4244.38000000	(3,607,005)		0	1,383,509			0		1,383,509	0			0003
140861 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		52,640,679	4279.73000000	(2,682,420)		0	1,028,874			0		1,028,874	0			0003
140894 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2021	05/20/2022	05/20/2022	Expiry		44,316,883	4302.61000000	(2,123,375)		0	814,445			0		814,445	0			0003
141674 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/20/2022	05/20/2022	Expiry		32,987,814	185.28588000	(1,403,439)		0	538,305			0		538,305	0			0003
141795 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		46,996,307	4315.09000000	(2,296,589)		0	880,883			0		880,883	0			0003
142207 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Maturity		43,781,518	4300.53000000	(1,041,611)		(967,359)	(567,837)			0		399,522	(967,359)			0003
142575 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	05/20/2021	05/20/2022	05/20/2022	Expiry		18,780,207	104.34000000	(602,666)		0	231,160			0		231,160	0			0003
142072 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		21,086,612	108.87000000	(617,266)		0	264,062			0		264,062	0			0003
140379 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		611,902	85.27000000	(21,100)		0	9,026			0		9,026	0			0003
140918 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/04/2021	06/06/2022	06/06/2022	Expiry		38,485,884	186.37000000	(1,623,090)		0	694,346			0		694,346	0			0003
140920 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/04/2021	12/06/2022	12/06/2022	Expiry		11,177,484	4470.99000000	(528,725)		0	326,848			0		326,848	0			0003
141322 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		56,195,005	4352.56000000	(2,803,197)		0	1,199,188			0		1,199,188	0			0003
141323 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		56,626,171	4373.71000000	(2,667,564)		0	1,141,165			0		1,141,165	0			0003
141324 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		50,683,046	4388.51000000	(2,293,036)		0	980,944			0		980,944	0			0003
141325 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		50,861,668	4396.97000000	(2,246,819)		0	961,173			0		961,173	0			0003
141326 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		53,237,426	4407.55000000	(2,283,283)		0	976,772			0		976,772	0			0003
141327 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		56,914,713	4418.12000000	(2,368,677)		0	1,013,303			0		1,013,303	0			0003
141328 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		42,477,725	4426.58000000	(1,725,493)		0	738,154			0		738,154	0			0003
141329 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		54,418,369	4441.38000000	(2,118,170)		0	906,138			0		906,138	0			0003
141330 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		62,727,448	4454.07000000	(2,352,428)		0	1,006,352			0		1,006,352	0			0003
141331 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	06/04/2021	06/06/2022	06/06/2022	Expiry		47,316,883	4504.83000000	(1,519,916)		0	650,209			0		650,209	0			0003
141803 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		78,571,006	4483.68000000	(2,683,274)		0	1,147,886			0		1,147,886	0			0003
141806 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Expiry		79,591,885	4316.60000000	(4,344,212)		0	1,858,423			0		1,858,423	0			0003
142208 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	06/04/2021	06/06/2022	06/06/2022	Maturity		44,126,430	4371.59000000	(879,540)		(639,713)	(263,452)			0		376,261	(639,713)			0003
140299 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG	06/18/2021	06/17/2022	06/17/2022	Expiry		22,325,086	107.44000000	(680,595)		0	314,121			0		314,121	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
140385 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		764,332	81.97000000	(25,990)			11,995			0		11,995	0			0003
140928 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		31,975,072	173.42000000	(1,404,939)			648,434			0		648,434	0			0003
141082 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	12/20/2022	12/20/2022	Expiry		9,226,395	4393.52000000	(493,395)			317,567			0		317,567	0			0003
141084 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		31,448,365	4249.78000000	(1,766,676)			815,389			0		815,389	0			0003
141087 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		52,688,389	4324.78000000	(2,405,518)			1,110,239			0		1,110,239	0			0003
141092 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		51,941,114	4331.02000000	(2,329,002)			1,074,924			0		1,074,924	0			0003
141110 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		57,768,871	4343.52000000	(2,498,006)			1,152,926			0		1,152,926	0			0003
141112 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		54,402,171	4387.27000000	(2,060,880)			951,175			0		951,175	0			0003
141114 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	06/18/2021	06/17/2022	06/17/2022	Expiry		49,674,083	4435.19000000	(1,616,496)			746,075			0		746,075	0			0003
141263 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	06/18/2021	06/17/2022	06/17/2022	Expiry		72,149,171	4414.35000000	(2,465,806)			1,138,064			0		1,138,064	0			0003
141298 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPR08K5P83	06/18/2021	06/17/2022	06/17/2022	Expiry		38,933,849	4312.27575000	(1,824,436)			842,048			0		842,048	0			0003
141818 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		54,012,058	4370.61000000	(2,100,755)			969,579			0		969,579	0			0003
141820 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		56,256,816	4356.02000000	(2,286,863)			1,055,475			0		1,055,475	0			0003
141821 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		52,874,607	4295.61000000	(2,564,239)			1,183,495			0		1,183,495	0			0003
141822 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMYMCUFXT09	06/18/2021	06/17/2022	06/17/2022	Expiry		65,110,422	4253.95000000	(3,539,303)			1,633,525			0		1,633,525	0			0003
142210 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	06/18/2021	06/21/2022	06/21/2022	Maturity		44,595,807	4306.03000000	(991,162)		(580,479)	(117,219)			0		463,260	(580,479)			0003
140276 Call Options - Ishares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57PNE97	07/06/2021	07/06/2022	07/06/2022	Expiry		24,675,544	109.36000000	(737,687)			377,943			0		377,943	0			0003
141080 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGJGFU57PNE97	07/06/2021	07/06/2022	07/06/2022	Expiry		908,573	82.33000000	(31,315)			16,044			0		16,044	0			0003
141125 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	07/06/2021	07/06/2022	07/06/2022	Expiry		36,085,834	176.86000000	(1,464,961)			750,542			0		750,542	0			0003
141128 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	07/06/2021	07/06/2022	07/06/2022	Expiry		48,182,455	4545.51000000	(1,956,336)			1,002,287			0		1,002,287	0			0003
141132 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	07/06/2021	07/06/2022	07/06/2022	Expiry		55,105,840	4554.20000000	(2,186,349)			1,120,129			0		1,120,129	0			0003
141275 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	07/06/2021	07/06/2022	07/06/2022	Expiry		32,640,203	4630.21000000	(953,792)			488,655			0		488,655	0			0003
141364 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Expiry		70,286,193	4510.77000000	(3,257,462)			1,668,892			0		1,668,892	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141366 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Expiry		55,623,847	4519.45000000	(2,518,977		0	1,290,544			0		1,290,544	0			0003
141367 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Expiry		45,953,040	4525.97000000	(2,045,395		0	1,047,915			0		1,047,915	0			0003
141368 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Expiry		59,111,645	4534.66000000	(2,570,564		0	1,316,974			0		1,316,974	0			0003
141741 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/06/2021	07/06/2022	07/06/2022	Expiry		36,707,663	4430.41000000	(1,938,713		0	993,258			0		993,258	0			0003
141742 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/06/2021	07/06/2022	07/06/2022	Expiry		48,115,580	4434.75000000	(2,510,457		0	1,286,179			0		1,286,179	0			0003
141743 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/06/2021	07/06/2022	07/06/2022	Expiry		58,673,601	4480.36000000	(2,705,939		0	1,386,330			0		1,386,330	0			0003
141744 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/06/2021	07/06/2022	07/06/2022	Expiry		45,990,007	4588.95000000	(1,539,729		0	788,847			0		788,847	0			0003
141745 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/06/2021	07/06/2022	07/06/2022	Expiry		62,658,069	4612.84000000	(1,945,305		0	996,636			0		996,636	0			0003
141828 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMJCUFTX09	07/06/2021	07/06/2022	07/06/2022	Expiry		51,144,121	4497.74000000	(2,242,340		0	1,148,815			0		1,148,815	0			0003
142211 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/06/2021	07/06/2022	07/06/2022	Expiry		42,197,349	4493.39000000	(888,000		0	454,948			0		454,948	0			0003
140255 Call Options - IShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. 4PQUHN3JFFG9NF38B653	07/20/2021	07/20/2022	07/20/2022	Expiry		19,961,783	112.17000000	(719,550		0	396,245			0		396,245	0			0003
140396 Call Options - IShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMMJCUFTX09	07/20/2021	07/20/2022	07/20/2022	Expiry		835,917	80.71000000	(33,282		0	18,334			0		18,334	0			0003
141108 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNBB6K528	07/20/2021	07/20/2022	07/20/2022	Expiry		34,084,871	177.94000000	(1,466,575		0	807,621			0		807,621	0			0003
141520 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		53,581,121	4599.74000000	(1,801,816		0	992,233			0		992,233	0			0003
141521 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		54,286,635	4565.15000000	(2,023,411		0	1,114,262			0		1,114,262	0			0003
141522 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		52,788,526	4530.57000000	(2,172,983		0	1,196,635			0		1,196,635	0			0003
141523 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		46,594,395	4515.44000000	(2,001,172		0	1,102,015			0		1,102,015	0			0003
141524 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		59,934,929	4504.63000000	(2,652,207		0	1,460,530			0		1,460,530	0			0003
141525 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		62,514,054	4493.82000000	(2,852,974		0	1,571,090			0		1,571,090	0			0003
141526 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		55,600,499	4487.34000000	(2,582,370		0	1,422,072			0		1,422,072	0			0003
141528 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		52,320,079	4474.37000000	(2,515,913		0	1,385,476			0		1,385,476	0			0003
141529 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		62,145,626	4457.07000000	(3,128,378		0	1,722,751			0		1,722,751	0			0003
141531 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	07/20/2021	07/20/2022	07/20/2022	Expiry		68,543,382	4411.68000000	(3,880,207		0	2,136,772			0		2,136,772	0			0003
142212 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	SOCIETE GENERAL 02RNE81BXP480TDBPU41	07/20/2021	07/20/2022	07/20/2022	Expiry		37,054,208	4474.37000000	(769,725		0	423,876			0		423,876	0			0003
140277 Call Options - IShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	08/06/2021	08/05/2022	08/05/2022	Expiry		21,952,543	112.97000000	(676,263		0	403,157			0		403,157	0			0003
141081 Call Options - IShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	08/06/2021	08/05/2022	08/05/2022	Expiry		892,706	83.64000000	(33,085		0	19,724			0		19,724	0			0003
141168 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPT507KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		40,599,210	172.87000000	(1,782,521		0	1,062,657			0		1,062,657	0			0003
141172 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPT507KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		59,309,839	4527.47000000	(3,041,296		0	1,813,080			0		1,813,080	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141175 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		45,789,346	4567.40000000	(2,107,310)		0	1,256,281			0		1,256,281	0			0003
141186 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		65,137,652	4580.71000000	(2,888,783)		0	1,722,165			0		1,722,165	0			0003
141189 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		54,434,757	4591.80000000	(2,338,830)		0	1,394,302			0		1,394,302	0			0003
141190 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		54,975,071	4602.89000000	(2,288,513)		0	1,364,306			0		1,364,306	0			0003
141335 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		74,019,204	4611.76000000	(3,003,453)		0	1,790,520			0		1,790,520	0			0003
141339 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		54,842,601	4620.64000000	(2,168,477)		0	1,292,746			0		1,292,746	0			0003
141345 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		58,387,709	4633.95000000	(2,219,238)		0	1,323,007			0		1,323,007	0			0003
141356 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		56,258,623	4649.47000000	(2,039,334)		0	1,215,757			0		1,215,757	0			0003
141360 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		58,617,521	4689.40000000	(1,878,250)		0	1,119,726			0		1,119,726	0			0003
141361 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/06/2021	08/05/2022	08/05/2022	Expiry		52,844,277	4718.24000000	(1,543,808)		0	920,347			0		920,347	0			0003
141752 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/06/2021	08/05/2022	08/05/2022	Expiry		42,461,841	4525.25000000	(2,319,606)		0	1,382,842			0		1,382,842	0			0003
142213 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	08/06/2021	08/05/2022	08/05/2022	Expiry		49,237,078	4589.58000000	(1,030,909)		0	614,580			0		614,580	0			0003
140289 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	08/20/2021	08/19/2022	08/19/2022	Expiry		18,751,333	113.05000000	(621,199)		0	394,222			0		394,222	0			0003
140876 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/20/2021	08/19/2022	08/19/2022	Expiry		769,227	83.03000000	(35,848)		0	22,750			0		22,750	0			0003
141365 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	08/20/2021	08/19/2022	08/19/2022	Expiry		33,257,633	174.95000000	(1,378,197)		0	874,625			0		874,625	0			0003
141598 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	08/20/2021	08/19/2022	08/19/2022	Expiry		55,834,719	4588.25000000	(2,775,521)		0	1,761,388			0		1,761,388	0			0003
141601 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	08/20/2021	08/19/2022	08/19/2022	Expiry		57,812,901	4632.66000000	(2,555,297)		0	1,621,631			0		1,621,631	0			0003
141606 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	08/20/2021	08/19/2022	08/19/2022	Expiry		45,679,156	4650.43000000	(1,924,022)		0	1,221,014			0		1,221,014	0			0003
141773 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		80,511,280	4532.72000000	(4,589,182)		0	2,912,365			0		2,912,365	0			0003
141774 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		28,390,279	4570.48000000	(1,475,218)		0	936,196			0		936,196	0			0003
141775 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		39,224,410	4597.13000000	(1,901,303)		0	1,206,596			0		1,206,596	0			0003
141776 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		54,207,293	4610.45000000	(2,536,410)		0	1,609,645			0		1,609,645	0			0003
141777 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4POUHN3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		54,648,487	4619.34000000	(2,499,580)		0	1,586,278			0		1,586,278	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141779 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUH3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		56,435,740	4683.74000000	(2,160,506			1,371,090			0		1,371,090	0			0003
141780 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC . 4PQUH3JFFG9NF38B653	08/20/2021	08/19/2022	08/19/2022	Expiry		57,040,422	4721.50000000	(1,962,287			1,245,297			0		1,245,297	0			0003
142214 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	08/20/2021	08/19/2022	08/19/2022	Expiry		40,906,569	4592.68678000	(872,331			553,594			0		553,594	0			0003
140290 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	UBS AG . BFM8T61CT2L1QCEM1K50	09/03/2021	09/06/2022	09/06/2022	Expiry		22,470,142	117.61239000	(709,970			480,387			0		480,387	0			0003
141395 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		39,749,192	179.96000000	(1,647,794			1,114,948			0		1,114,948	0			0003
141398 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		768,703	85.52000000	(24,450			16,543			0		16,543	0			0003
141412 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		36,546,495	4626.13860000	(1,954,855			1,322,714			0		1,322,714	0			0003
141413 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		47,985,637	4630.67000000	(2,537,895			1,717,217			0		1,717,217	0			0003
141414 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		45,183,475	4666.96000000	(2,176,223			1,472,499			0		1,472,499	0			0003
141415 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		63,271,007	4691.90000000	(2,851,974			1,929,733			0		1,929,733	0			0003
141416 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		50,223,070	4705.51000000	(2,181,282			1,475,929			0		1,475,929	0			0003
141417 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		51,792,956	4714.58000000	(2,193,734			1,484,347			0		1,484,347	0			0003
141418 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		54,303,450	4728.19000000	(2,214,318			1,498,275			0		1,498,275	0			0003
141419 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		64,444,640	4739.52000000	(2,544,459			1,721,658			0		1,721,658	0			0003
141420 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		61,879,139	4759.93000000	(2,303,600			1,558,686			0		1,558,686	0			0003
141421 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		53,682,235	4793.95000000	(1,807,904			1,223,283			0		1,223,283	0			0003
141422 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/03/2021	09/06/2022	09/06/2022	Expiry		62,704,587	4823.43000000	(1,928,550			1,304,916			0		1,304,916	0			0003
142215 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . G5GSEF7VJP5170UK5573	09/03/2021	09/06/2022	09/06/2022	Expiry		44,004,006	4691.90233500	(854,558			578,220			0		578,220	0			0003
141586 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO . 9R7GPTS07KV3UQJZ0078	09/20/2021	09/20/2022	09/20/2022	Expiry		867,302	82.60495500	(30,028			21,637			0		21,637	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
141588 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		72,931,841	4447.06346500	(4,698,272)		0	3,385,330			0		3,385,330	0			0003
141589 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		45,813,913	4484.10417000	(2,710,559)		0	1,953,088			0		1,953,088	0			0003
141590 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		51,605,315	4505.89282000	(2,899,174)		0	2,088,994			0		2,088,994	0			0003
141591 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		52,340,390	4521.14487500	(2,832,727)		0	2,041,116			0		2,041,116	0			0003
141592 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		53,014,254	4532.03920000	(2,792,933)		0	2,012,442			0		2,012,442	0			0003
141593 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		57,822,556	4545.11239000	(2,947,669)		0	2,123,937			0		2,123,937	0			0003
141594 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		49,251,936	4560.36444500	(2,414,880)		0	1,740,037			0		1,740,037	0			0003
141595 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		61,663,623	4601.76288000	(2,710,686)		0	1,953,179			0		1,953,179	0			0003
141596 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2021	09/20/2022	09/20/2022	Expiry		57,003,684	4634.44585500	(2,290,383)		0	1,650,331			0		1,650,331	0			0003
142229 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	09/20/2021	09/20/2022	09/20/2022	Expiry		41,961,987	4503.71395500	(1,238,356)		0	892,295			0		892,295	0			0003
142901 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2021	09/20/2022	09/20/2022	Expiry		32,300,367	173.10000000	(1,394,115)		0	1,004,527			0		1,004,527	0			0003
142903 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2021	09/20/2022	09/20/2022	Expiry		18,276,938	112.07265000	(704,745)		0	507,803			0		507,803	0			0003
141626 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		37,386,888	4450.82100000	(2,519,244)		0	1,925,669			0		1,925,669	0			0003
141628 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		54,043,383	4455.18455000	(3,607,841)		0	2,757,775			0		2,757,775	0			0003
141630 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		50,777,776	4533.72845000	(2,846,816)		0	2,176,059			0		2,176,059	0			0003
141631 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		64,487,366	4546.81910000	(3,506,595)		0	2,680,384			0		2,680,384	0			0003
141633 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		54,949,998	4557.72797500	(2,912,474)		0	2,226,247			0		2,226,247	0			0003
141635 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2021	10/06/2022	10/06/2022	Expiry		56,757,735	4614.45412500	(2,623,959)		0	2,005,711			0		2,005,711	0			0003
142237 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		47,879,782	4507.55000000	(1,242,186)		0	949,507			0		949,507	0			0003
142931 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		23,739,077	109.93000000	(799,242)		0	610,927			0		610,927	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
142833 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		59,278,978	4640.63542500	(2,313,188)		0	1,768,163			0		1,768,163	0			0003
142835 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/06/2021	10/06/2022	10/06/2022	Expiry		38,313,798	173.28000000	(1,613,937)		0	1,233,667			0		1,233,667	0			0003
142837 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		908,040	80.41000000	(38,366)		0	29,326			0		29,326	0			0003
142839 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2021	10/06/2022	10/06/2022	Expiry		54,202,134	4579.55000000	(2,470,620)		0	1,888,502			0		1,888,502	0			0003
142846 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		55,175,497	4492.27000000	(3,167,437)		0	2,421,137			0		2,421,137	0			0003
142850 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		50,498,624	4509.73000000	(2,780,233)		0	2,125,165			0		2,125,165	0			0003
142854 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/06/2021	10/06/2022	10/06/2022	Expiry		81,147,710	4527.18312500	(4,286,166)		0	3,276,275			0		3,276,275	0			0003
141917 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		56,958,699	4726.70998000	(2,395,377)		0	1,922,864			0		1,922,864	0			0003
141918 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		62,471,057	4745.30835900	(2,496,178)		0	2,003,781			0		2,003,781	0			0003
141919 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		67,012,260	4786.58768800	(2,373,840)		0	1,905,576			0		1,905,576	0			0003
141920 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2021	10/20/2022	10/20/2022	Expiry		61,262,006	4823.78444600	(1,938,528)		0	1,556,133			0		1,556,133	0			0003
142247 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	SOCIETE GENERAL	10/20/2021	10/20/2022	10/20/2022	Expiry		36,917,641	4681.35000000	(829,934)		0	666,221			0		666,221	0			0003
142652 Call Options - Ishares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/20/2021	10/20/2022	10/20/2022	Expiry		18,713,268	115.29000000	(599,959)		0	481,611			0		481,611	0			0003
142653 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	10/20/2021	10/20/2022	10/20/2022	Expiry		30,563,038	175.46000000	(1,268,121)		0	1,017,971			0		1,017,971	0			0003
142669 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2021	10/20/2022	10/20/2022	Expiry		57,733,231	4711.28693400	(2,626,039)		0	2,108,026			0		2,108,026	0			0003
142670 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2021	10/20/2022	10/20/2022	Expiry		60,848,037	4695.86000000	(2,882,615)		0	2,313,990			0		2,313,990	0			0003
142672 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2021	10/20/2022	10/20/2022	Expiry		45,384,496	4672.28000000	(2,284,272)		0	1,833,676			0		1,833,676	0			0003
142673 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2021	10/20/2022	10/20/2022	Expiry		55,932,932	4638.25000000	(3,065,585)		0	2,460,875			0		2,460,875	0			0003
142674 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2021	10/20/2022	10/20/2022	Expiry		39,613,264	4626.00656200	(2,235,149)		0	1,794,243			0		1,794,243	0			0003
142685 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	10/20/2021	10/20/2022	10/20/2022	Expiry		602,958	84.03000000	(19,615)		0	15,746			0		15,746	0			0003
143633 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		34,787,087	178.51882400	(1,463,437)		0	1,238,293			0		1,238,293	0			0003
143674 Call Options - Ishares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	11/05/2021	11/04/2022	11/04/2022	Expiry		24,495,856	116.41344000	(809,570)		0	685,021			0		685,021	0			0003
143676 Call Options - Ishares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		920,213	85.16048100	(30,152)		0	25,513			0		25,513	0			0003
143688 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	11/05/2021	11/04/2022	11/04/2022	Expiry		61,804,040	4791.01084700	(3,420,177)		0	2,893,996			0		2,893,996	0			0003
143690 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/05/2021	11/04/2022	11/04/2022	Expiry		68,868,834	4803.69417800	(3,697,993)		0	3,129,071			0		3,129,071	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
143692 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		67,690,966	4838.45590000	(3,340,580)		0	2,826,645			0		2,826,645	0			0003
143694 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		50,368,670	4857.24602000	(2,371,366)		0	2,006,540			0		2,006,540	0			0003
143696 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		57,498,425	4872.74786900	(2,601,428)		0	2,201,208			0		2,201,208	0			0003
143698 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		55,800,670	4884.96144700	(2,445,768)		0	2,069,496			0		2,069,496	0			0003
143700 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		55,940,451	4896.70527200	(2,377,926)		0	2,012,092			0		2,012,092	0			0003
143702 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		72,826,919	4911.73736800	(2,974,024)		0	2,516,482			0		2,516,482	0			0003
143704 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		73,291,615	4952.13612600	(2,679,382)		0	2,267,178			0		2,267,178	0			0003
143706 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		49,314,482	4981.26081200	(1,658,844)		0	1,403,637			0		1,403,637	0			0003
143708 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		64,976,235	4998.17192000	(2,080,520)		0	1,760,440			0		1,760,440	0			0003
143740 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/05/2021	11/04/2022	11/04/2022	Expiry		53,513,866	4850.19972500	(1,129,881)		0	956,053			0		956,053	0			0003
143643 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		34,717,716	181.34406600	(1,474,139)		0	1,304,046			0		1,304,046	0			0003
143712 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		54,471,507	4883.05962400	(2,625,599)		0	2,322,646			0		2,322,646	0			0003
143714 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		78,131,591	4901.85146400	(3,596,521)		0	3,181,538			0		3,181,538	0			0003
143716 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		52,959,790	4910.77758800	(2,384,323)		0	2,109,209			0		2,109,209	0			0003
143718 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		57,444,775	4937.08616400	(2,419,922)		0	2,140,700			0		2,140,700	0			0003
143720 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		62,663,082	4973.26045600	(2,402,684)		0	2,125,460			0		2,125,460	0			0003
143722 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/19/2021	11/18/2022	11/18/2022	Expiry		54,979,756	4998.15964400	(1,973,070)		0	1,745,408			0		1,745,408	0			0003
143783 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SAQHS INTERNATIONAL W22LR0WP21HZNB6K528	11/19/2021	11/18/2022	11/18/2022	Expiry		19,158,630	115.90142400	(677,490)		0	599,318			0		599,318	0			0003
143796 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUG3GFU57PNE97	11/19/2021	11/18/2022	11/18/2022	Expiry		893,154	83.93119800	(31.803)		0	28,134			0		28,134	0			0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
143816 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	45,911,439	4791.45000000	(2,826,532)		.0	2,500,394			.0	2,500,394	0				0003
143824 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	54,701,274	4798.03000000	(3,320,217)		.0	2,937,115			.0	2,937,115	0				0003
143833 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	39,215,792	4834.67000000	(2,196,485)		.0	1,943,045			.0	1,943,045	0				0003
143838 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GMZ0031MB27	11/19/2021	11/18/2022	11/18/2022	Expiry	65,275,914	4850.17000000	(3,530,614)		.0	3,123,235			.0	3,123,235	0				0003
143908 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	G5GSEF7VJP5170UK5573	11/19/2021	11/18/2022	11/18/2022	Expiry	41,418,383	4847.82492400	(914,343)		.0	808,842			.0	808,842	0				0003
144154 Call Options - SPDR Gold shares	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2021	12/06/2022	12/06/2022	Expiry	34,704,382	174.78033000	(1,526,926)		(3,070)	1,419,272			.0	1,422,342	(3,070)				0003
144161 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2021	12/06/2022	12/06/2022	Expiry	43,530,960	4680.74839800	(3,112,617)		(326)	2,899,098			.0	2,899,424	(326)				0003
144164 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2021	12/06/2022	12/06/2022	Expiry	58,669,545	4695.44174200	(4,075,744)		(432)	3,796,152			.0	3,796,584	(432)				0003
144166 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/06/2021	12/06/2022	12/06/2022	Expiry	49,810,653	4730.33843400	(3,226,404)		(352)	3,005,066			.0	3,005,418	(352)				0003
144188 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	58,735,295	4884.62000000	(2,750,698)		.0	2,562,294			.0	2,562,294	0				0003
144196 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC . ROYAL BANK OF CANADA	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	52,457,155	4859.82000000	(2,598,572)		.0	2,420,588			.0	2,420,588	0				0003
144209 Call Options - iShares MSCI EAFE	Liability Hedge	Exhibit 5	Equity/Index	ES71P3U3RH1GC71XBU11		12/06/2021	12/06/2022	12/06/2022	Expiry	877,833	81.03634000	(37,236)		.0	34,686			.0	34,686	0				0003
144212 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	53,239,232	4833.19000000	(2,797,513)		.0	2,605,902			.0	2,605,902	0				0003
144221 Call Options - iShares U.S. Real Estate	Liability Hedge	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	12/06/2021	12/06/2022	12/06/2022	Expiry	19,425,523	116.05000000	(835,942)		.0	778,686			.0	778,686	0				0003
144224 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	49,315,115	4807.01930000	(2,742,974)		.0	2,555,099			.0	2,555,099	0				0003
144228 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	83,982,634	4791.87000000	(4,824,415)		.0	4,493,975			.0	4,493,975	0				0003
144230 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	46,167,762	4776.71430100	(2,738,645)		.0	2,551,067			.0	2,551,067	0				0003
144232 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	BARCLAYS BANK PLC .	G5GSEF7VJP5170UK5573	12/06/2021	12/06/2022	12/06/2022	Expiry	56,534,190	4752.84000000	(3,523,351)		.0	3,282,026			.0	3,282,026	0				0003
144244 Call Options - S&P 500	Liability Hedge	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	K81H1DSRPRMVMQJFXT09	12/06/2021	12/06/2022	12/06/2022	Expiry	35,486,803	4732.63426900	(1,122,412)		.0	1,045,534			.0	1,045,534	0				0003
144668 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	12/20/2021	12/20/2022	12/20/2022	Expiry	30,882,659	175.52804500	(1,381,140)		.0	1,339,517			.0	1,339,517	0				0003
144672 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	12/20/2021	12/20/2022	12/20/2022	Expiry	18,770,648	116.53101600	(749,015)		.0	726,442			.0	726,442	0				0003
144675 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6QLXDRUG3FUF57RNE957	12/20/2021	12/20/2022	12/20/2022	Expiry	953,968	79.97513600	(40,175)		.0	38,964			.0	38,964	0				0003
144684 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TIEFA76	12/20/2021	12/20/2022	12/20/2022	Expiry	58,674,326	4716.48065000	(3,637,756)		.0	3,528,125			.0	3,528,125	0				0003
144685 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TIEFA76	12/20/2021	12/20/2022	12/20/2022	Expiry	57,738,418	4754.39521600	(3,295,999)		.0	3,196,667			.0	3,196,667	0				0003
144686 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TIEFA76	12/20/2021	12/20/2022	12/20/2022	Expiry	51,331,356	4766.72887000	(2,853,801)		.0	2,767,796			.0	2,767,796	0				0003
144709 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	12/20/2021	12/20/2022	12/20/2022	Expiry	76,413,839	4659.38040000	(5,270,304)		.0	5,111,473			.0	5,111,473	0				0003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
144712 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		48,660,091	4700.94938200	(3,081,528)		0	2,988,660			0		2,988,660	0			0003
144715 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		50,270,695	4742.51836400	(2,911,608)		0	2,823,861			0		2,823,861	0			0003
144717 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		36,041,093	4708.25821400	0		0				0		0	0			0003
144718 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		48,735,976	4784.08734600	(2,571,020)		0	2,493,538			0		2,493,538	0			0003
144720 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		49,044,638	4808.29785200	(2,445,756)		0	2,372,048			0		2,372,048	0			0003
144724 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		50,272,339	4833.87876400	(2,359,240)		0	2,288,140			0		2,288,140	0			0003
144726 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2021	12/20/2022	12/20/2022	Expiry		56,364,433	4859.00287400	(2,487,272)		0	2,412,313			0		2,412,313	0			0003
0649999999. Subtotal - Written Options - Hedging Other - Call Options and Warrants												(786,397,299)	0	(540,626,096)	(165,564,734)	0	XXX	0	0	375,061,362	(540,626,096)	0	0	XXX
0709999999. Subtotal - Written Options - Hedging Other												(786,397,299)	0	(540,626,096)	(165,564,734)	0	XXX	0	0	375,061,362	(540,626,096)	0	0	XXX
0779999999. Subtotal - Written Options - Replications												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0849999999. Subtotal - Written Options - Income Generation												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0919999999. Subtotal - Written Options - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0929999999. Total Written Options - Call Options and Warrants												(786,397,299)	0	(540,626,096)	(165,564,734)	0	XXX	0	0	375,061,362	(540,626,096)	0	0	XXX
0939999999. Total Written Options - Put Options												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0949999999. Total Written Options - Caps												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0959999999. Total Written Options - Floors												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0969999999. Total Written Options - Collars												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0979999999. Total Written Options - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
0989999999. Total Written Options												(786,397,299)	0	(540,626,096)	(165,564,734)	0	XXX	0	0	375,061,362	(540,626,096)	0	0	XXX
1049999999. Subtotal - Swaps - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1109999999. Subtotal - Swaps - Hedging Effective Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1169999999. Subtotal - Swaps - Hedging Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1229999999. Subtotal - Swaps - Replication												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1289999999. Subtotal - Swaps - Income Generation												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1349999999. Subtotal - Swaps - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1359999999. Total Swaps - Interest Rate												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1369999999. Total Swaps - Credit Default												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1379999999. Total Swaps - Foreign Exchange												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1389999999. Total Swaps - Total Return												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1399999999. Total Swaps - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1409999999. Total Swaps												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
REC 2000000.00 GBP PAY [2474820.00] USD /152057	Asset Hedge	Schedule D	Currency	ROYAL BANK OF CANADA	06/16/2022	06/17/2022	06/17/2022	Expiry		2,474,820	1.23741000		0	(37,020)				0			(37,020)			0002
REC 2475800.00 USD PAY [2000000.00] GBP /152058	Asset Hedge	Schedule D	Currency	ROYAL BANK OF CANADA	06/16/2022	07/15/2022	07/15/2022	Expiry		2,475,800	1.23790000		0	104,800				0			104,800			0002
REC 2000000.00 GBP PAY [2372560.00] USD /154028	Asset Hedge	Schedule D	Currency	BARCLAYS BANK PLC	07/13/2022	07/15/2022	07/15/2022	Expiry		2,372,560	1.18628000		0	(1,560)				0			(1,560)			0002
REC 2398980.04 USD PAY [2018000.00] GBP /154029	Asset Hedge	Schedule D	Currency	BARCLAYS BANK PLC	07/13/2022	10/13/2022	10/13/2022	Expiry		2,398,980	1.18879090		0	115,209				0			115,209			0002
REC 201000.00 EUR PAY [203716.17] USD /154719	Asset Hedge	Schedule D	Currency	MORGAN STANLEY CAPITAL SERVICES	07/26/2022	07/27/2022	07/27/2022	Expiry		203,716	1.01351328		0	1,264				0			1,264			0002
REC 1234000.00 GBP PAY [1483979.85] USD /154725	Asset Hedge	Schedule D	Currency	BANK OF AMERICA, N.A.	07/26/2022	07/27/2022	07/27/2022	Expiry		1,483,980	1.20257670		0	14,837				0			14,837			0002

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
REC 204966.25 USD PAY [201000.00] EUR /154728	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ..	07/26/2022	10/19/2022	10/19/2022	Expiry .....	.....	204,966	1.01973259	.....	.....0	8,529	.....	.....	.....	.....0	.....	.....	.....8,529	.....	.....	0002
REC 5554068.20 USD PAY [5448000.00] EUR /154730	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ..	07/26/2022	10/20/2022	10/20/2022	Expiry .....	.....	5,554,068	1.01946920	.....	.....0	223,745	.....	.....	.....	.....0	.....	.....	.....223,745	.....	.....	0002
REC 5448000.00 EUR PAY [5519767.59] USD /154731	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ..	07/26/2022	07/27/2022	07/27/2022	Expiry .....	.....	5,519,768	1.01317320	.....	.....0	36,103	.....	.....	.....	.....0	.....	.....	.....36,103	.....	.....	0002
REC 1486842.65 USD PAY [1234000.00] GBP /154732	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A.	07/26/2022	10/13/2022	10/13/2022	Expiry .....	.....	1,486,843	1.20489680	.....	.....0	90,325	.....	.....	.....	.....0	.....	.....	.....90,325	.....	.....	0002
REC 183000.00 GBP PAY [220644.58] USD /154740	Asset Hedge	Schedule D	Currency.....	SOCIETE GENERAL	07/27/2022	07/28/2022	07/28/2022	Expiry .....	.....	220,645	1.20570809	.....	.....0	2,140	.....	.....	.....	.....0	.....	.....	.....2,140	.....	.....	0002
REC 221068.68 USD PAY [183000.00] GBP /154756	Asset Hedge	Schedule D	Currency.....	SOCIETE GENERAL	07/27/2022	10/13/2022	10/13/2022	Expiry .....	.....	221,068	1.20802557	.....	.....0	13,968	.....	.....	.....	.....0	.....	.....	.....13,968	.....	.....	0002
REC 3468890.45 USD PAY [3404000.00] EUR /154758	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	07/27/2022	10/20/2022	10/20/2022	Expiry .....	.....	3,468,890	1.01906300	.....	.....0	138,417	.....	.....	.....	.....0	.....	.....	.....138,417	.....	.....	0002
REC 3404000.00 EUR PAY [3447744.80] USD /154761	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	07/27/2022	07/28/2022	07/28/2022	Expiry .....	.....	3,447,745	1.01285100	.....	.....0	21,952	.....	.....	.....	.....0	.....	.....	.....21,952	.....	.....	0002
REC 102991.06 USD PAY [101000.00] EUR /154778	Asset Hedge	Schedule D	Currency.....	BNP PARIBAS LONDON	07/28/2022	10/20/2022	10/20/2022	Expiry .....	.....	102,991	1.01971347	.....	.....0	4,173	.....	.....	.....	.....0	.....	.....	.....4,173	.....	.....	0002
REC 101000.00 EUR PAY [102376.77] USD /154781	Asset Hedge	Schedule D	Currency.....	BNP PARIBAS LONDON	07/28/2022	07/28/2022	07/28/2022	Expiry .....	.....	102,377	1.01363139	.....	.....0	573	.....	.....	.....	.....0	.....	.....	.....573	.....	.....	0002
REC 200000.00 GBP PAY [241471.92] USD /154812	Asset Hedge	Schedule D	Currency.....	SOCIETE GENERAL	07/29/2022	08/01/2022	08/01/2022	Expiry .....	.....	241,472	1.20735960	.....	.....0	3,348	.....	.....	.....	.....0	.....	.....	.....3,348	.....	.....	0002
REC 403000.00 EUR PAY [408444.78] USD /154815	Asset Hedge	Schedule D	Currency.....	BARCLAYS BANK PLC .	07/29/2022	07/29/2022	07/29/2022	Expiry .....	.....	409,445	1.01599201	.....	.....0	1,494	.....	.....	.....	.....0	.....	.....	.....1,494	.....	.....	0002
REC 411857.38 USD PAY [403000.00] EUR /154816	Asset Hedge	Schedule D	Currency.....	BARCLAYS BANK PLC .	07/29/2022	10/20/2022	10/20/2022	Expiry .....	.....	411,857	1.02197861	.....	.....0	17,562	.....	.....	.....	.....0	.....	.....	.....17,562	.....	.....	0002
REC 244306.48 USD PAY [202000.00] GBP /154819	Asset Hedge	Schedule D	Currency.....	SOCIETE GENERAL	07/29/2022	10/13/2022	10/13/2022	Expiry .....	.....	244,306	1.20943802	.....	.....0	15,703	.....	.....	.....	.....0	.....	.....	.....15,703	.....	.....	0002
REC 900000.00 EUR PAY [914123.70] USD /155412	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	08/17/2022	08/18/2022	08/18/2022	Expiry .....	.....	914,124	1.01569300	.....	.....0	(6,294)	.....	.....	.....	.....0	.....	.....	.....(6,294)	.....	.....	0002
REC 925335.91 USD PAY [907000.00] EUR /155434	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	08/17/2022	10/20/2022	10/20/2022	Expiry .....	.....	925,336	1.02021600	.....	.....0	37,927	.....	.....	.....	.....0	.....	.....	.....37,927	.....	.....	0002
REC 476804.16 USD PAY [403000.00] GBP /155661	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ..	08/19/2022	10/13/2022	10/13/2022	Expiry .....	.....	476,804	1.18264060	.....	.....0	20,529	.....	.....	.....	.....0	.....	.....	.....20,529	.....	.....	0002
REC 400000.00 GBP PAY [472579.88] USD /155663	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ..	08/19/2022	08/22/2022	08/22/2022	Expiry .....	.....	472,580	1.18144970	.....	.....0	(2,100)	.....	.....	.....	.....0	.....	.....	.....(2,100)	.....	.....	0002
REC 5000000.00 GBP PAY [5683703.00] USD /156886	Asset Hedge	Schedule D	Currency.....	WELLS FARGO BANK, N.A.	09/16/2022	09/20/2022	09/20/2022	Expiry .....	.....	5,683,703	1.13874060	.....	.....0	(6,703)	.....	.....	.....	.....0	.....	.....	.....(6,703)	.....	.....	0002
REC 5696928.00 USD PAY [5000000.00] GBP /156887	Asset Hedge	Schedule D	Currency.....	WELLS FARGO BANK, N.A.	09/16/2022	10/13/2022	10/13/2022	Expiry .....	.....	5,696,928	1.13938560	.....	.....0	38,428	.....	.....	.....	.....0	.....	.....	.....38,428	.....	.....	0002
REC 20000.00 EUR PAY [196400.00] USD /157645	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A.	10/03/2022	12/20/2022	12/20/2022	Expiry .....	.....	196,400	98200000	.....	.....0	16,000	.....	.....	.....	.....0	.....	.....	.....16,000	.....	.....	0002
REC 75000.00 GBP PAY [848598.75] USD /157654	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A.	10/03/2022	12/20/2022	12/20/2022	Expiry .....	.....	848,599	1.13146500	.....	.....0	64,376	.....	.....	.....	.....0	.....	.....	.....64,376	.....	.....	0002
REC 150000.00 GBP PAY [169119.45] USD /157771	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	10/05/2022	10/06/2022	10/06/2022	Expiry .....	.....	169,119	1.12746300	.....	.....0	(1,899)	.....	.....	.....	.....0	.....	.....	.....(1,899)	.....	.....	0002
REC 150000.00 GBP PAY [168347.85] USD /157832	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA	10/06/2022	10/07/2022	10/07/2022	Expiry .....	.....	168,348	1.12231900	.....	.....0	(1,878)	.....	.....	.....	.....0	.....	.....	.....(1,878)	.....	.....	0002
REC 75000.00 GBP PAY [83966.25] USD /157918	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A.	10/06/2022	12/20/2022	12/20/2022	Expiry .....	.....	83,966	1.11955000	.....	.....0	7,331	.....	.....	.....	.....0	.....	.....	.....7,331	.....	.....	0002
REC 100000.00 EUR PAY [98095.00] USD /157942	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A.	10/07/2022	12/20/2022	12/20/2022	Expiry .....	.....	98,095	98095000	.....	.....0	8,105	.....	.....	.....	.....0	.....	.....	.....8,105	.....	.....	0002
REC 75000.00 GBP PAY [83463.00] USD /157943	Asset Hedge	Schedule BA	Currency.....	GOLDMAN SACHS INTERNATIONAL	10/07/2022	12/20/2022	12/20/2022	Expiry .....	.....	83,463	1.11284000	.....	.....0	7,835	.....	.....	.....	.....0	.....	.....	.....7,835	.....	.....	0002
REC 200000.00 EUR PAY [195070.60] USD /158168	Asset Hedge	Schedule BA	Currency.....	GOLDMAN SACHS INTERNATIONAL	10/10/2022	12/20/2022	12/20/2022	Expiry .....	.....	195,071	97535300	.....	.....0	17,329	.....	.....	.....	.....0	.....	.....	.....17,329	.....	.....	0002
REC 972522.40 USD PAY [1000000.00] EUR /158169	Asset Hedge	Schedule D	Currency.....	CITIBANK N.A.	10/10/2022	11/14/2022	11/14/2022	Expiry .....	.....	972,522	97252240	.....	.....0	(60,178)	.....	.....	.....	.....0	.....	.....	.....(60,178)	.....	.....	0002
REC 1000000.00 EUR PAY [970214.50] USD /158170	Asset Hedge	Schedule D	Currency.....	CITIBANK N.A.	10/10/2022	10/11/2022	10/11/2022	Expiry .....	.....	970,215	97021450	.....	.....0	86	.....	.....	.....	.....0	.....	.....	.....86	.....	.....	0002
REC 90000.00 GBP PAY [99477.90] USD /158183	Asset Hedge	Schedule D	Currency.....	CITIBANK N.A.	10/10/2022	12/20/2022	12/20/2022	Expiry .....	.....	99,478	1.10531000	.....	.....0	10,079	.....	.....	.....	.....0	.....	.....	.....10,079	.....	.....	0002

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)	
REC 925000.00 EUR PAY [897481.44] USD /158191	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	10/11/2022	10/11/2022	10/11/2022	Expiry .....	.....	897,481	.....	97025021	.....	.....	0	.....	.....	.....	0	.....	.....	46	.....	0002	
REC 899354.01 USD PAY [925000.00] EUR /158193	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	10/11/2022	11/10/2022	11/10/2022	Expiry .....	.....	899,354	.....	97227461	.....	.....	0	.....	.....	.....	0	.....	.....	(44,146)	.....	0002	
REC 100000.00 EUR PAY [97480.00] USD /158205	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A. E57ODZIWZ7FF32TIEFA76	10/11/2022	12/20/2022	12/20/2022	Expiry .....	.....	97,480	.....	97480000	.....	.....	0	.....	.....	.....	0	.....	.....	8,720	.....	0002	
REC 4000000.00 GBP PAY [4427440.00] USD /158214	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	10/11/2022	10/13/2022	10/13/2022	Expiry .....	.....	4,427,440	.....	1.10686000	.....	.....	0	.....	.....	.....	0	.....	.....	99,360	.....	0002	
REC 100000.00 EUR PAY [97888.50] USD /158273	Asset Hedge	Schedule BA	Currency.....	GOLDMAN SACHS INTERNATIONAL W22LROIIP21H2NBB6K528	10/11/2022	12/20/2022	12/20/2022	Expiry .....	.....	97,689	.....	97688500	.....	.....	0	.....	.....	.....	0	.....	.....	8,512	.....	0002	
REC 100000.00 EUR PAY [97741.84] USD /158274	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A. E57ODZIWZ7FF32TIEFA76	10/11/2022	12/20/2022	12/20/2022	Expiry .....	.....	97,742	.....	97741840	.....	.....	0	.....	.....	.....	0	.....	.....	8,458	.....	0002	
REC 200000.00 EUR PAY [194080.00] USD /158380	Asset Hedge	Schedule BA	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUG3FU57RNE97	10/13/2022	12/20/2022	12/20/2022	Expiry .....	.....	194,080	.....	97040000	.....	.....	0	.....	.....	.....	0	.....	.....	18,320	.....	0002	
REC 5000000.00 GBP PAY [5580729.50] USD /158399	Asset Hedge	Schedule D	Currency.....	BNP PARIBAS LONDON ROMUJISFPU8MPRO8K5P83	10/14/2022	10/17/2022	10/17/2022	Expiry .....	.....	5,580,730	.....	1.11814590	.....	.....	0	.....	.....	.....	0	.....	.....	85,771	.....	0002	
REC 5655158.94 USD PAY [5053000.00] GBP /158400	Asset Hedge	Schedule D	Currency.....	BNP PARIBAS LONDON ROMUJISFPU8MPRO8K5P83	10/14/2022	12/01/2022	12/01/2022	Expiry .....	.....	5,655,159	.....	1.11916860	.....	.....	0	.....	.....	.....	0	.....	.....	(537,798)	.....	0002	
REC 3000000.00 EUR PAY [2918204.70] USD /158402	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ... I7331LVCZKQKX5T7XV54	10/14/2022	10/17/2022	10/17/2022	Expiry .....	.....	2,918,205	.....	97273490	.....	.....	0	.....	.....	.....	0	.....	.....	34,395	.....	0002	
REC 2921595.60 USD PAY [3000000.00] EUR /158403	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES ... I7331LVCZKQKX5T7XV54	10/14/2022	11/03/2022	11/03/2022	Expiry .....	.....	2,921,596	.....	97386520	.....	.....	0	.....	.....	.....	0	.....	.....	(2,204)	.....	0002	
REC 201000.00 EUR PAY [196766.94] USD /158412	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	10/17/2022	10/19/2022	10/19/2022	Expiry .....	.....	196,767	.....	97894000	.....	.....	0	.....	.....	.....	0	.....	.....	(330)	.....	0002	
REC 10464000.00 EUR PAY [10287263.04] USD /158442	Asset Hedge	Schedule D	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJUFXT09	10/18/2022	10/20/2022	10/20/2022	Expiry .....	.....	10,287,263	.....	98311000	.....	.....	0	.....	.....	.....	0	.....	.....	(49,285)	.....	0002	
REC 5000000.00 GBP PAY [5780500.00] USD /159144	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	10/28/2022	11/01/2022	11/01/2022	Expiry .....	.....	5,780,500	.....	1.15610000	.....	.....	0	.....	.....	.....	0	.....	.....	(39,500)	.....	0002	
REC 3940000.00 EUR PAY [3894690.00] USD /159329	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	11/01/2022	11/03/2022	11/03/2022	Expiry .....	.....	3,894,690	.....	98850000	.....	.....	0	.....	.....	.....	0	.....	.....	(54,766)	.....	0002	
REC 925000.00 EUR PAY [925989.75] USD /159962	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	11/08/2022	11/10/2022	11/10/2022	Expiry .....	.....	925,990	.....	1.00107000	.....	.....	0	.....	.....	.....	0	.....	.....	17,510	.....	0002	
REC 1000000.00 EUR PAY [1003230.00] USD /160137	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	11/09/2022	11/14/2022	11/14/2022	Expiry .....	.....	1,003,230	.....	1.00323000	.....	.....	0	.....	.....	.....	0	.....	.....	29,470	.....	0002	
REC 357921.00 USD PAY [300000.00] GBP /160357	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A. E57ODZIWZ7FF32TIEFA76	11/15/2022	12/20/2022	12/20/2022	Expiry .....	.....	357,921	.....	1.19307000	.....	.....	0	.....	.....	.....	0	.....	.....	(7,269)	.....	0002	
REC 354219.00 USD PAY [300000.00] GBP /160647	Asset Hedge	Schedule BA	Currency.....	CITIBANK N.A. E57ODZIWZ7FF32TIEFA76	11/17/2022	12/20/2022	12/20/2022	Expiry .....	.....	354,219	.....	1.18073000	.....	.....	0	.....	.....	.....	0	.....	.....	(10,971)	.....	0002	
REC 5053000.00 GBP PAY [6101960.86] USD /161254	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. I7331LVCZKQKX5T7XV54	11/23/2022	12/01/2022	12/01/2022	Expiry .....	.....	6,101,961	.....	1.20759170	.....	.....	0	.....	.....	.....	0	.....	.....	90,996	.....	0002	
REC 6250000.00 EUR PAY [6476912.50] USD /161343	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. I7331LVCZKQKX5T7XV54	11/23/2022	11/28/2022	11/28/2022	Expiry .....	.....	6,476,913	.....	1.03630600	.....	.....	0	.....	.....	.....	0	.....	.....	(15,038)	.....	0002	
REC 6481290.00 USD PAY [6250000.00] EUR /161344	Asset Hedge	Schedule D	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. I7331LVCZKQKX5T7XV54	11/23/2022	12/08/2022	12/08/2022	Expiry .....	.....	6,481,290	.....	1.03700640	.....	.....	0	.....	.....	.....	0	.....	.....	(113,710)	.....	0002	
REC 15000000.00 EUR PAY [15540900.00] USD /161414	Asset Hedge	Schedule D	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	11/29/2022	11/30/2022	11/30/2022	Expiry .....	.....	15,540,900	.....	1.03606000	.....	.....	0	.....	.....	.....	0	.....	.....	63,600	.....	0002	
REC 10000000.00 EUR PAY [10364523.00] USD /161430	Asset Hedge	Schedule D	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	11/30/2022	12/01/2022	12/01/2022	Expiry .....	.....	10,364,523	.....	1.03645230	.....	.....	0	.....	.....	.....	0	.....	.....	156,477	.....	0002	
REC 6541875.00 USD PAY [6250000.00] EUR /161707	ASSET HEDGE	Schedule D	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJUFXT09	12/06/2022	12/08/2022	12/08/2022	Expiry .....	.....	6,541,875	.....	1.04670000	.....	.....	0	.....	.....	.....	0	.....	.....	(53,125)	.....	0002	
REC 6250000.00 EUR PAY [6541875.00] EUR /161708	ASSET HEDGE	Schedule D	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJUFXT09	12/06/2022	12/08/2022	12/08/2022	Expiry .....	.....	6,541,875	.....	1.04670000	.....	.....	0	.....	.....	.....	0	.....	.....	53,125	.....	0002	
REC 1062784.50 USD PAY [1000000.00] EUR /162231	Asset Hedge	Schedule BA	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJUFXT09	12/13/2022	12/20/2022	12/20/2022	Expiry .....	.....	1,062,785	.....	1.06278450	.....	.....	0	.....	.....	.....	0	.....	.....	785	.....	0002	
REC 482655.89 USD PAY [390000.00] GBP /162250	Asset Hedge	Schedule BA	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	12/13/2022	12/20/2022	12/20/2022	Expiry .....	.....	482,656	.....	1.23757921	.....	.....	0	.....	.....	.....	0	.....	.....	7,909	.....	0002	
1439999999. Subtotal - Forwards - Hedging Other													0	0	679,846	0	0	XXX	0	0	0	679,846	0	0	XXX
1479999999. Subtotal - Forwards													0	0	679,846	0	0	XXX	0	0	0	679,846	0	0	XXX
1509999999. Subtotal - SSAP No. 108 Adjustments													0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1689999999. Subtotal - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108													0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1699999999. Subtotal - Hedging Effective Variable Annuity Guarantees Under SSAP No.108													0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1709999999. Subtotal - Hedging Other													432,313,830	0	277,376,843	68,726,824	0	XXX	0	0	(207,970,174)	277,376,843	0	0	XXX
1719999999. Subtotal - Replication													0	0	0	0	0	XXX	0	0	0	0	0	0	XXX

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART A - SECTION 2

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Terminated During Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule / Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Termination Date	Indicate Exercise, Expiration, Maturity or Sale	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Consideration Received (Paid) on Termination	Current Year Income	Book/ Adjusted Carrying Value	Code	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Gain (Loss) on Termination Recognized	Adjustment to Carrying Value of Hedged Item	Gain (Loss) on Termination Deferred	Hedge Effectiveness at Inception and at Termination (b)
1729999999. Subtotal - Income Generation												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1739999999. Subtotal - Other												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1749999999. Subtotal - Adjustments for SSAP No. 108 Derivatives												0	0	0	0	0	XXX	0	0	0	0	0	0	XXX
1759999999 - Totals												432,313,830	0	277,376,843	68,726,824	0	XXX	0	0	(207,970,174)	277,376,843	0	0	XXX

(a)	Code	Description of Hedged Risk(s)
(b)	Code	Financial or Economic Impact of the Hedge at the End of the Reporting Period
	0002	Currency derivatives hedging foreign investments or liabilities back to USD
	0003	Equity derivatives hedging portfolio's exposure to equity markets

Schedule DB - Part B - Section 1 - Futures Contracts Open

N O N E

Schedule DB - Part B - Section 1B - Brokers with whom cash deposits have been made

N O N E

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART B - SECTION 2

Future Contracts Terminated December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Change in Variation Margin			19	20
															16	17	18		
Ticker Symbol	Number of Contracts	Notional Amount	Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Date of Maturity or Expiration	Exchange	Trade Date	Transaction Price	Termination Date	Termination Price	Indicate Exercise, Expiration, Maturity or Sale	Cumulative Variation Margin at Termination	Gain (Loss) Recognized in Current Year	Gain (Loss) Used to Adjust Basis of Hedged Item	Deferred	Hedge Effective-ness at Inception and at Termination (b)	Value of One (1) Point
TYZ2	421	42,100,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	10/25/2022	110.9219		58,334	58,334			0001	1,000
FVZ2	842	84,200,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	10/25/2022	106.8140		152,032	152,032			0001	1,000
FVZ2	263	26,300,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	10/27/2022	107.0312		104,611	104,611			0001	1,000
TYZ2	337	33,700,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	10/31/2022	110.6563		(42,812)	(42,812)			0001	1,000
TUZ2	83	16,600,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	10/31/2022	102.2109		(13,400)	(13,400)			0001	1,000
FVZ2	673	67,300,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	10/31/2022	106.6212		(8,238)	(8,238)			0001	1,000
TYZ2	178	17,800,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	11/01/2022	110.8100		4,745	4,745			0001	1,000
FVZ2	53	5,300,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/01/2022	106.7031		3,692	3,692			0001	1,000
UXY22	172	17,200,000	US ULTRA BOND 10Y /158534	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	MARKET_EXCHANGE 9R7GPTS07KV3UQJZQ078	10/18/2022	116.5462	11/01/2022	116.3662		(31,896)	(31,896)			0001	1,000
TUZ2	44	8,800,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/02/2022	102.0938		(17,408)	(17,408)			0001	1,000
FVZ2	95	9,500,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/02/2022	106.6094		(2,284)	(2,284)			0001	1,000
UXY22	129	12,900,000	US ULTRA BOND 10Y /158534	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	MARKET_EXCHANGE 9R7GPTS07KV3UQJZQ078	10/18/2022	116.5462	11/02/2022	116.4368		(14,814)	(14,814)			0001	1,000
TYZ2	673	67,300,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	11/07/2022	109.8750		(611,313)	(611,313)			0001	1,000
TUZ2	239	47,800,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/07/2022	101.7335		(266,781)	(266,781)			0001	1,000
FVZ2	337	33,700,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/07/2022	106.0234		(205,583)	(205,583)			0001	1,000
TYZ2	65	6,500,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	11/09/2022	110.1250		(42,792)	(42,792)			0001	1,000
FVZ2	116	11,600,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/09/2022	106.2188		(48,098)	(48,098)			0001	1,000
UXY22	129	12,900,000	US ULTRA BOND 10Y /158534	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	MARKET_EXCHANGE 9R7GPTS07KV3UQJZQ078	10/18/2022	116.5462	11/09/2022	115.2813		(163,874)	(163,874)			0001	1,000
TUZ2	167	33,400,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/10/2022	102.3508		19,766	19,766			0001	1,000
TUZ2	61	12,200,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/10/2022	102.4414		18,273	18,273			0001	1,000
UXY22	125	12,500,000	US ULTRA BOND 10Y /158534	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	MARKET_EXCHANGE 9R7GPTS07KV3UQJZQ078	10/18/2022	116.5462	11/10/2022	117.3087		94,633	94,633			0001	1,000
TYZ2	206	20,600,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	11/16/2022	112.9688		450,205	450,205			0001	1,000
TUZ2	39	7,800,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/16/2022	102.4141		9,553	9,553			0001	1,000
FVZ2	873	87,300,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/16/2022	108.2188		1,384,019	1,384,019			0001	1,000
TUZ2	1,067	213,400,000	US 2YR NOTE FUTURE II /158503	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	102.2891	11/21/2022	102.1602		(280,450)	(280,450)			0001	1,000
TUH3	161	32,200,000	US 2YR NOTE FUTURE II /160789	Portfolio Hedge	Schedule BA, D	Interest	03/31/2023	CBOT 9R7GPTS07KV3UQJZQ078	11/21/2022	102.4469	11/21/2022	102.4336		(5,500)	(5,500)			0001	1,000
FVZ2	105	10,500,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/21/2022	107.7266		114,782	114,782			0001	1,000
TYZ2	520	52,000,000	US 10Y NOTE FUTURE II /158502	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	110.7780	11/22/2022	112.3125		795,163	795,163			0001	1,000
FVZ2	603	60,300,000	US 5YR NOTE FUTURE II /158501	Portfolio Hedge	Schedule BA, D	Interest	12/30/2022	CBOT 9R7GPTS07KV3UQJZQ078	10/18/2022	106.6283	11/22/2022	107.5625		560,223	560,223			0001	1,000

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART B - SECTION 2

Future Contracts Terminated December 31 of Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Change in Variation Margin			19	20
															16	17	18		
Ticker Symbol	Number of Contracts	Notional Amount	Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Date of Maturity or Expiration	Exchange	Trade Date	Transaction Price	Termination Date	Termination Price	Indicate Exercise, Expiration, Maturity or Sale	Cumulative Variation Margin at Termination	Gain (Loss) Recognized in Current Year	Gain (Loss) Used to Adjust Basis of Hedged Item	Deferred	Hedge Effective-ness at Inception and at Termination (b)	Value of One (1) Point
TUH3	 906	 181,200,000	US 2YR NOTE FUTURE II /160789	Portfolio Hedge	Schedule BA, D	Interest	.03/31/2023	CBOT 9R7GPTS07KV3UQJZ0078	.11/21/2022	 102.4469	.11/28/2022	 102.4792	.....	..... 53,961	 53,961	.....	.....	0001	 1,000
FVH3	 603	 60,300,000	US 5YR NOTE FUTURE II /161161	Portfolio Hedge	Schedule BA, D	Interest	.03/31/2023	CBOT 9R7GPTS07KV3UQJZ0078	.11/22/2022	 107.9141	.11/30/2022	 108.1327	.....	..... 128,716	 128,716	.....	.....	0001	 1,000
TYH3	 187	 18,700,000	US 10Y NOTE FUTURE II /161145	Portfolio Hedge	Schedule BA, D	Interest	.03/31/2023	CBOT 9R7GPTS07KV3UQJZ0078	.11/22/2022	 112.6048	.12/01/2022	 114.2096	.....	..... 299,099	 299,099	.....	.....	0001	 1,000
TYH3	 333	 33,300,000	US 10Y NOTE FUTURE II /161145	Portfolio Hedge	Schedule BA, D	Interest	.03/31/2023	CBOT 9R7GPTS07KV3UQJZ0078	.11/22/2022	 112.6048	.12/05/2022	 114.4756	.....	..... 621,198	 621,198	.....	.....	0001	 1,000
1539999999. Subtotal - Long Futures - Hedging Other														3,117,763	3,117,763	0	0	XXX	XXX
1579999999. Subtotal - Long Futures														3,117,763	3,117,763	0	0	XXX	XXX
UXYZ2	 56	 5,600,000	US ULTRA BOND 10Y /160237	Portfolio Hedge	Schedule BA, D	Interest	.12/30/2022	MARKET_EXCHANGE 9R7GPTS07KV3UQJZ0078	.11/10/2022	 117.3087	.11/10/2022	 118.0781	.....	..... (43,397)	 (43,397)	.....	.....	0001	 1,000
1609999999. Subtotal - Short Futures - Hedging Other														(43,397)	(43,397)	0	0	XXX	XXX
1649999999. Subtotal - Short Futures														(43,397)	(43,397)	0	0	XXX	XXX
1679999999. Subtotal - SSAP No. 108 Adjustments														0	0	0	0	XXX	XXX
1689999999. Subtotal - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108														0	0	0	0	XXX	XXX
1699999999. Subtotal - Hedging Effective Variable Annuity Guarantees Under SSAP No.108														0	0	0	0	XXX	XXX
1709999999. Subtotal - Hedging Other														3,074,366	3,074,366	0	0	XXX	XXX
1719999999. Subtotal - Replication														0	0	0	0	XXX	XXX
1729999999. Subtotal - Income Generation														0	0	0	0	XXX	XXX
1739999999. Subtotal - Other														0	0	0	0	XXX	XXX
1749999999. Subtotal - Adjustments for SSAP No. 108 Derivatives														0	0	0	0	XXX	XXX
1759999999 - Totals														3,074,366	3,074,366	0	0	XXX	XXX

(a)	Code	Description of Hedged Risk(s)
(b)	Code	Financial or Economic Impact of the Hedge at the End of the Reporting Period
	0001	Interest rate hedges reduced the portfolio's interest rate risk (duration, convexity, volatility, yield curve)

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE DB - PART D - SECTION 1

Counterparty Exposure for Derivative Instruments Open December 31 of Current Year

1	2	3	Counterparty Offset		Book/Adjusted Carrying Value			Fair Value			12	13
			4	5	6	7	8	9	10	11		
Description of Exchange, Counterparty or Central Clearinghouse	Master Agreement (Y or N)	Credit Support Annex (Y or N)	Fair Value of Acceptable Collateral	Present Value of Financing Premium	Contracts With Book/Adjusted Carrying Value >0	Contracts With Book/Adjusted Carrying Value <0	Exposure Net of Collateral	Contracts With Fair Value >0	Contracts With Fair Value <0	Exposure Net of Collateral	Potential Exposure	Off-Balance Sheet Exposure
0199999999 - Aggregate Sum of Exchange Traded Derivatives	XXX	XXX	XXX				0			0		0
Bank Of America NA	Y	Y	15,640,000		17,280,337	(10,062,923)	0	8,405,380		0	19,158	0
Barclays Bank PLC	Y	Y	57,440,000		166,667,837	(116,000,792)	0	56,667,980		0		0
BNP Paribas London	Y	Y	18,810,000		36,455,161	(23,776,767)	0	9,548,517		0		0
Citibank N.A.	Y	Y	35,888,721		121,473,747	(92,066,158)	0	34,563,835		0	53,622	0
Credit Suisse International	Y	Y	0		0	0	0	0		0	0	0
Goldman Sachs International	Y	Y	10,490,000		14,765,921	(10,127,063)	0	7,260,962		0	0	0
JPMorgan Chase Bank, N.A.	Y	Y	14,800,000		24,358,407	(8,560,171)	998,236	15,147,720		347,720	674,991	674,991
Morgan Stanley & Co International PLC	Y	Y	22,615,000		66,818,982	(50,893,487)	0	21,916,071		0	0	0
Morgan Stanley Capital Services	Y	Y	310,000		388,988	(3,866)	75,121	385,121		75,121	278,870	278,870
MORGAN STANLEYCBO	Y	Y	0		344,021,525	(266,110,606)	77,910,920	102,595,762		102,595,762	0	0
Royal Bank of Canada	Y	Y	0		16,701,898	(15,299,973)	1,401,924	720,751		720,751	631,195	631,195
Societe Generale	Y	Y	8,930,000		6,611,082	(4,522,091)	0	1,009,346		0	0	0
UBS AG	Y	Y	9,450,000		10,069,486	(708,919)	0	9,051,124		0	0	0
Wells Fargo Bank, N.A.	Y	Y	14,360,000		22,185,416	(7,778,024)	47,392	13,834,847		0	897,784	897,784
0299999999. Total NAIC 1 Designation			208,733,721	0	847,798,787	(605,910,842)	80,433,593	281,107,417	0	103,739,355	2,555,620	2,482,840
0899999999. Aggregate Sum of Central Clearinghouses (Excluding Exchange Traded)					25,166,766	(94,964,522)	0		(69,797,756)	0	55,104,141	
.....												
.....												
.....												
.....												
.....												
0999999999 - Gross Totals			208,733,721	0	872,965,553	(700,875,364)	80,433,593	281,107,417	(69,797,756)	103,739,355	57,659,761	2,482,840
1. Offset per SSAP No. 64												
2. Net after right of offset per SSAP No. 64					872,965,553	(700,875,364)						

Collateral Pledged by Reporting Entity

[illegible]

Collateral Pledged to Reporting Entity

1	2	3	4	5	6	7	8	9
Exchange, Counterparty or Central Clearinghouse	Type of Asset Pledged	CUSIP Identification	Description	Fair Value	Par Value	Book/Adjusted Carrying Value	Maturity Date	Type of Margin (I, V or IV)
Goldman Sachs International	W2LR0WP21HZNBB6K528	Cash.....	Cash Collateral	10,490,000	10,490,000	XXX		V.....
Bank Of America NA	B4TYDEB6GKMZ0031MB27	Cash.....	Cash Collateral	15,640,000	15,640,000	XXX		V.....
Barclays Bank Plc	G5GSEF7VJPS170UK5573	Cash.....	Cash Collateral	57,440,000	57,440,000	XXX		V.....
BNP Paribas	ROMUWSFPU8MPRO8KSP83	Cash.....	Cash Collateral	18,810,000	18,810,000	XXX		V.....
Citibank NA	E570DZINZ7FF32TWEFA76	Cash.....	Cash Collateral	35,888,721	35,888,721	XXX		V.....
Morgan Stanley Capital Services	I7331LVCZKQKX5T7XV54	Cash.....	Cash Collateral	310,000	310,000	XXX		V.....
Morgan Stanley & Co International PLC	4PQUHNGJPFQFNF3BB653	Cash.....	Cash Collateral	22,615,000	22,615,000	XXX		V.....
Societe Generale	C2RNE8IBXP4ROTDBPU41	Cash.....	Cash Collateral	8,930,000	8,930,000	XXX		V.....
UBS AG	BFMBT61CT2L1QCEMIK50	Cash.....	Cash Collateral	9,450,000	9,450,000	XXX		V.....
JPMorgan Chase Bank, N.A.	7H6GLXDRUGQFU57RNE97	Cash.....	Cash Collateral	14,800,000	14,800,000	XXX		V.....
Wells Fargo Bank NA	KB1H1DSPAIFMIMCUFX09	Cash.....	Cash Collateral	14,360,000	14,360,000	XXX		V.....
0299999999 - Total				208,733,721	208,733,721	XXX	XXX	XXX

Schedule DB - Part E - Derivatives Hedging Variable Annuity Guarantees as of December 31 of
Current Year

N O N E

Schedule DL - Part 1 - Reinvested Collateral Assets Owned

N O N E

Schedule DL - Part 2 - Reinvested Collateral Assets Owned

N O N E

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE E - PART 1 - CASH

1	2	3	4	5	6	7
Depository	Code	Rate of Interest	Amount of Interest Received During Year	Amount of Interest Accrued December 31 of Current Year	Balance	*
Bank of New York Mellon New York, NY					71,022,471	.XXX.
PNC Bank Pittsburgh, PA					(37,685,229)	.XXX.
Wells Fargo Bank / Norwest Bank Phoenix, AZ					266,379	.XXX.
Huntington Bank Columbus, OH					28,819	.XXX.
FHLB Cincinnati, OH		3.750	289,751		21,056,570	.XXX.
State Street Global Services Kansas City, MO					11,036,224	.XXX.
Morgan Stanley New York, NY					135,769	.XXX.
0199998 Deposits in ... depositories which do not exceed the allowable limit in any one depository (See instructions) - open depositories	XXX	XXX				XXX
0199999. Totals - Open Depositories	XXX	XXX	289,751	0	65,861,003	XXX
0299998 Deposits in ... depositories which do not exceed the allowable limit in any one depository (See instructions) - suspended depositories	XXX	XXX				XXX
0299999. Totals - Suspended Depositories	XXX	XXX	0	0	0	XXX
0399999. Total Cash on Deposit	XXX	XXX	289,751	0	65,861,003	XXX
0499999. Cash in Company's Office	XXX	XXX	XXX	XXX		XXX
.....						
.....						
.....						
.....						
.....						
0599999 Total - Cash	XXX	XXX	289,751	0	65,861,003	XXX

TOTALS OF DEPOSITORY BALANCES ON THE LAST DAY OF EACH MONTH DURING THE CURRENT YEAR

1. January.....	624,846,335	4. April.....	263,466,407	7. July.....	237,987,201	10. October.....	651,439,802
2. February....	814,047,666	5. May.....	278,211,079	8. August.....	155,323,851	11. November...	172,289,643
3. March.....	374,131,527	6. June.....	320,606,225	9. September	227,941,486	12. December	65,861,003

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned December 31 of Current Year

1	2	3	4	5	6	7	8	9
CUSIP	Description	Code	Date Acquired	Rate of Interest	Maturity Date	Book/Adjusted Carrying Value	Amount of Interest Due and Accrued	Amount Received During Year
0109999999	Total - U.S. Government Bonds					0	0	0
0309999999	Total - All Other Government Bonds					0	0	0
0509999999	Total - U.S. States, Territories and Possessions Bonds					0	0	0
0709999999	Total - U.S. Political Subdivisions Bonds					0	0	0
0909999999	Total - U.S. Special Revenues Bonds					0	0	0
.....	AMCOR FLEXIBLES NORTH AMERICA INC COMMER .....	.....	12/16/2022	0.000	02/02/2023	9,956,349	0	21,683
.....	AMEREN CORP FIXED COUPON 0 MATURITY 201 .....	.....	12/14/2022	0.000	01/05/2023	9,994,710	0	22,419
.....	AMERICAN HONDA FINANCE CORP COMMERCIAL P .....	.....	12/09/2022	0.000	03/08/2023	34,680,854	0	95,565
.....	AMPHENOL CORP COMMERCIAL PAPER .....	.....	12/16/2022	0.000	02/01/2023	19,916,326	0	34,881
.....	AVANGRID INC COMMERCIAL PAPER .....	.....	12/27/2022	0.000	02/02/2023	29,877,271	0	15,271
.....	BECTON DICKINSON AND CO COMMERCIAL PAPER .....	.....	12/13/2022	0.000	01/17/2023	19,958,118	0	49,507
.....	CENTERPOINT ENER FIXED COUPON 0 MATURIT .....	.....	12/14/2022	0.000	01/27/2023	9,965,400	0	22,494
.....	CENTERPOINT ENERGY INC COMMERCIAL PAPER .....	.....	12/09/2022	0.000	01/30/2023	8,467,377	0	25,696
.....	CENTERPOINT ENERGY INC COMMERCIAL PAPER .....	.....	12/12/2022	0.000	02/01/2023	19,918,129	0	57,707
.....	COMMONWEALTH EDISON CO COMMERCIAL PAPER .....	.....	12/20/2022	0.000	01/03/2023	19,994,825	0	30,992
.....	DOLLAR GENERAL CORP COMMERCIAL PAPER .....	.....	12/16/2022	0.000	01/05/2023	10,994,121	0	23,454
.....	DOMINION ENERGY INC COMMERCIAL PAPER .....	.....	12/16/2022	0.000	02/07/2023	14,925,842	0	31,842
.....	DOVER CORP COMMERCIAL PAPER .....	.....	12/09/2022	0.000	01/18/2023	26,940,151	0	80,551
.....	DUKE ENERGY CORP COMMERCIAL PAPER .....	.....	12/20/2022	0.000	01/10/2023	17,979,268	0	27,568
.....	ENTERPRISE PRODUCTS OPERATING LLC COMMER .....	.....	12/30/2022	0.000	01/03/2023	39,989,998	0	9,998
.....	EQUIFAX INC COMMERCIAL PAPER .....	.....	12/15/2022	0.000	01/17/2023	11,899,768	0	26,692
.....	EVERGY KANSAS CENTRAL INC COMMERCIAL PAP .....	.....	12/13/2022	0.000	02/02/2023	28,570,825	0	76,149
.....	EXELON CORP COMMERCIAL PAPER .....	.....	12/21/2022	0.000	01/12/2023	24,963,284	0	33,284
.....	FISERV INC COMMERCIAL PAPER .....	.....	12/29/2022	0.000	02/06/2023	19,903,761	0	7,978
.....	GENERAL MILLS INC COMMERCIAL PAPER .....	.....	12/21/2022	0.000	01/09/2023	19,979,839	0	27,655
.....	HP INC COMMERCIAL PAPER .....	.....	12/16/2022	0.000	01/11/2023	19,973,555	0	42,166
.....	HP INC COMMERCIAL PAPER .....	.....	12/27/2022	0.000	01/23/2023	9,970,769	0	6,619
.....	MARRIOTT INTERNATIONAL INC/MD COMMERCIAL .....	.....	12/27/2022	0.000	01/19/2023	7,981,188	0	5,210
.....	MCCORMICK & CO INC/MD COMMERCIAL PAPER .....	.....	12/29/2022	0.000	01/03/2023	34,991,345	0	8,651
.....	MERCEDES-BENZ FINANCE NORTH AMERICA LLC .....	.....	12/15/2022	0.000	01/31/2023	34,859,701	0	74,367
.....	MOHAWK INDUSTR FIXED COUPON 0 MATURITY .....	.....	12/15/2022	0.000	01/12/2023	14,977,950	0	33,950
.....	MONDELEZ INTERNATIONAL INC COMMERCIAL PA .....	.....	12/20/2022	0.000	02/06/2023	9,952,425	0	15,758
.....	MOSAIC CO/THE COMMERCIAL PAPER .....	.....	12/28/2022	0.000	01/11/2023	10,985,937	0	5,615
.....	NASDAQ INC COMMERCIAL PAPER .....	.....	12/15/2022	0.000	01/18/2023	19,955,512	0	44,290
.....	NATIONAL RURAL UTILITIES COOPERATIVE FIN .....	.....	12/21/2022	0.000	01/23/2023	10,969,102	0	15,384
.....	ORACLE CORP COMMERCIAL PAPER .....	.....	12/15/2022	0.000	01/26/2023	14,452,568	0	32,077
.....	PARKER-HANNIFIN CORP COMMERCIAL PAPER .....	.....	12/20/2022	0.000	03/20/2023	8,507,986	0	13,981
.....	PENSKE TRUCK LEASING CO LP COMMERCIAL PA .....	.....	12/28/2022	0.000	01/04/2023	14,994,310	0	7,580
.....	PENSKE TRUCK LEASING CO LP COMMERCIAL PA .....	.....	12/20/2022	0.000	01/10/2023	19,976,463	0	31,296
.....	RYDER SYSTEM INC COMMERCIAL PAPER .....	.....	12/21/2022	0.000	01/23/2023	9,970,938	0	11,840
.....	SEMPRA ENERGY COMMERCIAL PAPER .....	.....	12/19/2022	0.000	01/04/2023	19,992,154	0	31,321
.....	SHERWIN-WILLIAMS CO/THE COMMERCIAL PAPER .....	.....	12/20/2022	0.000	01/26/2023	14,950,971	0	21,471
.....	SOUTHERN CO GAS CAPITAL CORP COMMERCIAL .....	.....	12/13/2022	0.000	01/17/2023	17,961,100	0	45,975
.....	SPIRE INC COMMERCIAL PAPER .....	.....	12/07/2022	0.000	01/20/2023	24,937,119	0	82,258
.....	SPIRE INC COMMERCIAL PAPER .....	.....	12/20/2022	0.000	02/06/2023	9,951,522	0	16,055
.....	VF CORP COMMERCIAL PAPER .....	.....	12/30/2022	0.000	01/03/2023	9,997,499	0	2,499
.....	VF CORP COMMERCIAL PAPER .....	.....	12/09/2022	0.000	02/06/2023	24,878,422	0	67,034
.....	VII CREDIT INC COMMERCIAL PAPER .....	.....	12/27/2022	0.000	01/10/2023	9,988,242	0	6,520
.....	VII CREDIT INC COMMERCIAL PAPER .....	.....	12/21/2022	0.000	02/22/2023	14,893,906	0	20,231
.....	WALGREENS BOOTS ALLIANCE INC COMMERCIAL .....	.....	12/14/2022	0.000	01/25/2023	9,967,592	0	22,829
.....	WALGREENS BOOTS ALLIANCE INC COMMERCIAL .....	.....	12/15/2022	0.000	02/03/2023	34,842,449	0	75,879
.....	WALGREENS BOOTS ALLIANCE INC COMMERCIAL .....	.....	12/29/2022	0.000	02/06/2023	34,824,927	0	14,510
.....	WASTE MANAGEMENT INC COMMERCIAL PAPER .....	.....	12/16/2022	0.000	02/14/2023	49,799,302	0	108,452
.....	WILLIAMS COS INC/THE COMMERCIAL PAPER .....	.....	12/21/2022	0.000	01/09/2023	21,976,744	0	31,897
.....	WISCONSIN GAS LLC COMMERCIAL PAPER .....	.....	12/27/2022	0.000	01/05/2023	29,984,824	0	18,949
.....	ALIMENTATION COUCHE-TARD INC COMMERCIAL .....	.....	12/07/2022	0.000	01/05/2023	9,994,873	0	31,928

ANNUAL STATEMENT FOR THE YEAR 2022 OF THE MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned December 31 of Current Year								
1	2	3	4	5	6	7	8	9
CUSIP	Description	Code	Date Acquired	Rate of Interest	Maturity Date	Book/Adjusted Carrying Value	Amount of Interest Due and Accrued	Amount Received During Year
.....	ALIMENTATION COUCHE-TARD INC COMMERCIAL .....	.....	12/08/2022	0.000	01/23/2023	29,912,640	0	94,723
.....	ROGERS COMMUNICATIONS INC COMMERCIAL PAP .....	.....	12/08/2022	0.000	01/26/2023	24,910,807	0	85,029
.....	SUNCOR ENERGY INC COMMERCIAL PAPER .....	.....	11/29/2022	0.000	02/27/2023	19,836,167	0	90,806
.....	SUNCOR ENERGY INC COMMERCIAL PAPER .....	.....	12/08/2022	0.000	03/07/2023	16,346,044	0	56,121
.....	TELUS CORP COMMERCIAL PAPER .....	.....	12/13/2022	0.000	03/13/2023	14,453,331	0	38,751
.....	THOMSON REUTERS CORP COMMERCIAL PAPER .....	.....	12/20/2022	0.000	01/18/2023	9,977,537	0	14,481
.....	TORONTO-DOMINION BANK/THE COMMERCIAL PAP .....	.....	12/29/2022	0.000	02/01/2023	7,970,781	0	2,816
.....	TRANSCANADA PIPELINES LTD COMMERCIAL PAP .....	.....	12/01/2022	0.000	02/24/2023	9,923,163	0	43,579
.....	TRANSCANADA PIPELINES LTD COMMERCIAL PAP .....	.....	12/01/2022	0.000	03/01/2023	14,871,592	0	66,592
.....	TRANSCANADA PIPELINES LTD COMMERCIAL PAP .....	.....	12/09/2022	0.000	03/09/2023	14,854,349	0	49,349
.....	RECKITT BENCKISER TREASURY SERVICES PLC .....	.....	12/29/2022	0.000	02/28/2023	49,617,210	0	19,640
.....	VODAFONE GROUP PLC COMMERCIAL PAPER .....	.....	12/15/2022	0.000	01/04/2023	34,986,468	0	71,994
1019999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations						1,227,997,700	0	2,301,859
1109999999. Total - Industrial and Miscellaneous (Unaffiliated) Bonds						1,227,997,700	0	2,301,859
1309999999. Total - Hybrid Securities						0	0	0
1509999999. Total - Parent, Subsidiaries and Affiliates Bonds						0	0	0
1909999999. Subtotal - Unaffiliated Bank Loans						0	0	0
2419999999. Total - Issuer Obligations						1,227,997,700	0	2,301,859
2429999999. Total - Residential Mortgage-Backed Securities						0	0	0
2439999999. Total - Commercial Mortgage-Backed Securities						0	0	0
2449999999. Total - Other Loan-Backed and Structured Securities						0	0	0
2459999999. Total - SVO Identified Funds						0	0	0
2469999999. Total - Affiliated Bank Loans						0	0	0
2479999999. Total - Unaffiliated Bank Loans						0	0	0
2509999999. Total Bonds						1,227,997,700	0	2,301,859
09248U-71-8	BLACKROCK LIQUIDITY FUND-EXEMPT MONEY MA .....	.....	12/30/2022	0.000 .....	.....	275,000,000	0	0
825252-40-6	INVESCO ADVISERS TREASURY PORT INSTL CL .....	.....	12/29/2022	0.000 .....	.....	32,694,074	0	225,761
8209999999. Subtotal - Exempt Money Market Mutual Funds - as Identified by the SVO						307,694,074	0	225,761
8609999999 - Total Cash Equivalents						1,535,691,774	0	2,527,620

1. Line Book/Adjusted Carrying Value by NAIC Designation Category Footnote:
Number
1A 1A ...\$ 0 1B ...\$ 0 1C ...\$ 0 1D ...\$ 18,939,883 1E ...\$ 0 1F ...\$ 0 1G ...\$ 0
1B 2A ...\$ 1,209,057,817 2B ...\$ 0 2C ...\$ 0
1C 3A ...\$ 0 3B ...\$ 0 3C ...\$ 0
1D 4A ...\$ 0 4B ...\$ 0 4C ...\$ 0
1E 5A ...\$ 0 5B ...\$ 0 5C ...\$ 0
1F 6\$ 0

SCHEDULE E - PART 3 - SPECIAL DEPOSITS

States, Etc.	1	2	Deposits For the Benefit of All Policyholders		All Other Special Deposits	
			3	4	5	6
	Type of Deposit	Purpose of Deposit	Book/Adjusted Carrying Value	Fair Value	Book/Adjusted Carrying Value	Fair Value
1. Alabama	AL		0	0	0	0
2. Alaska	AK		0	0	0	0
3. Arizona	AZ		0	0	0	0
4. Arkansas	AR	B... LIFE INSURANCE	124,547	122,657	0	0
5. California	CA		0	0	0	0
6. Colorado	CO		0	0	0	0
7. Connecticut	CT		0	0	0	0
8. Delaware	DE		0	0	0	0
9. District of Columbia	DC		0	0	0	0
10. Florida	FL	B... LIFE INSURANCE	2,006,766	2,171,086	0	0
11. Georgia	GA	B... LIFE INSURANCE	113,000	113,000	0	0
12. Hawaii	HI		0	0	0	0
13. Idaho	ID		0	0	0	0
14. Illinois	IL		0	0	0	0
15. Indiana	IN		0	0	0	0
16. Iowa	IA		0	0	0	0
17. Kansas	KS		0	0	0	0
18. Kentucky	KY		0	0	0	0
19. Louisiana	LA		0	0	0	0
20. Maine	ME		0	0	0	0
21. Maryland	MD		0	0	0	0
22. Massachusetts	MA	B... LIFE INSURANCE	174,366	171,719	0	0
23. Michigan	MI		0	0	0	0
24. Minnesota	MN		0	0	0	0
25. Mississippi	MS		0	0	0	0
26. Missouri	MO		0	0	0	0
27. Montana	MT		0	0	0	0
28. Nebraska	NE		0	0	0	0
29. Nevada	NV	B... LIFE INSURANCE	240,992	214,442	0	0
30. New Hampshire	NH		0	0	0	0
31. New Jersey	NJ	B... LIFE INSURANCE	627,358	678,728	0	0
32. New Mexico	NM	B... LIFE INSURANCE	215,000	209,369	0	0
33. New York	NY		0	0	0	0
34. North Carolina	NC	B... LIFE INSURANCE	413,000	413,000	0	0
35. North Dakota	ND		0	0	0	0
36. Ohio	OH	B... LIFE INSURANCE	2,285,643	2,463,133	0	0
37. Oklahoma	OK		0	0	0	0
38. Oregon	OR		0	0	0	0
39. Pennsylvania	PA		0	0	0	0
40. Rhode Island	RI		0	0	0	0
41. South Carolina	SC		0	0	0	0
42. South Dakota	SD		0	0	0	0
43. Tennessee	TN		0	0	0	0
44. Texas	TX		0	0	0	0
45. Utah	UT		0	0	0	0
46. Vermont	VT		0	0	0	0
47. Virginia	VA	B... LIFE INSURANCE	96,000	95,982	0	0
48. Washington	WA		0	0	0	0
49. West Virginia	WV		0	0	0	0
50. Wisconsin	WI		0	0	0	0
51. Wyoming	WY		0	0	0	0
52. American Samoa	AS		0	0	0	0
53. Guam	GU		0	0	0	0
54. Puerto Rico	PR		0	0	0	0
55. U.S. Virgin Islands	VI		0	0	0	0
56. Northern Mariana Islands	MP		0	0	0	0
57. Canada	CAN		0	0	0	0
58. Aggregate Alien and Other	OT	XXX	0	0	0	0
59. Subtotal	XXX	XXX	6,296,672	6,653,116	0	0
DETAILS OF WRITE-INS						
5801.						
5802.						
5803.						
5898. Summary of remaining write-ins for Line 58 from overflow page	XXX	XXX	0	0	0	0
5899. Totals (Lines 5801 thru 5803 plus 5898)(Line 58 above)	XXX	XXX	0	0	0	0