



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

QUARTERLY STATEMENT
AS OF MARCH 31, 2023
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 513-361-9000
(City or Town, State, Country and Zip Code) (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 513-361-9000
(City or Town, State, Country and Zip Code) (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)
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OFFICERS

President Mark Francis Muething

Treasurer Brian Patrick Sponaugle

Secretary John Paul Gruber

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

County of Hamilton

SS:

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
President

John Paul Gruber
Secretary

Brian Patrick Sponaugle
Treasurer

Subscribed and sworn to before me this day of May 2023

a. Is this an original filing? Yes [X] No []

b. If no,
1. State the amendment number.....
2. Date filed
3. Number of pages attached.....

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

ASSETS

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
1. Bonds	33,672,760,868		33,672,760,868	33,331,904,289
2. Stocks:				
2.1 Preferred stocks	163,073,219		163,073,219	184,968,184
2.2 Common stocks	683,503,007		683,503,007	683,285,586
3. Mortgage loans on real estate:				
3.1 First liens	3,369,341,023		3,369,341,023	3,088,813,560
3.2 Other than first liens.....			0	0
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)			0	0
4.2 Properties held for the production of income (less \$ encumbrances)			0	0
4.3 Properties held for sale (less \$ encumbrances)			0	0
5. Cash (\$ (7,978,362)), cash equivalents (\$ 1,357,908,776) and short-term investments (\$426,387,338)	1,776,317,752		1,776,317,752	1,991,236,955
6. Contract loans (including \$ premium notes)	30,959,271		30,959,271	31,459,162
7. Derivatives	823,586,811		823,586,811	872,965,902
8. Other invested assets	1,355,870,303		1,355,870,303	1,363,435,253
9. Receivables for securities	162,004,685		162,004,685	142,312,266
10. Securities lending reinvested collateral assets			0	0
11. Aggregate write-ins for invested assets	0	0	0	0
12. Subtotals, cash and invested assets (Lines 1 to 11)	42,037,416,939	0	42,037,416,939	41,690,381,157
13. Title plants less \$ charged off (for Title insurers only)			0	0
14. Investment income due and accrued	502,652,726	10,068,871	492,583,855	414,726,057
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	1,730,434	30,642	1,699,792	2,479,621
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	10,294,744	5,281,334	5,013,410	5,262,831
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)			0	0
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	6,098,992	1,523,374	4,575,618	1,960,978
16.2 Funds held by or deposited with reinsured companies			0	0
16.3 Other amounts receivable under reinsurance contracts	205,107,538		205,107,538	247,110,241
17. Amounts receivable relating to uninsured plans			0	0
18.1 Current federal and foreign income tax recoverable and interest thereon	44,834,272		44,834,272	89,634,229
18.2 Net deferred tax asset	184,573,489	31,851,893	152,721,596	72,205,814
19. Guaranty funds receivable or on deposit	2,031,782		2,031,782	2,079,536
20. Electronic data processing equipment and software			0	0
21. Furniture and equipment, including health care delivery assets (\$)	2,746,332	2,746,332	0	0
22. Net adjustment in assets and liabilities due to foreign exchange rates			0	0
23. Receivables from parent, subsidiaries and affiliates	940,821		940,821	43,006
24. Health care (\$) and other amounts receivable			0	0
25. Aggregate write-ins for other than invested assets	263,391,731	9,409,754	253,981,977	253,459,195
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	43,261,819,800	60,912,200	43,200,907,600	42,779,342,665
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	164,526,617		164,526,617	103,698,994
28. Total (Lines 26 and 27)	43,426,346,417	60,912,200	43,365,434,217	42,883,041,659
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page	0	0	0	0
1199. Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)	0	0	0	0
2501. Company-owned life insurance	220,328,691		220,328,691	218,662,787
2502. Accrued contractual fee income	33,653,286		33,653,286	34,796,408
2503. Accounts receivable	9,409,754	9,409,754	0	0
2598. Summary of remaining write-ins for Line 25 from overflow page	0	0	0	0
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	263,391,731	9,409,754	253,981,977	253,459,195

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$ 25,282,029,193 less \$ included in Line 6.3 (including \$574,326 Modco Reserve)	25,282,029,193	24,259,873,748
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	50,769,197	50,510,234
3. Liability for deposit-type contracts (including \$ Modco Reserve).....	784,630,035	779,823,617
4. Contract claims:		
4.1 Life	162,817,888	140,168,179
4.2 Accident and health	378,590	390,642
5. Policyholders' dividends/refunds to members \$ and coupons \$ due and unpaid		0
6. Provision for policyholders' dividends, refunds to members and coupons payable in following calendar year - estimated amounts:		
6.1 Policyholders' dividends and refunds to members apportioned for payment (including \$ Modco)		
6.2 Policyholders' dividends and refunds to members not yet apportioned (including \$ Modco) ...		
6.3 Coupons and similar benefits (including \$ Modco)		
7. Amount provisionally held for deferred dividend policies not included in Line 6		
8. Premiums and annuity considerations for life and accident and health contracts received in advance less \$ discount; including \$ 27,482 accident and health premiums	245,184	165,594
9. Contract liabilities not included elsewhere:		
9.1 Surrender values on canceled contracts		
9.2 Provision for experience rating refunds, including the liability of \$ accident and health experience rating refunds of which \$ 0 is for medical loss ratio rebate per the Public Health Service Act		
9.3 Other amounts payable on reinsurance, including \$ 316,903 assumed and \$ 6,566,649 ceded	6,883,552	14,213,374
9.4 Interest Maintenance Reserve	29,377,794	93,254,039
10. Commissions to agents due or accrued-life and annuity contracts \$ 4,696,838 , accident and health \$ and deposit-type contract funds \$	4,696,838	8,900,094
11. Commissions and expense allowances payable on reinsurance assumed		
12. General expenses due or accrued	37,100,443	48,404,491
13. Transfers to Separate Accounts due or accrued (net) (including \$ accrued for expense allowances recognized in reserves, net of reinsured allowances)		0
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	2,730,235	2,060,039
15.1 Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 Net deferred tax liability		
16. Unearned investment income	308,045	290,003
17. Amounts withheld or retained by reporting entity as agent or trustee	1,208,338	1,174,746
18. Amounts held for agents' account, including \$ 2,699,665 agents' credit balances	2,699,665	1,071,165
19. Remittances and items not allocated	141,345,391	232,798,384
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above		
22. Borrowed money \$ and interest thereon \$		
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	561,980,785	577,063,642
24.02 Reinsurance in unauthorized and certified (\$) companies		0
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers	11,996,839,732	12,677,297,503
24.04 Payable to parent, subsidiaries and affiliates	763,423	1,957,201
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance		
24.08 Derivatives	669,221,456	700,875,712
24.09 Payable for securities	253,520,681	120,064,449
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	442,429,000	236,402,971
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	40,431,975,465	39,946,759,827
27. From Separate Accounts Statement	164,526,617	103,698,994
28. Total liabilities (Lines 26 and 27)	40,596,502,082	40,050,458,821
29. Common capital stock	1,507,500	1,507,500
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds	0	0
32. Surplus notes		0
33. Gross paid in and contributed surplus	815,178,800	815,178,800
34. Aggregate write-ins for special surplus funds	0	0
35. Unassigned funds (surplus)	1,952,245,835	2,015,896,538
36. Less treasury stock, at cost:		
36.1 shares common (value included in Line 29 \$)		
36.2 shares preferred (value included in Line 30 \$)		
37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement)	2,767,424,635	2,831,075,338
38. Totals of Lines 29, 30 and 37	2,768,932,135	2,832,582,838
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	43,365,434,217	42,883,041,659
DETAILS OF WRITE-INS		
2501. Liability for funds held as collateral	409,223,484	209,544,587
2502. Unclaimed property	27,313,442	23,267,792
2503. Accounts payable	5,892,074	3,590,592
2598. Summary of remaining write-ins for Line 25 from overflow page	0	0
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	442,429,000	236,402,971
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page	0	0
3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)	0	0
3401.		
3402.		
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page	0	0
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)	0	0

SUMMARY OF OPERATIONS

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Premiums and annuity considerations for life and accident and health contracts	1,723,432,981	(12,908,965,213)	(7,198,257,952)
2. Considerations for supplementary contracts with life contingencies			0
3. Net investment income	229,857,717	339,902,205	1,018,987,195
4. Amortization of Interest Maintenance Reserve (IMR)	4,525,312	27,052,272	36,421,280
5. Separate Accounts net gain from operations excluding unrealized gains or losses			0
6. Commissions and expense allowances on reinsurance ceded	67,763,198	318,865,582	496,787,124
7. Reserve adjustments on reinsurance ceded			
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts.....			0
8.2 Charges and fees for deposit-type contracts	3,845,865	958,206	4,705,776
8.3 Aggregate write-ins for miscellaneous income	10,405,891	11,809,259	43,057,256
9. Totals (Lines 1 to 8.3)	2,039,830,964	(12,210,377,689)	(5,598,299,321)
10. Death benefits	3,119,837	6,314,045	19,313,347
11. Matured endowments (excluding guaranteed annual pure endowments)	4,585,251	2,705,651	22,540,278
12. Annuity benefits	190,750,300	49,760,135	460,170,085
13. Disability benefits and benefits under accident and health contracts	963,685	985,335	3,804,204
14. Coupons, guaranteed annual pure endowments and similar benefits			0
15. Surrender benefits and withdrawals for life contracts	559,067,532	405,143,080	1,460,476,453
16. Group conversions			0
17. Interest and adjustments on contract or deposit-type contract funds	42,525,144	38,690,510	142,273,578
18. Payments on supplementary contracts with life contingencies		92	(1,213)
19. Increase in aggregate reserves for life and accident and health contracts	1,022,398,419	(13,053,826,161)	(8,743,882,548)
20. Totals (Lines 10 to 19)	1,823,410,168	(12,550,227,313)	(6,635,305,816)
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	90,959,341	75,936,092	364,090,995
22. Commissions and expense allowances on reinsurance assumed	108,011	93,832	526,914
23. General insurance expenses and fraternal expenses	38,505,595	38,198,954	158,746,732
24. Insurance taxes, licenses and fees, excluding federal income taxes	3,860,484	3,441,604	12,160,149
25. Increase in loading on deferred and uncollected premiums	(314,353)	(31,008)	192,875
26. Net transfers to or (from) Separate Accounts net of reinsurance	86,317,770	(17,641,216)	(22,047,053)
27. Aggregate write-ins for deductions	0	331,212,665	319,161,240
28. Totals (Lines 20 to 27)	2,042,847,016	(12,119,016,390)	(5,802,473,964)
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	(3,016,052)	(91,361,299)	204,174,643
30. Dividends to policyholders and refunds to members	2,408	2,798	10,069
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	(3,018,460)	(91,364,097)	204,164,574
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	52,044,475	(31,241,806)	13,603,479
33. Net gain from operations after dividends to policyholders, refunds to members and federal income taxes and before realized capital gains or (losses) (Line 31 minus Line 32)	(55,062,935)	(60,122,291)	190,561,095
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ 8,540,308 (excluding taxes of \$ (15,776,830) transferred to the IMR)	(99,215,686)	25,274,069	(32,534,189)
35. Net income (Line 33 plus Line 34)	(154,278,621)	(34,848,222)	158,026,906
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	2,832,582,838	2,878,120,622	2,878,120,622
37. Net income (Line 35)	(154,278,621)	(34,848,222)	158,026,906
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (16,817,499)	8,053,667	(88,066,773)	(200,664,475)
39. Change in net unrealized foreign exchange capital gain (loss)	3,177,213		8,817,141
40. Change in net deferred income tax	93,323,673	(38,256,625)	(33,120,202)
41. Change in nonadmitted assets	(29,009,492)	(1,137,959)	(4,655,490)
42. Change in liability for reinsurance in unauthorized and certified companies			
43. Change in reserve on account of change in valuation basis, (increase) or decrease			236,182,404
44. Change in asset valuation reserve	15,082,857	(46,857,569)	(72,918,048)
45. Change in treasury stock			0
46. Surplus (contributed to) withdrawn from Separate Accounts during period			
47. Other changes in surplus in Separate Accounts Statement			
48. Change in surplus notes			
49. Cumulative effect of changes in accounting principles		(157,385,866)	(454,367,260)
50. Capital changes:			
50.1 Paid in			
50.2 Transferred from surplus (Stock Dividend)			
50.3 Transferred to surplus			
51. Surplus adjustment:			
51.1 Paid in	0	0	0
51.2 Transferred to capital (Stock Dividend)			
51.3 Transferred from capital			
51.4 Change in surplus as a result of reinsurance		329,212,665	317,161,240
52. Dividends to stockholders			
53. Aggregate write-ins for gains and losses in surplus	0	0	0
54. Net change in capital and surplus for the year (Lines 37 through 53)	(63,650,703)	(37,340,349)	(45,537,784)
55. Capital and surplus, as of statement date (Lines 36 + 54)	2,768,932,135	2,840,780,273	2,832,582,838
DETAILS OF WRITE-INS			
08.301. Contractual rider fee income	8,737,324	10,325,319	36,447,215
08.302. Interest on company-owned life insurance	1,665,903	1,470,205	6,015,989
08.303. Reinsurance experience refund	0	0	506,212
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	2,664	13,735	87,840
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	10,405,891	11,809,259	43,057,256
2701. Amortization of ceding commission		329,212,665	317,161,240
2702. Reinsurance fee		2,000,000	2,000,000
2703.			
2798. Summary of remaining write-ins for Line 27 from overflow page	0	0	0
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	0	331,212,665	319,161,240
5301. Employee and agent stock option contribution		0	0
5302. Brothers Management transferred to GAFFRI		0	0
5303.			
5398. Summary of remaining write-ins for Line 53 from overflow page	0	0	0
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	0	0	0

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

CASH FLOW

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
Cash from Operations			
1. Premiums collected net of reinsurance	1,724,862,041	1,286,391,516	6,989,285,203
2. Net investment income	268,659,166	384,130,468	1,223,725,675
3. Miscellaneous income	79,312,166	331,293,674	540,147,485
4. Total (Lines 1 to 3)	2,072,833,373	2,001,815,658	8,753,158,363
5. Benefit and loss related payments	703,569,056	806,902,184	2,266,789,240
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	86,317,770	(17,641,216)	(22,047,053)
7. Commissions, expenses paid and aggregate write-ins for deductions	147,049,298	134,386,060	551,485,249
8. Dividends paid to policyholders	2,408	2,798	10,069
9. Federal and foreign income taxes paid (recovered) net of \$ (7,236,522) tax on capital gains (losses)	7,996	46,220,408	103,798,463
10. Total (Lines 5 through 9)	936,946,528	969,870,234	2,900,035,968
11. Net cash from operations (Line 4 minus Line 10)	1,135,886,845	1,031,945,424	5,853,122,395
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	1,334,224,714	6,241,333,713	14,058,518,365
12.2 Stocks	37,142,288	9	18,218,012
12.3 Mortgage loans	70,766,282	182,570,029	537,024,492
12.4 Real estate	0	0	0
12.5 Other invested assets	55,392,316	47,303,771	274,007,827
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	0	0	(88,759)
12.7 Miscellaneous proceeds	(14,687,330)	0	(22,325,520)
12.8 Total investment proceeds (Lines 12.1 to 12.7)	1,482,838,270	6,471,207,522	14,865,354,417
13. Cost of investments acquired (long-term only):			
13.1 Bonds	1,820,933,305	6,920,294,774	16,364,817,270
13.2 Stocks	30,276,003	52	109,234,027
13.3 Mortgage loans	353,645,165	299,093,804	1,107,745,261
13.4 Real estate	0	0	0
13.5 Other invested assets	41,082,018	48,708,682	300,895,779
13.6 Miscellaneous applications	42,882,276	(652,370,712)	673,935,708
13.7 Total investments acquired (Lines 13.1 to 13.6)	2,288,818,767	6,615,726,600	18,556,628,045
14. Net increase (or decrease) in contract loans and premium notes	(499,891)	(30,579,382)	(32,719,274)
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(805,480,606)	(113,939,696)	(3,658,554,354)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	0	0	0
16.2 Capital and paid in surplus, less treasury stock	0	0	0
16.3 Borrowed funds	0	0	0
16.4 Net deposits on deposit-type contracts and other insurance liabilities	(34,285,652)	157,078,044	50,372,894
16.5 Dividends to stockholders	0	0	0
16.6 Other cash provided (applied)	(511,039,791)	(10,522,949)	(1,262,584,245)
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	(545,325,443)	146,555,095	(1,212,211,351)
RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18. Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17) ..	(214,919,204)	1,064,560,823	982,356,690
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	1,991,236,956	1,008,880,265	1,008,880,265
19.2 End of period (Line 18 plus Line 19.1)	1,776,317,752	2,073,441,089	1,991,236,956

Note: Supplemental disclosures of cash flow information for non-cash transactions:

20.0001. Bond conversions and refinancing	111,514,066	453,096,376
20.0002. Bonds transferred to other invested assets	18,555,573	119,664,976
20.0003. Common stock conversions	17,612,705	205,249
20.0004. Net investment income payment-in-kind for bonds	358,836	1,072,948
20.0005. Bonds transferred to mortgage loans		362,734,554
20.0006. Other invested assets transferred to bonds		17,100,287
20.0007. Exchanges	162,125	
20.0008. Transfers	11,490,305	

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS			
	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Industrial life			0
2. Ordinary life insurance	4,205,901	6,869,900	24,857,140
3. Ordinary individual annuities	1,853,404,231	1,352,147,583	7,344,903,146
4. Credit life (group and individual)			0
5. Group life insurance			0
6. Group annuities	1,606,981	1,009,564	5,079,281
7. A & H - group	18,517	17,458	73,886
8. A & H - credit (group and individual)			0
9. A & H - other	1,206,126	1,269,459	4,930,620
10. Aggregate of all other lines of business	0	0	0
11. Subtotal (Lines 1 through 10)	1,860,441,756	1,361,313,964	7,379,844,073
12. Fraternal (Fraternal Benefit Societies Only)			0
13. Subtotal (Lines 11 through 12)	1,860,441,756	1,361,313,964	7,379,844,073
14. Deposit-type contracts	2,358,745	2,887,636	9,164,370
15. Total (Lines 13 and 14)	1,862,800,501	1,364,201,600	7,389,008,443
DETAILS OF WRITE-INS			
1001.			
1002.			
1003.			
1098. Summary of remaining write-ins for Line 10 from overflow page	0	0	0
1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)	0	0	0

NOTES TO FINANCIAL STATEMENTS

Note 1 – Summary of Significant Accounting Policies

A. Accounting Practices

The financial statements of the MassMutual Ascend Life Insurance Company (“MMALIC” or “the Company”) are presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance. The Company was formerly known as Great American Life Insurance Company.

The Ohio Department of Insurance recognizes only statutory accounting practices prescribed or permitted by the State of Ohio for determining and reporting the financial condition and results of operations of an insurance company, for determining its solvency under the Ohio Insurance Law. The National Association of Insurance Commissioners’ (“NAIC”) *Accounting Practices and Procedures Manual* has been adopted as a component of prescribed or permitted practices by the State of Ohio.

In 2021 the Ohio Department of Insurance promulgated Ohio Administrative Code Section 3901-1-67, Alternative Derivative and Reserve Accounting Practices (OAC 3901-1-67), which constitutes a prescribed practice as contemplated by the NAIC SAP. The prescribed practice allows Ohio-domiciled insurance companies to utilize certain alternative derivative and reserve accounting practices for eligible derivative instruments and indexed products, respectively, in order to better align the measurement of indexed product reserves and the derivatives that hedge them. Effective January 1, 2022, the Company elected to apply OAC 3901-1-67 to its derivative instruments hedging equity indexed annuity products and equity indexed reserve liabilities.

A reconciliation of the Company’s net income and capital and surplus between NAIC SAP and practices prescribed and permitted by the State of Ohio is shown below:

Net Income	SSAP #	F/S Page	F/S Line #	03/31/2023	12/31/2022
(1) State basis	XXX	XXX	XXX	\$ (154,278,621)	\$ 158,026,906
(2) State prescribed practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX		
OAC 3901-1-67:					
Derivative instruments	86	4	7, 3	(8,562,111)	(26,420,295)
Reserves for fixed indexed annuities	51	4	1, 19	97,587,260	(187,982,067)
Tax impact	101	4	18.2, 32	36,628	381,717
(3) State permitted practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$ (243,340,399)	\$ 372,047,552
Surplus					
(5) Statutory surplus state basis	XXX	XXX	XXX	\$ 2,768,932,135	\$ 2,832,582,838
(6) State prescribed practices that increase/(decrease) NAIC SAP					
OAC 3901-1-67:					
Derivative instruments	86	2, 4	7, 3	(256,476,214)	(39,219,472)
Reserves for fixed indexed annuities	51	3, 4	1, 19	145,787,597	48,200,337
Tax impact	101	2, 4	18.2, 32	38,224,779	13,094,188
(7) State permitted practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$ 2,841,395,972	\$ 2,810,507,785

B, C & D – No significant changes.

Note 2 – Accounting Changes and Corrections of Errors

There were no changes that were considered significant to the Company, except for the following.

Effective January 1, 2022, the Company elected to apply OAC 3901-1-67 to its derivative instruments hedging equity indexed annuity products and equity indexed annuity reserve liabilities. Under OAC 3901-1-67, derivative instruments will be carried on the statutory balance sheet at amortized cost with the initial hedge cost amortized over the term and asset payoffs realized at the end of the term being reported through net investment income rather than derivative instruments being carried at fair value with asset payoffs realized over the term through change in net unrealized capital gains and losses. Additionally, the cash surrender value reserves for equity indexed annuity products will only reflect index interest credits at the end of the crediting term as compared to partial index interest credits accumulating throughout the crediting term in increase in aggregate reserves for life and accident and health contracts. As a result of the Company’s election to apply OAC 3901-1-67 as of January 1, 2022, total statutory admitted assets decreased \$393,568,270, total statutory liabilities decreased \$236,182,404 and total statutory capital and surplus decreased \$157,385,866. The following table summarizes the components of the total decrease in statutory surplus:

Change in fixed indexed annuity reserves	\$ 236,182,404
Change in net deferred income tax	60,798,989
Derivatives instruments	(454,367,259)
Total decrease in statutory surplus	\$ (157,385,866)

Note 3 – Business Combinations and Goodwill

Not applicable.

Note 4 – Discontinued Operations

Not applicable.

Note 5 – Investments

A, B & C – No significant changes.

D. Loan-Backed Securities

- (1) The Company uses dealer-modeled prepayment assumptions for mortgage-backed and asset-backed securities at the date of purchase to determine the effective yields; significant changes in estimated cash flows from the original purchase assumptions are accounted for on a prospective basis.
- (2) The Company does not currently hold any aggregate loan-backed securities with a recognized other-than-temporary impairment (“OTTI”) in which the Company has the intent to sell or the inability or lack of intent to retain the investment in the security for a period of time to recover the amortized cost basis.

NOTES TO FINANCIAL STATEMENTS

- (4) The following table shows all loan-backed securities with an unrealized loss:

a. The aggregate amount of unrealized losses:

1. Less than 12 Months

\$

490,854,211

2. 12 Months or Longer

2,561,106,464

b. The aggregate related fair value of securities with unrealized losses:

1. Less than 12 Months

\$

8,661,146,796

2. 12 Months or Longer

16,182,128,750
- (5) Based on cash flow projections received from independent sources (which reflect loan to collateral values, subordination, vintage and geographic concentration), implied cash flows inherent in security ratings and analysis of historical payment data, management believes that the Company will recover its cost basis in all securities with unrealized losses. The Company has the intent to hold securities in an unrealized loss position until they recover in value or mature.
- E. Dollar Repurchase Agreements and/or Securities Lending Transactions – Not applicable.
- F. Repurchase Agreements Transactions Accounted for as Secured Borrowing – Not applicable.
- G. Reverse Repurchase Agreements Transactions Accounted for as Secured Borrowing – Not applicable.
- H. Repurchase Agreements Transactions Accounted for as a Sale – Not applicable.
- I. Reverse Repurchase Agreements Transactions Accounted for as a Sale – Not applicable.
- J. Real Estate – Not applicable.
- K. Low Income Housing Tax Credits – Not applicable.
- L. Restricted Assets – No significant change.
- M. Working Capital Finance Investments – Not applicable.
- N. Offsetting and Netting of Assets and Liabilities – Not applicable.
- O. 5GI Securities

Investment	Number of 5GI Securities		Aggregate BACV		Aggregate Fair Value	
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
(1) Bonds - AC	30	36	\$ 74,752,092	\$ 102,166,634	\$ 67,142,563	\$ 96,483,303
(2) LB&SS - AC	-	-	-	-	-	-
(3) Preferred Stock - AC	1	1	3,499,929	3,499,929	5,456,946	5,744,476
(4) Preferred Stock - FV	16	23	36,088,346	62,654,401	36,088,346	62,654,401
(5) Total (1+2+3+4)	47	60	\$ 114,340,367	\$ 168,320,964	\$ 108,687,855	\$ 164,882,180

AC - Amortized Cost FV - Fair Value

- P. Short Sales – Not applicable.
- Q. Prepayment Penalties and Acceleration Fees

	General Account	Separate Account
(1) Number of CUSIPS	0	0
(2) Aggregate amount of investment income	\$ -	\$ -

- R. Share of Cash Pool by Asset Type – Not applicable.

Note 6 – Joint Ventures, Partnerships and Limited Liability Companies

No significant change.

Note 7 – Investment Income

No significant change.

Note 8 – Derivative Instruments

No significant change.

NOTES TO FINANCIAL STATEMENTS

Note 9 – Income Taxes

On August 16th, 2022, the Inflation Reduction Act was signed into law and includes certain corporate income tax provisions. Impacts to the Company include the imposition of a corporate alternative minimum tax ("CAMT") applicable to tax years beginning after December 31, 2022. The CAMT imposes a 15% minimum tax on adjusted financial statement income on corporations that have an average adjusted financial statement income over \$1 billion in the prior three-year period (2020-2022). As of the reporting date, the Company has not determined if it will be liable for CAMT in 2023. In accordance with INT 22-02: *Fourth Quarter 2022 through First Quarter 2023 Reporting of the Inflation Reduction Act – Corporate Alternative Minimum Tax*, the financial statements do not include an estimated impact of the CAMT because a reasonable estimate cannot be made. The United States Treasury Secretary has been authorized to issue guidance on the CAMT and pending such guidance the Company is not able to make a reasonable estimate.

A. Deferred tax assets and deferred tax liabilities

(1) The components of the net deferred tax asset/ (liability) are as follows:

	03-2023			12-2022			Change		
	Ordinary	Capital	Total	Ordinary	Capital	Total	Ordinary	Capital	Total
a. Gross deferred tax assets	\$ 202,714,060	\$ 76,145,911	\$ 278,859,971	\$ 187,418,721	\$ -	\$ 187,418,721	\$ 15,295,339	\$ 76,145,911	\$ 91,441,250
b. Statutory valuation allowance adjustment	-	-	-	-	-	-	-	-	-
c. Adjusted gross deferred tax assets	202,714,060	76,145,911	278,859,971	187,418,721	-	187,418,721	15,295,339	76,145,911	91,441,250
d. Deferred tax assets nonadmitted	88,022,036	(56,170,143)	31,851,893	73,566,963	(71,340,460)	2,226,503	14,455,073	15,170,317	29,625,390
e. Subtotal net admitted deferred tax asset	114,692,024	132,316,054	247,008,078	113,851,758	71,340,460	185,192,218	840,266	60,975,594	61,815,860
f. Deferred tax liabilities	38,116,339	56,170,143	94,286,482	41,645,944	71,340,460	112,986,404	(3,529,605)	(15,170,317)	(18,699,922)
g. Net admitted deferred tax assets/(net deferred tax liability)	\$ 76,575,685	\$ 76,145,911	\$ 152,721,596	\$ 72,205,814	\$ -	\$ 72,205,814	\$ 4,369,871	\$ 76,145,911	\$ 80,515,782

(2) Admission calculation components, SSAP No. 101:

	03-2023			12-2022			Change		
	Ordinary	Capital	Total	Ordinary	Capital	Total	Ordinary	Capital	Total
a. Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 28,862,746	\$ 28,862,746	\$ -	\$ -	\$ -	\$ -	\$ 28,862,746	\$ 28,862,746
b. Adjusted gross deferred tax assets expected to be realized (excluding the amount of deferred tax assets from 2(a) above) after application of the threshold limitation. (The lesser of 2(b)1 and 2(b)2 below)	76,575,685	47,283,165	123,858,850	72,205,814	-	72,205,814	4,369,871	47,283,165	51,653,036
1. Adjusted gross deferred tax assets expected to be realized follow ing the balance sheet date	76,575,685	47,283,165	123,858,850	72,205,814	-	72,205,814	4,369,871	47,283,165	51,653,036
2. Adjusted gross deferred tax assets allow ed per limitation threshold	XXX	XXX	391,473,210	XXX	XXX	415,619,723	XXX	XXX	(24,146,513)
c. Adjusted gross deferred tax assets (excluding the amount of deferred tax assets from 2(a) and 2(b) above) offset by gross deferred tax liabilities	38,116,339	56,170,143	94,286,482	41,645,944	71,340,460	112,986,404	(3,529,605)	(15,170,317)	(18,699,922)
d. Deferred tax assets admitted as the result of application of SSAP No. 101	\$ 114,692,024	\$ 132,316,054	\$ 247,008,078	\$ 113,851,758	\$ 71,340,460	\$ 185,192,218	\$ 840,266	\$ 60,975,594	\$ 61,815,860

(3) Other admissibility criteria:

	03-2023	12-2022
a. Ratio percentage used to determine recovery period and threshold limitation amount	830%	871%
b. Amount of adjusted capital and surplus used to determine recovery period and threshold limitation in 2(b)2 above	\$ 2,609,821,399	\$ 2,770,798,155

(4) Impact of tax planning strategies:

	03-2023		12-2022		Change	
	Ordinary	Capital	Ordinary	Capital	Ordinary	Capital
a. Determination of adjusted gross deferred tax assets and net admitted deferred tax assets, by tax character as a percentage						
1. Adjusted gross DTAs amount from Note 9A 1(c)	\$ 202,714,060	\$ 76,145,911	\$ 187,418,721	\$ -	\$ 15,295,339	\$ 76,145,911
2. Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies	0.0%	17.5%	0.0%	0.0%	0.0%	17.5%
3. Net admitted adjusted gross DTAs amount from Note 9A 1(e)	114,692,024	132,316,054	113,851,758	71,340,460	840,266	60,975,594
4. Percentage of net admitted adjusted gross DTAs by tax character admitted because of the impact of tax planning strategies	0.0%	24.6%	0.0%	0.0%	0.0%	24.6%
b. Does the company's tax planning strategies include the use of reinsurance? Yes [] No [X]						

B. The Company has recognized all of its deferred tax liabilities.

NOTES TO FINANCIAL STATEMENTS

C. Current income taxes incurred consist of the following major components:

(1) Current income tax expense:

	03-2023	12-2022	Change
a. Federal	\$ 52,036,480	\$ 13,600,685	\$ 38,435,795
b. Foreign	7,995	2,794	5,201
c. Subtotal	52,044,475	13,603,479	38,440,996
d. Federal income tax (benefit) expense on net capital gains	(7,236,522)	(14,295,851)	7,059,329
e. Utilization of capital loss carry-forwards	-	-	-
f. Other	-	-	-
g. Federal and foreign income taxes incurred	<u>\$ 44,807,953</u>	<u>\$ (692,372)</u>	<u>\$ 45,500,325</u>

(2) Deferred tax assets:

	03-2023	12-2022	Change
a. Ordinary			
1 Discounting of unpaid losses	\$ -	\$ -	\$ -
2 Unearned premium reserve	-	-	-
3 Policyholder reserve	126,027,323	112,698,436	13,328,887
4 Investments	-	-	-
5 Deferred acquisition costs	64,542,937	61,621,231	2,921,706
6 Policyholder dividends accrual	-	-	-
7 Fixed assets	-	-	-
8 Compensation and benefits accrual	-	-	-
9 Pension accrual	218,157	217,028	1,129
10 Receivables - nonadmitted	6,102,664	6,232,003	(129,339)
11 Net operating loss carry-forward	-	-	-
12 Tax credit carry-forward	-	-	-
13 Other	1,667,812	2,084,813	(417,001)
14 Accruals	4,155,167	4,565,210	(410,043)
15 Amortization of intangibles	-	-	-
16 Underwriting expenses	-	-	-
99 Subtotal	<u>\$202,714,060</u>	<u>\$187,418,721</u>	<u>\$ 15,295,339</u>
b. Statutory valuation allowance adjustment	-	-	-
c. Nonadmitted	<u>88,022,036</u>	<u>73,566,963</u>	<u>14,455,073</u>
d. Admitted ordinary deferred tax assets	<u>\$114,692,024</u>	<u>\$113,851,758</u>	<u>\$ 840,266</u>
e. Capital			
1 Investments	\$ 76,145,911	\$ -	\$ 76,145,911
2 Net capital loss carry-forward	-	-	-
3 Real estate	-	-	-
4 Other	-	-	-
5 Non-insurance subsidiaries	-	-	-
99 Subtotal	<u>\$ 76,145,911</u>	<u>\$ -</u>	<u>\$ 76,145,911</u>
f. Statutory valuation allowance adjustment	-	-	-
g. Nonadmitted	<u>(56,170,143)</u>	<u>(71,340,460)</u>	<u>15,170,317</u>
h. Admitted capital deferred tax assets	<u>\$132,316,054</u>	<u>\$ 71,340,460</u>	<u>\$ 60,975,594</u>
i. Admitted deferred tax assets	<u>\$247,008,078</u>	<u>\$185,192,218</u>	<u>\$ 61,815,860</u>

(3) Deferred tax liabilities:

	03-2023	12-2022	Change
a. Ordinary			
1 Investments	\$ 1,015,796	\$ 1,015,796	\$ -
2 Fixed assets	467,141	902,671	(435,530)
3 Deferred and uncollected premium	2,013,675	2,079,689	(66,014)
4 Policyholder reserves	3,607,066	3,869,176	(262,110)
5 Other	439,161	439,162	(1)
6 Policy loans	255,590	265,367	(9,777)
7 Other - Reserve transition adjustment	30,317,910	33,074,083	(2,756,173)
99 Subtotal	<u>\$ 38,116,339</u>	<u>\$ 41,645,944</u>	<u>\$ (3,529,605)</u>
b. Capital			
1 Investments	\$ 56,170,143	\$ 71,340,460	\$ (15,170,317)
2 Real estate	-	-	-
3 Other	-	-	-
99 Subtotal	<u>\$ 56,170,143</u>	<u>\$ 71,340,460</u>	<u>\$ (15,170,317)</u>
c. Deferred tax liabilities	<u>\$ 94,286,482</u>	<u>\$112,986,404</u>	<u>\$ (18,699,922)</u>

(4) Net deferred tax assets/(liabilities) \$152,721,596 \$ 72,205,814 \$ 80,515,782

NOTES TO FINANCIAL STATEMENTS

D. The provision for federal income taxes incurred on operations is different from that which would be obtained by applying the statutory federal income tax rate to income before income taxes. The significant items causing this difference are as follows:

	03-2023	12-2022
Provision computed at federal statutory rate	\$ (35,452,031)	\$ 40,254,415
Reinsurance items	(11,962,931)	54,946,270
OAC 3901-1-67 adoption	-	(46,220,408)
Investment items	(1,723,945)	(10,404,565)
Nonadmitted assets	129,339	(3,571,589)
Tax credits	-	(117,666)
Other	493,848	(2,458,627)
Total statutory income tax expense (benefit)	\$ (48,515,720)	\$ 32,427,830
Federal and foreign income tax expense (benefit)	\$ 44,807,953	\$ (692,372)
Change in net deferred income taxes	(93,323,673)	33,120,202
Total statutory income tax expense (benefit)	\$ (48,515,720)	\$ 32,427,830

E. (1) The Company does not have any operating loss carry-forwards or capital loss carry-forwards available to offset future net income subject to federal income taxes.

(2) The following are income taxes on operations and realized gains incurred in the current and prior years that will be available for recoupment in the event of future net losses:

Period	Ordinary	Capital	Total
2023	\$ -	\$ -	\$ -
2022	\$ -	\$ -	\$ -
2021	\$ -	\$ 28,862,746	\$ 28,862,746

(3) The Company had no deposits to disclose under Section 6603 of the Internal Revenue Service Code.

F. (1) The Company's federal income tax return is consolidated with the following entities – No significant change.

(2) Tax allocation agreement – No significant change.

G. Federal or Foreign Income Tax Loss Contingencies

The Company does not have any tax loss contingencies for which it is reasonably possible that the total liability will significantly increase within twelve months of the reporting date.

H. Repatriation Transition Tax (RTT) – Not applicable.

I. Alternative Minimum Tax – Not applicable.

NOTES TO FINANCIAL STATEMENTS

Note 10 – Information Concerning Parent, Subsidiaries, Affiliates and Other Related Parties

A., B. & C.

The Company is a wholly-owned subsidiary of Glidepath Holdings Inc. which is a subsidiary of Massachusetts Mutual Life Insurance Company ("MMLIC"); 100% of the Company's outstanding common stock is directly owned by Glidepath Holdings Inc. See Schedule Y, Part 1, Organizational Chart.

The Company did not pay or receive federal income tax payments in cash to (from) parent during the period.

The Company did not pay dividends to parent during the period.

The Company did not receive capital contributions during the period.

- D. The Company reported \$940,821 due from and \$763,423 due to the parent and affiliated companies. The terms of the agreement require that these amounts are settled within 90 days.
- E. Management or service contracts and all cost sharing arrangements involving the Company:
 - (1) The Company has an agreement with Barings (an affiliate) which provides investment advisory services to the Company.
 - (2) Certain administrative, management, underwriting, claims, accounting, data processing, collection, and investment services are provided under agreements between the Company and affiliates at charges not unfavorable to the Company or the affiliate.
- F. The Company has no material guarantees or undertakings for the benefit of an affiliate.
- G. The Company's outstanding shares are 100% owned by Glidepath Holdings Inc., a subsidiary of MMLIC.
- H. The Company does not own shares of any upstream intermediate entity or its ultimate parent.
- I. The Company has no investment in a subsidiary that exceeds 10% of admitted assets.
- J. The Company did not recognize any impairment or write down for its investments in subsidiary, controlled or affiliated companies during the statement period.
- K. The Company has no investment in a foreign insurance subsidiary.
- L. The Company owns 100% of the outstanding stock of Manhattan National Holding, LLC ("MNH"), a wholly-owned non-insurance subsidiary. MNH owns 100% of the stock of Manhattan National Life Insurance Company ("MNLIC"), a stock life insurance company domiciled in Ohio. The Company utilizes the look-through approach for the valuation of MNH instead of obtaining audited financial statements for MNH. The Company's carrying value in MNH is \$15,814,519, and represents the carrying value of MNLIC, which is presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance.
- M. All SCA Investments – No significant change.
- N. Investment in Insurance SCAs

All U.S insurance subsidiaries owned by the Company prepare their statutory financial statement in compliance with NAIC statutory accounting practices and procedures.
- O. SCA and SSAP No. 48 Entity Loss Tracking – Not applicable.

Note 11 – Debt

- A. The Company has no capital notes or reverse repurchase agreements outstanding.
- B. Federal Home Loan Bank Agreements
 - (1) The Company became a member of the Federal Home Loan Bank ("FHLB") on August 14, 2009. Through its association with the FHLB and by purchasing a set amount of FHLB stock, the Company can enter into deposit contracts. The Company owned \$42,340,800 and \$48,262,300 of FHLB stock at March 31, 2023 and December 31, 2022, respectively. The Company also posted collateral to the FHLB of assets with a fair value of approximately \$1,348,965,485 as of March 31, 2023. The Company's FHLB borrowing capacity is based on the Company's estimate of collateral eligible to be pledged with the FHLB. The deposit-type contract liabilities and related assets are accounted for in the Company's general account.
 - (2) FHLB Capital Stock
 - a. The Company held 200,000 shares of Class B membership stock at March 31, 2023 and December 31, 2022, respectively. The Company held 223,408 and 282,623 shares of activity and excess stock at March 31, 2023 and December 31, 2022, respectively.
 - b. The Company has no membership stock eligible for redemption.
 - (3) Collateral Pledged to FHLB
 - a. The amount of collateral pledged to the FHLB at March 31, 2023 was \$1,348,965,485 (fair value) and \$1,424,061,255 (carrying value). The total aggregate borrowing from the FHLB at March 31, 2023 was \$500,000,000.
 - b. The maximum amount of collateral pledged to the FHLB during the period was \$1,348,965,485 (fair value) and \$1,424,061,255 (carrying value) at March 31, 2023. The amount borrowed from the FHLB at the time of maximum collateral was \$500,000,000.
 - (4) Borrowing from FHLB
 - a. The Company has accessed a total of \$500,000,000 as part of the funding agreement with the FHLB.
 - b. The maximum amount of borrowings from the FHLB during the period was \$500,000,000.
 - c. The current borrowings related to fixed rate funding agreements are subject to prepayment penalties.

NOTES TO FINANCIAL STATEMENTS

Note 12 - Retirement Plans, Deferred Compensation, Postemployment Benefits and Compensated Absences and Other Postretirement Benefit Plans

A., B., C. & D.

The Company did not participate in a defined benefit plan.

E. Defined Contribution Plan

The Company participates in the retirement plans of MMALIC. MMALIC sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for its employees and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$44,291,500 as of March 31, 2023 and \$37,437,537 as of December 31, 2022. The Company matches a percentage of employee contributions to the qualified 401(k) thrift savings plan. The Company's total matching thrift savings contributions included in general insurance expenses were \$1,159,043 for the three months ended March 31, 2023 and \$3,968,648 for the year ended December 31, 2022.

F. The Company did not participate in multiemployer plans.

G. The Company did not participate in consolidated or holding company plans.

H. The Company does not accrue for postemployment benefits and compensated absences.

I. The Company does not apply for a subsidy under the Medicare Part D under the Medicare Modernization Act.

Note 13 – Capital and Surplus, Shareholders’ Dividend Restrictions and Quasi-Reorganizations

No significant change.

Note 14 – Contingencies

No significant change.

Note 15 – Leases

No significant change.

Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With Concentrations of Credit Risk

No significant change.

Note 17 – Sale, Transfer and Servicing of Financial Assets and Extinguishments of Liabilities

The Company has no reportable transactions.

Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans

Not applicable.

Note 19 – Direct Premium Written/Produced by Managing General Agents/Third Party Administrators

Not applicable.

NOTES TO FINANCIAL STATEMENTS

Note 20 – Fair Value Measurements

A.

(1) Fair Value Measurements at Reporting Date

The Company has categorized its assets and liabilities measured at fair value into the three-level fair value hierarchy as reflected in the following table. See item (4) below for a discussion of each of these three levels.

	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Assets at fair value					
Bonds:					
Special revenue	\$ -	\$ 1,449	\$ -	\$ -	\$ 1,449
Industrial and misc. (unaffiliated)	-	7,251,833	6,234,414	-	13,486,247
Hybrid securities	-	312,500	-	-	312,500
Total bonds	-	\$ 7,565,782	6,234,414	-	13,800,196
Non-affiliated preferred stock	23,033,946	15,300,000	101,134,456	-	139,468,402
Non-affiliated common stock	91,076,610	-	184,135,281	-	275,211,891
Currency sw aps	-	705,677	-	-	705,677
Currency forw ards	-	529,435	-	-	529,435
Interest rate sw aps	-	102,077	-	-	102,077
Separate account assets	1,705,446	162,821,171	-	-	164,526,617
Total assets at fair value	<u>\$ 115,816,002</u>	<u>\$ 187,024,142</u>	<u>\$ 291,504,151</u>	<u>\$ -</u>	<u>\$ 594,344,295</u>
Liabilities at fair value					
Currency sw aps	\$ -	\$ 9,751,495	\$ -	\$ -	\$ 9,751,495
Currency forw ards	-	954,316	-	-	954,316
Interest rate sw aps	-	94,129,358	-	-	94,129,358
Separate account liabilities	1,705,446	162,821,171	-	-	164,526,617
Total liabilities at fair value	<u>\$ 1,705,446</u>	<u>\$ 267,656,340</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 269,361,786</u>

(2) Fair Value Measurements in Level 3 of the Fair Value Hierarchy

	Beginning Balance at 12/31/2022	Transfers into Level 3	Transfers out of Level 3	Total Gains and (losses) included in Net Income	Total Gains and (losses) included in Surplus	Purchases	Issuances	Settlements	Other Adjustments	Ending Balance at 3/31/2023
Bonds: industrial and misc (unaffiliated)	\$ 12,679,423	\$ -	\$ -	\$ (8,348,919)	\$ (3,984,624)	\$ -	\$ -	\$ (371)	\$ 5,888,905	\$ 6,234,414
Non-affiliated preferred stock	127,327,521	-	-	-	(12,451,324)	1,374,710	-	-	(15,116,451)	101,134,456
Non-affiliated common stock	140,349,829	-	-	-	(5,329,094)	-	-	(4,793,600)	53,908,146	184,135,281
Total	<u>\$ 280,356,773</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (8,348,919)</u>	<u>\$ (21,765,042)</u>	<u>\$ 1,374,710</u>	<u>\$ -</u>	<u>\$ (4,793,971)</u>	<u>\$ 44,680,600</u>	<u>\$ 291,504,151</u>

(3) Fair Value Recognition of Transfers Between Levels

The Company recognizes and records the transfer of securities into and out of Level 3 due to changes in availability of market observable inputs. All transfers are reflected in the table above at fair value as of the end of the reporting period.

(4) Inputs and Techniques Used in Estimating Fair Value

Level 1 - Quoted prices for identical assets or liabilities in active markets (markets in which transactions occur with sufficient frequency and volume to provide pricing information on an ongoing basis). The Company's Level 1 financial instruments consist primarily of publicly traded equity securities for which quoted market prices in active markets are available.

Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar assets or liabilities in inactive markets (markets in which there are few transactions, the prices are not current, price quotations vary substantially over time or among market makers, or in which little information is released publicly); and valuations based on other significant inputs that are observable in active markets. Level 2 inputs include benchmark yields, reported trades, corroborated broker/dealer quotes, issuer spreads and benchmark securities. When non-binding broker quotes can be corroborated by comparison to similar securities priced using observable inputs, they are classified as Level 2.

Level 3 - Valuations derived from market valuation techniques generally consistent with those used to estimate the fair value of Level 2 financial instruments in which one or more significant inputs are unobservable or when the market for a security exhibits significantly less liquidity relative to markets supporting Level 2 fair value measurements. The unobservable inputs may include management's own assumptions about the assumptions market participants would use based on the best information available in the circumstances. The Company's Level 3 is comprised of financial instruments whose fair value is estimated based on non-binding broker quotes or internally developed using significant inputs not based on, or corroborated by, observable market information.

The Company's investment manager, Barings LLC ("Barings") is responsible for the valuation process and uses data from outside sources (including nationally recognized pricing services and broker/dealers) in establishing fair value. Valuation techniques utilized by pricing services and prices obtained from external sources are reviewed by Barings internal investment professionals who are familiar with the securities being priced and the markets in which they trade to ensure the fair value determination is representative of an exit price. To validate the appropriateness of the prices obtained, the investment manager considers widely published indices (as benchmarks), recent trades, changes in interest rates, general economic conditions and the credit quality of the specific issuers. In addition, Barings communicates directly with the pricing service regarding the methods and assumptions used in pricing, including verifying, on a test basis, the inputs used by the service to value specific securities.

(5) Derivative Assets and Liabilities

- a. The Company's derivative assets/liabilities are reported on a gross basis (see 20-A-(1)).
- b. The Company has no gross or net derivative assets/liabilities measured at fair value in the Level 3 category.

B. The Company has no additional fair value disclosures.

NOTES TO FINANCIAL STATEMENTS

C. The Company has categorized all the financial assets in the financial statements into the three-level fair value hierarchy as reflected in the following table. See item (4) above for a discussion of each of these three levels.

Type of Financial Instrument	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Not Practicable (Carrying Value)
Financial assets:							
Bonds:							
U.S. Governments	\$ 90,438,016	\$ 123,122,747	\$ -	\$ 90,438,016	\$ -	\$ -	\$ -
All other government	18,057,789	19,161,385	-	18,057,789	-	-	-
States, territories and possessions	184,836,758	189,527,566	-	184,836,758	-	-	-
Political subdivisions of states, territories	259,553,314	260,284,246	-	259,553,314	-	-	-
Special revenue	1,559,591,154	1,677,580,326	-	1,559,591,154	-	-	-
Industrial and misc. (unaffiliated)	27,508,163,891	30,086,931,018	-	21,244,974,204	6,263,189,687	-	-
Hybrid securities	702,417,793	760,489,976	-	689,179,393	13,238,400	-	-
Parent, subs and affiliates	519,486,149	555,663,604	-	406,560,507	112,925,642	-	-
Total bonds	\$ 30,842,544,864	\$ 33,672,760,868	\$ -	\$ 24,453,191,135	\$ 6,389,353,729	\$ -	\$ -
Non affiliated preferred stock	176,082,000	163,073,219	42,815,570	15,300,000	117,966,430	-	-
Non affiliated common stock	275,211,891	275,211,891	91,076,610	-	184,135,281	-	-
Mortgage loans	3,179,187,665	3,069,341,023	-	-	3,179,187,665	-	-
Currency forw ards	529,435	529,435	-	529,435	-	-	-
Fixed-indexed annuity options	514,339,547	822,249,622	162,831,095	351,508,452	-	-	-
Interest rate sw aps	102,077	102,077	-	102,077	-	-	-
Currency sw aps	705,677	705,677	-	705,677	-	-	-
Separate account assets	164,526,617	164,526,617	1,705,446	162,821,171	-	-	-
Cash, cash equivalents and short-term investments	1,776,317,752	1,776,317,752	1,776,317,752	-	-	-	-
Policy loans	30,959,271	30,959,271	-	-	30,959,271	-	-
Total financial assets	<u>36,960,506,796</u>	<u>39,975,777,452</u>	<u>2,074,746,473</u>	<u>\$ 24,984,157,947</u>	<u>\$ 9,901,602,376</u>	<u>\$ -</u>	<u>\$ -</u>
Financial liabilities:							
Currency sw aps	\$ 9,751,495	\$ 9,751,495	\$ -	\$ 9,751,495	\$ -	\$ -	\$ -
Currency forw ards	954,316	954,316	-	954,316	-	-	-
Interest rate sw aps	94,129,358	94,129,358	-	94,129,358	-	-	-
Fixed-indexed annuity options	-	564,386,287	-	-	-	-	-
Separate account liabilities	164,526,617	164,526,617	1,705,446	162,821,171	-	-	-
Total financial liabilities	<u>\$ 269,361,786</u>	<u>\$ 833,748,073</u>	<u>\$ 1,705,446</u>	<u>\$ 267,656,340</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

D. Not Practicable to Estimate Fair Value – The Company has no financial instruments that fall under this classification.

E. NAV Practical Expedient Investments – The Company has no financial investments that fall under this classification.

Note 21 – Other Items

A. On February 17, 2022, MMALIC entered into a Funds Withheld Coinsurance agreement effective February 1, 2022, with Martello Re Limited, a Bermuda-domiciled Class E life and annuity reinsurer launched in 2022. MMALIC ceded statutory reserves of \$14,188,769,319 on a closed block of fixed, fixed-indexed and payout annuity policies, in exchange for a \$320,000,000 ceding commission paid by Martello Re. Under this agreement, the Company ceded \$12,023,007,987 and \$12,648,690,025 of annuity reserves at March 31, 2023 and December 31, 2022, respectively.

The Company entered into a quota share indemnity reinsurance agreement on fixed-indexed annuity (“FIA”) policies with Hannover Life Reassurance Company of America (“HLR”) effective December 31, 2018. Effective January 1, 2022 the Company has recaptured the FIA policies ceded to HLR in the agreement that became effective on December 31, 2018. The financial impact of the reinsurance recapture was a decrease to statutory capital of \$140,568,399.

B. The Company had no troubled debt restructuring.

C. Other Disclosures:

The impact of the Martello Re transaction on MMALIC’s income statement for 2022 is as follows:

	12-2022
Premiums and other revenues:	
Premiums and annuity considerations for life and accident and health contracts	\$ (14,113,436,353)
Net investment income	(451,786,096)
Commissions and expense allow ances on reinsurance ceded	451,581,204
Aggregate w rite-ins for miscellaneous income	<u>(34,606,397)</u>
Total premiums and other revenues	<u>\$ (14,148,247,642)</u>
Benefits and expenses:	
Annuity benefits	\$ (470,692,560)
Surrender benefits and w ithdraw als for life contracts	(1,604,832,240)
Increase in aggregate reserves for life and accident and health contracts	(12,416,592,021)
Aggregate w rite-ins for deductions	<u>317,161,240</u>
Total benefits and expenses	<u>\$ (14,174,955,581)</u>

Note 22 – Events Subsequent/Other items

No significant change.

Note 23 – Reinsurance

No significant change.

Note 24 – Retrospectively Rated Contracts & Contracts Subject to Redetermination

Not applicable.

NOTES TO FINANCIAL STATEMENTS

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

Reserves on accident and health contracts for incurred and loss adjustment expenses attributable to insured events of prior years developed as anticipated during the period. Original estimates are increased or decreased as additional information becomes known regarding individual claims. However, no significant trends or unanticipated events were noted. None of the Company's accident and health contracts are subject to retrospective rating or experience refunds.

Note 26 – Intercompany Pooling Arrangements

Not applicable.

Note 27 – Structured Settlements

Not applicable.

Note 28 – Health Care Receivables

Not applicable.

Note 29 – Participating Policies

No significant change.

Note 30 – Premium Deficiency Reserves

Not applicable.

Note 31 – Reserves for Life Contracts and Annuity Contracts

No significant change.

Note 32 – Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics

No significant change.

Note 33 – Analysis of Life Actuarial Reserves by Withdrawal Characteristics

No significant change.

Note 34 – Premiums and Annuity Considerations Deferred and Uncollected

No significant change.

Note 35 – Separate Accounts

No significant change.

Note 36 – Loss/Claim Adjustment Expenses

No significant change.

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

- 1.1

Did the reporting entity experience any material transactions requiring the filing of Disclosure of Material Transactions with the State of Domicile, as required by the Model Act?

Yes ☐ No ☒
- 1.2

If yes, has the report been filed with the domiciliary state?

Yes ☐ No ☐
- 2.1

Has any change been made during the year of this statement in the charter, by-laws, articles of incorporation, or deed of settlement of the reporting entity?

Yes ☐ No ☒
- 2.2

If yes, date of change:
- 3.1

Is the reporting entity a member of an Insurance Holding Company System consisting of two or more affiliated persons, one or more of which is an insurer?
If yes, complete Schedule Y, Parts 1 and 1A.

Yes ☒ No ☐
- 3.2

Have there been any substantial changes in the organizational chart since the prior quarter end?

Yes ☐ No ☒
- 3.3

If the response to 3.2 is yes, provide a brief description of those changes.
- 3.4

Is the reporting entity publicly traded or a member of a publicly traded group?

Yes ☐ No ☒
- 3.5

If the response to 3.4 is yes, provide the CIK (Central Index Key) code issued by the SEC for the entity/group.
- 4.1

Has the reporting entity been a party to a merger or consolidation during the period covered by this statement?

Yes ☐ No ☒
- 4.2

If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation.

1	2	3
Name of Entity	NAIC Company Code	State of Domicile
5.

If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved?
If yes, attach an explanation.

Yes ☐ No ☒ N/A ☐
- 6.1

State as of what date the latest financial examination of the reporting entity was made or is being made.

12/31/2021
- 6.2

State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released.

12/31/2016
- 6.3

State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date).

01/11/2018
- 6.4

By what department or departments?
State of Ohio, Department of Insurance
- 6.5

Have all financial statement adjustments within the latest financial examination report been accounted for in a subsequent financial statement filed with Departments?

Yes ☐ No ☐ N/A ☒
- 6.6

Have all of the recommendations within the latest financial examination report been complied with?

Yes ☐ No ☐ N/A ☒
- 7.1

Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period?

Yes ☐ No ☒
- 7.2

If yes, give full information:
- 8.1

Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board?

Yes ☐ No ☒
- 8.2

If response to 8.1 is yes, please identify the name of the bank holding company.
- 8.3

Is the company affiliated with one or more banks, thrifts or securities firms?

Yes ☒ No ☐
- 8.4

If response to 8.3 is yes, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC) and the Securities Exchange Commission (SEC)] and identify the affiliate's primary federal regulator.

1	2	3	4	5	6
Affiliate Name	Location (City, State)	FRB	OCC	FDIC	SEC
Barings LLC	Charlotte, NC	..NO..	..NO..	..NO..	..YES..
Baring International Investment Limited	London, UK	..NO..	..NO..	..NO..	..YES..
Baring Securities LLC	Charlotte, NC	..NO..	..NO..	..NO..	..YES..
Flourish Financial, LLC	New York, NY	..NO..	..NO..	..NO..	..YES..
IMM Ascend Life Investor Services, LLC	Cincinnati, OH	..NO..	..NO..	..NO..	..YES..
IML Distributors, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Investment Advisers, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Investors Services	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Strategic Distributors, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
The MassMutual Trust Company, OCC	Enfield, CT	..NO..	..YES..	..NO..	..NO..

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

- 9.1

Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards?
(a) Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
(b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity;
(c) Compliance with applicable governmental laws, rules and regulations;
(d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and
(e) Accountability for adherence to the code.

Yes [X] No []
- 9.11

If the response to 9.1 is No, please explain:
.....
- 9.2

Has the code of ethics for senior managers been amended?

Yes [] No [X]
- 9.21

If the response to 9.2 is Yes, provide information related to amendment(s).
.....
- 9.3

Have any provisions of the code of ethics been waived for any of the specified officers?

Yes [] No [X]
- 9.31

If the response to 9.3 is Yes, provide the nature of any waiver(s).
.....

FINANCIAL

- 10.1

Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement?

Yes [X] No []
- 10.2

If yes, indicate any amounts receivable from parent included in the Page 2 amount:\$

INVESTMENT

- 11.1

Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.)

Yes [] No [X]
- 11.2

If yes, give full and complete information relating thereto:
.....
12.

Amount of real estate and mortgages held in other invested assets in Schedule BA:\$219,752,838
13.

Amount of real estate and mortgages held in short-term investments:\$
- 14.1

Does the reporting entity have any investments in parent, subsidiaries and affiliates?

Yes [X] No []
- 14.2

If yes, please complete the following:

	1	2
	Prior Year-End Book/Adjusted Carrying Value	Current Quarter Book/Adjusted Carrying Value
14.21 Bonds	\$505,922,314	\$555,663,604
14.22 Preferred Stock	\$0	\$
14.23 Common Stock	\$401,901,977	\$408,291,116
14.24 Short-Term Investments	\$0	\$
14.25 Mortgage Loans on Real Estate	\$0	\$
14.26 All Other	\$152,544,036	\$159,849,126
14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)	\$1,060,368,327	\$1,123,803,846
14.28 Total Investment in Parent included in Lines 14.21 to 14.26 above	\$	\$

15.1

Has the reporting entity entered into any hedging transactions reported on Schedule DB?

Yes [X] No []

15.2

If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes [X] No [] N/A []
If no, attach a description with this statement.
.....

16.

For the reporting entity's security lending program, state the amount of the following as of the current statement date:

16.1

Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2.

\$0

16.2

Total book/adjusted carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2

\$0

16.3

Total payable for securities lending reported on the liability page.

\$0
- 8.1

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

17. Excluding items in Schedule E - Part 3 - Special Deposits, real estate, mortgage loans and investments held physically in the reporting entity's offices, vaults or safety deposit boxes, were all stocks, bonds and other securities, owned throughout the current year held pursuant to a custodial agreement with a qualified bank or trust company in accordance with Section 1, III - General Examination Considerations, F. Outsourcing of Critical Functions, Custodial or Safekeeping Agreements of the NAIC Financial Condition Examiners Handbook? Yes [X] No []
- 17.1 For all agreements that comply with the requirements of the NAIC Financial Condition Examiners Handbook, complete the following:

1 Name of Custodian(s)	2 Custodian Address
Bank of New York Mellon	1 Wall Street, New York, NY 10286
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105

- 17.2 For all agreements that do not comply with the requirements of the NAIC Financial Condition Examiners Handbook, provide the name, location and a complete explanation:

1 Name(s)	2 Location(s)	3 Complete Explanation(s)

- 17.3 Have there been any changes, including name changes, in the custodian(s) identified in 17.1 during the current quarter? Yes [] No [X]
- 17.4 If yes, give full information relating thereto:

1 Old Custodian	2 New Custodian	3 Date of Change	4 Reason

- 17.5 Investment management – Identify all investment advisors, investment managers, broker/dealers, including individuals that have the authority to make investment decisions on behalf of the reporting entity. For assets that are managed internally by employees of the reporting entity, note as such. ["...that have access to the investment accounts"; "...handle securities"]

1 Name of Firm or Individual	2 Affiliation
ARES Capital Management LLC	U.....
Ares Management LLC	U.....
Barings LLC	A.....
Centerbridge Martello Advisors, LLC	U.....
Fractal Investments LLC	U.....
Western Asset Management Company	U.....
Angelo, Gordon & Co., L.P	U.....

- 17.5097 For those firms/individuals listed in the table for Question 17.5, do any firms/individuals unaffiliated with the reporting entity (i.e. designated with a "U") manage more than 10% of the reporting entity's invested assets?..... Yes [] No [X]
- 17.5098 For firms/individuals unaffiliated with the reporting entity (i.e. designated with a "U") listed in the table for Question 17.5, does the total assets under management aggregate to more than 50% of the reporting entity's invested assets?..... Yes [] No [X]

- 17.6 For those firms or individuals listed in the table for 17.5 with an affiliation code of "A" (affiliated) or "U" (unaffiliated), provide the information for the table below.

1 Central Registration Depository Number	2 Name of Firm or Individual	3 Legal Entity Identifier (LEI)	4 Registered With	5 Investment Management Agreement (IMA) Filed
130074	ARES Capital Management LLC	549300R4YHRZ8JUZU385	SEC	NO.....
130074	Ares Management LLC	549300JA9GMPFTSVQQ05	SEC	NO.....
106006	Barings LLC	549300G36F1EZS4MQM37	SEC	DS.....
131940	Angelo, Gordon & Co., L.P.	XXJ808RONB9FETFPGB63	SEC	NO.....
157359	Centerbridge Martello Advisors, LLC	549300F5X7LPP05D3544	SEC	NO.....
311767	Fractal Investments LLC – Pending Mandate	984500D14JFD006CBC96	SEC	NO.....
801-8162	Western Asset Management Company	549300C5A561UXU1CN46	SEC	NO.....

- 18.1 Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Investment Analysis Office been followed? Yes [] No [X]
- 18.2 If no, list exceptions:
At 3/31/2023, 67 issues for 54 issuers did not meet the filing requirements of the Purposes and Procedures Manual. The majority of these issues currently lack one or more of the following: Valid cusip/PPN, audited financials and/or executed legal documentation.
Exceptions totaled \$443,891,280 or 1.29% of all assets.

19. By self-designating 5GI securities, the reporting entity is certifying the following elements for each self-designated 5GI security:
- a. Documentation necessary to permit a full credit analysis of the security does not exist or an NAIC CRP credit rating for an FE or PL security is not available.
- b. Issuer or obligor is current on all contracted interest and principal payments.
- c. The insurer has an actual expectation of ultimate payment of all contracted interest and principal.
- Has the reporting entity self-designated 5GI securities? Yes [X] No []

20. By self-designating PLGI securities, the reporting entity is certifying the following elements of each self-designated PLGI security:
- a. The security was purchased prior to January 1, 2018.
- b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
- c. The NAIC Designation was derived from the credit rating assigned by an NAIC CRP in its legal capacity as a NRSRO which is shown on a current private letter rating held by the insurer and available for examination by state insurance regulators.
- d. The reporting entity is not permitted to share this credit rating of the PL security with the SVO.
- Has the reporting entity self-designated PLGI securities? Yes [] No [X]

21. By assigning FE to a Schedule BA non-registered private fund, the reporting entity is certifying the following elements of each self-designated FE fund:
- a. The shares were purchased prior to January 1, 2019.
- b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
- c. The security had a public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO prior to January 1, 2019.
- d. The fund only or predominantly holds bonds in its portfolio.
- e. The current reported NAIC Designation was derived from the public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO.
- f. The public credit rating(s) with annual surveillance assigned by an NAIC CRP has not lapsed.
- Has the reporting entity assigned FE to Schedule BA non-registered private funds that complied with the above criteria? Yes [] No [X]

GENERAL INTERROGATORIES

PART 2 - LIFE AND ACCIDENT AND HEALTH COMPANIES/FRATERNAL BENEFIT SOCIETIES

Life and Accident Health Companies/Fraternal Benefit Societies:

1.

Report the statement value of mortgage loans at the end of this reporting period for the following categories:

1

Amount

1.1

Long-Term Mortgages In Good Standing

1.11

Farm Mortgages

\$

1.12

Residential Mortgages

\$

2,079,697,720

1.13

Commercial Mortgages

\$

1,289,643,303

1.14

Total Mortgages in Good Standing

\$

3,369,341,023

1.2

Long-Term Mortgages In Good Standing with Restructured Terms

1.21

Total Mortgages in Good Standing with Restructured Terms

\$

1.3

Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months

1.31

Farm Mortgages

\$

1.32

Residential Mortgages

\$

1.33

Commercial Mortgages

\$

1.34

Total Mortgages with Interest Overdue more than Three Months

\$

0

1.4

Long-Term Mortgage Loans in Process of Foreclosure

1.41

Farm Mortgages

\$

1.42

Residential Mortgages

\$

1.43

Commercial Mortgages

\$

1.44

Total Mortgages in Process of Foreclosure

\$

0

1.5

Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)

\$

3,369,341,023

1.6

Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter

1.61

Farm Mortgages

\$

1.62

Residential Mortgages

\$

1.63

Commercial Mortgages

\$

1.64

Total Mortgages Foreclosed and Transferred to Real Estate

\$

0

2.

Operating Percentages:

2.1

A&H loss percent

%

2.2

A&H cost containment percent

%

2.3

A&H expense percent excluding cost containment expenses

%

3.1

Do you act as a custodian for health savings accounts?

Yes

[]

No

[X]

3.2

If yes, please provide the amount of custodial funds held as of the reporting date

\$

3.3

Do you act as an administrator for health savings accounts?

Yes

[]

No

[X]

3.4

If yes, please provide the balance of the funds administered as of the reporting date

\$

4.

Is the reporting entity licensed or chartered, registered, qualified, eligible or writing business in at least two states?

Yes

[X]

No

[]

4.1

If no, does the reporting entity assume reinsurance business that covers risks residing in at least one state other than the state of domicile of the reporting entity?

Yes

[]

No

[]

Fraternal Benefit Societies Only:

5.1

In all cases where the reporting entity has assumed accident and health risks from another company, provisions should be made in this statement on account of such reinsurances for reserve equal to that which the original company would have been required to establish had it retained the risks. Has this been done?

Yes

[]

No

[]

N/A

[]

5.2

If no, explain:

6.1

Does the reporting entity have outstanding assessments in the form of liens against policy benefits that have increased surplus?

Yes

[]

No

[]

6.2

If yes, what is the date(s) of the original lien and the total outstanding balance of liens that remain in surplus?

Date	Outstanding Lien Amount

SCHEDULE S - CEDED REINSURANCE

[illegible]

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

The following entities are general partner level or above of **Massachusetts Mutual Life Insurance Company** (Parent)

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Special Situations Investor LLC	None		Delaware
CM Life Mortgage Lending LLC	None		Delaware
CML Global Capabilities LLC	None		Delaware
MM Global Capabilities I LLC	None		Delaware
MassMutual Global Business Services India LLP	None		India
MM Global Capabilities (Netherlands) B.V.	None		Netherlands
MassMutual Global Business Services Romania S.R.L.	None		Romania
MM Global Capabilities II LLC	None		Delaware
MM Global Capabilities III LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
Lyme Adirondack Timber Sales, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
ITPS Holding LLC	None		Delaware
HITPS LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
MassMutual Ventures US IV, GP, LLC	None		Delaware
MassMutual Ventures US IV, L.P.	None		Delaware
MassMutual Ventures Europe/APAC I GP, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, L.P.	None		Cayman Islands
MassMutual Ventures Europe/APAC I L.P.	None		Cayman Islands
JFIN Parent LLC	None		Delaware
Jefferies Finance LLC	27-0105644		Delaware
JFIN GP Adviser LLC	None		Delaware
JFIN Fund III LLC	None		Delaware

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of
Jefferies Credit Partners LLC	None		Delaware
APEX Credit Partners LLC	None		Delaware
Jefferies Credit Management LLC	None		Delaware
JCP Direct Lending CLO 2022 LLC	None		Delaware
Jefferies Direct Lending Europe SCSp SICAV-RAIF	None		Luxembourg
Jefferies Credit Management Holdings LLC	None		Delaware
Senior Credit Investments, LLC	None		Delaware
JDLF GP (Europe) S.a.r.l	None		Luxembourg
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
Jefferies Direct Lending Fund C LP	None		Delaware
Jefferies DLF C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund C SPE LLC	None		Delaware
JDLF II GP LLC	None		Delaware
JDLF II GP LP	None		Delaware
Jefferies Direct Lending Fund II C LP	None		Delaware
Jefferies DLF II C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund II C SPE LLC	None		Delaware
Jefferies Private Credit BDC Inc.	None		Maryland
Jefferies Senior Lending LLC	None		Delaware
Jefferies Credit Partners BDC Inc	None		Maryland
JFIN Revolver Holdings LLC	None		Delaware
JFIN Revolver Holdings II LLC	None		Delaware
JFIN Revolver Holdings IV LLC	None		Delaware
JFIN Co-Issuer Corporation	None		Delaware
JFIN Europe GP, S.a.r.l.	None		Luxembourg
Jefferies Finance Europe, S.L.P.	None		Luxembourg
Jefferies Finance Europe, SCSp	None		Luxembourg
Jefferies Finance Business Credit LLC	None		Delaware
JFIN Business Credit Fund I LLC	None		Delaware
JFIN Funding 2021 LLC	None		Delaware
JFIN High Yield Investments LLC	None		Delaware
JFIN LC Fund LLC	None		Delaware
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2018 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2020 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-V Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-II Ltd.	None		Cayman Islands

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
JFIN Revolver CLO 2022-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-IV Ltd.	None		Cayman Islands
JFIN Revolver Fund, L.P.	None		Delaware
JFIN Revolver Funding 2021 Ltd.	None		Delaware
JFIN Revolver Funding 2021-III Ltd.	None		Delaware
JFIN Revolver Funding 2021-IV Ltd.	None		Delaware
JFIN Revolver Funding 2022-I Ltd.	None		Bermuda
JFIN Revolver SPE1 2022 LLC	None		Delaware
JFIN Revolver SPE3 2022 LLC	None		Delaware
JFIN Revolver SPE4 2022 LLC	None		Delaware
SFL Parkway Funding 2022 LLC	None		Delaware
JCP Private Loan Management GP LLC	None		Delaware
JCP Private Loan Management LP	None		Delaware
Beauty Brands Acquisition Holdings LLC	None		Delaware
Beauty Brands Acquisition LLC	None		Delaware
Beauty Brands Acquisition Intermediate LLC	None		Delaware
Forma Brands, LLC	None		Delaware
Apex Credit Holdings LLC	None		Delaware
JFIN CLO 2012 Ltd.	None		Cayman Islands
JFIN CLO 2013 Ltd.	None		Cayman Islands
JFIN CLO 2014 Ltd.	None		Cayman Islands
JFIN CLO 2014-II Ltd.	None		Cayman Islands
JFIN CLO 2015 Ltd.	None		Cayman Islands
JFIN CLO 2015-II Ltd.	None		Cayman Islands
JFIN CLO 2016 Ltd.	None		Cayman Islands
JFIN CLO 2017 Ltd.	None		Cayman Islands
JFIN CLO 2017 II Ltd.	None		Cayman Islands
Tomorrow Parent, LLC	None		Delaware
Custom Ecology Holdco, LLC	None		Delaware
Glidepath Holdings Inc.	86-2294635		Delaware
MassMutual Ascend Life Insurance Company	13-1935920	63312	Ohio
AAG Insurance Agency, LLC	31-1422717		Kentucky
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
MM Ascend Life Investor Services, LLC	31-1395344		Ohio
MM Ascend Mortgage Lending LLC	31-1395344		Ohio
Manhattan National Holding, LLC	26-3260520		Ohio
Manhattan National Life Insurance Company	45-0252531	67083	Ohio
MassMutual Mortgage Lending LLC	None		Delaware
MM Copper Hill Road LLC	04-1590850		Delaware
MMV CTF I GP LLC	None		Delaware
MassMutual Ventures Climate Technology Fund I LP	None		Delaware
MM Direct Private Investment Holding LLC	None		Delaware

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
MM Direct Private Investments UK Limited	None		United Kingdom
DPI-ACRES Capital LLC	None		Delaware
MM Investment Holding	None		Cayman Islands
MMIH Bond Holdings LLC	None		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2014-A	36-4785301		Delaware
MMAF Equipment Finance LLC 2017-A	35-2590691		Delaware
MMAF Equipment Finance LLC 2017-B	32-0546197		Delaware
MMAF Equipment Finance LLC 2018-A	82-5335801		Delaware
MMAF Equipment Finance LLC 2019-A	83-3722640		Delaware
MMAF Equipment Finance LLC 2019-B	None		Delaware
MMAF Equipment Finance LLC 2020-A	None		Delaware
MMAF Equipment Finance LLC 2020-B	None		Delaware
MMAF Equipment Finance LLC 2021-A	None		Delaware
MMAF Equipment Finance LLC 2022-A	None		Delaware
MMAF Equipment Finance LLC 2022-B	None		Delaware
Rozier LLC	None		Delaware
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MML CM LLC	None		Delaware
Blueprint Income LLC	None		New York
Flourish Digital Assets LLC	None		Delaware
Flourish Financial LLC	None		Delaware
Flourish Holding Company LLC	None		Delaware
Flourish Insurance Agency LLC	None		Delaware
Flourish Technologies LLC	None		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
Low Carbon Energy Holding	None		United Kingdom
Sleeper Street LLC	None		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Milestone Acquisition Holding LLC	47-3055009		Delaware
Teaktree Acquisition, LLC	None		Delaware
VGS Acquisition Holding, LLC	None		Delaware

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SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Haven Life Insurance Agency, LLC	46-2252944		Delaware
Aland Royalty Holdings LP	None		Delaware
GASL Holdings LLC	None		Delaware
Barings Asset-Based Income Fund (US) LP	None		Delaware
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings North American Private Loan Fund LP	38-4010344		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
Marco Hotel LLC	46-4255307		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
RB Apartments LLC	82-4411267		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Athens Fund Management LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures Southeast Asia II LLC	None		Delaware
MassMutual Ventures Southeast Asia III LLC	None		Delaware
MMV Digital I LLC	None		Cayman Islands
MassMutual Ventures UK LLC	None		Delaware
MassMutual Ventures US I LLC	47-1296410		Delaware
MassMutual Ventures US II LLC	None		Delaware
MassMutual Ventures US III LLC	None		Delaware
MassMutual Ventures US IV LLC	None		Delaware
MM Catalyst Fund LLC	None		Delaware
MM Catalyst Fund II LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
Rothesay Limited	None		United Kingdom
Rothesay Mortgages Limited	None		United Kingdom
Rothesay Life Plc	None		United Kingdom
Rothesay MA No.1 Limited	None		United Kingdom
Rothesay MA No.3 Limited	None		United Kingdom
Rothesay MA No.4 Limited	None		United Kingdom
LT Mortgage Finance Limited	None		United Kingdom
Rothesay Property Partnership 1 LLP	None		United Kingdom
Rothesay Foundation	None		United Kingdom
Rothesay Pensions Management Limited	None		United Kingdom
Rothesay Asset Management UK Limited	None		United Kingdom
Rothesay Asset Management Australia Pty Ltd	None		Australia
Rothesay Asset Management North America LLC	None		Delaware

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
LifeScore Labs, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda
Baring Asset Management (Asia) Limited	98-0457463		Hong Kong, Special Administrative Region of China
Baring Asset Management Korea Limited	None		Korea
Barings Investment Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Barings Overseas Investment Fund Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC
Barings Singapore Pte. Ltd.	None		Singapore
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	None		Australia
Barings Australia Real Estate Holdings Pty Ltd	None		Australia
Barings Australia Real Estate Pty Ltd	14-0045656		Australia
Altis Property Partners Holdings Pty Ltd	98-0457456		Australia
Altis Asset Management Pty Ltd	None		Australia
Altis Property Partners Pty Ltd	None		Australia
Barings Australia Structured Finance Holdings Pty Ltd	None		Australia
Barings Australia Structured Finance Pty Ltd	None		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Real Estate Acquisitions LLC	None		Delaware
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings Asset Management Spain SL	None		Spain
Baring France SAS	None		France
Baring International Fund Managers (Ireland) Limited	None		Ireland
Barings GmbH	None		Germany
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Netherlands B.V.	None		Netherlands
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Switzerland Sàrl	None		Switzerland
Baring Asset Management Limited	98-0241935		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom

12.5

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

12.6

	Federal Tax ID	NAIC Co Code	State of Domicile
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Fund Managers Limited	98-0457586		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Core Fund Feeder I GP S.à.r.l.	None		Luxembourg
Barings Investment Fund (LUX) GP S.à r.l.	None		Luxembourg
Barings BME GP S.à.r.l.	None		United Kingdom
Barings GPC GP S.à.r.l.	None		Luxembourg
Barings European Core Property Fund GP Sà.r.l	None		United Kingdom
Barings Umbrella Fund (LUX) GP S.à.r.l.	None		Luxembourg
GPLF4(S) GP S.à r. l	None		Luxembourg
PREIF Holdings Limited Partnership	None		United Kingdom
BMC Holdings DE LLC	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
EIP Holdings I, LLC	None		Delaware
Novation Companies, Inc.	None		Maryland
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
Tamiami Citrus, LLC	None		Delaware
Techquity, LP	None		Delaware
Validus Holding Company LLC	46-0687392		Delaware
Aland Royalty GP, LLC	None		Delaware
Alaska Future Fund GP, LLC	None		Delaware
BAI Funds SLP, LLC	None		Delaware
BAI GP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings CMS Fund GP, LLC	None		Delaware
Barings Infiniti Fund Management LLC	None		Delaware
Barings Hotel Opportunity Venture I GP, LLC	None		Delaware
Barings Investment Series LLC	None		Delaware
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings Emerging Generation Fund GP II, LLC	None		Delaware
Barings ERS PE Emerging Manager III GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Core Property Fund GP LLC	None		Delaware
Barings Direct Lending GP Ltd.	None		Cayman Islands
Barings Emerging Generation Fund LP	84-3784245		Delaware
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware

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SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Centre Street CLO Equity Partnership GP, LLC	None		Delaware
Barings Centre Street CLO Equity Partnership LP	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings GPSF LLC	None		Delaware
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund II Management, LLC	None		Delaware
Barings North American Private Loan Fund III Management, LLC	None		Delaware
Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	None		Delaware
Barings - MM Revolver Fund GP LLC	None		Delaware
BMT RE Debt Fund GP LLC	None		Delaware
Barings Small Business Fund LLC	84-5063008		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BHOVI Incentive LLC	None		Delaware
BIG Real Estate Fund GP LLC	None		Delaware
BIG Real Estate Incentive I LLC	None		Delaware
BIG Real Estate Incentive II LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
BREDIF GP LLC	None		Delaware
CREF X GP LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Barings Emerging Markets Blended Fund I GP, LLC	None		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia II LLC	None		Delaware
RECSA-NY GP LLC	None		Delaware
SBNP SIA II LLC	None		Delaware
SBNP SIA III LLC	None		Delaware
Barings CLO 2022-I	98-1624360		Cayman Island
Barings CLO 2022-II	None		Cayman Island
Amherst Long Term Holdings, LLC	None		Delaware
MassMutual International LLC	04-3313782		Delaware
MassMutual Solutions LLC	None		Delaware
Haven Technologies Asia Limited	None		Hong Kong
Yunfeng Financial Group Limited	None		Hong Kong
MassMutual Asia Limited (SPV)	None		Hong Kong
MassMutual External Benefits Group LLC	27-3576835		Delaware
MMV CTF I GP LLC	None		Delaware
MassMutual Ventures Climate Technology Fund I LP	27-3576835		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
2160 Grand Manager LLC	04-1590850		Delaware

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
300 South Tryon LLC	04-1590850		Delaware
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Barings Affordable Housing Mortgage Fund I LLC	82-3468147		Delaware
Barings Affordable Housing Mortgage Fund II LLC	61-1902329		Delaware
Barings Affordable Housing Mortgage Fund III LLC	85-3036663		Delaware
Barings Emerging Markets Corporate Bond Fund*	None		Ireland
Barings European Real Estate Debt Income Fund	None		Luxembourg
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson CLO Ltd. 2016-II	None		Cayman Islands
Barings CLO Ltd. 2017-I	None		Cayman Islands
Barings CLO 2018-III	None		Cayman Islands
Barings CLO 2018-IV	None		Cayman Islands
Barings CLO 2019-II	98-1473665		Cayman Islands
Barings CLO 2019-III	None		Cayman Islands
Barings CLO 2019-IV	None		Cayman Islands
Barings CLO 2020-I	None		Cayman Islands
Barings CLO 2020-II	None		Cayman Islands
Barings CLO 2020-III	None		Cayman Islands
Barings CLO 2020-IV	None		Cayman Islands
Barings CLO 2021-I	None		Cayman Islands
Barings CLO 2021-II	None		Cayman Islands
Barings CLO 2021-III	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Barings Euro CLO 2019-I	3603726OH		Ireland
Barings Euro CLO 2019-II	None		Ireland
Barings Euro CLO 2020-I DAC	None		Ireland
Barings Euro CLO 2021-I DAC	3715576VH		Ireland
Barings Euro CLO 2021-II DAC	3750378QH		Ireland
Barings Euro CLO 2021-III DAC	None		Ireland
Barings Euro CLO 2022-I DAC	None		Ireland
Barings Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Special Situations Credit 4 Delaware*	85-1465973		Delaware
Barings Global Special Situations Credit 4 LUX*	98-1570693		Luxembourg
Barings Global Technology Equity Fund	None		Ireland

*This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Europe Select Fund	None		Ireland
Barings Hotel Opportunity Venture	87-0977058		Connecticut
Barings Innovations & Growth Real Estate Fund*	86-3661023		Delaware
Barings Middle Market CLO 2017-I Ltd & LLC	None		Cayman Islands
Barings Middle Market CLO 2018-I	None		Cayman Islands
Barings Middle Market CLO 2019-I	None		Cayman Islands
Barings Middle Market CLO Ltd 2021-I	98-1612604		Cayman Islands
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Barings Target Yield Infrastructure Debt Fund*	98-1567942		Luxembourg
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Euro Value Add II (BREEVA II) *	None		Luxembourg
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Barings Real Estate Debt Income Fund LP*	85-3449260		Delaware
Barings Transportation Fund LP*	87-1262754		Delaware
Braemar Energy Ventures I, L.P.*	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Barings European Private Loan Fund III A	46-5001122		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Benchmark 2018-B8	38-4096530		New York
Barings Core Property Fund LP	20-5578089		Delaware
DPI Acres Capital SPV LLC	04-1590850		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
GIA EU Holdings - Emerson JV Sarl	98-1607033		Luxembourg
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Martello Re	None		Bermuda
Miami Douglas Two GP LLC*	04-1590850		Delaware
Miami Douglas Two LP*	04-1590850		Delaware
Miami Douglas Three MM LLC	04-1590850		Delaware
MM BIG Peninsula Co-Invest Member LLC	87-4021641		Delaware
MM Direct Private Investment Holding	04-1590850		Delaware
MM CM Holding LLC	None		Delaware
MM Debt Participations LLC	81-3000420		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
Ten Fan Pier Boulevard LLC	35-2553915		Delaware
Tower Square Capital Partners III, L.P.	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Trailside MM Member LLC*	04-1590850		Delaware
Washington Gateway Two LLC*	83-1325764		Delaware
Washington Gateway Three LLC*	32-0574045		Delaware
Barings Affiliates & Funds:			

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SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings China Aggregate Bond Private Securities Investment Fund	None		Peoples Republic of China
Barings European Growth Trust Fund	None		United Kingdom
Barings Global High Yield Fund	47-3790192		Massachusetts
CCIC Fund	None		Peoples Republic of China
Great Lakes II LLC*	71-1018134		Delaware
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
Barings California Mortgage Fund IV	None		California
Barings Umbrella Fund LUX SCSp SICAV RAIF*	None		Luxembourg
Calgary Railway Holding LLC*	82-2285211		Delaware
Cornbrook PRS Holdings LLC	82-3307907		Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II LLC	95-4207717		California
Cornerstone California Mortgage Fund III LLC	95-4207717		California
Cornerstone Fort Pierce Development LLC*	56-2630592		Delaware
Cornerstone Permanent Mortgage Fund	45-2632610		Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735		Massachusetts
CREA/PPC Venture LLC	20-0348173		Delaware
Danville Riverwalk Venture, LLC	82-2783393		Delaware
Euro Real Estate Holdings LLC	04-1590850		Delaware
Fan Pier Development LLC*	20-3347091		Delaware
GIA EU Holdings LLC	04-1590850		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
MMLIC Debt Participations LLC	13-1935920		Delaware
MM Brookhaven Member LLC	04-1590850		Delaware
MM Kannapolis Industrial Member LLC	04-1590850		Delaware
MM East South Crossing Member LLC	04-1590850		Delaware
MM Horizon Savannah Member LLC*	04-1590850		Delaware
MM National Self-Storage Program Member LLC	04-1590850		Delaware
MM 1400 E 4th Street Member LLC	04-1590850		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
PACO France Logistics LLC	04-1590850		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Trailside MM Member II LLC	04-1590850		Delaware
Unna, Dortmund Holding LLC	82-3250684		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
West 37th Street Hotel LLC*	88-3861481		Delaware
MassMutual Premier Funds:			
MassMutual Premier Main Street Fund	51-0529328		Massachusetts

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SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Select Funds:			
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts
MassMutual Select T. Rowe Price Retirement 2005 Fund	82-3347422		Massachusetts
MassMutual Select T. Rowe Price Retirement 2010 Fund	82-3355639		Massachusetts
MassMutual Select T. Rowe Price Retirement 2015 Fund	82-3382389		Massachusetts
MassMutual Select T. Rowe Price Retirement 2020 Fund	82-3396442		Massachusetts
MassMutual Select T. Rowe Price Retirement 2025 Fund	82-3417420		Massachusetts
MassMutual Select T. Rowe Price Retirement 2030 Fund	82-3430358		Massachusetts
MassMutual Select T. Rowe Price Retirement 2035 Fund	82-3439837		Massachusetts
MassMutual Select T. Rowe Price Retirement 2040 Fund	82-3451779		Massachusetts
MassMutual Select T. Rowe Price Retirement 2045 Fund	82-3472295		Massachusetts
MassMutual Select T. Rowe Price Retirement 2050 Fund	82-3481715		Massachusetts
MassMutual Select T. Rowe Price Retirement 2055 Fund	82-3502011		Massachusetts
MassMutual Select T. Rowe Price Retirement 2060 Fund	82-3525148		Massachusetts
MassMutual Select T. Rowe Price Retirement Balanced Fund	82-3533944		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2035 Fund	27-1933380		Massachusetts
MassMutual RetireSMART 2045 Fund	27-1932769		Massachusetts
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual 20/80 Allocation Fund	45-1618155		Massachusetts
MassMutual 80/20 Allocation Fund	45-1618222		Massachusetts
MassMutual RetireSMART In Retirement Fund	03-0532464		Massachusetts
MassMutual 40/60 Allocation Fund	45-1618262		Massachusetts
MassMutual 60/40 Allocation Fund	45-1618046		Massachusetts
MassMutual ishares 60/40 Allocation Fund	45-1618046		Massachusetts
MassMutual Balanced Fund	04-3212054		Massachusetts
MassMutual Blue Chip Growth Fund	04-3556992		Massachusetts
MassMutual Core Bond Fund	04-3277549		Massachusetts
MassMutual Disciplined Growth Fund	04-3539084		Massachusetts
MassMutual Disciplined Value Fund	04-3539083		Massachusetts
MassMutual Diversified Value Fund	01-0821120		Massachusetts
MassMutual Equity Opportunities Fund	04-3512590		Massachusetts

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SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP
PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Growth Opportunities Fund	04-3512589		Massachusetts
MassMutual Inflation-Protected and Income Fund	03-0532475		Massachusetts
MassMutual Mid Cap Growth Fund	04-3512596		Massachusetts
MassMutual Premier Diversified Bond Fund	04-3464165		Massachusetts
MassMutual RetireSMART by JPMorgan 2065 Fund	92-1441036		Massachusetts
MassMutual Select 80/20 Allocation Fund	45-1618222		Massachusetts
MassMutual Select Fundamental Value Fund	04-3584138		Massachusetts
MassMutual Select Overseas Fund	04-3557000		Massachusetts
MassMutual Select T Rowe Price Retirement 2065 Fund	92-1427882		Massachusetts
MassMutual Small Cap Growth Equity Fund	04-3464205		Massachusetts
MassMutual Small Cap Opportunities Fund	04-3424705		Massachusetts
MassMutual Small Cap Value Equity Fund	02-0769954		Massachusetts
MassMutual Strategic Bond Fund	26-0099965		Massachusetts

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SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0435 ...	Massachusetts Mut Life Ins Co	 65935	04-1590850 ..	3848388 .....	.....	.....	Massachusetts Mutual Life Insurance Company (MMLIC)	.. MA.....	..UIP.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I GP, LLC ..	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I GP, L.P. ..	..CYM.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I L.P.	..CYM.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...	Massachusetts Mut Life Ins Co	 93432	06-1041383 ..	.....	.....	.....	C.M. Life Insurance Company	.. CT.....	..IA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...	Massachusetts Mut Life Ins Co	 70416	43-0581430 ..	.....	.....	.....	MML Bay State Life Insurance Company	.. CT.....	..IA.....	C.M. Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0435 ...	Massachusetts Mut Life Ins Co .....	.....	.....	.....	.....	.....	CM Life Mortgage Lending LLC	.. DE.....	..NIA.....	C.M. Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							CML Special Situations Investor LLC	.. DE.....	..NIA.....	C.M. Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							CML Global Capabilities LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MM Global Capabilities I LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MassMutual Global Business Services India LLP	.. IND.....	..NIA.....	MM Global Capabilities I LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MM Global Capabilities (Netherlands) B.V. ...	.. NLD.....	..NIA.....	MM Global Capabilities I LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MassMutual Global Business Services Romania S.R.L.	.. ROU.....	..NIA.....	MM Global Capabilities (Netherlands) B.V.	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MM Global Capabilities II LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MM Global Capabilities III LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MM/Barings Multifamily TEBS 2020 LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MML Special Situations Investor LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	..NIA.....	C.M. Life Insurance Company	Influence.....	0.000	MMLIC .....	.....	.....
. 0000 ...			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	..NIA.....	Wood Creek Capital Management LLC	Management.....	.....	MMLIC .....	.....	.....
. 0000 ...							Lyme Adirondack Forest Company, LLC	.. DE.....	..NIA.....	Timberland Forest Holding LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							Lyme Adirondack Timberlands I, LLC	.. DE.....	..NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							Lyme Adirondack Timberlands II, LLC	.. DE.....	..NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							Lyme Adirondack Timber Sales, LLC	.. DE.....	..NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Berkshire Way LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			83-0560183 ..	.....	.....	.....	Aland Royalty Holdings LP	.. DE.....	..NIA.....	MassMutual Holding LLC	Ownership/Influence	26.700	MMLIC .....	.....	.....
. 0000 ...			82-2932156 ..	.....	.....	.....	GASL Holdings LLC	.. DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	11.300	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MSP-SC, LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							EM Opportunities LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MassMutual MCAM Insurance Company, Inc.	.. VT.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MassMutual Ventures US IV, GP, LLC	.. DE.....	..NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...							MassMutual Ventures US IV, LP	.. DE.....	..NIA.....	MassMutual Ventures US IV, GP, LLC	Ownership.....	100.000	MMLIC .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000			04-1590850				Insurance Road LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Trad Private Equity LLC	..DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Intellectual Property LLC	..DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000							Trad Investments I LLC	..DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000							ITPSHolding LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							HITPS LLC	..DE	NIA	ITPS Holding LLC	Ownership	100.000	MMLIC		
.0000							JFIN Parent LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Forma Brands, LLC*	..DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	..DE	NIA	JFIN Parent LLC	Ownership	50.000	MMLIC		1
.0000			86-2294635				Glidepath Holdings Inc.	..DE	UDP	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	63312	13-1935920				MassMutual Ascend Life Insurance Company	..OH	RE	Glidepath Holdings Inc.	Ownership	100.000	MMLIC		
.0000			31-1422717				AAG Insurance Agency, LLC	..KY	NIA	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	..OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			31-1395344				MM Ascend Life Investor Services, LLC	..OH	NIA	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Ascend Mortgage Lending LLC	..OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-3260520				Manhattan National Holding, LLC	..OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	67083	45-0252531				Manhattan National Life Insurance Company	..OH	DS	Manhattan National Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Mortgage Lending LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Jefferies Private Credit BDC Inc.	..MD	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN GP Adviser LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Partners LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit Partners LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Management LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JCP Direct Lending CLO 2022 LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Direct Lending Europe SCSp SICAV-RAIF	..LUX	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Credit Management Holdings LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Senior Credit Investments, LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							JDLF GP (Europe) S.a.r.l	..LUX	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LP	..DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C LP	..DE	NIA	JFAM GP LP	Ownership	100.000	MMLIC		
.0000							Jefferies DLF C Holdings LLC	..DE	NIA	Jefferies Direct Lending Fund C LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C SPE LLC	..DE	NIA	Jefferies DLF C Holdings LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LLC	..DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LP	..DE	NIA	JDLF II GP LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund II C LP	..DE	NIA	JDLF II GP LP	Ownership	100.000	MMLIC		
.0000							Jefferies DLF II C Holdings LLC	..DE	NIA	Jefferies Direct Lending Fund II C LP	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund II C SPE LLC	..DE	NIA	Jefferies DLF II C Holdings LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Senior Lending LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Partners BDC Inc	..MD	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings II LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings IV LLC	..DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Perce- ntage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Report- ing Entity	Directly Controlled by (Name of Entity/Person)					
.0000							JFIN Co-Issuer Corporation	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Europe GP, S.a.r.l.	.LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Europe, S.L.P.	.LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Europe, SCSp	.LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Business Credit LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Business Credit Fund I LLC	.DE	NIA	Jefferies Finance Business Credit LLC	Ownership	100.000	MMLIC		
.0000							JFIN Funding 2021 LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN High Yield Investments LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN LC Fund LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Beauty Brands Acquisition Holdings LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Beauty Brands Acquisition LLC	.DE	NIA	Beauty Brands Acquisition Holdings LLC	Ownership	100.000	MMLIC		
.0000							Beauty Brands Acquisition Intermediate LLC	.DE	NIA	Beauty Brands Acquisition LLC	Ownership	100.000	MMLIC		
.0000							Forma Brands, LLC	.DE	NIA	Beauty Brands Acquisition Intermediate LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-III Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2018 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2020 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2021-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2021-V Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-III Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-IV Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Fund, L.P.	.DE	NIA	Jefferies Finance LLC	Ownership	90.000	MMLIC		
.0000							JFIN Revolver Funding 2021 Ltd.	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Funding 2021 III Ltd.	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Funding 2021 IV Ltd.	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Funding 2022-I Ltd.	.BMU	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver SPE1 2022 LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver SPE3 2022 LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver SPE4 2022 LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							SFL Parkway Funding 2022 LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JCP Private Loan Management GP LLC	.DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JCP Private Loan Management LP	.DE	NIA	JCP Private Loan Management GP LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit Holdings LLC	.DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2012 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2013 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2014 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2014-II Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2015-II Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	85.000	MMLIC		
.0000							JFIN CLO 2016 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017-II Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Tomorrow Parent, LLC	.DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Per-centage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Custom Ecology Holdco, LLC	..DE....	NIA.....	JFIN Parent LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MM Copper Hill Road LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							MMV CTF I GP LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures Climate Technology Fund I LP	..DE....	NIA.....	MMV CTF I GP LLC	Ownership.....	100.000	MMLIC		
.0000							MM Direct Private Investments Holding LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							MM Direct Private Investments UK Limited	..GBR....	NIA.....	MM Direct Private Investments Holding LLC	Ownership.....	100.000	MMLIC		
.0000							DPI-ACRES Capital LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							MM Investment Holding	..CYM....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							MMIH Bond Holdings LLC	..DE....	NIA.....	MM Investment Holding	Ownership.....	99.600	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	..DE....	NIA.....	MM Investment Holding	Ownership.....	99.600	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	0.400	MMLIC		
.0000			36-4785301				MMAF Equipment Finance LLC 2014-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000			35-2590691				MMAF Equipment Finance LLC 2017-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000			32-0546197				MMAF Equipment Finance LLC 2017-B	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000			82-5335801				MMAF Equipment Finance LLC 2018-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000			83-3722640				MMAF Equipment Finance LLC 2019-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2019-B	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2020-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2020-B	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2021-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2022-A	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2022-B	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000							Rozier LLC	..DE....	NIA.....	MassMutual Asset Finance LLC	Ownership.....	100.000	MMLIC		
.0000			04-2443240				MML Management Corporation	..MA....	NIA.....	MM Investment Holding	Ownership.....	100.000	MMLIC	...YES...	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	..MA....	NIA.....	MML Management Corporation	Ownership.....	100.000	MMLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	..MA....	NIA.....	MML Management Corporation	Ownership.....	100.000	MMLIC		
.0000							MML CM LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000							Blueprint Income LLC	..NY....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Digital Assets LLC	..DE....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Financial LLC	..DE....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Holding Company LLC	..DE....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Insurance Agency LLC	..DE....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Technologies LLC	..DE....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	..MA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	99.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	..MA....	NIA.....	MassMutual Holding LLC	Ownership.....	1.000	MMLIC		
.0000							MML Investment Advisers, LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	..CT....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC	...YES...	

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000			04-1590850				MML Private Placement Investment Company I, LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	..DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			04-1590850				MM Private Equity Intercontinental LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-2738137				Pioneers Gate LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	..YES	
.0000			06-1597528				MassMutual Assignment Company	..NC	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Low Carbon Energy Holding	..GBR	NIA	MassMutual Holding LLC	Ownership	49.000	MMLIC		
.0000							Sleeper Street LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Intermodal Holding II LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Milestone Acquisition Holding LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Capital Partners LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-4255307				Marco Hotel LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			45-3623262				HB Naples Golf Owner LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			82-4411267				RB Apartments LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Holding LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Athens Fund Management LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							Crane Venture Partners LLP	..GBR	NIA	MassMutual Ventures Holding LLC	Ownership	33.000	MMLIC		
.0000							MassMutual Ventures Management LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures SEA Management Private Limited	..DE	NIA	MassMutual Ventures Management LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia II LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia III LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MMV Digital I LLC	..CYM	NIA	MassMutual Ventures Southeast Asia III LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures UK LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures US I LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US II LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US III LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV LLC	..DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	..DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Rothesay Limited	..GBR	NIA	MM Rothesay Holdco US LLC	Ownership	48.800	MMLIC		
.0000							Rothesay Life Plc	..GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.1 Limited	..GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Mortgages Limited	..GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.3 Limited	..GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.4 Limited	..GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							LT Mortgage Finance Limited	..GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Property Partnership 1 LLP	..GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Foundation	..GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay Pensions Management Limited	..GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay Asset Management UK Limited	..GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000							Rothesay Asset Management Australia Pty Ltd	.AUS....	NIA.....	Rothesay Asset Management UK Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Asset Management North America LLC	.DE....	NIA.....	Rothesay Asset Management UK Limited	Ownership.....	100.000	MMLIC		
.0000							MM Catalyst Fund LLC	.DE....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MM Catalyst Fund II LLC	.DE....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			47-1466022				LifeScore Labs, LLC	.MA....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			45-4000072				MM Asset Management Holding LLC	.MA....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			51-0504477				Barings LLC	.MA....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MML Investors Services, LLC	.MA....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MML Insurance Agency, LLC	.MA....	NIA.....	MML Investors Services, LLC	Ownership.....	100.000	MMLIC		
.0000			41-2011634				MMLISI Financial Alliances, LLC	.DE....	NIA.....	MML Investors Services, LLC	Ownership.....	100.000	MMLIC		
.0000			51-0504477				Barings LLC	.DE....	NIA.....	MassMutual Asset Management Holding LLC	Ownership.....	100.000	MMLIC		
.0000			98-0524271				Baring Asset Management (Asia) Holdings Limited	.HKG....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000			98-0457465				Baring International Fund Managers (Bermuda) Limited	.BMU....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000			98-0457463				Baring Asset Management (Asia) Limited	.HKG....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000							Baring Asset Management Korea Limited	.KOR....	NIA.....	Baring Asset Management (Asia) Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Investment Management (Shanghai) Limited	.HKG....	NIA.....	Baring Asset Management (Asia) Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Overseas Investment Fund Management (Shanghai) Limited	.HKG....	NIA.....	Barings Investment Management (Shanghai) Limited	Ownership.....	100.000	MMLIC		
.0000			98-0457707				Baring SICE (Taiwan) Limited	.TWN....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Singapore Pte. Ltd.	.SGP....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000			98-0236449				Barings Japan Limited	.JPN....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Australia Holding Company Pty Ltd	.AUS....	NIA.....	Baring Asset Management (Asia) Holdings Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Australia Pty Ltd	.AUS....	NIA.....	Barings Australia Holding Company Pty Ltd	Ownership.....	100.000	MMLIC		
.0000							Barings Australia Real Estate Holdings Pty Ltd	.AUS....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000			14-0045656				Barings Australia Real Estate Pty Ltd	.AUS....	NIA.....	Barings Australia Real Estate Holdings Pty Ltd	Ownership.....	100.000	MMLIC		
.0000			98-0457456				Altis Property Partners Holdings Pty Ltd	.AUS....	NIA.....	Barings Australia Real Estate Pty Ltd	Ownership.....	100.000	MMLIC		
.0000							Altis Asset Management Pty Ltd	.AUS....	NIA.....	Altis Property Partners Holdings Pty Ltd	Ownership.....	100.000	MMLIC		
.0000							Altis Property Partners Pty Ltd	.AUS....	NIA.....	Altis Property Partners Holdings Pty Ltd	Ownership.....	100.000	MMLIC		
.0000							Barings Australia Structured Finance Holdings Pty Ltd	.AUS....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000							Barings Australia Structured Finance Pty Ltd	.AUS....	NIA.....	Barings Australia Structured Finance Holdings Pty Ltd	Ownership.....	100.000	MMLIC		
.0000			80-0875475				Barings Finance LLC	.DE....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000							BCF Europe Funding Limited	.IRL....	NIA.....	Barings Finance LLC	Ownership.....	100.000	MMLIC		
.0000							BCF Senior Funding I LLC	.DE....	NIA.....	Barings Finance LLC	Ownership.....	100.000	MMLIC		
.0000							BCF Senior Funding I Designated Activity Company	.IRL....	NIA.....	Barings Finance LLC	Ownership.....	100.000	MMLIC		
.0000							Barings Real Estate Acquisitions LLC	.DE....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000			04-3238351				Barings Securities LLC	.DE....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000			98-0437588				Barings Guernsey Limited	.GGY....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000							Barings Europe Limited	.GBR....	NIA.....	Barings Guernsey Limited	Ownership.....	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000							Barings Asset Management Spain SL	.ESP.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Baring France SAS	.FRA.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Baring International Fund Managers (Ireland) Limited	.IRL.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings GmbH	.DEU.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Italy S.r.l.	.ITA.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Sweden AB	.SWE.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Netherlands B.V.	.NLD.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Switzerland Sàrl	.CHE.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR.....	NIA.....	Barings Europe Limited	Ownership.....	100.000	MMLIC		
.0000							Barings European Direct Lending 1 GP LLP	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Baring International Investment Management Holdings	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000										Baring International Investment Management Holdings	Ownership.....	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	.GBR.....	NIA.....	Baring Fund Managers Limited	Ownership.....	100.000	MMLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Core Fund Feeder I GP S.à.r.l.	.LUX.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings BME GP S.à.r.l.	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings GPC GP S.à. r.l.	.LUX.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings European Core Property Fund GP Sàrl	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Investment Fund (LUX) GP S.à. r.l.	.LUX.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							Barings Umbrella Fund (LUX) GP S.à.r.l.	.LUX.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							GPLF4(S) GP S.à r. l.	.LUX.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							PREIF Holdings Limited Partnership	.GBR.....	NIA.....	Baring Asset Management Limited	Ownership.....	100.000	MMLIC		
.0000							BMC Holdings DE LLC	.DE.....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA.....	NIA.....	Barings LLC	Ownership.....	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE.....	NIA.....	Barings LLC	Influence.....		MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE.....	NIA.....	Barings LLC	Management.....		MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	.DE.....	NIA.....	Barings LLC	Board		MMLIC		
.0000			82-2932156				GASL Holdings LLC	.DE.....	NIA.....	Barings LLC	Management.....		MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	.DE.....	NIA.....	Barings LLC	Ownership/Influence	19.800	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC.	.DE.....	NIA.....	MassMutual Holding LLC	Ownership.....	17.100	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company	Ownership.....	31.500	MMLIC		
.0000			46-5460309				Novation Companies, Inc.	.MD.....	NIA.....	Barings LLC	Influence.....		MMLIC		
.0000							Novation Companies, Inc.	.MD.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	19.900	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE.....	NIA.....	Barings LLC	Influence.....		MMLIC		
.0000							Red Lake Ventures, LLC	.DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.700	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE.....	NIA.....	Barings LLC	Ownership.....		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....		MMLIC		
.0000							Tamiami Citrus, LLC	.DE.....	NIA.....	Barings LLC	Ownership.....		MMLIC		

SCHEDULE Y
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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Tamiami Citrus, LLC	..DE	..NIA	Barings LLC	Management/Board		MMLIC		
.0000							Teaktree Acquisition, LLC	..DE	..NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	..DE	..NIA	Barings LLC	Influence		MMLIC		
.0000							Techquity, LP	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.600	MMLIC		
.0000							Techquity, LP	..DE	..NIA	Barings LLC	Influence		MMLIC		
.0000							EIP Holdings I, LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	29.000	MMLIC		
.0000			46-0687392				Validus Holding Company LLC	..DE	..NIA	Barings LLC	Ownership	40.400	MMLIC		
.0000							VGS Acquisition Holding, LLC	..DE	..NIA	MassMutual Holding LLC	Ownership/Influence	33.300	MMLIC		
.0000							VGS Acquisition Holding, LLC	..DE	..NIA	Barings LLC	Management		MMLIC		
.0000							Aland Royalty GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Alaska Future Fund GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI Funds SLP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Baring Asset-Based Income Fund (US) GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CMS Fund GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Infniti Fund Management LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Hotel Opportunity Venture I GP, LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Investment Series LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP II, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings ERS PE Emerging Manager III GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Barings Global Investment Funds (U.S.) Management LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CLO Investment Partners GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Core Property Fund GP LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Direct Lending GP Ltd.	..CYM	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund LP	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	46.100	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund LP	..DE	..NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Centre Street CLO Equity Partnership GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund II Management, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund III Management, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings - MM Revolver Fund GP LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BMT RE Debt Fund GP LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Real Assets Fund GP, LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings GPSF LLC	..DE	..NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	33.600	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	..DE	..NIA	Barings LLC	Management		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Relation- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000			98-0536233				Benton Street Advisors, Inc.	.CYM		Barings LLC	Ownership	100.000	MLLIC		
.0000							BHOVI Incentive LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							BIG Real Estate Fund GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							BIG Real Estate Incentive I LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							BIG Real Estate Incentive II LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							BRECS VII GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							BREDIF GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							CREF X GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				Great Lakes III GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							Lake Jackson LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings Emerging Markets Blended Fund I GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000			41-2280126				Mezzco III LLC	.DE	NIA	Barings LLC	Ownership	99.300	MLLIC		
.0000			80-0920285				Mezzco IV LLC	.DE	NIA	Barings LLC	Ownership	99.300	MLLIC		
.0000							Mezzco Australia II LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							RECSA-NY GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				SBNP SIA II LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							SBNP SIA III LLC	.DE	NIA	Barings LLC	Ownership	100.000	MLLIC		
.0000							Amherst Long Term Holdings, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.500	MLLIC		
.0000			04-3313782				MassMutual International LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC	YES	
.0000							MassMutual Solutions LLC	.DE	NIA	MassMutual International LLC	Ownership	100.000	MLLIC		
.0000							Haven Technologies Asia Limited	.HKG	NIA	MassMutual Solutions LLC	Ownership	100.000	MLLIC		
.0000							Yunfeng Financial Group Limited	.HKG	NIA	MassMutual International LLC	Ownership	24.900	MLLIC		
.0000							MassMutual Asia Limited (SPV)	.HKG	NIA	MassMutual International LLC	Ownership	100.000	MLLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MMV CTF I GP LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures Climate Technology Fund I LP	.DE	NIA	MMV CTF I GP LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				100 w. 3rd Street LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				2160 Grand Manager LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MLLIC		
.0000			82-2432216				300 South Tryon Hotel LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				300 South Tryon LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Almack Mezzanine Fund II Unleveraged LP	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.900	MLLIC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	.DE	NIA	Barings LLC	Management		MLLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000			85-3036663				Barings Affordable Housing Mortgage Fund III LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..100.000	MMLIC		
.0000			85-3036663				Barings Affordable Housing Mortgage Fund III LLC	..DE	NIA	Barings LLC	Management		MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..11.200	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE	NIA	C.M. Life Insurance Company	Ownership/Influence	..1.100	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	..IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..53.200	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	..IRL	NIA	Barings LLC	Ownership	..17.200	MMLIC		
.0000							Barings European Real Estate Debt Income Fund	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..66.300	MMLIC		
.0000							Barings European Real Estate Debt Income Fund	..LUX	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..21.800	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE	NIA	Barings LLC	Management		MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..75.700	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	..DE	NIA	C.M. Life Insurance Company	Ownership	..3.800	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	..DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings US High Yield Bond Fund	..IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..55.100	MMLIC		
.0000							Barings US High Yield Bond Fund	..IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson CLO Ltd. 2013-I	..CYM	NIA	Barings LLC	Influence		MMLIC		2
.0000							Babson CLO Ltd. 2015-I	..CYM	NIA	Barings LLC	Influence		MMLIC		3
.0000							Babson CLO Ltd. 2015-II	..CYM	NIA	Barings LLC	Influence		MMLIC		4
.0000							Babson CLO Ltd. 2016-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2016-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO Ltd. 2017-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2018-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2018-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1473665				Barings CLO 2019-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2019-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2019-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1624360				Barings CLO 2022-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2022-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-I BV	..NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-II BV	..NLD	NIA	Barings LLC	Influence		MMLIC		

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.0000							Barbson Euro CLO 2015-I BV	.NLD		Barings LLC	Influence		MLLIC		
.0000			36-037260H				Barings Euro CLO 2019-I BV	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2019-II BV	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2020-I DAC	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000			37-15576VH				Barings Euro CLO 2021-I DAC	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2021-II DAC	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2021-III DAC	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2022-I DAC	.IRL	NIA	Barings LLC	Influence		MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	92.700	MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			88-3792609				Barings Centre Street CLO Equity Partnership LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	25.300	MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.500	MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	C.M. Life Insurance Company	Ownership	2.700	MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	44.000	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	C.M. Life Insurance Company	Ownership	4.900	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Barings LLC	Management		MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	81.300	MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	C.M. Life Insurance Company	Influence		MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			82-5330194				Barings Global Em. Markets Equity Fund	.NC	NIA	Barings LLC	Management		MLLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000							Barings Global Dividends Champion Fund	.IRL	NIA	Barings LLC	Management		MLLIC		
.0000							Barings LLC	.IRL	NIA	Barings LLC			MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	26.800	MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	C.M. Life Insurance Company	Ownership	7.000	MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Global Special Situations Credit Fund 3	.IRL	NIA	MassMutual Holding LLC	Ownership/Influence	19.800	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	70.200	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	C.M. Life Insurance Company	Ownership	3.700	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	13.200	MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	C.M. Life Insurance Company	Ownership	0.700	MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	Barings LLC	Management		MLLIC		

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.0000							Barings Global Special Situations Credit Fund 3	..IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Technology Equity Fund	..IRL	NIA	Barings LLC	Ownership/Influence	..73.000	MMLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	..CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..48.700	MMLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	..CT	NIA	Barings LLC	Management		MMLIC		
.0000			86-3661023				Barings Innovations & Growth Real Estate Fund	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..32.800	MMLIC		
.0000			86-3661023				Barings Innovations & Growth Real Estate Fund	..DE	NIA	C.M. Life Insurance Company	Ownership	..0.500	MMLIC		
.0000							Barings Middle Market CLO 2017-I Ltd & LLC	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Middle Market CLO 2018-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Middle Market CLO 2019-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1612604				Barings Middle Market CLO Ltd 2021-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..37.500	MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	..DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..33.700	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	..DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..18.400	MMLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	..LUX	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			87-1262754				Barings Transportation Fund LP	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..11.700	MMLIC		
.0000			87-1262754				Barings Transportation Fund LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..8.200	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..89.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	..DE	NIA	C.M. Life Insurance Company	Ownership	..1.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	..DE	NIA	Barings LLC	Management		MMLIC		
.0000			38-4096530				Barings European Core Property Fund SCSp	..LUX	NIA	MassMutual Holding LLC	Ownership/Influence	..7.600	MMLIC		
.0000			20-5578089				Barings European Core Property Fund SCSp	..LUX	NIA	C.M. Life Insurance Company	Ownership	..0.500	MMLIC		
.0000			20-5578089				Barings European Core Property Fund SCSp	..LUX	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			46-5001122				Barings European Private Loan Fund III A	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..45.200	MMLIC		
.0000			38-4059932				Benchmark 2018-B2 Mortgage Trust	..NY	NIA	Barings LLC	Influence		MMLIC		
.0000							Benchmark 2018-B4	..NY	NIA	Barings LLC	Influence		MMLIC		
.0000			38-4096530				Benchmark 2018-B8	..NY	NIA	Barings LLC	Influence		MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..23.300	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	..DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			35-2531693				Cornerstone Permanent Mortgage Fund III LLC	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..100.000	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV LLC	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..100.000	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	..DE	NIA	Company	Ownership/Influence	..34.800	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	..DE	NIA	C.M. Life Insurance Company	Ownership	..5.200	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	..DE	NIA	Barings LLC	Management		MMLIC		
.0000			37-1708623				Great Lakes III, L.P.	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..41.400	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percent- age	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Relation- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
. 0000 ...			37-1708623 ..				Great Lakes III, L.P.	..DE....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Management.....		MLLIC		
. 0000 ...							GIA EU Holdings – Emerson JV Sarl	..LUX....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership/Influence	..63.300 ..	MLLIC		
. 0000 ...							GIA EU Holdings – Emerson JV Sarl	..LUX....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Management.....		MLLIC		
. 0000 ...			38-4041011 ..				JPMCC Commercial Mortgage Securities Trust 2017-JP7	..NY....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Influence.....		MLLIC		
. 0000 ...			38-4032059 ..				JPMDB Commercial Mortgage Securities Trust 2017-C5	..NY....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Influence.....		MLLIC		
. 0000 ...			04-1590850 ..				Miami Douglas Two GP LLC	..DE....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Influence.....	..0.000 ..	MLLIC		
. 0000 ...			04-1590850 ..				Miami Douglas Two GP LLC	..DE....	NIA.....	C.M. Life Insurance Company	Influence.....	..0.000 ..	MLLIC		
. 0000 ...			04-1590850 ..				Miami Douglas Two LP	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..90.000 ..	MLLIC		
. 0000 ...			04-1590850 ..				Miami Douglas Two LP	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..10.000 ..	MLLIC		
. 0000 ...			04-1590850 ..				Miami Douglas Three MM LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ..	MLLIC		
. 0000 ...			87-4021641 ..				MM BIG Peninsula Co-Invest Member LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..27.800 ..	MLLIC		
. 0000 ...			87-4021641 ..				MM BIG Peninsula Co-Invest Member LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..0.800 ..	MLLIC		
. 0000 ...							MM CM Holding LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ..	MLLIC		
. 0000 ...			04-1590850 ..				MM Direct Private Invetment Holding	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ..	MLLIC		
. 0000 ...			81-3000420 ..				MM Debt Participations LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..100.000 ..	MLLIC		
. 0000 ...			81-3000420 ..				MM Debt Participations LLC	..DE....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Management.....		MLLIC		
. 0000 ...			20-8856877 ..				Somerset Special Opportunities Fund L.P.	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..40.100 ..	MLLIC		
. 0000 ...			20-8856877 ..				Somerset Special Opportunities Fund L.P.	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..1.900 ..	MLLIC		
. 0000 ...			35-2553915 ..				Ten Fan Pier Boulevard LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ..	MLLIC		
. 0000 ...			41-2280127 ..				Tower Square Capital Partners III, L.P.	..DE....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Management.....		MLLIC		
. 0000 ...			41-2280127 ..				Tower Square Capital Partners III, L.P.	..DE....	NIA.....	MassMutual Holding LLC	Ownership/Influence	..16.500 ..	MLLIC		
. 0000 ...			41-2280129 ..				Tower Square Capital Partners IIIA, L.P.	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..93.100 ..	MLLIC		
. 0000 ...			41-2280129 ..				Tower Square Capital Partners IIIA, L.P.	..DE....	NIA.....	Barings LLC Massachusetts Mutual Life Insurance Company	Management.....		MLLIC		
. 0000 ...			04-1590850 ..				Trailside MM Member LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..66.970 ..	MLLIC		
. 0000 ...			04-1590850 ..				Trailside MM Member LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..7.400 ..	MLLIC		
. 0000 ...			04-1590850 ..				Trailside MM Member II LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....		MLLIC		
. 0000 ...			83-1325764 ..				Washington Gateway Two LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..96.020 ..	MLLIC		
. 0000 ...			83-1325764 ..				Washington Gateway Two LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..6.700 ..	MLLIC		
. 0000 ...			32-0574045 ..				Washington Gateway Three LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..95.380 ..	MLLIC		
. 0000 ...			32-0574045 ..				Washington Gateway Three LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..11.400 ..	MLLIC		
. 0000 ...			88-3861481 ..				West 37th Street Hotel LLC	..DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..93.800 ..	MLLIC		
. 0000 ...			88-3861481 ..				West 37th Street Hotel LLC	..DE....	NIA.....	C.M. Life Insurance Company	Ownership.....	..6.300 ..	MLLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Per-cent-age	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...							Martello Re	.BMJ....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	.. 0.300 ...	MMLIC		
. 0000 ...							Babson Capital Loan Strategies Master Fund LP	.CYM....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...							Barings China Aggregate Bond Private	.CHN....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...							Securities Investment Fund	.GBR....	NIA.....	Barings LLC	Ownership/Influence	..26.000 ...	MMLIC		
. 0000 ...			47-3790192 ..				Barings European Growth Trust Fund	.MA....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...							Barings Global High Yield Fund	.CHN....	NIA.....	Barings LLC	Ownership/Influence	..67.400 ...	MMLIC		
. 0000 ...			71-1018134 ..				CCIC Fund			Massachusetts Mutual Life Insurance Company					
. 0000 ...			71-1018134 ..				Great Lakes II LLC	.DE....	NIA.....	Company	Ownership	..10.600 ...	MMLIC		
. 0000 ...							Great Lakes II LLC	.DE....	NIA.....	C.M. Life Insurance Company	Ownership	.. 0.980 ...	MMLIC		
. 0000 ...			04-1590850 ..				Wood Creek Venture Fund LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..40.000 ...	MMLIC		
. 0000 ...			13-1935920 ..				MMLIC Debt Participations LLC	.DE....	NIA.....	Massachusetts Mutual Ascend	Ownership	..100.000 ...	MMLIC		
. 0000 ...							Barings California Mortgage Fund IV	.CA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...							Barings Umbrella Fund LUX SCSp SICAV RAIF	.LUX....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..50.000 ...	MMLIC		
. 0000 ...							Barings Umbrella Fund LUX SCSp SICAV RAIF	.LUX....	NIA.....	Company	Ownership	..2.300 ...	MMLIC		
. 0000 ...			82-2285211 ..				Calgary Railway Holding LLC	.DE....	NIA.....	C.M. Life Insurance Company	Ownership	..90.000 ...	MMLIC		
. 0000 ...			82-2285211 ..				Calgary Railway Holding LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..10.000 ...	MMLIC		
. 0000 ...			82-3307907 ..				Cornbrook PRS Holdings LLC	.DE....	NIA.....	Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			95-4207717 ..				Cornerstone California Mortgage Fund I LLC	.CA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			95-4207717 ..				Cornerstone California Mortgage Fund II LLC	.CA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			95-4207717 ..				Cornerstone California Mortgage Fund III LLC	.CA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			56-2630592 ..				Cornerstone Fort Pierce Development LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..90.000 ...	MMLIC		
. 0000 ...			56-2630592 ..				Cornerstone Fort Pierce Development LLC	.DE....	NIA.....	Company	Ownership	..5.900 ...	MMLIC		
. 0000 ...			45-2632610 ..				Cornerstone Permanent Mortgage Fund	.MA....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			45-2632610 ..				Cornerstone Permanent Mortgage Fund	.MA....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...			61-1750537 ..				Cornerstone Permanent Mortgage Fund II			Massachusetts Mutual Life Insurance Company					
. 0000 ...			61-1750537 ..				Cornerstone Permanent Mortgage Fund II	.MA....	NIA.....	Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			61-1793735 ..				Cornerstone Permanent Mortgage Fund IV	.MA....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...			20-0348173 ..				CREA/PPC Venture LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			82-2783393 ..				Danville Riverwalk Venture, LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..28.500 ...	MMLIC		
. 0000 ...			04-1590850 ..				DPI Acres Capital SPV LLC	.DE....	NIA.....	Company	Ownership	..94.400 ...	MMLIC		
. 0000 ...			04-1590850 ..				Euro Real Estate Holdings LLC	.DE....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership	..100.000 ...	MMLIC		
. 0000 ...			20-3347091 ..				Fan Pier Development LLC	.DE....	NIA.....	Barings LLC	Management		MMLIC		
. 0000 ...										Massachusetts Mutual Life Insurance Company	Ownership	..50.000 ...	MMLIC		
. 0000 ...										Company		..65.000 ...	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			20-3347091 ..				Fan Pier Development LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 5.900 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				GIA EU Holdings LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....		.....
. 0000 ...			81-5360103 ..				Landmark Manchester Holdings LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM Brookhaven Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM Kannapolis Industrial Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 82.700 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM Kannapolis Industrial Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Ascend	Ownership.....	.. 12.300 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM East South Crossing Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM Horizon Savannah Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM Horizon Savannah Member LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 3.700 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM National Self-Storage Program Member LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 98.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				MM 1400 E 4th Street Member LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 96.000 ...	MMLIC .....		.....
. 0000 ...			80-0948028 ..				One Harbor Shore LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 94.990 ...	MMLIC .....		.....
. 0000 ...			80-0948028 ..				One Harbor Shore LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 6.000 ...	MMLIC .....		.....
. 0000 ...			04-1590850 ..				PACO France Logistics LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....		.....
. 0000 ...							Salomon Brothers Commercial Mortgage Trust 2001-MM	.. DE.....	 NIA.....	Barings Real Estate Advisers LLC	Influence.....	.....	MMLIC .....		.....
. 0000 ...			81-5273574 ..				Three PW Office Holding LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.100 ...	MMLIC .....		.....
. 0000 ...			82-3250684 ..				Unna, Dortmund Holding LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....		.....
. 0000 ...			45-5401109 ..				Washington Gateway Apartments Venture LLC ...	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.440 ...	MMLIC .....		.....
. 0000 ...			45-5401109 ..				Washington Gateway Apartments Venture LLC ...	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	.. 4.800 ...	MMLIC .....		.....
. 0000 ...			51-0529328 ..		0000927972 ..		MassMutual Premier Main Street Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 88.800 ...	MMLIC .....		.....
. 0000 ...			26-3229251 ..		0000927972 ..		MassMutual Premier Strategic Emerging Markets Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 27.100 ...	MMLIC .....		.....
. 0000 ...			04-3512593 ..		0000916053 ..		MassMutual Select Fundamental Growth Fund ...	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 3.400 ...	MMLIC .....		.....
. 0000 ...			42-1710935 ..		0000916053 ..		MassMutual Select Mid-Cap Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 29.200 ...	MMLIC .....		.....
. 0000 ...			02-0769954 ..		0000916053 ..		MassMutual Select Small Capital Value Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....		.....
. 0000 ...			04-3584140 ..		0000916053 ..		MassMutual Select Small Company Value Fund ..	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 18.200 ...	MMLIC .....		.....
. 0000 ...			82-3347422 ..		0000916053 ..		MassMutual Select T. Rowe Price Retirement 2005 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 5.400 ...	MMLIC .....		.....
. 0000 ...			82-3355639 ..		0000916053 ..		MassMutual Select T. Rowe Price Retirement 2010 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....		.....
. 0000 ...			82-3382389 ..		0000916053 ..		MassMutual Select T. Rowe Price Retirement 2015 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....		.....
. 0000 ...			82-3396442 ..		0000916053 ..		MassMutual Select T. Rowe Price Retirement 2020 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....		.....

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			82-3417420 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2025 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3430358 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2030 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3439837 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2035 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3451779 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2040 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3472295 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2045 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3481715 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2050 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3502011 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2055 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3525148 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement 2060 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			82-3533944 ..	.....	0000916053 ..	.....	MassMutual Select T. Rowe Price Retirement Balanced Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			46-4257056 ..	.....	.....	.....	MML Series International Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			47-3529636 ..	.....	.....	.....	MML Series II Dynamic Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000 ...	MMLIC .....	.....	.....
. 0000 ...			47-3544629 ..	.....	.....	.....	MML Series II Equity Rotation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 95.800 ...	MMLIC .....	.....	.....
. 0000 ...			27-1933389 ..	.....	0000916053 ..	.....	MassMutual RetireSMART 2035 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 3.900 ...	MMLIC .....	.....	.....
. 0000 ...			27-1932769 ..	.....	0000916053 ..	.....	MassMutual RetireSMART 2045 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 8.800 ...	MMLIC .....	.....	.....
. 0000 ...			46-3289207 ..	.....	0000916053 ..	.....	MassMutual RetireSMART 2055 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 22.900 ...	MMLIC .....	.....	.....
. 0000 ...			47-5326235 ..	.....	0000916053 ..	.....	MassMutual RetireSMART 2060 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 43.800 ...	MMLIC .....	.....	.....
. 0000 ...			45-1618155 ..	.....	0000916053 ..	.....	MassMutual 20/80 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			45-1618222 ..	.....	0000916053 ..	.....	MassMutual 80/20 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 51.600 ...	MMLIC .....	.....	.....
. 0000 ...			03-0532464 ..	.....	0000916053 ..	.....	MassMutual RetireSMART In Retirement Fund ...	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 2.000 ...	MMLIC .....	.....	.....
. 0000 ...			45-1618262 ..	.....	0000916053 ..	.....	MassMutual 40/60 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			45-1618046 ..	.....	0000916053 ..	.....	MassMutual 60/40 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			45-1618046 ..	.....	0000916053 ..	.....	MassMutual ishares 60/40 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 78.400 ...	MMLIC .....	.....	.....
. 0000 ...			04-3212054 ..	.....	0000916053 ..	.....	MassMutual Balanced Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3556992 ..	.....	0000916053 ..	.....	MassMutual Blue Chip Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3277549 ..	.....	0000916053 ..	.....	MassMutual Core Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3539084 ..	.....	0000916053 ..	.....	MassMutual Disciplined Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000 ...	MMLIC .....	.....	.....

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			04-3539083 ..	.....	0000916053 ..	.....	MassMutual Disciplined Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			01-0821120 ..	.....	0000916053 ..	.....	MassMutual Diversified Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3512590 ..	.....	0000916053 ..	.....	MassMutual Equity Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3512589 ..	.....	0000916053 ..	.....	MassMutual Growth Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			03-0532475 ..	.....	0000916053 ..	.....	MassMutual Inflation-Protected and Income Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3512596 ..	.....	0000916053 ..	.....	MassMutual Mid Cap Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3464165 ..	.....	0000916053 ..	.....	MassMutual Premier Diversified Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			92-1441036 ..	.....	0000916053 ..	.....	MassMutual RetireSMART by JPMorgan 2065 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			45-1618222 ..	.....	0000916053 ..	.....	MassMutual Select 80/20 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3584138 ..	.....	0000916053 ..	.....	MassMutual Select Fundamental Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3557000 ..	.....	0000916053 ..	.....	MassMutual Select Overseas Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			92-1427882 ..	.....	0000916053 ..	.....	MassMutual Select T Rowe Price Retirement 2065 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3464205 ..	.....	0000916053 ..	.....	MassMutual Small Cap Growth Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			04-3424705 ..	.....	0000916053 ..	.....	MassMutual Small Cap Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			02-0769954 ..	.....	0000916053 ..	.....	MassMutual Small Cap Value Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....
. 0000 ...			26-0099965 ..	.....	0000916053 ..	.....	MassMutual Strategic Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MLLIC .....	.....	.....

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 14.23% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 9.6% and includes only Babson Capital Loan Strategies Fund, L.P.
3	Debt investors own .5% and includes only Great Lakes III, L.P.
4	Debt investors own .2% and includes only Great Lakes III, L.P.

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

The following supplemental reports are required to be filed as part of your statement filing. However, in the event that your company does not transact the type of business for which the special report must be filed, your response of NO to the specific interrogatory will be accepted in lieu of filing a "NONE" report and a bar code will be printed below. If the supplement is required of your company but is not being filed for whatever reason enter SEE EXPLANATION and provide an explanation following the interrogatory questions.

	Response
1. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3. Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
4. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	YES
5. Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC?	NO
6. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
7. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
8. Will the Life PBR Statement of Exemption be filed with the state of domicile by July 1st and electronically with the NAIC with the second quarterly filing per the Valuation Manual (by August 15)? (2nd Quarter Only) The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter. In the case of an ongoing statement of exemption, enter "SEE EXPLANATION" and provide as an explanation that the company is utilizing an ongoing statement of exemption.	N/A

AUGUST FILING

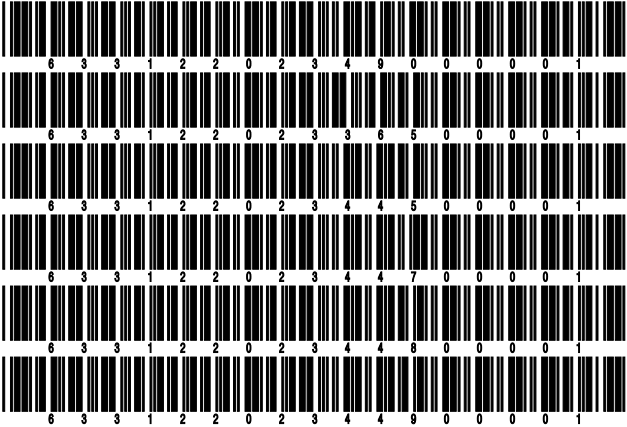
9. Will the regulator-only (non-public) Communication of Internal Control Related Matters Noted in Audit be filed with the state of domicile and electronically with the NAIC (as a regulator-only non-public document) by August 1? The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter.	N/A
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Explanation:

1. The data for this supplement is not required to be filed
2. The data for this supplement is not required to be filed
3. The data for this supplement is not required to be filed
5. The data for this supplement is not required to be filed
6. The data for this supplement is not required to be filed
7. The data for this supplement is not required to be filed

Bar Code:

1. Trusteed Surplus Statement [Document Identifier 490]
2. Medicare Part D Coverage Supplement [Document Identifier 365]
3. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
5. Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
6. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
7. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]



STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Assets Line 25

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
2504. Funds held as collateral			0	0
2597. Summary of remaining write-ins for Line 25 from overflow page	0	0	0	0

Additional Write-ins for Liabilities Line 25

	1 Current Statement Date	2 December 31 Prior Year
2504. Interest rate swap collateral payable		0
2597. Summary of remaining write-ins for Line 25 from overflow page	0	0

Additional Write-ins for Summary of Operations Line 8.3

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
08.304. Miscellaneous income	2,664	13,735	87,840
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	2,664	13,735	87,840

SCHEDULE A - VERIFICATION

Real Estate

	1	2
	Year to Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year		
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition		
3. Current year change in encumbrances		
4. Total gain (loss) on disposals		
5. Deduct amounts received on disposals		
6. Total foreign exchange change in book/adjusted carrying value		
7. Deduct current year's other than temporary impairment recognized		
8. Deduct current year's depreciation		
9. Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)		
10. Deduct total nonadmitted amounts		
11. Statement value at end of current period (Line 9 minus Line 10)		

SCHEDULE B - VERIFICATION

Mortgage Loans

	1	2
	Year to Date	Prior Year Ended December 31
1. Book value/recorded investment excluding accrued interest, December 31 of prior year	3,088,813,561	2,148,469,101
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	303,189,476	1,426,971,997
2.2 Additional investment made after acquisition	50,455,689	43,507,818
3. Capitalized deferred interest and other	131,736	1,081,607
4. Accrual of discount	166,288	13,017,034
5. Unrealized valuation increase (decrease)		0
6. Total gain (loss) on disposals		0
7. Deduct amounts received on disposals	70,766,282	537,024,492
8. Deduct amortization of premium and mortgage interest points and commitment fees	2,649,444	7,209,504
9. Total foreign exchange change in book value/recorded investment excluding accrued interest		0
10. Deduct current year's other than temporary impairment recognized		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)	3,369,341,024	3,088,813,561
12. Total valuation allowance		
13. Subtotal (Line 11 plus Line 12)	3,369,341,024	3,088,813,561
14. Deduct total nonadmitted amounts		0
15. Statement value at end of current period (Line 13 minus Line 14)	3,369,341,024	3,088,813,561

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

	1	2
	Year to Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	1,363,435,253	1,092,315,061
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	23,637,194	34,554,124
2.2 Additional investment made after acquisition	36,000,397	386,006,631
3. Capitalized deferred interest and other		0
4. Accrual of discount		0
5. Unrealized valuation increase (decrease)	(2,345,295)	130,291,068
6. Total gain (loss) on disposals	(9,025,993)	(362,017)
7. Deduct amounts received on disposals	55,392,316	291,108,114
8. Deduct amortization of premium and depreciation	457,579	1,983,147
9. Total foreign exchange change in book/adjusted carrying value	18,643	7,800
10. Deduct current year's other than temporary impairment recognized		(13,713,847)
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	1,355,870,303	1,363,435,253
12. Deduct total nonadmitted amounts		
13. Statement value at end of current period (Line 11 minus Line 12)	1,355,870,303	1,363,435,253

SCHEDULE D - VERIFICATION

Bonds and Stocks

	1	2
	Year to Date	Prior Year Ended December 31
1. Book/adjusted carrying value of bonds and stocks, December 31 of prior year	34,200,158,053	32,199,605,856
2. Cost of bonds and stocks acquired	1,832,653,735	16,491,151,584
3. Accrual of discount	23,657,263	161,977,324
4. Unrealized valuation increase (decrease)	(10,535,362)	(54,103,127)
5. Total gain (loss) on disposals	(78,931,795)	51,389,809
6. Deduct consideration for bonds and stocks disposed of	1,371,367,002	14,559,739,657
7. Deduct amortization of premium	16,277,437	59,049,938
8. Total foreign exchange change in book/adjusted carrying value	(2,735,569)	8,850,307
9. Deduct current year's other than temporary impairment recognized	57,284,792	40,527,854
10. Total investment income recognized as a result of prepayment penalties and/or acceleration fees	0	603,750
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	34,519,337,094	34,200,158,053
12. Deduct total nonadmitted amounts	0	0
13. Statement value at end of current period (Line 11 minus Line 12)	34,519,337,094	34,200,158,053

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 1B

Showing the Acquisitions, Dispositions and Non-Trading Activity
During the Current Quarter for all Bonds and Preferred Stock by NAIC Designation

NAIC Designation	1 Book/Adjusted Carrying Value Beginning of Current Quarter	2 Acquisitions During Current Quarter	3 Dispositions During Current Quarter	4 Non-Trading Activity During Current Quarter	5 Book/Adjusted Carrying Value End of First Quarter	6 Book/Adjusted Carrying Value End of Second Quarter	7 Book/Adjusted Carrying Value End of Third Quarter	8 Book/Adjusted Carrying Value December 31 Prior Year
BONDS								
1. NAIC 1 (a)	15,526,509,764	1,348,080,897	939,556,348	2,562,499,626	18,497,533,939	0	0	15,526,509,764
2. NAIC 2 (a)	17,271,622,003	5,985,051,789	5,999,861,517	(2,730,255,593)	14,526,556,682	0	0	17,271,622,003
3. NAIC 3 (a)	1,456,281,962	37,192,400	40,543,494	54,377,138	1,507,308,006	0	0	1,456,281,962
4. NAIC 4 (a)	454,612,614	39,447,189	27,043,898	24,726,111	491,742,016	0	0	454,612,614
5. NAIC 5 (a)	209,389,446	637,261	5,639,804	(38,512,979)	165,873,924	0	0	209,389,446
6. NAIC 6 (a)	31,170,373	21,847	8,294,444	14,786,227	37,684,003	0	0	31,170,373
7. Total Bonds	34,949,586,162	7,410,431,383	7,020,939,505	(112,379,470)	35,226,698,570	0	0	34,949,586,162
PREFERRED STOCK								
8. NAIC 1	4,037,177	0	0	444,024	4,481,201	0	0	4,037,177
9. NAIC 2	92,640,241	6,325,791	0	(3,091,278)	95,874,754	0	0	92,640,241
10. NAIC 3	6,998,696	0	0	0	6,998,696	0	0	6,998,696
11. NAIC 4	1,399,018	30,919	1,276,040	(153,897)	0	0	0	1,399,018
12. NAIC 5	79,292,676	0	9,896,164	(14,480,658)	54,915,854	0	0	79,292,676
13. NAIC 6	600,376	0	0	202,338	802,714	0	0	600,376
14. Total Preferred Stock	184,968,184	6,356,710	11,172,204	(17,079,471)	163,073,219	0	0	184,968,184
15. Total Bonds and Preferred Stock	35,134,554,346	7,416,788,093	7,032,111,709	(129,458,941)	35,389,771,789	0	0	35,134,554,346

(a) Book/Adjusted Carrying Value column for the end of the current reporting period includes the following amount of short-term and cash equivalent bonds by NAIC designation:

NAIC 1 \$ 358,329,167 ; NAIC 2 \$ 1,195,607,206 ; NAIC 3 \$ 0 NAIC 4 \$ 0 ; NAIC 5 \$ 0 ; NAIC 6 \$ 0

SCHEDULE DA - PART 1

Short-Term Investments

	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Actual Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
7709999999 Totals	426,387,338	xxx	423,568,505	939,917	0

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	389,684,178	476,420,524
2. Cost of short-term investments acquired	87,577,383	433,155,035
3. Accrual of discount	2,999,496	742,798
4. Unrealized valuation increase (decrease)	0	0
5. Total gain (loss) on disposals	0	(87,555)
6. Deduct consideration received on disposals	53,810,277	520,546,624
7. Deduct amortization of premium	63,442	0
8. Total foreign exchange change in book/adjusted carrying value	0	0
9. Deduct current year's other than temporary impairment recognized	0	0
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	426,387,338	389,684,178
11. Deduct total nonadmitted amounts	0	0
12. Statement value at end of current period (Line 10 minus Line 11)	426,387,338	389,684,178

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1.	Book/Adjusted Carrying Value, December 31, prior year (Line 10, prior year)	172,090,191
2.	Cost Paid/(Consideration Received) on additions	130,651,966
3.	Unrealized Valuation increase/(decrease)	(27,474,304)
4.	SSAP No. 108 adjustments	
5.	Total gain (loss) on termination recognized	2,736,845
6.	Considerations received/(paid) on terminations	2,736,845
7.	Amortization	(120,943,303)
8.	Adjustment to the Book/Adjusted Carrying Value of hedged item	
9.	Total foreign exchange change in Book/Adjusted Carrying Value	40,805
10.	Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4+5-6+7+8+9)	154,365,355
11.	Deduct nonadmitted assets	
12.	Statement value at end of current period (Line 10 minus Line 11)	154,365,355

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 to date minus	
3.12	Section 1, Column 15, prior year	
	Change in variation margin on open contracts - All Other	
3.13	Section 1, Column 18, current year to date minus	
3.14	Section 1, Column 18, prior year	
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	
	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	
3.3	Subtotal (Line 3.1 minus Line 3.2)	
4.1	Cumulative variation margin on terminated contracts during the year	
4.2	Less:	
	4.21 Amount used to adjust basis of hedged item	
	4.22 Amount recognized	
	4.23 SSAP No. 108 adjustments	
4.3	Subtotal (Line 4.1 minus Line 4.2)	
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)	
7.	Deduct total nonadmitted amounts	
8.	Statement value at end of current period (Line 6 minus Line 7)	

NONE

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.....	154,365,355
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)	154,365,355
4.	Part D, Section 1, Column 6	823,586,811
5.	Part D, Section 1, Column 7	(669,221,456)
6.	Total (Line 3 minus Line 4 minus Line 5)	0
		Fair Value Check
7.	Part A, Section 1, Column 16	410,841,567
8.	Part B, Section 1, Column 13	
9.	Total (Line 7 plus Line 8)	410,841,567
10.	Part D, Section 1, Column 9	504,874,009
11.	Part D, Section 1, Column 10	(94,032,441)
12.	Total (Line 9 minus Line 10 minus Line 11)	0
		Potential Exposure Check
13.	Part A, Section 1, Column 21	56,192,659
14.	Part B, Section 1, Column 20	
15.	Part D, Section 1, Column 12	56,192,659
16.	Total (Line 13 plus Line 14 minus Line 15)	0

SCHEDULE E - PART 2 - VERIFICATION

(Cash Equivalents)

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	1,535,691,774	279,044,687
2. Cost of cash equivalents acquired	21,300,544,206	99,903,606,155
3. Accrual of discount	11,980,890	14,187,427
4. Unrealized valuation increase (decrease)	0	0
5. Total gain (loss) on disposals	5,624	(1,203)
6. Deduct consideration received on disposals	21,490,313,717	98,661,145,292
7. Deduct amortization of premium	0	0
8. Total foreign exchange change in book/adjusted carrying value	0	0
9. Deduct current year's other than temporary impairment recognized	0	0
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	1,357,908,776	1,535,691,774
11. Deduct total nonadmitted amounts	0	0
12. Statement value at end of current period (Line 10 minus Line 11)	1,357,908,776	1,535,691,774

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

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE B - PART 2

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

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						
121836EF3	Various	.NJ		11/03/2022	7.230	0	220	5,531,454
121836H14	Various	.TN		01/19/2023	8.470	2,104,010	0	2,207,171
121836JK7	Various	.MD		02/16/2023	7.940	3,939,617	0	3,992,916
121836LMO	Various	.NJ		03/16/2023	8.240	1,051,693	0	1,031,091
146738DE6	Various	.FL		01/11/2023	11.280	2,908,399	0	2,903,025
146738EF2	Various	.PA		01/26/2023	12.240	7,693,406	0	7,681,652
146738FG9	Various	.FL		02/09/2023	11.838	7,084,001	0	7,084,001
146738GH6	Various	.MA		02/24/2023	9.630	10,846,096	0	10,846,096
146738H13	Various	.FL		03/09/2023	9.665	8,828,819	0	8,828,819
146738IJO	Various	.FL		03/23/2023	9.520	13,805,016	0	13,805,016
161225J19	Various	.NJ		01/19/2023	8.780	15,038,845	0	15,831,628
161225KLO	Various	.TN		02/16/2023	8.830	11,247,743	0	11,722,518
161225MNO	Various	.FL		03/16/2023	8.410	33,285,150	0	32,634,632
20258#ZZ9	Various	.OH		01/18/2022	3.600	0	1,160,000	81,086,456
243820ZF7	Various	.CA		01/19/2023	9.190	28,799,117	0	29,247,041
243820ZH3	Various	.CA		02/16/2023	8.820	14,777,486	0	14,858,388
243820ZJ9	Various	.TN		03/16/2023	9.250	7,382,616	0	7,193,613
62938XNNO	Various	.FL		11/17/2022	8.510	0	1,232	557,223
62938XPP3	Various	.FL		11/17/2022	8.676	0	(37,436)	49,753,443
62938XRR7	Various	.FL		01/19/2023	9.190	32,130,217	0	32,605,501
62938XTT1	Various	.FL		02/16/2023	9.090	20,368,273	0	20,568,420
62938XVV3	Various	.FL		03/16/2023	8.560	66,528,728	0	64,989,501
671483FG5	Various	.MS		01/19/2023	8.280	313,232	0	336,357
685422ZZ3	Various	.GA		12/23/2021	7.290	0	192,721	36,979,904
69511#ZZ9	Various	.FL		12/09/2021	7.010	0	66,285	21,721
78415#AA9	Various	.OH		12/22/2021	3.800	0	2,824,449	53,163,139
78416#ZZ6	Various	.MO		04/20/2021	4.250	0	461,101	26,563,895
78417#AA7	Various	.IN		09/20/2022	6.690	0	24,835,968	72,727,500
86106#YY8	Various	.GA		10/14/2021	6.560	0	8,840,813	21,952,700
89#625ZZ1	Various	.FL		03/30/2022	7.310	0	6,837,255	21,736,074
0399999. Mortgages in good standing - Residential mortgages-all other						288,132,464	45,182,608	658,440,895
N226021	Arlington	.VA		05/05/2022	4.490	0	5,145,019	108,131,878
N226162	Flower Mound	.TX		12/08/2022	6.150	57,012	117,717	18,987,160
N237011	Los Angeles	.CA		03/29/2023	6.310	15,000,000	0	39,250,000
NAG0211	Philadelphia	.PA		06/01/2021	6.050	0	10,345	32,100,000
0599999. Mortgages in good standing - Commercial mortgages-all other						15,057,012	5,273,081	198,469,038
0899999. Total Mortgages in good standing						303,189,476	50,455,689	856,909,933
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						303,189,476	50,455,689	856,909,933

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE B - PART 3

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

[illegible]

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6	7	8	9	10	11	12	13	
		3	4										
CUSIP Identification	Name or Description	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 at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Commitment for Additional Investment	Percentage of Ownership	
000000-00-0	2725 Sprott Private Resource Lending Fund III LP	Toronto	CA	Sprott Resource Lending Corp		11/29/2022	3		186,821		4,591,141	1.149	
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated									0	0	4,591,141	XXX	
000000-00-0	6118 Yukon Capital Partners II LP	Minneapolis	MN	Yukon Partners II LLC		07/17/2014	2		125,458		573,966	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		13,863		1,411,953	0.856	
000000-00-0	6124 Yukon Capital Partners III LP	Minneapolis	MN	Yukon Partners III LLC		07/18/2017	2		15,002		1,042,287	5.980	
000000-00-0	6126 Gryphon Mezzanine Partners LP	San Francisco	CA	Gryphon Mezzanine Partners GP LP		11/30/2017	3		25,292		448,741	6.340	
000000-00-0	6129 SAAS Capital Fund III	Cincinnati	OH	Gryphon Mezzanine Partners GP LP		08/09/2018	3		9,084			6.716	
000000-00-0	6130 SAAS Capital Fund III (B) LP	Cincinnati	OH	SC GP III LLC		08/26/2020	3		58,887			7.583	
000000-00-0	6132 Sagard Credit Partners LP	Toronto	CA	Sagard Credit Partners Cayman GP Inc		10/09/2018	3		459,183		3,783,916	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		118,034		2,317,215	18.420	
000000-00-0	6135 NB Direct Access Insurance SPV LLC	Wilmington	DE	NB Direct Access Associates LP		08/21/2020	3		268,293		255,793	21.429	
000000-00-0	6148 TTGA SBIC Pioneer Feeder Fund LP	Purchase	NY	TTGA SBIC Feeder GP LLC		05/25/2021	3		201,287		7,465,153	3.618	
1799999. Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated									0	1,294,183	0	17,299,024	XXX
000000-00-0	2581 Energy Impact Fund II LP	New York	NY			11/12/2021	1		480,884		4,222,276		
000000-00-0	2584 One Equity Partners VIII LP	New York	NY			01/26/2022	3		259,852		1,729,462	0.250	
000000-00-0	2614 NSH Verisma Holdco LP	Radnor	PA			12/16/2021	3		2,800,000		1,839,512	12.089	
000000-00-0	2624 KLCP Domestic Fund III LP	New York	NY			12/27/2021	3		7,603		1,950,000	0.920	
000000-00-0	2644 SDC Digital Infrastructure Opportunity Fund III LP	New York	NY			04/25/2022	1		49,191		3,328,221	0.330	
000000-00-0	2656 Trident IX LP	Greenwich	CT			06/24/2022	1		625,728		4,836,019	0.070	
000000-00-0	2710 Asper DHUK LP	London SE1 9SG				10/21/2022	3		21,208		3,368,540	1.604	
000000-00-0	2733 Capital Z Partners (MGA) L.P.	New York	NY			12/14/2022	3		13,125		3,169,266	0.311	
000000-00-0	2741 Matador Film Partners LP	Delaware	DE			03/14/2023	1	700,000				2.000	
000000-00-0	6013 NB Secondary Opportunities Fund IV LP	New York	NY			04/19/2017	3		188,300		1,300,000	0.442	
000000-00-0	6031 Snow Phipps III LP	New York	NY			06/08/2016	3		396,815		2,732,731	1.142	
000000-00-0	6033 Solamere Capital Fund II LP	Boston	MA			08/19/2013	3		119,730		1,155,393	1.886	
000000-00-0	6034 Solamere Capital Fund II-A LP	Boston	MA			08/19/2013	3		84,900		1,627,165	1.760	
000000-00-0	6039 Tritium Partners LLC	Austin	TX			06/26/2015	3		204,167		584,939	2.094	
000000-00-0	6050 ManchesterStory Venture Fund LP	West Des Moines	IA			03/23/2017	3		61,163		734,898	2.132	
000000-00-0	6054 Greenspring Global Partners VIII LP	Owing Mills	MD			07/14/2017	1		134,573		638,191	10.872	
000000-00-0	6058 Cintrifuse Syndicate Fund II, LLC	Cincinnati	OH			09/18/2017	1		56,035			4.483	
000000-00-0	6065 Corsair Boomer Investors LP	New York	NY			06/25/2018	3		8,311		462,489	9.845	
000000-00-0	6067 NB Dyal IV US Investors LP	New York	NY			06/11/2018	3		130,302			0.273	
000000-00-0	6068 Triatlantic Capital Partners VI LP	New York	NY			07/25/2018	3		544,368		4,951,798	0.490	
000000-00-0	6072 Solamere Capital Fund III LP	Boston	MA			11/20/2018	3		486,043		1,347,801	1.571	
000000-00-0	6073 Roark Capital Partners Fund V LP	New York	NY			11/01/2018	3		11,803		365,054	0.143	
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP	New York	NY			02/08/2019	3		156,691		969,695	0.243	
000000-00-0	6079 Goldner Hawn Fund VII LP	Minneapolis	MN			04/29/2019	3		25,000			1.732	
000000-00-0	6082 Nutraceutical Investco LP	River Side	CT			10/18/2019	3		6,421			2.273	
000000-00-0	6083 Tritium Partners II LLC	Austin	TX			11/13/2019	3		136,413			2.050	
000000-00-0	6085 Corsair Blade Investors LP	New York	NY			12/16/2019	3		15,576		1,016,165	15.576	
000000-00-0	6095 Greenspring Opportunities VI LP	Owing Mills	MD			01/21/2020	3		50,000			0.410	
000000-00-0	6099 NB Strategic Capital LP	New York	NY			03/05/2020	3		362,500			1.013	
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP	New York	NY			01/29/2020	3		514,821		2,961,301	0.494	
000000-00-0	6101 Revelstoke EPIC Fund I LP	Denver	CA			10/01/2021	3		4,247		2,810,937	0.412	
000000-00-0	6139 GreyLion Capital LP	New York	NY			08/20/2014	3		36,378		173,207	2.057	
000000-00-0	6140 GreyLion Capital II LP	New York	NY			02/28/2018	3		29,406		1,570,817	1.201	
000000-00-0	6142 TriArtisan Orlando Partners LLC	New York	NY			03/12/2018	3		15,909		1,225,278	15.002	
000000-00-0	6143 Private Equity Solutions SCSP	Luxembourg	LUX			12/16/2019	3		283,253			1.585	
000000-00-0	6149 Greylion Capital Fund III LP	New York	NY			12/14/2021	3		209,900		1,557,288	0.688	

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6	7	8	9	10	11	12	13
		3	4		NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol							
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	Commitment for Additional Investment	Percentage of Ownership
000000-00-0	2518MidOcean Partners VI LP						3.....		314,229			
1999999. Joint Venture Interests - Common Stock - Unaffiliated								700,000	8,844,845	0	52,628,443	XXX
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund	Springfield	MA.....	Massachusetts Mutual Life Ins Co		10/06/2021	3.....			10,628,825	1,667,234	
000000-00-0	2525 MM BIG Peninsula Co-Invest Member LLC	Hartford	CT.....	Massachusetts Mutual Life Ins Co		06/30/2021	3.....			1,665,495	17,812,896	
000000-00-0	2530 MM Horizon Savannah Member LLC	Springfield	MA.....	Massachusetts Mutual Life Ins Co		10/25/2021	3.....			3,883,219		
000000-00-0	2731 MM Kannapolis Industrial Member LLC	Boston	MA.....	Massachusetts Mutual Life Ins Co		02/08/2023	3.....	1,908,843	199			12.280
000000-00-0	2737 Applan Natural Resources Fund III LP	London		Applan Natural Resources Fund GP II Limi		01/13/2023	3.....	68,261				0.333
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP	Philadelphia	PA.....	Lubert-Adler Group WH LP		10/01/2021	3.....		1,875,000		4,938,679	5.411
2199999. Joint Venture Interests - Real Estate - Unaffiliated								1,977,104	1,875,199	16,177,539	24,418,809	XXX
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	Charlotte	CT.....	BREDIF GP LLC		03/24/2021	3.....		17,686,746		4,125,000	0.100
000000-00-0	2735 MALIC Debt Participations LLC	Charlotte	NC.....	MassMutual Ascend Life Insurance Company		02/06/2023	3.....	548				100.000
2399999. Joint Venture Interests - Mortgage Loans - Unaffiliated								548	17,686,746	0	4,125,000	XXX
000000-00-0	2601 BSP TS Co-Invest I LLC	New York	NY.....	Broad Sky Partners LLC		12/10/2021	3.....		21,934		8,363,263	
000000-00-0	2616 Stork SPV LP	Greenwich	CT.....	Amulet Capital Fund II GP LP		12/20/2021	3.....		7,893			4.526
000000-00-0	2673 KSL Capital Partners CV I LP	Denver	CO.....	KSL Capital Partners		05/25/2022	1.....		16,775			0.307
000000-00-0	2690 Invesco Direct Lending UL Feeder Fund II LP	San Diego		Invesco Direct Lending Associates II LLC		08/03/2022	1.....		500,000			
000000-00-0	2709 Low Carbon Renewables Fund SCSp	Luxembourg	LUX.....	Low Carbon GP		02/09/2023	1.....	1,402,610			1,357,002	0.930
000000-00-0	2739 PPW Aero Topco LP	New York	NY.....	PPW Aero Topco GP LLC		02/15/2023	2.....	12,500				0.001
000000-00-0	2744 CEP VIII Project Laser Co-Investment Partners LP	New York	NY.....	One Equity Partners		03/17/2023	3.....	1,831,468			6,195,067	0.544
000000-00-0	2746 AEA SBP CF LP	New York	NY.....	AEA Small Business Private Equity		03/24/2023	3.....	973,393				0.309
000000-00-0	2747 KLCC FEEDER FUND I LP	Wilmington	DE.....	KLCC GP LLC		03/31/2023	1.....	3,750,000				10.000
2599999. Joint Venture Interests - Other - Unaffiliated								7,969,971	546,602	0	15,915,332	XXX
000000-00-0	7171 Affirm Asset Securitizat-2022-X1 CERT	Springfield	MA.....			01/01/2023			5,697,457			
000000-00-0	7172 ICON Brand Holdings LLC-Series 2012-1A Class A	Springfield	MA.....			01/01/2023			2,803,760			
000000-00-0	7174 Loan Asset Issuer LLC - Series 2021 NG-1 Class A Asset Backed Certificate	Springfield	MA.....			01/01/2023			4,927,801			
000000-00-0	7177 Voya QLO 2018-2 Ltd-VOYA 2018-2A SUB	Springfield	MA.....			01/01/2023			5,126,555			
4699999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated								0	18,555,573	0	0	XXX
6099999. Total - Unaffiliated								10,647,623	48,989,969	16,177,539	118,977,749	XXX
6199999. Total - Affiliated								0	0	0	0	XXX
6299999 - Totals								10,647,623	48,989,969	16,177,539	118,977,749	XXX

SCHEDULE BA - PART 3

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

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	Consid-eration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Invest-ment Income

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 3

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

1	2	Location			5	6	7	8	Change in Book/Adjusted Carrying Value					15	16	17	18	19	20	
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated									0	0	0	0	0	0	0	456	0	0	0	
000000-00-0	6105 L-A Laramar Urban Neighborhood Fund LP	Philadelphia	PA	Distribution	10/15/2015	02/17/2023						0		1,117,825				0		
000000-00-0	6107 Lubert-Adler Real Estate Fund VII-B LP	Philadelphia	PA	Distribution	04/07/2017	02/28/2023						0						0		
000000-00-0	6109 LCN NA Fund III-D LP	Philadelphia	PA	Liquidation of Investment	08/23/2019	03/01/2023	524,323					0	428,425	499,181		(25,142)	(25,142)			
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP	Philadelphia	PA	Distribution	10/01/2021	02/28/2023						0		1,083,333				0		
000000-00-0	6112 Hillpointe Workforce Housing Partnership II LP	Winter Park	FL	Distribution	11/03/2020	03/07/2023						0		349,091				0		
2199999. Joint Venture Interests - Real Estate - Unaffiliated									524,323	0	0	0	0	0	428,425	3,438,537	0	(25,142)	(25,142)	0
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	Charlotte	CT	Distribution	03/24/2021	03/31/2023						0		3,548,455				0		
000000-00-0	2735 MALIC Debt Participations LLC	Charlotte	NC	Distribution	02/06/2023							0						0		
000000-00-0	6114 Pretium Mortgage Credit Partners I LP	New York	NY	Distribution	12/04/2014	02/21/2023						0		1,904,944				0		
2399999. Joint Venture Interests - Mortgage Loans - Unaffiliated									0	0	0	0	0	0	5,453,399	0	0	0	0	
000000-00-0	8505 MET LIFE 7.80 11/01/2025	New York	NY	Distribution	08/31/2017	04/01/2022	(429)					0						0		
2799999. Surplus Debentures, etc - Unaffiliated									(429)	0	0	0	0	0	0	0	0	0	0	
000000-00-0	7170 RT balancing	Springfield	MA	Distribution	01/01/2023	03/31/2023						0		9,771,082				0		
4699999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated									0	0	0	0	0	0	9,771,082	0	0	0	0	
6099999. Total - Unaffiliated									44,112,831	(16,108,446)	0	0	0	(16,108,446)	28,460,001	55,392,313	0	6,531,367	6,531,367	13,131,277
6199999. Total - Affiliated									0	0	0	0	0	0	0	0	0	0	0	
6299999 - Totals									44,112,831	(16,108,446)	0	0	0	(16,108,446)	28,460,001	55,392,313	0	6,531,367	6,531,367	13,131,277

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
36179X-QW-9	Ginnie Mae II Pool-POOL #MA8569 .....	.....	...01/18/2023	MIZUHO SECURITIES .....	.....	.....25,179,688	25,000,000	65,972	1.A
91282C-GD-7	United States Treasury N-UNSECURED .....	.....	...01/06/2023	BMO CAPITAL MARKETS .....	.....	.....999,297	1,000,000	1,057	1.A
0109999999	Subtotal - Bonds - U.S. Governments					26,178,985	26,000,000	67,029	XXX
31400R-EJ-8	Fannie Mae Pool-POOL #CB5536 .....	.....	...01/18/2023	BMO CAPITAL MARKETS .....	.....	25,258,448	24,973,593	65,903	1.A
0909999999	Subtotal - Bonds - U.S. Special Revenues					25,258,448	24,973,593	65,903	XXX
00287Y-BX-6	AbbVie Inc-SENIOR UNSECURED .....	.....	...01/17/2023	CITIGROUP GLOBAL MAR .....	.....	.....7,445,440	8,000,000	41,244	2.A FE
006346-AS-9	ADAMS OUTDOOR ADV SECD REV NT SER 2018-1 .....	.....	...02/02/2023	DEUTSCHE BANK SECURI .....	.....	.....5,353,133	5,621,094	20,068	1.F FE
00912X-AV-6	Air Lease Corp-SENIOR UNSECURED .....	.....	...01/17/2023	WELLS FARGO .....	.....	.....12,911,093	13,817,000	150,260	2.B FE
01748X-AD-4	Allegiant Travel Co-FIRST LIEN .....	.....	...01/12/2023	BARCLAYS CAPITAL INC .....	.....	.....1,955,000	2,000,000	60,417	3.C FE
02665W-ED-9	American Honda Finance C-SENIOR UNSECURE .....	.....	...03/27/2023	BOFAMLSEC .....	.....	.....10,072,700	10,000,000	100,528	1.G FE
045054-AF-0	Ashtead Capital Inc-SENIOR UNSECURED .....	.....	...01/10/2023	SUNTRUST CAPITAL MAR .....	.....	.....18,950,600	20,000,000	357,292	2.C FE
053332-BC-5	AutoZone Inc-SENIOR UNSECURED .....	.....	...03/29/2023	CITIGROUP GLOBAL MAR .....	.....	.....10,637,042	10,767,000	86,136	2.B FE
05377R-GC-2	Avis Budget Rental Car F-AESOP 2023-1A A .....	.....	...01/09/2023	BARCLAYS CAPITAL INC .....	.....	.....4,999,076	5,000,000	0	1.A FE
05377R-GZ-1	Avis Budget Rental Car F-AESOP 2023-4A B .....	.....	...03/30/2023	CITIGROUP GLOBAL MAR .....	.....	.....3,398,666	3,400,000	0	1.F FE
05565E-BE-4	BMW US Capital LLC-SENIOR UNSECURED .....	.....	...03/30/2023	WELLS FARGO .....	.....	.....9,681,300	10,000,000	53,764	1.F FE
05609D-AA-3	BX Trust 2023-LIFE-BX 2023-LIFE A .....	.....	...01/31/2023	GOLDMAN .....	.....	.....5,000,000	5,000,000	14,715	1.A FE
05609D-AC-9	BX Trust 2023-LIFE-BX 2023-LIFE B .....	.....	...01/31/2023	GOLDMAN .....	.....	.....5,000,000	5,000,000	15,723	1.D FE
065404-CA-3	BANK 2018-BNK10-BANK 2018-BN10 D .....	.....	...01/26/2023	JP MORGAN SECURITIES .....	.....	.....1,758,641	2,450,000	5,131	2.C
06644E-AM-0	BANK5 2023-5YR1-BANK5 2023-5YR1 AS .....	.....	...03/30/2023	WELLS FARGO .....	.....	.....6,074,934	6,000,000	19,235	1.A FE
090572-AR-9	Bio-Rad Laboratories Inc-SENIOR UNSECURE .....	.....	...01/17/2023	U. S. BANCORP .....	.....	.....4,047,805	4,300,000	48,877	2.B FE
10373Q-AE-0	BP Capital Markets Ameri-SENIOR UNSECURE .....	.....	...03/27/2023	SCOTIA CAPITAL MARKE .....	.....	.....4,017,869	4,075,000	68,535	1.F FE
10922N-AG-8	Brighthouse Financial In-SENIOR UNSECURE .....	.....	...01/17/2023	GOLDMAN .....	.....	.....4,308,697	4,329,000	43,290	2.B FE
115637-AU-4	Brown-Forman Corp-SENIOR UNSECURED .....	.....	...03/28/2023	GOLDMAN .....	.....	.....14,764,741	14,700,000	13,577	1.G FE
12542R-M8-6	CHS Inc. Senior Unsecured Notes .....	.....	...01/24/2023	DIRECT .....	.....	.....20,000,000	20,000,000	0	2.B Z
12543D-BG-4	CHS/Community Health Sys-FIRST LIEN .....	.....	...01/20/2023	JP MORGAN SECURITIES .....	.....	.....923,095	1,046,000	21,083	4.B FE
12545E-AK-2	CHL Mortgage Pass-Throug-CIHL 2007-J2 2A .....	.....	...02/01/2023	PAYUP .....	.....	.....(10)	2	0	3.B FM
126650-CX-6	CVS Health Corp-SENIOR UNSECURED .....	.....	...03/27/2023	JP MORGAN SECURITIES .....	.....	.....4,904,150	5,000,000	2,389	2.B FE
127097-AG-8	Coterra Energy Inc-SENIOR UNSECURED .....	.....	...03/31/2023	EXCHANGE OFFER .....	.....	.....9,497,298	10,000,000	41,167	2.B FE
127097-AK-9	Coterra Energy Inc-SENIOR UNSECURED .....	.....	...01/18/2023	JP MORGAN SECURITIES .....	.....	.....9,241,220	9,500,000	144,314	2.B FE
16308N-AA-2	Cheever Escrow Issuer LL-SECURED .....	.....	...02/09/2023	BOFAMLSEC .....	.....	.....3,154,028	3,198,000	103,169	4.C FE
18977W-2C-3	CNO Global Funding-SECURED .....	.....	...01/06/2023	SUNTRUST CAPITAL MAR .....	.....	.....10,851,078	12,602,000	3,711	1.G FE
193051-AA-7	Cold Storage Trust 2020--COLD 2020-ICE5 .....	.....	...01/31/2023	JP MORGAN SECURITIES .....	.....	.....1,943,864	1,965,981	5,268	1.A
233853-AQ-3	Daimler Trucks Finance N-SENIOR UNSECURE .....	.....	...03/27/2023	VARIOUS .....	.....	.....26,962,118	26,862,000	77,928	2.A FE
24703D-BJ-9	Dell International LLC /-SENIOR UNSECURE .....	.....	...01/09/2023	WELLS FARGO .....	.....	.....6,519,065	6,522,000	0	2.B FE
25389J-AV-8	Digital Realty Trust LP-SENIOR UNSECURED .....	.....	...01/17/2023	JP MORGAN SECURITIES .....	.....	.....9,586,602	9,374,000	5,781	2.B FE
28416L-AA-0	Elara HGV Timeshare Issu-EHGV 2021-A A .....	.....	...01/11/2023	SUNTRUST CAPITAL MAR .....	.....	.....2,717,723	3,031,270	2,061	1.A FE
28416T-AA-3	Elara HGV Timeshare Issu-EHGV 2019-A A .....	.....	...01/11/2023	SUNTRUST CAPITAL MAR .....	.....	.....3,004,077	3,206,486	4,184	1.A FE
30040W-AT-5	Eversource Energy-SENIOR UNSECURED .....	.....	...03/29/2023	VARIOUS .....	.....	.....12,850,170	12,384,000	46,870	2.A FE
31740J-AA-6	FINANCE OF AMERICA STRUC-FASST 2023-RMF1 .....	.....	...02/22/2023	RJF1 .....	.....	.....67,997,753	76,773,068	0	1.A Z
337964-AP-5	FIVE 2023-V1 Mortgage Tr-FIVE 2023-V1 D .....	.....	...02/10/2023	DEUTSCHE BANK SECURI .....	.....	.....2,202,462	2,500,000	12,010	2.B FE
337964-AR-1	FIVE 2023-V1 Mortgage Tr-FIVE 2023-V1 E .....	.....	...02/10/2023	DEUTSCHE BANK SECURI .....	.....	.....1,041,688	1,250,000	6,005	2.C FE
36255N-AA-3	GS Mortgage Securities T-GSMS 2018-GS9 D .....	.....	...01/26/2023	PERFTRUSTCP .....	.....	.....3,997,813	5,500,000	13,292	2.C
37045X-EB-8	General Motors Financial-SENIOR UNSECURE .....	.....	...01/06/2023	BOFAMLSEC .....	.....	.....5,038,600	5,000,000	833	2.C FE
374297-E*-6	Getty Realty Corp Gtd Senior Note Series .....	.....	...01/20/2023	DIRECT .....	.....	.....10,000,000	10,000,000	0	2.B Z
37959G-AB-3	Global Atlantic Fin Co-SENIOR UNSECURED .....	.....	...01/06/2023	SUNTRUST CAPITAL MAR .....	.....	.....2,275,166	3,030,000	6,576	2.B FE
40054#-AA-5	Gryphon Mezzanine Partne Note .....	.....	...01/31/2023	DIRECT .....	.....	.....964,190	964,190	0	2.A PL
418056-AZ-0	Hasbro Inc-SENIOR UNSECURED .....	.....	...03/27/2023	VARIOUS .....	.....	.....13,756,560	15,000,000	119,654	2.B FE
423452-AG-6	Helmerich & Payne Inc-SENIOR UNSECURED		...01/25/2023	JP MORGAN SECURITIES		12,019,122	14,131,000	134,323	2.A FE

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SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

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CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
42806M-AP-4	Hertz Vehicle Financing -HERTZ 2022-2A B		01/19/2023	DEUTSCHE BANK SECURI		3,776,357	4,250,000	8,760	1.F FE
437076-CJ-9	Home Depot Inc/The-SENIOR UNSECURED		03/28/2023	VARIOUS		10,092,064	12,400,000	9,688	1.F FE
44891A-CD-7	Hyundai Capital America-SENIOR UNSECURED		03/28/2023	BARCLAYS CAPITAL INC		11,966,400	12,000,000	0	2.A FE
46188B-AB-8	Invitation Homes Operati-SENIOR UNSECURE		01/09/2023	GOLDMAN		1,174,123	1,388,000	4,966	2.C FE
482606-AJ-9	KIND Trust 2021-KIND-KNDR 2021-KIND B		01/12/2023	CITIGROUP GLOBAL MAR		5,526,111	5,847,736	1,887	1.C FE
48261Z-MM-4	KLCC FEEDER FUND I LP -Senior Class Tran		03/31/2023	DIRECT		6,250,000	6,250,000	0	2.B Z
48261Z-MN-2	KLCC FEEDER FUND I LP -Junior Class Tran		03/31/2023	DIRECT		2,500,000	2,500,000	0	3.B Z
488401-AC-4	Kemper Corp-SENIOR UNSECURED		01/06/2023	JP MORGAN SECURITIES		7,959,100	10,000,000	66,667	2.C FE
49177J-AE-2	Kenvue Inc-SENIOR UNSECURED		03/28/2023	MORGAN		10,275,200	10,000,000	11,222	1.E FE
49271V-AF-7	Keurig Dr Pepper Inc-SENIOR UNSECURED		03/29/2023	CITIGROUP GLOBAL MAR		3,820,149	3,835,000	61,703	2.B FE
497266-B#-2	Kirby Corp Senior Note Series B		01/19/2023	BANK OF AMERICA CORP		20,000,000	20,000,000	0	2.B Z
55285P-AB-0	MFA 2023-NQM1 Trust-MFRA 2023-NQM1 A2		01/18/2023	BARCLAYS CAPITAL INC		1,725,237	1,750,000	5,311	1.C FE
57708#-AA-9	Matterhorn Express Pipel Senior Secured		03/28/2023	DIRECT		4,187,500	4,187,500	0	2.C PL
57708#-AB-7	Matterhorn Express Pipel Senior Secured		03/28/2023	DIRECT		2,812,500	2,812,500	0	2.C PL
57763R-AB-3	Mauser Packaging Solutio-FIRST LIEN		01/30/2023	BOFAMILSEC		4,949,000	4,949,000	0	4.B FE
58013M-FF-6	McDonald's Corp-SENIOR UNSECURED		03/29/2023	CITIGROUP GLOBAL MAR		2,680,575	2,745,000	52,155	2.A FE
58769J-AB-3	Mercedes-Benz Finance No-SENIOR UNSECURE		03/07/2023	CITIGROUP GLOBAL MAR		(5,994,238)	(5,970,000)	(2,674)	1.G FE
58769J-AG-2	Mercedes-Benz Finance No-SENIOR UNSECURE		03/27/2023	CITIGROUP GLOBAL MAR		9,986,400	10,000,000	0	1.G FE
58940B-AR-7	Mercury Financial Credit-MFCC 2023-1A A		01/31/2023	FREIMARK BLAIR & CO		63,992,698	64,000,000	0	1.F FE
591894-CC-2	Metropolitan Edison Co-SENIOR UNSECURED		01/17/2023	JP MORGAN SECURITIES		10,945,997	11,347,000	5,421	2.B FE
61035M-AA-0	Monroe Capital ABS Fundi-MCAF 2023-1A A1		01/27/2023	DIRECT		3,149,452	3,150,000	0	1.A Z
61035M-AG-7	Monroe Capital ABS Fundi-MCAF 2023-1A B		01/27/2023	DIRECT		4,298,962	4,300,000	0	1.D Z
61035M-AK-8	Monroe Capital ABS Fundi-MCAF 2023-1A C		01/27/2023	DIRECT		2,049,643	2,050,000	0	1.F Z
63946T-AA-9	NB Direct Access Insuran Senior Secured		03/24/2023	DIRECT		1,073,171	1,073,171	0	2.A Z
65339K-BP-4	NextEra Energy Capital H-SENIOR UNSECURE		02/22/2023	JP MORGAN SECURITIES		2,243,595	2,238,000	0	2.A FE
67103H-AG-2	O'Reilly Automotive Inc-SENIOR UNSECURED		03/29/2023	BARCLAYS CAPITAL INC		9,888,200	10,000,000	145,000	2.B FE
682680-AW-3	ONEOK Inc-SENIOR UNSECURED		01/13/2023	BOFAMILSEC		4,773,750	5,000,000	74,313	2.C FE
68902V-AK-3	Otis Worldwide Corp-SENIOR UNSECURED		03/30/2023	VARIOUS		9,317,938	10,678,000	36,519	2.B FE
709599-BS-2	Penske Truck Leasing Co -SENIOR UNSECURE		01/06/2023	JP MORGAN SECURITIES		10,107,200	10,000,000	0	2.B FE
709599-BT-0	Penske Truck Leasing Co -SENIOR UNSECURE		03/27/2023	JP MORGAN SECURITIES		14,931,300	15,000,000	0	2.B FE
718547-AT-9	Phillips 66-SENIOR UNSECURED		03/27/2023	MIZUHO SECURITIES		9,976,800	10,000,000	0	2.A FE
723787-AV-9	Pioneer Natural Resource-SENIOR UNSECURE		03/27/2023	VARIOUS		14,096,495	14,091,000	0	2.A FE
743263-AE-5	Progress Energy Inc-SR UNSECURED		01/10/2023	FIRST TENNESSEE		9,267,614	8,000,000	225,611	2.B FE
75575R-AA-5	Ready Capital Mortgage F-RCMT 2023-FL11		01/26/2023	JP MORGAN SECURITIES		2,493,750	2,500,000	0	1.A FE
75575R-AC-1	Ready Capital Mortgage F-RCMT 2023-FL11		01/26/2023	JP MORGAN SECURITIES		4,987,500	5,000,000	0	1.A FE
756109-BR-4	Realty Income Corp-SENIOR UNSECURED		01/09/2023	WELLS FARGO		9,881,300	10,000,000	0	1.G FE
758750-AD-5	Regal Rexnord Corp-SENIOR UNSECURED		01/17/2023	VARIOUS		25,328,850	25,000,000	0	2.C FE
760759-BB-5	Republic Services Inc-SENIOR UNSECURED		03/27/2023	SMBC NIKKO SECURITIE		5,030,050	5,000,000	677	2.B FE
76209P-AB-9	RGA Global Funding-SECURED		01/06/2023	SUNTRUST CAPITAL MAR		7,792,318	8,950,000	115,455	1.E FE
78409V-BH-6	S&P Global Inc-SENIOR UNSECURED		03/01/2023	EXCHANGE OFFER		4,783,215	5,000,000	0	1.G FE
78409V-BL-7	S&P Global Inc-SENIOR UNSECURED		03/01/2023	EXCHANGE OFFER		9,960,371	10,000,000	0	1.G FE
78409V-BM-5	S&P Global Inc-SENIOR UNSECURED		03/01/2023	EXCHANGE OFFER		5,899,774	5,760,000	0	1.G FE
832248-AZ-1	Smithfield Foods Inc-SENIOR UNSECURED		01/13/2023	SEAPORT GROUP		4,212,375	4,500,000	88,719	2.C FE
855244-AR-0	Starbucks Corp-SENIOR UNSECURED		03/29/2023	BOFAMILSEC		3,961,384	4,072,000	61,532	2.A FE
87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A		01/05/2023	mitsubishi ufj sec i		3,021,341	3,543,120	4,482	1.F FE
87329#-AA-5	TTGA SBIC FEEDER FUND LP 6.00 12/31/2035		03/27/2023	BANK LOANS BABSON CA		3,375,003	3,375,003	0	2.B PL
87407R-AA-4	TAL Advantage VII LLC-TAL 2020-1A A		01/05/2023	mitsubishi ufj sec i		1,040,876	1,183,813	1,281	1.F FE
87612K-AA-0	Targa Resources Corp-SENIOR UNSECURED		01/09/2023	VARIOUS		9,948,883	10,000,000	14,444	2.C FE

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CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A		01/20/2023	BOFAMLSEC		3,818,854	3,934,744	3,642	1.F FE
89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A		01/05/2023	MITSUBISHI UFJ SEC I		6,663,382	7,768,584	10,207	1.F FE
92259V-AA-4	Velocity Commercial Capi-VCC 2023-1 A		01/10/2023	BARCLAYS CAPITAL INC		9,997,676	10,000,000	75,483	1.A FE
92343V-ER-1	Verizon Communications I-SENIOR UNSECURE		03/29/2023	BOFAMLSEC		4,928,300	5,000,000	6,013	2.A FE
92538K-AB-9	Verus Securitization Tru-VERUS 2021-5 A2		01/12/2023	CITIGROUP GLOBAL MAR		5,262,177	5,262,177	2,849	1.C FE
92539B-AB-8	Verus Securitization Tru-VERUS 2023-1 A2		01/11/2023	MORGAN		3,499,943	3,500,000	11,480	1.C FE
92556V-AD-8	Viatis Inc-SENIOR UNSECURED		01/06/2023	HSBC SECURITIES INC		1,329,331	1,652,000	2,230	2.C FE
95040Q-AN-4	Welltower Inc-SENIOR UNSECURED		01/09/2023	SUNTRUST CAPITAL MAR		5,192,526	6,255,000	62,689	2.A FE
97573*-AC-7	WinSupply Inc. Senior Unsecured Notes		03/03/2023	USBANCORPLBR		11,500,000	11,500,000	0	2.A Z
BC0121-10-1	Divert Dev Co I LLC Solid Waste Disposal		03/22/2023	DIRECT		7,000,000	7,000,000	0	3.A Z
BC0124-16-9	Castlelake Secured Aviat Notes Class A		03/30/2023	DIRECT		34,111,140	35,000,000	0	1.F Z
BC0126-47-9	Castlelake Secured Aviat Notes Class B		03/30/2023	DIRECT		6,695,131	7,500,000	0	2.B Z
00111G-AC-4	ABPCI Direct Lending Fun-ABPCI 2023-12A	D.	03/08/2023	SG COWEN SECURITIES		2,000,000	2,000,000	0	1.C FE
00120B-AA-8	AGL CLO 12 Ltd-AGL 2021-12A A1	D.	01/19/2023	DEUTSCHE BANK SECURI		7,414,100	7,550,000	3,755	1.A FE
00176B-AM-5	AMMC CLO XIII Ltd-AMMC 2013-13A B3LR	D.	01/24/2023	PAYUP		1,789	1,789	0	5.B FE
03330N-AJ-3	Anchorage Capital Clo 11-ANCHC 2019-11A	D.	03/29/2023	SMBC NIKKO SECURITIE		2,940,000	3,000,000	33,250	1.A FE
05464H-AC-4	AXIS Specialty Finance P-SENIOR UNSECURE	D.	01/13/2023	AMHERST SECURITIES		6,455,189	6,759,000	30,986	2.A FE
05874V-AA-1	Ballyrock CLO 23 Ltd-BALLY 2023-23A A1	D.	01/26/2023	BARCLAYS CAPITAL INC		10,000,000	10,000,000	0	1.A Z
12511A-AA-2	CBAM 2020-13 Ltd-CBAM 2020-13A A	D.	01/05/2023	WELLS FARGO		4,914,000	5,000,000	63,816	1.A FE
12563E-AA-1	CIFC Funding 2021-I Ltd-CIFC 2021-1A A1	D.	03/27/2023	VARIOUS		6,899,900	7,000,000	72,614	1.A FE
12661P-AB-5	CSL Finance Plc-SENIOR UNSECURED	D.	01/17/2023	CITIGROUP GLOBAL MAR		14,594,400	15,000,000	138,375	1.G FE
13877J-AA-9	Canyon Capital CLO 2022-CANYC 2022-1A A	D.	01/03/2023	BOFAMLSEC		1,975,198	2,041,000	23,850	1.A FE
13877P-AA-5	Canyon CLO 2021-4 Ltd-CANYC 2021-4A A	D.	01/03/2023	RBC CAPITAL MARKETS		2,489,777	2,562,000	29,885	1.A FE
14316M-AA-9	CARLYLE US CLO 2021-1 LT-CGMS 2021-1A A1	D.	01/19/2023	MORGAN		2,992,813	3,050,000	3,016	1.A FE
17182X-AL-5	CIFC Funding 2019-IV Ltd-CIFC 2019-4A A1	D.	01/19/2023	MORGAN		4,039,660	4,120,000	4,087	1.A FE
20914U-AF-3	Consolidated Energy Fina-SENIOR UNSECURE	D.	03/20/2023	MORGAN		1,705,000	2,000,000	49,063	4.B FE
290015-AJ-5	Elmwood CLO I Ltd-ELMW1 2019-1A AR	D.	01/04/2023	MIZUHO SECURITIES		4,459,050	4,500,000	55,503	1.A FE
29002G-AB-7	Elmwood CLO IV Ltd-ELMW4 2020-1A A	D.	01/09/2023	VARIOUS		4,926,250	5,000,000	63,534	1.A FE
45824T-BC-8	Intelsat Jackson Holding-FIRST LIEN	D.	01/25/2023	DEUTSCHE BANK SECURI		905,000	1,000,000	23,833	4.A FE
48661N-AA-6	Rad CLO 6 Ltd-RAD 2019-6A A1	D.	01/05/2023	BOFAMLSEC		6,405,630	6,490,000	82,104	1.A FE
50188Q-AE-1	LCM XIX LTD PARTNERSHIP DEF MEZZ NT QL C	D.	03/31/2023	EXCHANGE OFFER		6,480,605	8,225,000	0	1.B FE
50188Q-AL-5	LCM XVIII LP-LCM 19A BR	D.	03/31/2023	EXCHANGE OFFER		2,757,699	3,500,000	0	1.A FE
50188R-AA-7	LCM XVIII LP-LCM 19A INC	D.	03/31/2023	EXCHANGE OFFER		3,860,787	4,900,000	0	4.C Z
55301G-GM-0	West Cromwell Road - Note	B.	03/06/2023	DIRECT		350,887	350,887	0	1.F Z
55817A-AS-3	Madison Park Funding XXX-MDPK 2018-32A B	D.	03/28/2023	RBC CAPITAL MARKETS		4,578,430	4,750,000	54,125	1.C FE
55822E-AA-7	Madison Park Funding LIX-MDPK 2021-59A A	D.	03/30/2023	MORGAN		4,671,625	4,750,000	58,729	1.A FE
607120-F0-0	Airbus SE Senior Secured Notes	C.	01/31/2023	JP MORGAN SECURITIES		25,714,000	25,714,000	0	1.F Z
64130T-BA-2	Neuberger Berman CLO XX-NEUB 2015-20A A	D.	03/23/2023	CITIGROUP GLOBAL MAR		3,908,000	4,000,000	45,635	1.A FE
64133G-AR-1	Neuberger Berman Loan Ad-NEUB 2020-37A A	D.	03/27/2023	MORGAN		5,421,000	5,500,000	59,382	1.A FE
675922-AE-8	Octagon Investment Partn-OCT34 2017-1A B	D.	03/31/2023	EXCHANGE OFFER		5,365,743	5,997,000	0	1.B FE
675922-AJ-7	Octagon Investment Partn-OCT34 2017-1A C	D.	03/31/2023	EXCHANGE OFFER		6,371,435	7,120,999	0	1.C FE
675922-AL-2	Octagon Investment Partn-OCT34 2017-1A C	D.	03/31/2023	EXCHANGE OFFER		7,002,666	7,826,499	0	1.F FE
675923-AJ-5	Octagon Investment Partn-OCT34 2017-1A S	D.	03/31/2023	EXCHANGE OFFER		4,023,653	4,497,002	0	4.C Z
74980E-AS-7	RR 7 Ltd-RRAM 2019-7A A2B	D.	03/28/2023	JP MORGAN SECURITIES		3,374,000	3,500,000	45,553	1.C FE
75000K-AA-5	RR 25 Ltd-RRAM 2023-25A A1	D.	02/01/2023	BOFAMLSEC		12,000,000	12,000,000	0	1.A FE
750103-AA-1	Rad CLO 15 Ltd-RAD 2021-15A A	D.	01/25/2023	DEUTSCHE BANK SECURI		17,291,000	17,600,000	191,843	1.A FE
87250C-AL-1	TICP CLO XIV Ltd-TICP 2019-14A A1R	D.	03/24/2023	VARIOUS		13,723,700	14,000,000	157,675	1.A FE
89680Y-AA-3	Triton Container Interna-FIRST LIEN	D.	01/09/2023	BARCLAYS CAPITAL INC		3,913,202	4,427,000	21,680	2.C FE
92917J-AG-2	Voya CLO 2018-2 Ltd-VOYA 2018-2A B2	D.	03/31/2023	EXCHANGE OFFER		9,747,662	11,411,001	0	1.C FE
92917J-AL-1	Voya CLO 2018-2 Ltd-VOYA 2018-2A C2	D.	03/31/2023	EXCHANGE OFFER		6,338,429	7,420,001	0	1.F FE
92917T-AE-5	Voya CLO 2018-2 Ltd-VOYA 2018-2A SUB	D.	03/31/2023	EXCHANGE OFFER		5,045,951	5,907,000	0	4.C Z
92919D-AC-2	Voya CLO 2021-3 Ltd-VOYA 2021-3A B	D.	03/28/2023	MORGAN		3,164,700	3,300,000	40,529	1.C FE
96467K-AA-7	Whitebox CLO Ltd-WBOX 2023-4A A1	D.	03/23/2023	VARIOUS		8,984,400	9,000,000	3,080	1.A Z
96467K-AE-9	Whitebox CLO Ltd-WBOX 2023-4A B	D.	02/16/2023	CREDIT SUISSE SECURI		2,000,000	2,000,000	0	2.A Z

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B9550E--AG-6	Unicore SA Senior Unsecured Notes	D	01/18/2023	JP MORGAN SECURITIES		25,000,000	25,000,000	0	2.A Z
G1746#--AG-1	Cadent Finance PLC - Senior Unsecured No	B	01/31/2023	DIRECT		29,671,200	29,671,206	0	1.F Z
G3076*-AF-3	Envol Investments Limite Senior Secured	B	01/04/2023	RBC CAPITAL MARKETS		21,214,000	21,213,992	0	2.B PL
805564-EM-9	Saxon Asset Securities Tr 1999-3 Mt Ln Ast Bk Cer Ser 1999-3	D	02/28/2023	PAYUP		(501)	0	0	1.A FM
91020E-AA-2	United Educators Insurance R		01/31/2023	BUY		20,000,000	0	0	1.A
1109999999	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)					1,193,579,506	1,222,082,815	4,373,044	XXX
020002-BB-6	ALLSTATE CORP-SUBORDINATED BOND		01/26/2023	GOLDMAN		9,875,000	10,000,000	263,542	2.B FE
05567S-AA-0	BNSF Funding Trust I-BNSF 6.613 12/15/55		03/27/2023	BARCLAYS CAPITAL INC		9,450,000	10,000,000	135,934	2.B FE
25746U-DM-8	Dominion Energy Inc-D 4.35 PERP		01/19/2023	BOFAMLSEC		6,125,000	7,000,000	82,892	2.C FE
29379V-BR-3	EPD 5 3/8 02/15/2078		03/23/2023	BARCLAYS CAPITAL INC		2,430,000	3,000,000	18,813	2.B FE
36960U-B0-5	General Electric Co-GE FLOAT PERP		01/26/2023	MORGAN		10,000,000	10,000,000	103,487	3.A FE
45685E-AG-1	Voya Financial Inc-JUNIOR SUBORDINATED B		01/26/2023	SUMRIDGE PARTNERS LL		9,962,500	10,000,000	117,708	2.C FE
638612-AJ-0	Nationwide Financial Ser-NATMUT 6 3/4 05		01/10/2023	SUMRIDGE PARTNERS LL		9,847,500	10,100,000	107,944	2.B FE
74251V--AL-6	PRINCIPAL FINANCIAL GROU-JR SUBORDINATED		03/02/2023	CANTOR		7,930,000	8,000,000	33,388	2.B FE
759351-AE-9	Reinsurance Group of Ame-RGA FLOAT 12/15		03/07/2023	VARIOUS		6,442,293	7,054,000	122,359	2.C FE
89356B-AB-4	Transcanada Trust-TRPCN 5 7/8 08/15/2076	A	03/20/2023	BARCLAYS CAPITAL INC		10,170,000	11,000,000	65,441	2.C FE
89356B-AG-3	Transcanada Trust-TRPCN 5.6 03/07/2082	A	02/03/2023	VARIOUS		18,036,000	20,000,000	442,400	2.C FE
018820-AA-8	Allianz SE-ALVGR 3 1/2 PERP	D	01/17/2023	CITIGROUP GLOBAL MAR		8,675,000	10,000,000	251,806	2.A FE
05565Q-DU-9	BP Capital Markets PLC-SUBORDINATED	D	01/11/2023	CREDIT SUISSE SECURI		7,680,000	8,000,000	107,917	2.A FE
05565Q-DV-7	BP Capital Markets PLC-SUBORDINATED	D	01/23/2023	BARCLAYS CAPITAL INC		11,005,620	11,834,000	52,883	2.A FE
29265W-AA-6	Enel SpA-ENELIM 8 3/4 09/24/73	D	01/12/2023	CREDIT SUISSE SECURI		12,113,768	11,923,000	327,469	2.C FE
53944Y-AV-5	Lloyds Banking Group PLC-SUBORDINATED	D	03/07/2023	MORGAN		13,417,923	13,426,000	0	3.C FE
67S40C-AG-8	Rothsay Life PLC-ROTHLF 4 7/8 PERP	D	01/26/2023	MORGAN		4,275,000	5,000,000	72,448	2.C FE
1309999999	Subtotal - Bonds - Hybrid Securities					157,435,604	166,337,000	2,306,431	XXX
06761K--AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A	D	03/27/2023	CITIGROUP GLOBAL MAR		4,926,500	5,000,000	55,512	1.A
06762H-AC-1	BARINGS CLO LTD 2023-I SR SEC2 NT CL B	D	02/01/2023	MORGAN		2,000,000	2,000,000	0	1.D Z
XS2583-34-6	Barings Euro CLO-BABSE 2023-1A A2	B	02/03/2023	GOLDMAN		9,959,000	9,958,995	0	1.A
1509999999	Subtotal - Bonds - Parent, Subsidiaries and Affiliates					16,885,500	16,958,995	55,512	XXX
00177#--AA-1	AMF Levered II, LLC - Revolver		03/29/2023	BANK LOANS BABSON CA		31,750,000	31,750,000	0	1.C PL
00452#--AA-7	Accommodations Plus Technologies LLC/Ter		03/31/2023	PIK NOTE BUY UP		23,380	23,380	0	4.B PL
05351K--A#-6	Avant Credit Card Master Avant Master Tr		02/15/2023	BANK LOANS BABSON CA		1,474,635	1,474,635	0	3.B PL
05351K--A*-0	Avant Cr Card Master Tr 2021-VFN1 CI A		02/15/2023	BANK LOANS BABSON CA		19,838,000	19,838,000	0	1.G PL
05351K--A#-8	Avant Credit Card Master Avant Master Tr		02/15/2023	BANK LOANS BABSON CA		2,000,700	2,000,700	0	2.B PL
05564Z--MP-1	BREDIF MM LSA LLC - Term Loan Series 202		03/15/2023	BANK LOANS BABSON CA		1,526,250	1,526,250	0	1.D Z
05630#--A1-1	BORED MERIDIAN PEAK FUNDING LLC - Secure		01/27/2023	BANK LOANS BABSON CA		5,000,000	5,000,000	0	1.F Z
103119--CK-7	NEFCO Holding Company, LLC - Delayed Dra		03/31/2023	BANK LOANS BABSON CA		2,251	2,251	0	4.C Z
12625Z--MR-0	CRE II LENDER SUB I, LLC - Term Loan Ser		01/26/2023	BANK LOANS BABSON CA		3,081,250	3,081,250	0	1.F Z
12759#--AA-2	CELF SPV LLC - Revolving Senior Secured		01/30/2023	BANK LOANS BABSON CA		3,500,000	3,500,000	0	1.F PL
12765*-AA-8	CCOF II & CARLYLE CREDIT OPPORTUNITIES C		01/10/2023	BANK LOANS BABSON CA		3,464,125	3,464,125	0	1.D Z
14314Z--MM-3	CARLYLE SECURED LENDING III SPV, - Senio		03/14/2023	BANK LOANS BABSON CA		4,800,000	4,800,000	0	1.F Z
000000--00-0	ASF Cosmos LP/Term Loan USD 08/22 (CS Pa		03/31/2023	BANK LOANS BABSON CA		2,223,120	2,223,120	0	4.C Z
14886M--AN-1	Checkout Holding Corp-CHKOUT PIK-TERM EX		02/28/2023	PIK NOTE BUY UP		7,369	7,369	0	6. PL
000000--00-0	RCC REAL ESTATE SPE 9 LLC -Series 2022-1		03/31/2023	BANK LOANS BABSON CA		3,702,113	3,702,113	0	1.F Z
000000--00-0	RCC REAL ESTATE SPE 9 LLC -Series 2022-2		03/31/2023	BANK LOANS BABSON CA		875,362	875,362	0	1.F Z
14979*-AA-6	CAZ GP OWNERSHIP EF AGGREGATOR, L.P. - S		03/07/2023	BANK LOANS BABSON CA		3,750,000	3,750,000	0	1.F Z
14979#--AA-4	CAZ GP OWNERSHIP CD AGGREGATOR - Secured		03/07/2023	BANK LOANS BABSON CA		4,583,333	4,583,333	0	1.F Z
15644G--A#-1	CENTRIC BRANDS 1LEXIT TL L+1000 10/09/20		02/22/2023	PIK NOTE BUY UP		79,862	79,862	0	4.A PL
15644G--B*-4	CENTRIC BRANDS INC. - REVOLVING LOAN (FI		01/31/2023	BANK LOANS BABSON CA		514,554	514,554	0	4.A PL
15674#--AA-9	Cerberus SINC II		03/31/2023	BANK LOANS BABSON CA		(430,000)	(430,000)	0	1.D Z
24360#--AC-6	DECOFAC INC. - TERM B LOAN		03/31/2023	PIK NOTE BUY UP		549	549	0	3.B PL

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
30034@-AA-3	EVERLAKE PRIVATE FUND BORROWER, LLC - Se		..03/17/2023	BANK LOANS BABSON CA		833,333	833,333	0	2.A PL
30301*-AA-1	FS CREIT FINANCE MM-1 LLC - Secured Term		..03/20/2023	BANK LOANS BABSON CA		80,852,702	80,852,702	0	1.F PL
32013#-AA-2	FIRST EAGLE DIRECT LENDING V-B, LLC - Se		..03/31/2023	BANK LOANS BABSON CA		2,637,681	2,637,681	0	1.D Z
36457W-AC-5	Galway Borrower LLC-1L SR SECD		..03/31/2023	BANK LOANS BABSON CA		(154)	(154)	0	3.B PL
36457W-AD-3	GALWAY BORROWER LLC - CLOSING DATE TERM		..03/31/2023	BANK LOANS BABSON CA		45,634	45,634	0	4.A PL
40476@-AC-3	Hanley Wood LLC - 2021 Delayed Draw Term		..01/19/2023	BANK LOANS BABSON CA		236,025	236,025	0	4.C
40481#-AB-6	HH - STELLA INC. - DELAYED DRAW TERM LO		..03/24/2023	BANK LOANS BABSON CA		29,780	29,780	0	3.A PL
40490@-AE-1	HTI Technology & Industries - 2023 Incre		..02/15/2023	BANK LOANS BABSON CA		220,598	227,420	0	4.C Z
40490@-AF-8	HTI Technology & Industries - 2023 Delay		..02/22/2023	BANK LOANS BABSON CA		360,082	360,082	0	4.C Z
44961*-AB-1	Implus Footcare LLC/Initial Term Loan O		..03/31/2023	PIK NOTE BUY UP		3,327	3,327	0	3.C PL
45321*-AA-5	Implus Footcare LLC/Spenco Incremental		..03/31/2023	PIK NOTE BUY UP		518	518	0	3.C PL
40490@-AE-1	ITI Intermodal INC - Delayed Draw Term L		..03/31/2023	BANK LOANS BABSON CA		184,971	184,971	0	4.C Z
46139Z-MM-8	Invesco Private Credit Opportunities Hol		..01/09/2023	BANK LOANS BABSON CA		4,200,000	4,200,000	0	1.F Z
47231#-MQ-8	JEFFERIES DIRECT LENDING OFFSHORE FUND I		..02/14/2023	BANK LOANS BABSON CA		891,839	891,839	0	2.B Z
47231#-MR-6	JEFFERIES DIRECT LENDING OFFSHORE FUND I		..02/14/2023	BANK LOANS BABSON CA		441,180	441,180	0	2.B Z
47231#-MS-4	JEFFERIES DIRECT LENDING OFFSHORE FUND I		..02/14/2023	BANK LOANS BABSON CA		2,141,287	2,141,287	0	2.B Z
47231#-MT-2	JEFFERIES DIRECT LENDING FUND II C SPE L		..03/09/2023	BANK LOANS BABSON CA		572,046	572,046	0	2.B Z
47235#-AA-2	JEFFERIES DIRECT LENDING FUND II SPE LLC		..03/09/2023	BANK LOANS BABSON CA		2,903,198	2,903,198	0	2.B Z
51206#-AB-7	LAKERS BUYER INC. - INITIAL DELAYED DRA		..03/10/2023	BANK LOANS BABSON CA		27,265	27,265	0	3.B PL
53173#-AB-2	LIDO ADVISORS LLC - DELAYED DRAW TERM L		..02/27/2023	BANK LOANS BABSON CA		177,541	177,541	0	2.C PL
534501-OC-C	Cleaver-Brooks Inc - 2022 Fixed PIK Term		..03/31/2023	VARIOUS		46,063	46,063	0	4.C Z
55343@-AF-5	MJX Venture Mgmt III LLC Senior TL		..02/28/2023	DIRECT		(24,776,930)	(24,777,500)	0	1.F Z
55417#-AA-5	M360 MM Series LLC - Series 2022-1 Secur		..02/28/2023	BANK LOANS BABSON CA		67,985	67,985	0	1.F PL
57780@-AB-0	MAVERICK ACQUISITION INC. - DELAYED DRA		..01/03/2023	VARIOUS		70,788	70,788	0	4.C PL
60510M-AF-5	Mission Lane Credit Card Master Trust -		..03/29/2023	BANK LOANS BABSON CA		800,000	800,000	0	2.B PL
60510M-A@-7	Mission Lane Credit Card Master Trust -		..03/29/2023	BANK LOANS BABSON CA		3,800,000	3,800,000	0	1.F PL
60510M-B*-8	Mission Lane Credit Card Master Trust -		..03/29/2023	BANK LOANS BABSON CA		400,000	400,000	0	3.A PL
62879W-MQ-7	NB SOF V ISPV 2022 LLC - Class A Term Lo		..03/07/2023	BANK LOANS BABSON CA		2,998,699	2,998,699	0	1.F Z
62879X-AB-1	NB Select Opportunities ISPV 2022 LLC -		..03/22/2023	BANK LOANS BABSON CA		4,160,010	4,160,010	0	1.G PL
62879X-AC-9	NB Select Opportunities ISPV 2022 LLC -		..03/22/2023	BANK LOANS BABSON CA		964,124	964,124	0	2.C PL
62907@-AB-8	NEFCO Holding Company, LLC - Delayed Dra		..03/31/2023	BANK LOANS BABSON CA		73,518	73,518	0	4.C Z
65658#-AA-2	NORTH HAVEN FALCON BUYER LLC - TERM LOA		..02/21/2023	PIK NOTE BUY UP		2,833	2,833	0	3.B PL
65716*-AB-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		..02/24/2023	BANK LOANS BABSON CA		24,431	24,431	0	2.C PL
67080B-A*-8	NXT Capital Structured Note I, LLC - Cla		..03/09/2023	BANK LOANS BABSON CA		2,548,476	2,548,476	0	1.A Z
67117@-AA-5	OR Opportunistic DL (C) Funding LLC - Te		..03/23/2023	BANK LOANS BABSON CA		1,155,556	1,155,556	0	1.E PL
68144#-AB-6	Olympia Acquisition, Inc-2022 2nd Amendn		..02/28/2023	VARIOUS		22,536	22,536	0	4.B PL
68144#-AC-4	Olympia Acquisition, Inc - 2022 2nd Amen		..03/13/2023	BANK LOANS BABSON CA		150,340	150,340	0	4.B PL
68144#-AD-2	Olympia Acquisition, Inc-2022 Rolled Ter		..02/28/2023	VARIOUS		505,200	505,200	0	4.B Z
69451*-AA-7	PPW AERO BUYER INC INITIAL TERM LN		..02/15/2023	BANK LOANS BABSON CA		1,464,253	1,525,264	0	4.C Z
70216*-AA-1	PARTNERS GROUP PRIVATE EQUITY II, LLC -		..03/22/2023	BANK LOANS BABSON CA		5,000,000	5,000,000	0	1.F Z
70559@-AF-3	PEGASUS GLOBAL ENTERPRISE HOLDINGS LLC		..03/23/2023	BANK LOANS BABSON CA		82,954	82,954	0	3.A PL
71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		..02/28/2023	PIK NOTE BUY UP		14,477	14,477	0	6. Z
72303#-MM-8	PINEBRIDGE PRIVATE CREDIT III HOLDINGS L		..03/30/2023	BANK LOANS BABSON CA		6,625,000	6,625,000	0	1.F Z
73112@-AB-6	Policy Services Company, 1L PIK Toggle T		..03/22/2023	PIK NOTE BUY UP		76,718	76,718	0	5.B GI
73112@-AC-4	Policy Services Company, 1L PIK Toggle D		..03/22/2023	PIK NOTE BUY UP		27,178	27,178	0	5.B GI
74309#-AA-7	PRODUCTION RESOURCE GROUP L.L.C. - DELA		..01/23/2023	PIK NOTE BUY UP		1,589	1,589	0	4.C PL
74309#-AB-5	PRG 9/20 Last Out		..03/23/2023	PIK NOTE BUY UP		27,509	27,509	0	4.C PL
74309#-AC-3	PRODUCTION RESOURCE GROUP L.L.C. - DELA		..03/31/2023	PIK NOTE BUY UP		190	190	0	5.B GI

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
74309#-AD-1	PRODUCTION RESOURCE GROUP L.L.C. - SECO		...01/30/2023	VARIOUS		168,334	168,334	0	5.B Z
74719#-AA-1	Pyramid Management Advisors LLC/Term Lo		...03/31/2023	PIK NOTE BUY UP		1,832	1,832	0	3.C PL
74719#-AB-9	Pyramid Management Advisors LLC/Delayed		...03/31/2023	PIK NOTE BUY UP		693	693	0	3.C PL
74719#-AC-7	Pyramid Management Advisors LLC/Delayed		...03/31/2023	PIK NOTE BUY UP		158	158	0	3.C PL
74741#-AA-5	Olympia Acquisition Inc./Term Loan 9/19		...03/31/2023	VARIOUS		(830)	(830)	0	4.C PL
74923#-AB-3	RoadOne IntermodalLogistics - Term Loan		...03/31/2023	BANK LOANS BABSON CA		1,183,859	1,224,640	0	4.C Z
75812R-MM-9	Red Cedar Holdings B, L.P. - Series 2022		...03/06/2023	BANK LOANS BABSON CA		1,066,800	1,066,800	0	1.D Z
78029#-AB-5	RMA Companies - Term Loan		...03/08/2023	BANK LOANS BABSON CA		193,525	199,510	0	2.B PL
78642#-AB-2	SAFE HOME SECURITY INC. - DELAYED DRAW T		...03/31/2023	BANK LOANS BABSON CA		26,999	26,999	0	2.C PL
816307-AB-1	SelectQuote Inc./Term Loan 10/19		...02/28/2023	PIK NOTE BUY UP		2,820	2,820	0	3.B PL
84724#-AB-1	Sparus Holdings LLC - Delayed Draw Term		...02/03/2023	BANK LOANS BABSON CA		203,426	203,426	0	4.C Z
85789#-AB-0	STEALTH HOLDING LLC - DELAYED DRAW TERM		...03/31/2023	BANK LOANS BABSON CA		26,067	26,067	0	3.C Z
86662#-AB-0	SUN ACQUIRER CORP		...02/09/2023	VARIOUS		363,052	363,052	0	5.B Z
87264Z-MM-9	TPG TIGER HOLDCO, LLC, - Class A Term Lo		...03/29/2023	BANK LOANS BABSON CA		1,878,003	1,878,003	0	1.F Z
87264Z-MN-7	TPG TIGER HOLDCO, LLC, - Class B Term Lo		...03/29/2023	BANK LOANS BABSON CA		626,001	626,001	0	2.B Z
88167#-AA-8	Tetragon Financial Group (Delaware) LLC		...03/28/2023	BANK LOANS BABSON CA		28,500,000	28,500,000	0	1.F PL
88676Z-MM-9	TIKEHAU GREEN DIAMOND CFO LLC - Class A		...02/21/2023	VARIOUS		17,840,326	17,840,326	0	1.F Z
88676Z-MN-7	TIKEHAU GREEN DIAMOND CFO LLC - Class B		...02/21/2023	VARIOUS		4,460,082	4,460,082	0	2.B Z
90139#-AA-1	Twin Brook Capital Funding XIII WSPV, LL		...03/15/2023	BANK LOANS BABSON CA		7,370,000	7,370,000	0	1.D Z
90140*-AA-0	Twin Brook Capital Funding XIV WSPV, LLC		...03/15/2023	BANK LOANS BABSON CA		5,755,000	5,755,000	0	1.D Z
92974*-AB-5	WSP FC ACQUISITION LLC - SECOND AMENOM		...03/29/2023	BANK LOANS BABSON CA		253,819	253,819	0	3.B PL
94184#-AB-3	WATERMILL EXPRESS LLC - DELAYED DRAW TE		...02/27/2023	BANK LOANS BABSON CA		12,391	12,391	0	3.B PL
956525-XX-2	Kings III - Delayed Draw Term Loan		...02/27/2023	BANK LOANS BABSON CA		20,932	20,932	0	4.C Z
96525Z-MN-3	WHITEHORSE LIQUIDITY PARTNERS V-R LP, -C		...03/27/2023	BANK LOANS BABSON CA		1,764,083	1,764,083	0	1.F Z
98876*-AB-1	ZB Holdco LLC - Delayed Draw Term Loan		...01/30/2023	BANK LOANS BABSON CA		239,733	239,733	0	4.C Z
BAFA00-17-1	Fasanara Apex 3 12/22/25		...01/25/2023	GSCO		74,434,796	74,370,925	0	2.B Z
BC0108-70-1	Cogency Global - Incremental Term Loan		...03/31/2023	BANK LOANS BABSON CA		474,406	489,078	0	4.C Z
BC0108-87-3	RoadOne IntermodalLogistics - Delayed Dra		...03/31/2023	BANK LOANS BABSON CA		95,472	95,472	0	4.C Z
BC0120-73-2	SBP Holding LP - Term Loan		...03/27/2023	BANK LOANS BABSON CA		1,961,094	2,032,222	0	4.C Z
BC0127-30-0	VitalSource - 2023 Incremental Term Loan		...03/17/2023	BANK LOANS BABSON CA		2,425,000	2,500,000	0	4.C Z
G7740#-AA-7	SCL XL I FUND L.P. - Senior Secured Revo		...03/20/2023	BANK LOANS BABSON CA		1,315,789	1,315,789	0	1.G PL
119241-C0-3	Lernen Bidco Limited EUR TLB1 (Nov'1	B.....	...01/19/2023	BANK LOANS BABSON CA		1,081,600	1,081,600	0	4.C Z
549358-NT-2	ION Trading Technologies EUR TLB (Mar'21	B.....	...01/24/2023	BANK LOANS BABSON CA		1,012,421	1,082,804	0	4.C Z
70621Z-MN-3	PEMBERTON PD SMA HOLDINGS (LEVERED) S.A.	B.....	...03/23/2023	BANK LOANS BABSON CA		9,661,525	9,661,523	0	1.F Z
BC0105-62-3	Cooperatie Koninklijke Cosun U.A - EUR S		...01/31/2023	BANK LOANS BABSON CA		21,730,000	21,729,990	0	2.B Z
66684#-AA-9	OHA Credit Solutions Master Fund I SPV,	C.....	...03/13/2023	BANK LOANS BABSON CA		2,099,989	2,100,000	0	1.F PL
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans						383,039,689	383,389,740	0	XXX
2509999997. Total - Bonds - Part 3						1,802,377,732	1,839,742,143	6,867,919	XXX
2509999998. Total - Bonds - Part 5						XXX	XXX	XXX	XXX
2509999999. Total - Bonds						1,802,377,732	1,839,742,143	6,867,919	XXX
23281#-12-4	Cyprum Parallel Investors V LP - Perpet		...03/31/2023	DIRECT	13,437,910			0	2.A PL
4019999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Perpetual Preferred						1,343,791	XXX	0	XXX
45822P-20-4	Integrus Holding Inc-INTEGRYS HOLDING IN		...03/09/2023	CANTOR	200,000,000	4,982,000		0	2.B FE
68144#-AF-7	Olympia Acquisition, Inc./Preferred Unit		...02/28/2023	DIRECT	80,310	30,919		0	4.B Z
4029999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Redeemable Preferred						5,012,919	XXX	0	XXX
4509999997. Total - Preferred Stocks - Part 3						6,356,710	XXX	0	XXX
4509999998. Total - Preferred Stocks - Part 5						XXX	XXX	XXX	XXX
4509999999. Total - Preferred Stocks						6,356,710	XXX	0	XXX

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SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
29273V-10-0	ENERGY TRANSFER EQUITY L P LTD PARTNERSH .....	.....	.....02/01/2023	RILY	100.000	1,326 .....	.....	.....0 .....	.....
29336T-10-0	ENLINK MIDSTREAM LLC COMMON UNIT .....	.....	.....01/11/2023	BLOOMBERG TRADEBOOK	38,300.000	484,035 .....	.....	.....0 .....	.....
293792-10-7	ENTERPRISE PRODS PARTNERS L P COMMON UNI .....	.....	.....03/24/2023	BLOOMBERG TRADEBOOK	65,000.000	1,628,705 .....	.....	.....0 .....	.....
29472R-10-8	Equity LifeStyle Propert-COMMON STOCK RE .....	.....	.....02/15/2023	BLOOMBERG TRADEBOOK	2,000.000	143,021 .....	.....	.....0 .....	.....
37946R-10-9	Global Partners LP/MA-COMMON STOCK LTD P .....	.....	.....03/01/2023	VARIOUS	21,286.000	744,791 .....	.....	.....0 .....	.....
460146-10-3	International Paper Co-COMMON STOCK .....	.....	.....02/17/2023	BLOOMBERG TRADEBOOK	3,700.000	143,020 .....	.....	.....0 .....	.....
58463J-30-4	Medical Properties Trust-COMMON STOCK RE .....	.....	.....02/15/2023	BLOOMBERG TRADEBOOK	9,750.000	119,152 .....	.....	.....0 .....	.....
59522J-10-3	MID-AMERICA APARTMENT CO-COMMON STOCK .....	.....	.....02/15/2023	BLOOMBERG TRADEBOOK	800.000	135,673 .....	.....	.....0 .....	.....
726503-10-5	PLAINS ALL AMERICAN PIPELINE L.P. LTD PA .....	.....	.....01/09/2023	BLOOMBERG TRADEBOOK	40,400.000	483,773 .....	.....	.....0 .....	.....
86765K-10-9	SUNOCO LP COMMON STK .....	.....	.....02/24/2023	BLOOMBERG TRADEBOOK	20,000.000	940,267 .....	.....	.....0 .....	.....
87484T-10-8	Talos Energy Inc-COMMON STOCK .....	.....	.....02/17/2023	IN-KIND TRANSFER	990,034.000	17,612,705 .....	.....	.....0 .....	.....
958669-10-3	Western Midstream Partne-COMMON STOCK .....	.....	.....01/10/2023	BLOOMBERG TRADEBOOK	17,600.000	476,822 .....	.....	.....0 .....	.....
29250N-10-5	ENBRIDGE INC-COMMON STOCK .....	.....	.....03/24/2023	BLOOMBERG TRADEBOOK	17,965.000	656,445 .....	.....	.....0 .....	.....
5019999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded						23,569,735	XXX	0	XXX
78463V-10-7	SPDR Gold Shares-ETF .....	.....	.....01/10/2023	BLOOMBERG TRADEBOOK	2,000.000	349,558 .....	.....	.....0 .....	.....
5819999999. Subtotal - Common Stocks - Exchange Traded Funds						349,558	XXX	0	XXX
5989999997. Total - Common Stocks - Part 3						23,919,293	XXX	0	XXX
5989999998. Total - Common Stocks - Part 5						XXX	XXX	XXX	XXX
5989999999. Total - Common Stocks						23,919,293	XXX	0	XXX
5999999999. Total - Preferred and Common Stocks						30,276,003	XXX	0	XXX
6009999999 - Totals						1,832,653,735	XXX	6,867,919	XXX

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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 Quarter-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	04/06/2021	04/06/2028		2,560,103	4073.94000000	61,186		(2,130)	43,886		(39,739)				(2,130)			0003
141936 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/06/2021	04/06/2026		643,934	4073.94000000	14,875		(725)	8,985		(3,982)				(725)			0003
141931 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2021	04/20/2028		2,131,255	4134.94000000	55,626		(1,936)	40,202		(4,689)				(1,936)			0003
141935 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2021	04/20/2026		1,033,297	4134.94000000	25,316		(1,234)	15,486		(2,551)				(1,234)			0003
141929 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2026		2,934,227	4201.62000000	71,302		(3,475)	44,241		6,854				(3,475)			0003
141934 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2028		3,525,201	4201.62000000	93,418		(3,252)	68,100		(30,617)				(3,252)			0003
139414 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/20/2026		3,238,121	4159.12000000	79,334		(3,867)	49,834		60,418				(3,867)			0003
141933 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/19/2028		4,387,198	4159.12000000	117,577		(4,094)	86,343		43,208				(4,094)			0003
142030 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/04/2021	06/05/2026		3,793,322	4229.89000000	92,936		(4,527)	59,160		24,499				(4,527)			0003
142031 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/04/2021	06/06/2028		3,756,297	4229.89000000	99,542		(3,462)	73,713		(16,747)				(3,462)			0003
142042 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/19/2026		4,246,800	4166.45000000	104,896		(5,110)	67,577		137,732				(5,110)			0003
142043 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/20/2028		5,895,992	4166.45000000	159,192		(5,537)	118,756		197,248				(5,537)			0003
142044 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2021	07/06/2026		4,766,527	4343.54000000	116,303		(5,669)	76,049		139,024				(5,669)			0003
142045 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2021	07/06/2028		3,597,757	4343.54000000	92,822		(3,231)	69,880		100,985				(3,231)			0003
142024 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/20/2021	07/20/2026		4,182,637	4323.06000000	98,710		(4,811)	65,302		117,970				(4,811)			0003
142025 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/20/2021	07/20/2028		2,039,052	4323.06000000	50,365		(1,753)	38,192		50,790				(1,753)			0003
142046 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/06/2021	08/06/2026		4,064,101	4436.52000000	95,100		(4,635)	63,799		68,903				(4,635)			0003
142047 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/06/2021	08/04/2028		3,826,358	4436.52000000	97,189		(3,385)	74,328		57,188				(3,385)			0003
142048 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/20/2021	08/20/2026		1,809,340	4441.67000000	41,977		(2,046)	28,483		22,132				(2,046)			0003
142049 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/20/2021	08/18/2028		2,137,781	4441.67000000	56,010		(1,951)	43,142		23,554				(1,951)			0003
142050 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/03/2021	09/04/2026		1,540,167	4535.43000000	43,125		(2,101)	29,600		14,701				(2,101)			0003
142051 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/03/2021	09/06/2028		2,111,925	4535.43000000	61,246		(2,129)	47,537		5,383				(2,129)			0003
142217 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	09/20/2021	09/18/2026		1,174,913	4357.73000000	27,141		(1,324)	18,867		28,000				(1,324)			0003
142219 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	09/20/2021	09/20/2028		1,873,140	4357.73000000	46,454		(1,617)	36,353		41,119				(1,617)			0003
141613 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		6,545,325	4363.55000000	596,280		(97,018)	7,631		7				(97,018)			0003

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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 Quarter-end (b)
142231 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	10/06/2026	.....	1,802,801	4363.55000000	42,366		(2,065)	29,837		45,708			(2,065)				0003
142232 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	10/06/2028	.....	2,272,930	4363.55000000	59,551		(2,073)	46,975		57,312			(2,073)				0003
142242 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	10/20/2021	10/20/2026	.....	2,142,624	4536.19000000	51,423		(2,506)		47,032			(2,506)				0003
142243 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	10/20/2021	10/20/2028	.....	2,133,416	4536.19000000	55,255		(1,923)		43,889			(1,923)				0003
142680 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	02RNE81BX4R0TD8PU41	10/20/2021	04/20/2023	.....	7,145,543	4536.19000000	632,375		(102,891)		24,278			(102,891)				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		(118,395)		47,890			(118,395)				0003
143735 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	11/06/2028	.....	3,225,894	4697.53000000	80,325		(2,795)	64,310		76,596			(2,795)				0003
143737 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	11/06/2026	.....	1,317,530	4697.53000000	30,567		(1,489)	22,034		32,795			(1,489)				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		(111,252)		62,501			(111,252)				0003
143909 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	11/20/2026	.....	1,146,967	4697.96000000	26,495		(1,291)	19,302		24,599			(1,291)				0003
143911 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	11/20/2028	.....	2,303,354	4697.96000000	60,118		(2,092)	48,461		51,379			(2,092)				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		(148,970)		113,820			(148,970)				0003
144235 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	12/06/2021	12/04/2026	.....	729,148	4591.67000000	16,916		(825)		13,460			(825)				0003
144237 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	12/06/2028	.....	752,619	4591.67000000	18,966		(660)	15,413		13,256			(660)				0003
144700 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	.....	9,136,040	4568.02000000	911,780		(148,352)		136,684			(148,352)				0003
144701 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	12/18/2026	.....	1,060,073	4568.02000000	24,594		(1,200)	18,324		23,321			(1,200)				0003
144703 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	12/20/2028	.....	1,687,120	4568.02000000	44,371		(1,544)	36,302		35,368			(1,544)				0003
145265 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	.....	6,104,865	4696.05000000	583,622		(95,133)		104,753			(95,133)				0003
145280 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	01/06/2022	01/06/2027	.....	840,780	4696.05000000	20,431		(996)		14,946			(996)				0003
145291 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	01/06/2022	01/05/2029	.....	2,075,217	4696.05000000	55,408		(1,929)		24,880			(1,929)				0003
145768 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	01/20/2027	.....	1,067,105	4482.73000000	26,998		(1,316)	20,581		21,755			(1,316)				0003
145772 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	01/20/2022	01/19/2029		2,284,303	4482.73000000	66,016		(2,299)	54,807		48,072			(2,299)				0003

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145875 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2022	07/20/2023		4,034,457	..4482.73000000	394,164		(64,250)	80,854		18,480			(64,250)				0003
146423 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	02/04/2022	08/04/2023	.....	8,790,818	..4500.53000000	906,773	.....	.....(147,807)	210,916	.....	.....30,902	.....	.....	.....(147,807)	.....	.....	.....	.....0003
146459 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	02/04/2022	02/05/2027	.....	875,187	..4500.53000000	23,367	.....	.....(1,138)	18,008	.....	.....15,112	.....	.....	.....(1,138)	.....	.....	.....	.....0003
146461 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	02/04/2022	02/06/2029	.....	2,205,498	..4500.53000000	62,195	.....	.....(2,163)	52,011	.....	.....32,165	.....	.....	.....(2,163)	.....	.....	.....	.....0003
147090 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	02/18/2022	08/18/2023	.....	7,524,511	..4348.87000000	802,823	.....	.....(130,863)	207,322	.....	.....93,315	.....	.....	.....(130,863)	.....	.....	.....	.....0003
147150 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	02/18/2022	02/19/2027	.....	1,589,414	..4348.87000000	43,391	.....	.....(2,114)	33,772	.....	.....31,055	.....	.....	.....(2,114)	.....	.....	.....	.....0003
147153 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	02/18/2022	02/20/2029	.....	2,507,570	..4348.87000000	70,713	.....	.....(2,459)	59,522	.....	.....37,535	.....	.....	.....(2,459)	.....	.....	.....	.....0003
147824 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/04/2022	09/01/2023	.....	7,359,079	..4328.87000000	812,447	.....	.....(132,432)	230,640	.....	.....89,263	.....	.....	.....(132,432)	.....	.....	.....	.....0003
147912 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	03/04/2022	03/04/2027	.....	2,313,933	..4328.87000000	67,104	.....	.....(3,271)	52,735	.....	.....50,193	.....	.....	.....(3,271)	.....	.....	.....	.....0003
147914 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPRO8K5P83	03/04/2022	03/02/2029	.....	3,147,487	..4328.87000000	96,628	.....	.....(3,366)	81,841	.....	.....53,939	.....	.....	.....(3,366)	.....	.....	.....	.....0003
148445 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/18/2022	09/20/2023	.....	10,711,488	..4463.12000000	1,158,984	.....	.....(187,204)	365,995	.....	.....96,084	.....	.....	.....(187,204)	.....	.....	.....	.....0003
148494 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	03/18/2022	03/19/2027	.....	3,484,463	..4463.12000000	103,140	.....	.....(5,024)	81,857	.....	.....59,398	.....	.....	.....59,655	.....	.....	.....	.....0003
148496 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	03/18/2022	03/20/2029	.....	2,690,653	..4463.12000000	83,679	.....	.....(2,910)	71,351	.....	.....24,610	.....	.....	.....47,896	.....	.....	.....	.....0003
149297 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	50,322,766	..179.66000000	4,157,774	.....	.....(1,013,813)	79,738	.....	.....1,049,810	.....	.....	.....(1,013,813)	.....	.....	.....	.....0003
149311 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	10/06/2023	.....	9,410,415	..4481.15000000	1,005,963	.....	.....(163,377)	348,783	.....	.....83,216	.....	.....	.....(163,377)	.....	.....	.....	.....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	.....	40,309,869	..110.55000000	3,308,161	.....	.....(806,647)	63,444	.....	.....	.....	.....	.....(806,647)	.....	.....	.....	.....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	.....	1,309,381	..72.70000000	87,342	.....	.....(21,297)	1,675	.....	.....1,557	.....	.....	.....(21,297)	.....	.....	.....	.....0003
149330 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	52,429,455	..4481.15000000	4,634,721	.....	.....(1,130,110)	88,885	.....	.....	.....	.....	.....(1,130,110)	.....	.....	.....	.....0003
149332 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023		63,184,215	..4481.15000000	5,585,433		(1,361,928)	107,118					(1,361,928)				0003

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	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 Quarter-end (b)
149335 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	40,330,350	4481.15000000	3,406,948		(830,735)	65,339					(830,735)				0003
149338 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	80,083,097	4481.15000000	7,243,100		(1,766,126)	138,909		50			(1,766,126)				0003
149339 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	47,500,190	4481.15000000	4,187,247		(1,021,000)	80,303					(1,021,000)				0003
149342 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	53,325,685	4481.15000000	4,699,927		(1,146,010)	90,136					(1,146,010)				0003
149343 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	56,635,991	4481.15000000	5,153,875		(1,256,698)	98,841					(1,256,698)				0003
149346 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	49,740,765	4481.15000000	4,245,505		(1,035,205)	81,421					(1,035,205)				0003
149348 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	61,658,372	4481.15000000	5,610,912		(1,368,140)	107,607					(1,368,140)				0003
149349 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	51,085,110	4481.15000000	4,271,629		(1,041,575)	81,922					(1,041,575)				0003
149353 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	47,052,075	4481.15000000	4,159,365		(1,014,201)	79,769					(1,014,201)				0003
149361 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	68,067,431	4481.15000000	6,194,136		(1,510,351)	118,792					(1,510,351)				0003
149364 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	67,442,398	4481.15000000	6,137,258		(1,496,482)	117,701					(1,496,482)				0003
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		(735,135)	57,820		1,049			(735,135)				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		(156,621)	12,319		800			(156,621)				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		(1,352)	33,393		(22,479)			(1,352)				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		(3,993)	65,861		(13,910)			(3,993)				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		(570,653)	44,883					(570,653)				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		(136,789)	10,759					(136,789)				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		(42,938)	7,237					(42,938)				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		(909,040)	214,493		2,859			(909,040)				0003

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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 Quarter-end (b)
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	.....	51,729,620	.. 4459.45000000	 4,535,535	.....	..... (1,105,925)	260,949	.....	..... 3,637	.....	.....	..... (1,105,925)	.....	.....	.....	..... 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	.....	60,202,575	.. 4459.45000000	 5,233,112	.....	..... (1,276,019)	301,083	.....	..... 5,119	.....	.....	..... (1,276,019)	.....	.....	.....	..... 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	.....	..... (1,186,536)	279,969	.....	..... 5,114	.....	.....	..... (1,186,536)	.....	.....	.....	..... 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	.....	65,999,860	.. 4459.45000000	 5,787,235	.....	..... (1,411,134)	332,964	.....	..... 6,358	.....	.....	..... (1,411,134)	.....	.....	.....	..... 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	.....	..... (1,358,775)	320,610	.....	..... 6,298	.....	.....	..... (1,358,775)	.....	.....	.....	..... 0003
149968 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	04/20/2022	04/20/2023	.....	39,103,137	.. 182.71000000	 3,156,182	.....	..... (769,590)	181,589	.....	..... 564,752	.....	.....	..... (769,590)	.....	.....	.....	..... 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	.....	52,621,510	.. 4459.45000000	 4,622,653	.....	..... (1,127,167)	265,961	.....	..... 5,377	.....	.....	..... (1,127,167)	.....	.....	.....	..... 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	.....	29,919,315	.. 112.38000000	 2,387,912	.....	..... (582,258)	137,387	.....	..... 2	.....	.....	..... (582,258)	.....	.....	.....	..... 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	.....	53,959,345	.. 4459.45000000	 4,646,834	.....	..... (1,133,064)	267,352	.....	..... 5,477	.....	.....	..... (1,133,064)	.....	.....	.....	..... 0003
149976 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2022	04/20/2023	.....	1,568,899	.. 72.42000000	 93,652	.....	..... (22,836)	 5,388	.....	..... 11,191	.....	.....	..... (22,836)	.....	.....	.....	..... 0003
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	.....	..... (104,378)	239,248	.....	..... 71,228	.....	.....	..... (104,378)	.....	.....	.....	..... 0003
149982 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	.....	70,905,255	.. 4459.45000000	 6,138,269	.....	..... (1,496,729)	353,161	.....	..... 7,297	.....	.....	..... (1,496,729)	.....	.....	.....	..... 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	.....	..... (1,205,674)	284,485	.....	..... 5,922	.....	.....	..... (1,205,674)	.....	.....	.....	..... 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	.....	..... (643,732)	151,892	.....	..... 63,142	.....	.....	..... (643,732)	.....	.....	.....	..... 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	.....	..... (108,452)	 25,590	.....	..... 9,259	.....	.....	..... (108,452)	.....	.....	.....	..... 0003
150017 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	04/20/2023	.....	31,480,978	.. 4459.45000000	 2,804,955	.....	..... (683,948)	 161,381	.....	.....	.....	.....	..... (683,948)	.....	.....	.....	..... 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	.....	..... (6,127)	102,033	.....	..... (49,110)	.....	.....	..... (6,127)	.....	.....	.....	..... 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		 (2,662)	 66,195		 (38,525)			 (2,662)				 0003

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150025 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.04/20/2022	.04/20/2023		21,692,132	..4459.45000000	444,689		(108,431)	25,585					(108,431)				0003
150374 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.11/06/2023	.....	8,246,680	..4123.34000000	923,620	.....	(149,731)	371,803	.....	189,926	.....	.....	.....(149,731)	.....	.....	.....	0003
150384 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	47,679,735	..175.42000000	4,100,527	.....	(1,002,601)	405,547	.....	1,664,233	.....	.....	.....(1,002,601)	.....	.....	.....	0003
150386 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	36,058,801	..99.83000000	3,420,805	.....	(836,406)	338,321	.....	3,875	.....	.....	.....(836,406)	.....	.....	.....	0003
150388 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBUI1	.05/06/2022	.05/05/2023	.....	1,267,327	..67.27000000	96,423	.....	(23,576)	9,536	.....	47,271	.....	.....	.....(23,576)	.....	.....	.....	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	.....	(1,213,459)	490,837	.....	566,640	.....	.....	.....(1,213,459)	.....	.....	.....	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	.....	(1,008,242)	407,828	.....	612,797	.....	.....	.....(1,008,242)	.....	.....	.....	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	.....	(1,277,697)	516,821	.....	519,885	.....	.....	.....(1,277,697)	.....	.....	.....	0003
150399 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	4PQJHN3JPGFNF3B8653	.05/06/2022	.05/05/2023	.....	82,470,558	..4123.34000000	8,382,382	.....	(2,049,538)	829,027	.....	1,391,707	.....	.....	.....(2,049,538)	.....	.....	.....	0003
150405 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZ1Z7FF32TWIFA76	.05/06/2022	.05/05/2023	.....	53,300,661	..4123.34000000	5,399,357	.....	(1,320,172)	534,002	.....	934,656	.....	.....	.....(1,320,172)	.....	.....	.....	0003
150407 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	51,772,032	..4123.34000000	5,244,507	.....	(1,282,311)	518,687	.....	946,925	.....	.....	.....(1,282,311)	.....	.....	.....	0003
150409 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	51,986,324	..4123.34000000	5,266,215	.....	(1,287,618)	520,834	.....	979,812	.....	.....	.....(1,287,618)	.....	.....	.....	0003
150413 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/06/2022	.05/05/2023	.....	52,510,943	..4123.34000000	5,246,483	.....	(1,282,794)	518,883	.....	994,523	.....	.....	.....(1,282,794)	.....	.....	.....	0003
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	.....	(1,420,462)	574,569	.....	1,116,515	.....	.....	.....(1,420,462)	.....	.....	.....	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	.....	(1,431,721)	579,123	.....	1,152,203	.....	.....	.....(1,431,721)	.....	.....	.....	0003
150420 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	.....	51,541,750	..4123.34000000	4,561,500	.....	(1,115,312)	451,137	.....	785,589	.....	.....	.....(1,115,312)	.....	.....	.....	0003
150422 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	.....	51,541,750	..4123.34000000	4,508,587	.....	(1,102,374)	445,904	.....	819,439	.....	.....	.....(1,102,374)	.....	.....	.....	0003
150446 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H10SPRFMYMCJFXTO9	.05/06/2022	.05/05/2023	.....	57,221,839	..1159.24000000	2,952,647	.....	(721,938)	292,020	.....	1,143,339	.....	.....	.....(721,938)	.....	.....	.....	0003
150447 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/06/2022	.05/05/2023	.....	15,676,768	..510.08000000	675,670	.....	(165,205)	66,825	.....	319,878	.....	.....	.....(165,205)	.....	.....	.....	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	.....	(1,038,747)	420,167	.....	.....	.....	.....	.....(1,038,747)	.....	.....	.....	0003
150452 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZ1Z7FF32TWIFA76	.05/06/2022	.05/06/2027	.....	2,560,850	..4123.34000000	78,874	.....	(3,844)	64,706	.....	15,243	.....	.....	.....(3,844)	.....	.....	.....	0003
150453 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZ1Z7FF32TWIFA76	.05/06/2022	.05/04/2029		1,806,435	..4123.34000000	58,890		(2,051)	51,330		(9,733)			(2,051)				0003

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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 Quarter-end (b)
150456 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E57QDZIWZFF32TWIFA76	.05/06/2022	.05/05/2023	.....	24,065,637	..4123.34000000	452,434	.....	.....(110,623)	44,746	.....	.....	.....	.....	.....(110,623)	.....	.....	.....	0003
150696 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4R0TD8PU41	.05/13/2022	.05/13/2023	.....	1,496,901	..3937.43000000	112,713	.....	.....(27,484)	13,587	.....	.....14,357	.....	.....	.....(27,484)	.....	.....	.....	0003
150999 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	39,618,509	..172.03000000	3,385,071	(827,669)	464,982	.....	.....1,737,214	.....	.....	.....(827,669)	.....	.....	.....	0003
151002 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	1,423,170	..67.77000000	84,514	(20,664)	11,609	.....	.....44,363	.....	.....	.....(20,664)	.....	.....	.....	0003
151038 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG MORGAN STANLEY & CO. INTERNATIONAL	BFM8T61CT2L1QCEMIK50	.05/20/2022	.05/19/2023	.....	30,611,764	..94.88000000	2,807,309	(686,403)	385,619	.....	.....40,048	.....	.....	.....(686,403)	.....	.....	.....	0003
151040 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC MORGAN STANLEY & CO. INTERNATIONAL	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	60,330,213	..3901.36000000	6,178,134	(1,510,588)	848,645	.....	.....1,756,620	.....	.....	.....(1,510,588)	.....	.....	.....	0003
151042 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC MORGAN STANLEY & CO. INTERNATIONAL	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	40,032,578	..3901.36000000	4,079,847	(997,545)	560,419	.....	.....1,258,192	.....	.....	.....(997,545)	.....	.....	.....	0003
151046 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC MORGAN STANLEY & CO. INTERNATIONAL	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	53,166,502	..3901.36000000	5,451,074	(1,332,817)	748,774	.....	.....1,864,318	.....	.....	.....(1,332,817)	.....	.....	.....	0003
151050 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC MORGAN STANLEY & CO. INTERNATIONAL	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	46,024,903	..3901.36000000	4,716,498	(1,153,210)	647,871	.....	.....1,807,566	.....	.....	.....(1,153,210)	.....	.....	.....	0003
151052 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC MORGAN STANLEY & CO. INTERNATIONAL	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	57,596,373	..3901.36000000	5,797,785	(1,417,590)	796,399	.....	.....2,384,168	.....	.....	.....(1,417,590)	.....	.....	.....	0003
151054 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	4PQUHN3JPFGFNF3BB653	.05/20/2022	.05/19/2023	.....	50,257,133	..3901.36000000	4,797,239	(1,172,951)	658,961	.....	.....2,061,067	.....	.....	.....(1,172,951)	.....	.....	.....	0003
151057 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.11/20/2023	.....	6,632,312	..3901.36000000	814,453	(132,033)	348,627	.....	.....196,694	.....	.....	.....(132,033)	.....	.....	.....	0003
151059 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	46,036,048	..3901.36000000	4,732,508	(1,157,124)	650,070	.....	.....710,144	.....	.....	.....(1,157,124)	.....	.....	.....	0003
151061 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	49,547,272	..3901.36000000	5,093,462	(1,245,379)	699,651	.....	.....806,737	.....	.....	.....(1,245,379)	.....	.....	.....	0003
151063 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023	.....	42,914,960	..3901.36000000	4,349,897	(1,063,574)	597,513	.....	.....1,000,872	.....	.....	.....(1,063,574)	.....	.....	.....	0003
151065 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	.05/20/2022	.05/19/2023		54,228,904	..3901.36000000	5,574,734	(1,363,053)	765,760		1,795,959			(1,363,053)				0003

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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		(1,568,982)	881,451		2,941,498			(1,568,982)				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	.....	.....(1,225,767)	688,633	.....	2,468,911	.....	.....	.....(1,225,767)	.....	.....	.....	0003
151092 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.05/20/2022	.05/19/2023	.....	49,387,221	..1137.94000000	2,565,666	.....	.....(627,319)	352,427	.....	1,895,217	.....	.....	.....(627,319)	.....	.....	.....	0003
151093 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/20/2022	.05/19/2023	.....	12,574,878	..509.24000000	544,492	.....	.....(133,131)	74,793	.....	304,324	.....	.....	.....(133,131)	.....	.....	.....	0003
151094 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.05/20/2022	.05/19/2023	.....	36,643,026	..3901.36000000	2,268,203	.....	.....(554,588)	311,566	.....	487,641	.....	.....	.....(554,588)	.....	.....	.....	0003
151098 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM9R08K5P83	.05/20/2022	.05/20/2027	.....	5,069,803	..3901.36000000	173,894	.....	.....(8,476)	143,991	.....	144,574	.....	.....	.....(8,476)	.....	.....	.....	0003
151099 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM9R08K5P83	.05/20/2022	.05/18/2029	.....	1,272,358	..3901.36000000	44,660	.....	.....(1,556)	39,171	.....	22,490	.....	.....	.....(1,556)	.....	.....	.....	0003
151102 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/20/2022	.05/19/2023	.....	21,232,330	..3901.36000000	382,182	.....	.....(93,446)	52,498	.....	.....	.....	.....	.....(93,446)	.....	.....	.....	0003
151614 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZIVZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	64,110,670	..4121.43000000	6,261,744	.....	.....(1,526,836)	1,166,571	.....	722,933	.....	.....	.....(1,526,836)	.....	.....	.....	0003
151616 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZIVZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	59,875,755	..4121.43000000	5,848,731	.....	.....(1,426,129)	1,089,627	.....	643,481	.....	.....	.....(1,426,129)	.....	.....	.....	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	.....	46,064,942	..171.82000000	3,741,279	.....	.....(912,257)	697,005	.....	1,954,295	.....	.....	.....(912,257)	.....	.....	.....	0003
151633 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	1,441,588	..69.98000000	82,891	.....	.....(20,212)	15,443	.....	35,442	.....	.....	.....(20,212)	.....	.....	.....	0003
151636 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.12/06/2023	.....	4,945,716	..4121.43000000	586,068	.....	.....(95,183)	268,436	.....	133,031	.....	.....	.....(95,183)	.....	.....	.....	0003
151639 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.06/06/2022	.06/06/2023	.....	41,733,980	..4121.43000000	4,044,150	.....	.....(986,108)	753,431	.....	637,316	.....	.....	.....(986,108)	.....	.....	.....	0003
151640 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	49,869,303	..4121.43000000	4,782,791	.....	.....(1,166,215)	891,040	.....	911,584	.....	.....	.....(1,166,215)	.....	.....	.....	0003
151644 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	46,984,302	..4121.43000000	4,520,185	.....	.....(1,102,182)	842,117	.....	911,616	.....	.....	.....(1,102,182)	.....	.....	.....	0003
151646 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	49,457,160	..4121.43000000	4,782,480	.....	.....(1,166,139)	890,983	.....	1,023,934	.....	.....	.....(1,166,139)	.....	.....	.....	0003
151653 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.06/06/2022	.06/06/2023	.....	30,384,255	..98.01000000	2,743,056	.....	.....(668,855)	511,035	.....	21,175	.....	.....	.....(668,855)	.....	.....	.....	0003
151664 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/06/2022	.06/06/2023		56,797,496	..4121.43000000	5,559,657		(1,355,642)	1,035,772		1,215,223			(1,355,642)				0003

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153018 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023		43,363,112	..3674.84000000	4,566,128		(1,104,308)	1,017,452		2,665,169			(1,104,308)				0003
153019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	06/17/2022	06/20/2023	.....	56,866,149	..3674.84000000	6,081,583	.....	.....(1,470,818)	1,355,135		1,049,915	.....	.....	.....(1,470,818)	.....	.....	.....	0003
153023 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	06/17/2022	06/20/2023	.....	67,197,150	..3674.84000000	7,125,884	.....	.....(1,723,380)	1,587,833		1,996,789	.....	.....	.....(1,723,380)	.....	.....	.....	0003
153034 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	41,618,610	..171.27000000	3,662,234	.....	.....(885,703)	816,041		1,689,501	.....	.....	.....(885,703)	.....	.....	.....	0003
153050 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	50,345,308	..3674.84000000	5,290,749	.....	.....(1,279,556)	1,178,917		1,710,822	.....	.....	.....(1,279,556)	.....	.....	.....	0003
153052 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	50,712,792	..3674.84000000	5,335,776	.....	.....(1,290,446)	1,188,950		1,859,197	.....	.....	.....(1,290,446)	.....	.....	.....	0003
153054 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	59,899,892	..3674.84000000	6,286,003	.....	.....(1,520,256)	1,400,685		2,361,354	.....	.....	.....(1,520,256)	.....	.....	.....	0003
153057 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	60,267,376	..3674.84000000	6,200,183	.....	.....(1,499,501)	1,381,562		2,991,314	.....	.....	.....(1,499,501)	.....	.....	.....	0003
153061 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/17/2022	06/20/2023	.....	47,037,952	..3674.84000000	4,881,764	.....	.....(1,180,644)	1,087,784		2,533,960	.....	.....	.....(1,180,644)	.....	.....	.....	0003
153101 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	06/17/2022	06/20/2023	.....	49,198,338	..1113.27000000	2,656,710	.....	.....(642,520)	591,984		3,112,940	.....	.....	.....(642,520)	.....	.....	.....	0003
153102 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	06/17/2022	06/20/2023	.....	10,315,157	..500.75000000	509,569	.....	.....(123,238)	113,545		470,550	.....	.....	.....(123,238)	.....	.....	.....	0003
153784 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSRPFMYMCJFXTO9	07/06/2022	07/06/2023	.....	55,628,138	..1130.16000000	3,031,734	.....	.....(739,245)	814,000		2,925,236	.....	.....	.....(739,245)	.....	.....	.....	0003
153785 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	07/06/2022	07/06/2023	.....	12,737,041	..508.13000000	612,652	.....	.....(149,386)	164,493		429,945	.....	.....	.....(149,386)	.....	.....	.....	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	.....	.....(115,685)	365,251		158,384	.....	.....	.....(115,685)	.....	.....	.....	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	.....	.....(1,566,438)	1,724,842		962,018	.....	.....	.....(1,566,438)	.....	.....	.....	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		(1,633,708)	1,798,915		1,058,420			(1,633,708)				0003

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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		1,950,930	61.35000000	115,492		(28,161)	31,009		70,648			(28,161)				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		(1,276,991)	1,406,125		2,586,956			(1,276,991)				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		(492,505)	542,308		913,473			(492,505)				0003	.....
153820 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC MORGAN STANLEY & CO. INTERNATIONAL	07/06/2022	07/06/2023	.....	69,495,328	3845.08000000	6,949,533		(1,694,544)	1,865,902		4,070,448			(1,694,544)				0003	.....
153828 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC BNP PARIBAS LONDON	07/06/2022	07/06/2023	.....	41,631,148	3845.08000000	4,204,877		(1,025,299)	1,128,981		978,373			(1,025,299)				0003	.....
153829 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUISFPUBMIPRO8K5P83	07/06/2022	07/06/2029	.....	4,331,917	3845.08000000	156,815		(5,458)	140,441		(25,864)			(5,458)				0003	.....
153832 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	54,109,284	3845.08000000	5,540,962		(1,351,084)	1,487,710		1,594,384			(1,351,084)				0003	.....
153835 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	52,124,593	3845.08000000	5,360,740		(1,307,139)	1,439,322		1,613,687			(1,307,139)				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		(7,068)	123,804		135,057			(7,068)				0003	.....
153838 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2022	07/06/2023	.....	48,619,159	3845.08000000	4,917,354		(1,199,026)	1,320,276		1,574,235			(1,199,026)				0003	.....
153841 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	61,324,498	3845.08000000	6,276,014		(1,530,316)	1,685,067		2,100,162			(1,530,316)				0003	.....
153844 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	63,090,037	3845.08000000	6,447,570		(1,572,147)	1,731,128		2,317,068			(1,572,147)				0003	.....
153847 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	62,086,159	3845.08000000	6,217,024		(1,515,932)	1,669,228		2,637,658			(1,515,932)				0003	.....
153851 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2023	.....	54,859,498	3845.08000000	5,476,633		(1,335,398)	1,470,438		2,500,434			(1,335,398)				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		(99,331)	109,375		26,432			(99,331)				0003	.....
153998 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	07/06/2022	07/06/2023	.....	47,374,956	162.14000000	4,165,782		(1,015,766)	1,118,484		2,590,400			(1,015,766)				0003	.....
153907 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC ROYAL BANK OF CANADA	07/06/2022	07/06/2023	.....	30,929,112	93.31000000	2,893,016		(705,420)	776,755		166,280			(705,420)				0003	.....
154270 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/15/2022	07/14/2023	.....	1,440,309	3801.99420000	100,530		(24,580)	29,275		81,797			(24,580)				0003	.....
154434 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/20/2022	01/19/2024	.....	4,751,880	3959.90000000	594,456		(96,545)	320,008		113,446			(96,545)				0003	.....
154439 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/20/2022	07/20/2023	.....	29,188,206	3959.90000000	1,768,805		(431,298)	542,757		426,526			(431,298)				0003	.....
154454 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2022	07/20/2023	.....	16,832,420	3959.90000000	345,065		(84,139)	105,883					(84,139)				0003	.....
154458 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUISFPUBMIPRO8K5P83	07/20/2022	07/20/2027	.....	2,557,974	3959.90000000	91,064		(4,438)	78,447		58,822			(4,438)				0003	.....
154462 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2022	07/20/2029	.....	1,734,536	3959.90000000	63,657		(2,216)	57,359		(22,928)			(2,216)				0003	.....
154464 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2022	07/20/2023		49,102,760	3959.90000000	5,018,280		(1,223,635)	1,539,856		685,607			(1,223,635)				0003	

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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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 Quarter-end (b)
154477 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.07/20/2022	.07/20/2023	.....	34,492,772	158.04000000	3,036,975	.....	(740,523)	931,894	.....	1,858,894	.....	.....	(740,523)	.....	.....	.....	0003
154483 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	.....	62,962,410	3959.90000000	6,434,730	.....	(1,569,016)	1,974,492	.....	931,821	.....	.....	(1,569,016)	.....	.....	.....	0003
154486 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.07/20/2022	.07/20/2023	.....	22,272,611	93.96000000	1,978,419	.....	(482,409)	607,077	.....	157,326	.....	.....	(482,409)	.....	.....	.....	0003
154495 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.07/20/2022	.07/20/2023	.....	1,722,149	62.91000000	127,445	.....	(31,076)	39,106	.....	70,256	.....	.....	(31,076)	.....	.....	.....	0003
154507 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	.....	49,102,760	3959.90000000	5,018,280	.....	(1,223,635)	1,539,856	.....	1,509,924	.....	.....	(1,223,635)	.....	.....	.....	0003
154515 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	.....	46,726,820	3959.90000000	4,775,460	.....	(1,164,427)	1,465,347	.....	1,559,612	.....	.....	(1,164,427)	.....	.....	.....	0003
154532 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	.....	53,854,640	3959.90000000	5,503,920	.....	(1,342,052)	1,688,874	.....	2,677,707	.....	.....	(1,342,052)	.....	.....	.....	0003
154536 Call Options - S&P Equal Weight Energy	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	.....	(523,963)	659,370	.....	1,763,566	.....	.....	(523,963)	.....	.....	.....	0003
154537 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.07/20/2022	.07/20/2023	.....	8,720,523	508.19000000	437,770	.....	(106,744)	134,330	.....	311,493	.....	.....	(106,744)	.....	.....	.....	0003
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	.....	36,827,070	3959.90000000	3,645,153	.....	(888,818)	1,118,513	.....	774,865	.....	.....	(888,818)	.....	.....	.....	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	.....	36,035,090	3959.90000000	3,662,146	.....	(892,962)	1,123,727	.....	935,407	.....	.....	(892,962)	.....	.....	.....	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	.....	54,646,620	3959.90000000	5,576,483	.....	(1,359,745)	1,711,140	.....	1,493,489	.....	.....	(1,359,745)	.....	.....	.....	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	.....	44,746,870	3959.90000000	4,558,933	.....	(1,111,630)	1,398,906	.....	1,257,396	.....	.....	(1,111,630)	.....	.....	.....	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	.....	45,538,850	3959.90000000	4,550,730	.....	(1,109,630)	1,396,388	.....	1,740,604	.....	.....	(1,109,630)	.....	.....	.....	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	.....	50,686,720	3959.90000000	5,022,683	.....	(1,224,709)	1,541,207	.....	2,080,035	.....	.....	(1,224,709)	.....	.....	.....	0003
155003 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I7OUK5573	.08/05/2022	.08/04/2023	.....	62,734,914	4145.19000000	6,127,319	.....	(1,498,163)	2,137,828	.....	1,891,252	.....	.....	(1,498,163)	.....	.....	.....	0003
155019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.08/05/2022	.08/04/2023		65,099,239	4145.19000000	6,469,736		(1,581,886)	2,257,298		1,358,698			(1,581,886)				0003

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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156505 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	09/06/2022	09/06/2029		987,646	3908.19000000		36,049		(1,255)		33,159		46,866		(1,255)			0003	
156508 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	7H6GLXDRUGOFU57RNE97 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	09/06/2023	.....	50,024,832	3908.19000000	.....	5,196,144	.....	(1,267,005)	.....	2,277,762	.....	773,375	.....	(1,267,005)	.....	.....	0003	.....
156526 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	.....	30,093,063	3908.19000000	.....	3,117,959	.....	(760,269)	.....	1,366,776	.....	671,867	.....	(760,269)	.....	.....	0003	.....
156533 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	09/06/2023	.....	54,714,660	3908.19000000	.....	5,686,136	.....	(1,386,482)	.....	2,492,553	.....	1,457,377	.....	(1,386,482)	.....	.....	0003	.....
156541 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	.....	49,634,013	3908.19000000	.....	5,161,761	.....	(1,258,621)	.....	2,262,690	.....	1,382,475	.....	(1,258,621)	.....	.....	0003	.....
156549 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	.....	74,255,610	3908.19000000	.....	7,732,388	.....	(1,885,432)	.....	3,389,540	.....	2,238,350	.....	(1,885,432)	.....	.....	0003	.....
156559 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	.....	46,898,280	3908.19000000	.....	4,866,005	.....	(1,186,505)	.....	2,133,043	.....	1,566,420	.....	(1,186,505)	.....	.....	0003	.....
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	.....	65,266,773	3908.19000000	.....	6,667,705	.....	(1,625,824)	.....	2,922,830	.....	2,264,959	.....	(1,625,824)	.....	.....	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	.....	(679,771)	.....	1,222,061	.....	3,031,009	.....	(679,771)	.....	.....	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	.....	44,944,185	3908.19000000	.....	4,509,031	.....	(1,099,462)	.....	1,976,562	.....	1,827,953	.....	(1,099,462)	.....	.....	0003	.....
156579 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	09/06/2022	09/06/2023	.....	13,000,187	505.76000000	.....	689,010	.....	(168,005)	.....	302,032	.....	611,771	.....	(168,005)	.....	.....	0003	.....
156588 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEMIK50	09/06/2022	09/06/2023	.....	18,186,604	3908.19000000	.....	383,737	.....	(93,569)	.....	168,214	.....	.....	.....	(93,569)	.....	.....	0003	.....
156621 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	09/06/2022	09/06/2023	.....	48,723,171	3908.19000000	.....	5,211,429	.....	(1,270,732)	.....	2,284,462	.....	2,656,629	.....	(1,270,732)	.....	.....	0003	.....
156718 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	09/09/2022	09/09/2023	.....	998,178	3994.15000000	.....	68,118	.....	(16,610)	.....	30,420	.....	15,197	.....	(16,610)	.....	.....	0003	.....
156928 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFU8MIPR08K5P83	09/20/2022	09/20/2023	.....	54,317,583	3855.93000000	.....	6,000,463	.....	(1,463,127)	.....	2,860,495	.....	760,359	.....	(1,463,127)	.....	.....	0003	.....
156935 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	09/20/2022	09/20/2023	.....	63,079,530	3855.93000000	.....	7,021,561	.....	(1,712,107)	.....	3,347,265	.....	1,642,525	.....	(1,712,107)	.....	.....	0003	.....
156943 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	09/20/2022	09/20/2023	.....	39,316,957	3855.93000000	.....	4,423,942	.....	(1,078,715)	.....	2,108,947	.....	1,130,560	.....	(1,078,715)	.....	.....	0003	.....
156960 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	09/20/2022	09/20/2023		61,799,202	3855.93000000		6,579,699		(1,604,365)		3,136,624		3,298,418		(1,604,365)			0003	

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156969 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	.09/20/2022	.09/20/2023		34,678,393	..3855.93000000	2,302,299		(561,382)	1,097,534		781,481			(561,382)				0003
156979 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	.09/20/2022	.09/20/2027	.....	1,181,616	..3855.93000000	45,492	.....	.....(2,217)	40,734	.....	.....62,155	.....	.....	.....(2,217)	.....	.....	.....	0003
156981 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.09/20/2022	.09/20/2023	.....	9,746,598	..504.43000000	552,632	.....	.....(134,751)	263,447	.....	.....501,862	.....	.....	.....(134,751)	.....	.....	.....	0003
156983 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.09/20/2022	.09/20/2023	.....	37,811,296	..1122.20000000	2,344,300	.....	.....(571,624)	1,117,557	.....	.....2,632,398	.....	.....	.....(571,624)	.....	.....	.....	0003
156984 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	.09/20/2022	.09/20/2029	.....	908,253	..3855.93000000	35,059	.....	.....(1,220)	32,440	.....	.....47,074	.....	.....	.....(1,220)	.....	.....	.....	0003
156987 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGGFU57RNE97	.09/20/2022	.09/20/2023	.....	17,448,140	..3855.93000000	383,859	.....	.....(93,599)	182,990	.....	.....97,891	.....	.....	.....(93,599)	.....	.....	.....	0003
156990 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2022	.09/20/2023	.....	29,664,891	..155.07000000	2,609,413	.....	.....(636,268)	1,243,939	.....	.....1,554,484	.....	.....	.....(636,268)	.....	.....	.....	0003
156998 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2022	.03/20/2024	.....	7,326,267	..3855.93000000	961,210	.....	.....(156,394)	625,577	.....	.....179,274	.....	.....	.....(156,394)	.....	.....	.....	0003
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	.....	63,237,252	..3855.93000000	5,085,121	.....	.....(1,239,934)	2,424,140	.....	.....1,135,951	.....	.....	.....(1,239,934)	.....	.....	.....	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	.....	50,512,683	..3855.93000000	4,059,444	.....	.....(989,837)	1,935,187	.....	.....1,554,139	.....	.....	.....(989,837)	.....	.....	.....	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	.....	56,296,578	..3855.93000000	4,549,314	.....	.....(1,109,285)	2,168,714	.....	.....1,911,260	.....	.....	.....(1,109,285)	.....	.....	.....	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	.....	45,885,567	..3855.93000000	3,698,351	.....	.....(901,790)	1,763,050	.....	.....1,843,727	.....	.....	.....(901,790)	.....	.....	.....	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	.....	.....(927,957)	1,814,209	.....	.....2,089,623	.....	.....	.....(927,957)	.....	.....	.....	0003
157067 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP2IHZNBB6K528	.09/20/2022	.09/20/2023	.....	20,665,997	..89.16000000	1,808,006	.....	.....(440,856)	861,899	.....	.....396,462	.....	.....	.....(440,856)	.....	.....	.....	0003
157075 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.09/20/2022	.09/20/2023	.....	1,126,864	..59.58000000	90,917	.....	.....(22,169)	43,341	.....	.....38,652	.....	.....	.....(22,169)	.....	.....	.....	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	.....	46,293,184	..3744.52000000	5,204,948	.....	.....(1,269,152)	2,709,425	.....	.....1,064,982	.....	.....	.....(1,269,152)	.....	.....	.....	0003
158005 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	.10/06/2022	.10/06/2023	.....	63,179,941	..3744.52000000	7,140,392	.....	.....(1,741,082)	3,716,916	.....	.....1,738,979	.....	.....	.....(1,741,082)	.....	.....	.....	0003
158016 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	.10/06/2022	.10/06/2023		50,422,349	..3744.52000000	5,712,348		(1,392,874)	2,973,551		1,506,728			(1,392,874)				0003

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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 Quarter-end (b)	
158703 Call Options - Ishares MSCI EAFE S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U9RH1G071XB11	10/20/2022	10/20/2023	.....	2,086,526	56.96000000	82,678		(20,160)	46,209		34,403			(20,160)				0003	.....
158715 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	59,553,688	3665.78000000	6,892,410		(1,680,615)	3,852,196		3,839,790			(1,680,615)				0003	.....
158720 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUWISFP08MPR08K5P83	10/20/2022	10/20/2023	.....	29,295,136	3665.78000000	2,079,662		(507,096)	1,162,331		795,010			(507,096)				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		(1,128,207)	2,586,001		3,227,049			(1,128,207)				0003	.....
158729 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32WIFA76	10/20/2022	10/20/2027	.....	6,530,815	3665.78000000	321,316		(15,661)	292,985		290,641			(15,661)				0003	.....
158732 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFP08MPR08K5P83	10/20/2022	10/19/2029	.....	3,668,206	3665.78000000	186,345		(6,489)	174,607		(38,583)			(6,489)				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		(127,042)	550,992		148,424			(127,042)				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		(1,677,985)	3,846,167		932,718			(1,677,985)				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	.....	73,315,600	3665.78000000	8,503,292		(2,073,406)	4,752,525		1,495,549			(2,073,406)				0003	.....
158769 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQF057PNE97	10/20/2022	10/20/2023	.....	38,430,560	1103.30000000	2,505,673		(610,972)	1,400,431		3,416,650			(610,972)				0003	.....
158771 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFMBT61CT2L10CEMIK50	10/20/2022	10/20/2023	.....	8,641,892	496.73000000	532,341		(129,804)	297,527		610,340			(129,804)				0003	.....
158774 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF0NF3BB653	10/20/2022	10/20/2023	.....	17,015,922	3665.78000000	318,198		(77,588)	177,842		438,455			(77,588)				0003	.....
158776 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	.....	43,989,360	3665.78000000	5,018,883		(1,223,782)	2,805,074		1,218,946			(1,223,782)				0003	.....
158792 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	.....	79,914,004	3665.78000000	9,316,110		(2,271,600)	5,206,812		2,629,925			(2,271,600)				0003	.....
158810 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	.....	31,892,286	3665.78000000	3,702,651		(902,838)	2,069,427		1,076,668			(902,838)				0003	.....
158821 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	.....	50,221,186	3665.78000000	5,619,803		(1,370,308)	3,140,931		1,899,749			(1,370,308)				0003	.....
158828 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	.....	58,285,902	3665.78000000	6,796,137		(1,657,140)	3,798,389		2,747,795			(1,657,140)				0003	.....
159728 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	39,822,474	3770.55000000	4,481,240		(1,086,731)	2,698,512		1,023,892			(1,086,731)				0003	.....
159745 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023		43,403,478	3770.55000000	5,007,355		(1,214,318)	3,015,328		1,253,775			(1,214,318)				0003	

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159748 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023		54,126,322	..3770.55000000		6,206,978		(1,505,234)		3,737,717		1,669,870		(1,505,234)			0003
159760 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	57,070,214	..3770.55000000	.....	6,543,353	.....	(1,586,808)	.....	3,940,275	.....	1,881,629	.....	(1,586,808)	.....	.....	0003
159769 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	11/04/2022	11/06/2023	.....	45,692,708	..1115.53000000	.....	3,024,857	.....	(733,549)	.....	1,821,508	.....	3,699,650	.....	(733,549)	.....	.....	0003
159771 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50	11/04/2022	11/06/2023	.....	13,151,244	...503.66000000	.....	825,882	.....	(200,282)	.....	497,329	.....	778,940	.....	(200,282)	.....	.....	0003
159794 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	45,374,370	..3770.55000000	.....	4,908,605	.....	(1,190,370)	.....	2,955,863	.....	1,561,690	.....	(1,190,370)	.....	.....	0003
159810 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	53,553,142	..3770.55000000	.....	6,178,318	.....	(1,498,284)	.....	3,720,459	.....	2,204,288	.....	(1,498,284)	.....	.....	0003
159815 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	50,254,079	..3770.55000000	.....	5,797,556	.....	(1,405,947)	.....	3,491,171	.....	2,271,887	.....	(1,405,947)	.....	.....	0003
159820 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	53,526,169	..3770.55000000	.....	5,982,495	.....	(1,450,796)	.....	3,602,538	.....	2,805,704	.....	(1,450,796)	.....	.....	0003
159831 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	76,202,158	..3770.55000000	.....	8,791,372	.....	(2,131,967)	.....	5,293,987	.....	5,731,518	.....	(2,131,967)	.....	.....	0003
159834 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	11/04/2022	11/05/2027	.....	11,680,363	..3770.55000000	.....	496,415	.....	(24,182)	.....	456,746	.....	823,465	.....	(24,182)	.....	.....	0003
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	.....	(11,996)	.....	325,230	.....	467,377	.....	(11,996)	.....	.....	0003
159842 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	05/06/2024	.....	8,295,210	..3770.55000000	.....	1,154,692	.....	(187,191)	.....	847,615	.....	207,322	.....	(187,191)	.....	.....	0003
159850 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	82,197,990	..3770.55000000	.....	9,271,976	.....	(2,248,517)	.....	5,583,397	.....	1,241,445	.....	(2,248,517)	.....	.....	0003
159852 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	47,885,985	..3770.55000000	.....	5,393,462	.....	(1,307,951)	.....	3,247,834	.....	768,528	.....	(1,307,951)	.....	.....	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	.....	31,555,802	...156.47000000	.....	2,986,410	.....	(724,225)	.....	1,798,356	.....	1,633,540	.....	(724,225)	.....	.....	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	.....	24,921,677	...82.65000000	.....	2,569,620	.....	(623,150)	.....	1,547,374	.....	809,615	.....	(623,150)	.....	.....	0003
159894 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	11/04/2022	11/06/2023	.....	1,536,737	...60.75000000	.....	116,000	.....	(28,131)	.....	69,853	.....	47,805	.....	(28,131)	.....	.....	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	.....	(157,572)	.....	391,275	.....	1,089,007	.....	(157,572)	.....	.....	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	.....	(1,604,395)	.....	3,983,948	.....	1,289,919	.....	(1,604,395)	.....	.....	0003
159911 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50	11/04/2022	11/06/2023	.....	21,552,501	..3770.55000000	.....	362,082	.....	(87,807)	.....	218,038	.....	946,541	.....	(87,807)	.....	.....	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	.....	(32,138)	.....	81,608	.....	117,029	.....	(32,138)	.....	.....	0003
160843 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMIPRO8K5P83	11/18/2022	11/19/2027	.....	12,068,585	...3965.34000000	.....	582,913	.....	(28,396)	.....	540,797	.....	499,742	.....	(28,396)	.....	.....	0003
160847 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBMIPRO8K5P83	11/18/2022	11/20/2029		7,589,428	...3965.34000000		380,230		(13,224)		360,617		(105,949)		(13,224)			0003

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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 Quarter-end (b)	
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		(641,166)	1,692,967		2,633,313			(641,166)				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	.....	29,725,454	162.79000000	2,729,714		(661,974)	1,747,909		1,323,695			(661,974)				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		(175,213)	462,641		605,740			(175,213)				0003	
160855 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	11/18/2022	11/20/2023	.....	18,816,034	86.59000000	1,803,823		(437,439)	1,155,037		502,250			(437,439)				0003	
160872 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPGFNF3BB653	11/18/2022	05/20/2024	.....	6,584,397	3965.34000000	737,256		(119,519)	559,993		162,058			(119,519)				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	.....	1,732,990	65.15000000	96,487		(23,399)	61,783		42,989			(23,399)				0003	
160893 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	68,905,179	3965.34000000	7,620,277		(1,847,969)	4,879,469		937,618			(1,847,969)				0003	
160896 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	.....	47,980,614	3965.34000000	5,169,840		(1,253,721)	3,310,388		1,036,114			(1,253,721)				0003	
160908 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	60,984,398	3965.34000000	6,732,172		(1,632,598)	4,310,791		1,001,851			(1,632,598)				0003	
160909 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	.....	47,187,546	3965.34000000	5,140,141		(1,246,519)	3,291,371		1,363,599			(1,246,519)				0003	
160921 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	.....	34,101,924	3965.34000000	3,593,101		(871,351)	2,300,759		1,052,377			(871,351)				0003	
160932 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	.....	68,203,848	3965.34000000	7,206,348		(1,747,588)	4,614,419		2,102,605			(1,747,588)				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		(1,221,991)	3,226,606		1,244,993			(1,221,991)				0003	
160943 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP517OUK5573	11/18/2022	11/20/2023	.....	51,764,770	3965.34000000	5,662,772		(1,373,261)	3,626,025		3,180,894			(1,373,261)				0003	
160972 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP517OUK5573	11/18/2022	11/20/2023	.....	34,842,921	3965.34000000	2,132,684		(517,191)	1,365,615		669,517			(517,191)				0003	
160985 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	.....	45,997,944	3965.34000000	5,032,196		(1,220,342)	3,222,251		1,766,774			(1,220,342)				0003	
160992 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	.....	51,152,886	3965.34000000	5,587,195		(1,354,933)	3,577,632		2,176,179			(1,354,933)				0003	
160993 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	11/18/2022	11/20/2023		17,723,482	3965.34000000	342,063		(82,953)	219,032		434,164			(82,953)				0003	

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161833 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	12/06/2022	12/06/2023		19,222,071	...86.37000000	1,727,409		(421,204)	1,187,889		509,114			(421,204)				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	.....	.....(76,222)	214,963	.....	.....372,283	.....	.....	.....(76,222)	.....	.....	.....	0003
161847 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	.....	28,863,484	...164.84000000	2,579,672	.....	.....(629,016)	1,773,966	.....	.....1,237,268	.....	.....	.....(629,016)	.....	.....	.....	0003
161858 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	.....	2,601,323	...66.53000000	69,833	.....	.....(17,028)	48,022	.....	.....35,598	.....	.....	.....(17,028)	.....	.....	.....	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	.....	.....(668,084)	1,884,148	.....	.....2,859,508	.....	.....	.....(668,084)	.....	.....	.....	0003
161869 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	.....	6,306,016	..3941.26000000	831,136	.....	.....(134,984)	658,235	.....	.....161,977	.....	.....	.....(134,984)	.....	.....	.....	0003
161871 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	12/06/2022	12/06/2023	.....	10,850,695	...511.36000000	671,658	.....	.....(163,774)	461,880	.....	.....532,438	.....	.....	.....(163,774)	.....	.....	.....	0003
161874 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	.....	42,959,734	..3941.26000000	4,585,843	.....	.....(1,118,192)	3,153,552	.....	.....642,976	.....	.....	.....(1,118,192)	.....	.....	.....	0003
161884 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	62,999,881	..3941.26000000	6,868,308	.....	.....(1,674,738)	4,723,138	.....	.....853,110	.....	.....	.....(1,674,738)	.....	.....	.....	0003
161886 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	.....	42,565,608	..3941.26000000	4,510,585	.....	.....(1,099,841)	3,101,799	.....	.....871,176	.....	.....	.....(1,099,841)	.....	.....	.....	0003
161899 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	49,665,993	..3941.26000000	5,397,308	.....	.....(1,316,056)	3,711,573	.....	.....1,245,813	.....	.....	.....(1,316,056)	.....	.....	.....	0003
161902 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	.....	29,559,450	..3941.26000000	1,658,250	.....	.....(404,340)	1,140,331	.....	.....574,607	.....	.....	.....(404,340)	.....	.....	.....	0003
161925 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	38,914,411	..3941.26000000	4,206,002	.....	.....(1,025,573)	2,892,346	.....	.....1,094,389	.....	.....	.....(1,025,573)	.....	.....	.....	0003
161940 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	50,076,725	..3941.26000000	5,459,413	.....	.....(1,331,199)	3,754,281	.....	.....1,477,721	.....	.....	.....(1,331,199)	.....	.....	.....	0003
161942 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	48,696,422	..3941.26000000	4,658,056	.....	.....(1,135,800)	3,203,211	.....	.....1,357,493	.....	.....	.....(1,135,800)	.....	.....	.....	0003
161957 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	59,655,691	..3941.26000000	6,503,721	.....	.....(1,585,839)	4,472,422	.....	.....2,153,687	.....	.....	.....(1,585,839)	.....	.....	.....	0003
161962 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	66,457,345	..3941.26000000	7,245,244	.....	.....(1,766,649)	4,982,346	.....	.....2,704,236	.....	.....	.....(1,766,649)	.....	.....	.....	0003
161964 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	12/06/2022	12/06/2023	.....	56,516,003	..3941.26000000	5,689,464	.....	.....(1,387,294)	3,912,481	.....	.....3,189,305	.....	.....	.....(1,387,294)	.....	.....	.....	0003
161965 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2027	.....	8,250,589	..3941.26000000	391,903	.....	.....(19,102)	367,436	.....	.....395,377	.....	.....	.....(19,102)	.....	.....	.....	0003
161970 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2029	.....	10,495,862	..3941.26000000	524,793	.....	.....(18,266)	501,396	.....	.....506,799	.....	.....	.....(18,266)	.....	.....	.....	0003
162048 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	12/09/2022	12/09/2023		2,301,254	..3937.33544339	157,725		(38,459)	109,759		128,774			(38,459)				0003

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162527 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	12/20/2022	12/20/2023		29,854,890	3821.62000000	1,916,684		(467,356)	1,391,565		686,035			(467,356)				0003
162533 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSPUBM8MPRO8K5P83	12/20/2022	12/20/2027	.....	6,695,471	3821.62000000	321,383	.....	(15,664)	303,782	.....	299,562	.....	.....	(15,664)	.....	.....	.....	0003
162536 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSPUBM8MPRO8K5P83	12/20/2022	12/20/2029	.....	10,151,085	3821.62000000	507,554	.....	(17,666)	487,705	.....	405,652	.....	.....	(17,666)	.....	.....	.....	0003
162540 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	27,965,832	169.08000000	2,496,242	.....	(608,673)	1,812,340	.....	1,077,287	.....	.....	(608,673)	.....	.....	.....	0003
162559 Call Options – Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	1,074,528	65.52000000	47,795	.....	(11,654)	34,701	.....	19,306	.....	.....	(11,654)	.....	.....	.....	0003
162574 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	06/20/2024	.....	6,114,592	3821.62000000	813,248	.....	(132,079)	664,845	.....	156,154	.....	.....	(132,079)	.....	.....	.....	0003
162578 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	52,356,194	3821.62000000	5,654,401	.....	(1,378,744)	4,105,250	.....	750,116	.....	.....	(1,378,744)	.....	.....	.....	0003
162586 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	47,770,250	3821.62000000	5,151,902	.....	(1,256,217)	3,740,422	.....	755,446	.....	.....	(1,256,217)	.....	.....	.....	0003
162587 Call Options – S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	12/20/2022	12/20/2023	.....	41,531,267	1123.49000000	2,707,839	.....	(660,268)	1,965,965	.....	3,381,959	.....	.....	(660,268)	.....	.....	.....	0003
162590 Call Options – S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	12/20/2022	12/20/2023	.....	10,505,238	508.98000000	650,274	.....	(158,560)	472,117	.....	577,980	.....	.....	(158,560)	.....	.....	.....	0003
162601 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	45,095,116	3821.62000000	4,791,804	.....	(1,168,412)	3,478,981	.....	967,591	.....	.....	(1,168,412)	.....	.....	.....	0003
162614 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	45,859,440	3821.62000000	4,942,359	.....	(1,205,123)	3,588,288	.....	1,209,255	.....	.....	(1,205,123)	.....	.....	.....	0003
162625 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	50,063,222	3821.62000000	5,384,595	.....	(1,312,956)	3,909,364	.....	1,455,701	.....	.....	(1,312,956)	.....	.....	.....	0003
162644 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	65,731,864	3821.62000000	6,873,209	.....	(1,675,933)	4,990,138	.....	2,307,710	.....	.....	(1,675,933)	.....	.....	.....	0003
162656 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023	.....	49,681,060	3821.62000000	5,365,490	.....	(1,308,298)	3,895,493	.....	2,059,996	.....	.....	(1,308,298)	.....	.....	.....	0003
162660 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023		50,063,222	3821.62000000	5,085,601		(1,240,051)	3,692,286		2,224,665			(1,240,051)				0003

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162677 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/20/2022	12/20/2023		19,835,611	...83.29000000	1,953,043		(476,221)	1,417,963		593,906			(476,221)				0003
162692 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	12/20/2022	12/20/2023	.....	33,391,749	..3821.62000000	3,588,735	.....	.....(875,061)	2,605,520	.....	.....2,329,566	.....	.....	.....(875,061)	.....	.....	.....	0003
162698 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	12/20/2022	12/20/2023	.....	19,414,179	..3821.62000000	423,229	.....	.....(103,198)	307,276	.....	.....889,312	.....	.....	.....(103,198)	.....	.....	.....	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	.....	53,884,842	..3821.62000000	5,650,728	.....	.....(1,377,849)	4,102,583	.....	.....1,647,009	.....	.....	.....(1,377,849)	.....	.....	.....	0003
163181 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJUF09	01/06/2023	01/05/2024	.....	47,226,592	..1134.16000000	.....	.....3,088,619	(712,758)	2,375,861	.....	.....3,507,092	.....	.....	.....(712,758)	.....	.....	.....	0003
163183 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	01/06/2023	01/05/2024	.....	10,898,213	...515.20000000	.....	......671,330	(154,922)	516,408	.....	.....504,325	.....	.....	.....(154,922)	.....	.....	.....	0003
163191 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	44,333,951	..3895.08000000	.....	.....4,600,961	(1,061,760)	3,539,201	.....	.....909,080	.....	.....	.....(1,061,760)	.....	.....	.....	0003
163210 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	65,090,360	..3895.08000000	.....	.....6,750,297	(1,557,761)	5,192,536	.....	.....1,667,576	.....	.....	.....(1,557,761)	.....	.....	.....	0003
163272 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	63,224,753	..3895.08000000	.....	.....6,463,746	(1,491,634)	4,972,113	.....	.....1,934,897	.....	.....	.....(1,491,634)	.....	.....	.....	0003
163301 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPFGNF3BB653	01/06/2023	01/05/2024	.....	35,688,968	..3895.08000000	.....	.....3,541,300	(817,223)	2,724,077	.....	.....1,127,599	.....	.....	.....(817,223)	.....	.....	.....	0003
163312 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	52,694,569	..3895.08000000	.....	.....5,476,141	(1,263,725)	4,212,416	.....	.....2,007,730	.....	.....	.....(1,263,725)	.....	.....	.....	0003
163325 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	49,720,315	..3895.08000000	.....	.....5,131,438	(1,184,178)	3,947,260	.....	.....2,122,008	.....	.....	.....(1,184,178)	.....	.....	.....	0003
163331 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	43,520,735	..3895.08000000	.....	.....4,366,468	(1,007,646)	3,358,821	.....	.....2,751,231	.....	.....	.....(1,007,646)	.....	.....	.....	0003
163342 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XB11	01/06/2023	01/05/2024	.....	29,739,668	..3895.08000000	.....	.....1,775,458	(409,721)	1,365,737	.....	.....634,759	.....	.....	.....(409,721)	.....	.....	.....	0003
163348 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJWSFPUBMPRO8K5P83	01/06/2023	01/05/2024	.....	19,861,310	..3895.08000000	.....	.....436,949	(100,834)	336,114	.....	.....491,252	.....	.....	.....(100,834)	.....	.....	.....	0003
163350 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	01/06/2023	01/05/2024	.....	17,525,877	...86.21000000	.....	.....1,637,610	(377,910)	1,259,700	.....	.....441,469	.....	.....	.....(377,910)	.....	.....	.....	0003
163351 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/06/2028	.....	11,272,223	..3895.08000000	.....	.....516,268	(23,749)	492,518	.....	.....452,284	.....	.....	.....(23,749)	.....	.....	.....	0003
163356 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/04/2030	.....	13,719,968	..3895.08000000	.....	......684,626	(22,508)	662,118	.....	.....249,239	.....	.....	.....(22,508)	.....	.....	.....	0003
163360 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	01/06/2023	01/05/2024	.....	1,571,607	...68.13000000	.....	.....100,998	(23,307)	77,691	.....	.....34,871	.....	.....	.....(23,307)	.....	.....	.....	0003
163368 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	53,847,905	..3895.08000000	.....	.....5,622,048	(1,297,396)	4,324,652	.....	.....757,725	.....	.....	.....(1,297,396)	.....	.....	.....	0003
163374 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	50,097,876	..3895.08000000	.....	.....5,228,953	(1,206,682)	4,022,272	.....	.....708,204	.....	.....	.....(1,206,682)	.....	.....	.....	0003
163380 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	01/06/2023	01/05/2024		33,404,433	...173.71000000		3,026,394	(698,399)	2,327,995		1,085,972			(698,399)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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 Quarter-end (b)	
163386 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/06/2023	.07/05/2024	.....	4,284,588	..3895.08000000	.....	..539,858	(83,055)	..456,803	.....	..118,999	.....	.....	.....(83,055)	.....	.....	.....	0003	.....
163389 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/06/2023	.01/05/2024	.....	34,276,704	..3895.08000000	.....	..3,479,808	(803,033)	..2,676,775	.....	..974,939	.....	.....	.....(803,033)	.....	.....	.....	0003	.....
163622 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.01/13/2023	.01/13/2024	.....	963,504	..3969.61000000	.....	..55,881	(11,789)	..44,093	.....	..57,251	.....	.....	.....(11,789)	.....	.....	.....	0003	.....
163820 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	33,921,132	..1145.17000000	.....	..2,201,481	(423,362)	..1,778,120	.....	..2,453,551	.....	.....	.....(423,362)	.....	.....	.....	0003	.....
163821 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.01/20/2023	.01/19/2024	.....	7,682,400	..515.67000000	.....	..470,163	(90,416)	..379,747	.....	..361,988	.....	.....	.....(90,416)	.....	.....	.....	0003	.....
163825 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	48,503,638	..3972.61000000	.....	..4,753,405	(914,116)	..3,839,289	.....	..677,269	.....	.....	.....(914,116)	.....	.....	.....	0003	.....
163846 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	47,992,725	..3972.61000000	.....	..4,680,773	(900,149)	..3,780,624	.....	..950,523	.....	.....	.....(900,149)	.....	.....	.....	0003	.....
163857 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	54,040,959	..3972.61000000	.....	..5,233,026	(1,006,351)	..4,226,675	.....	..1,368,623	.....	.....	.....(1,006,351)	.....	.....	.....	0003	.....
163871 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	67,697,689	..3972.61000000	.....	..6,502,345	(1,250,451)	..5,251,894	.....	..1,949,063	.....	.....	.....(1,250,451)	.....	.....	.....	0003	.....
163880 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	64,876,456	..3972.61000000	.....	..6,158,165	(1,184,263)	..4,973,903	.....	..2,183,133	.....	.....	.....(1,184,263)	.....	.....	.....	0003	.....
163905 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	59,390,723	..3972.61000000	.....	..5,746,052	(1,105,010)	..4,641,042	.....	..2,355,038	.....	.....	.....(1,105,010)	.....	.....	.....	0003	.....
163907 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.01/20/2023	.01/19/2024	.....	48,728,142	..3972.61000000	.....	..4,549,655	(874,934)	..3,674,722	.....	..2,735,908	.....	.....	.....(874,934)	.....	.....	.....	0003	.....
163916 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBU11	.01/20/2023	.01/19/2024	.....	23,818,982	..3972.61000000	.....	..1,310,044	(251,932)	..1,058,112	.....	..479,744	.....	.....	.....(251,932)	.....	.....	.....	0003	.....
163921 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.01/20/2023	.01/19/2024	.....	16,019,215	..3972.61000000	.....	..402,082	(77,324)	..324,759	.....	..354,231	.....	.....	.....(77,324)	.....	.....	.....	0003	.....
163922 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.01/20/2023	.01/20/2028	.....	5,705,912	..3972.61000000	.....	..263,613	(10,106)	..253,507	.....	..213,162	.....	.....	.....(10,106)	.....	.....	.....	0003	.....
163924 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/18/2030	.....	18,090,591	..3972.61000000	.....	..891,866	(24,435)	..867,431	.....	..(212,153)	.....	.....	.....(24,435)	.....	.....	.....	0003	.....
163946 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNBB6K528	.01/20/2023	.01/19/2024	.....	18,206,385	..89.47000000	.....	..1,651,228	(317,544)	..1,333,684	.....	..400,338	.....	.....	.....(317,544)	.....	.....	.....	0003	.....
163954 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.07/19/2024	.....	4,043,828	..3972.61000000	.....	..500,343	(64,147)	..436,196	.....	..107,962	.....	.....	.....(64,147)	.....	.....	.....	0003	.....
163964 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPRO8K5P83	.01/20/2023	.01/19/2024	.....	50,655,583	..3972.61000000	.....	..4,964,298	(954,673)	..4,009,625	.....	..652,525	.....	.....	.....(954,673)	.....	.....	.....	0003	.....
163966 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2023	.01/19/2024	.....	27,467,228	..179.29000000	.....	..2,512,891	(483,248)	..2,029,643	.....	..795,206	.....	.....	.....(483,248)	.....	.....	.....	0003	.....
163973 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.01/20/2023	.01/19/2024		1,200,069	..71.01000000		..77,328	(14,871)	..62,457		..26,069			(14,871)				0003	

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SCHEDULE DB - PART A - SECTION 1

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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 Quarter-end (b)	
164455 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	02/06/2023	02/06/2024		53,904,509	1167.94000000		3,557,698	(516,597)	3,041,100		3,047,107			(516,597)				0003	
164461 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	02/06/2023	02/06/2024		12,080,110	518.61000000		758,631	(110,157)	648,474		537,388			(110,157)				0003	
164465 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	02/06/2023	02/06/2024		63,985,221	4111.08000000		6,068,998	(881,252)	5,187,746		802,588			(881,252)				0003	
164494 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		50,300,148	4111.08000000		4,726,583	(686,326)	4,040,257		906,134			(686,326)				0003	
164511 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		33,297,856	4111.08000000		3,130,493	(454,565)	2,675,928		737,088			(454,565)				0003	
164536 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		51,608,936	4111.08000000		4,793,948	(696,108)	4,097,841		1,333,461			(696,108)				0003	
164563 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		75,864,001	4111.08000000		6,970,977	(1,012,224)	5,958,753		2,037,975			(1,012,224)				0003	
164571 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		37,982,426	4111.08000000		3,590,661	(521,384)	3,069,277		1,093,921			(521,384)				0003	
164575 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		50,489,635	4111.08000000		4,773,027	(693,070)	4,079,957		1,662,630			(693,070)				0003	
164581 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	02/06/2023	02/06/2024		45,021,501	4111.08000000		4,268,038	(619,743)	3,648,296		1,595,111			(619,743)				0003	
164584 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	02/06/2023	02/06/2024		49,843,809	4111.08000000		4,704,875	(683,174)	4,021,701		1,873,353			(683,174)				0003	
164592 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	02/06/2023	02/06/2024		51,342,868	4111.08000000		4,530,486	(657,851)	3,872,635		2,584,096			(657,851)				0003	
164600 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	02/06/2023	02/04/2028		5,580,626	4111.08000000		257,825	(7,492)	250,333		160,792			(7,492)				0003	
164603 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	02/06/2023	02/06/2030		20,840,541	4111.08000000		1,025,355	(21,253)	1,004,102		317,744			(21,253)				0003	
164605 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/06/2023	02/06/2024		3,166,912	70.69000000		190,409	(27,648)	162,760		87,502			(27,648)				0003	
164615 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	02/06/2023	02/06/2024		45,404,977	173.82000000		3,874,646	(562,620)	3,312,026		1,569,772			(562,620)				0003	
164621 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	02/06/2023	02/06/2024		28,635,852	92.74000000		2,482,333	(360,448)	2,121,885		510,097			(360,448)				0003	
164628 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	08/06/2024		6,804,276	4111.08000000		819,228	(79,377)	739,851		163,294			(79,377)				0003	
164633 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	02/06/2023	02/06/2024		66,315,525	4111.08000000		6,290,028	(913,346)	5,376,681		823,847			(913,346)				0003	
164639 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	02/06/2023	02/06/2024		29,689,385	4111.08000000		1,591,351	(231,073)	1,360,278		457,770			(231,073)				0003	
164641 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	02/06/2023	02/06/2024		21,353,699	4111.08000000		565,873	(82,168)	483,705		570,108			(82,168)				0003	
164704 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	02/10/2023	02/10/2024		1,214,990	4114.28506883		61,767	(8,292)	53,475		47,790			(8,292)				0003	
165119 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	02/17/2023	02/20/2024		26,712,445	90.66000000		2,412,753	(275,369)	2,137,385		569,226			(275,369)				0003	
165129 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	02/17/2023	02/20/2024		1,760,037	71.02000000		86,442	(9,866)	76,576		33,942			(9,866)				0003	
165141 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	02/17/2023	02/20/2024		53,827,100	4079.09000000		5,067,714	(578,380)	4,489,334		1,192,889			(578,380)				0003	

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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 Quarter-end (b)
165170 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	51,850,700	..4079.09000000	.....	4,801,643	 (548,014)	 4,253,629	.....	1,378,895	.....	.....	..... (548,014)	.....	.....	.....	0003
165187 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.02/17/2023	.02/20/2024	.....	37,395,023	..4079.09000000	.....	3,633,785	 (414,725)	 3,219,059	.....	2,029,578	.....	.....	..... (414,725)	.....	.....	.....	0003
165229 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.02/17/2023	.02/20/2024	.....	24,302,451	..4079.09000000	.....	1,287,175	 (146,906)	 1,140,269	.....	376,960	.....	.....	..... (146,906)	.....	.....	.....	0003
165236 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.08/20/2024	.....	6,934,453	..4079.09000000	.....	835,601	 (63,810)	 771,791	.....	159,855	.....	.....	..... (63,810)	.....	.....	.....	0003
165237 Call Options - S&P Equal Weight Energy	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.02/17/2023	.02/20/2024	.....	43,532,760	..1163.41000000	.....	2,934,108	 (334,871)	 2,599,237	.....	2,636,812	.....	.....	..... (334,871)	.....	.....	.....	0003
165239 Call Options - S&P U.S. Retiree Spending Index	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	10,435,563	..517.77000000	.....	672,050	 (76,701)	 595,349	.....	495,282	.....	.....	..... (76,701)	.....	.....	.....	0003
165240 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	56,699,351	..4079.09000000	.....	5,465,758	 (623,809)	 4,841,949	.....	701,088	.....	.....	..... (623,809)	.....	.....	.....	0003
165249 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	55,067,715	..4079.09000000	.....	5,287,236	 (603,435)	 4,683,802	.....	735,121	.....	.....	..... (603,435)	.....	.....	.....	0003
165257 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	44,869,990	..4079.09000000	.....	4,283,031	 (488,824)	 3,794,207	.....	824,437	.....	.....	..... (488,824)	.....	.....	.....	0003
165270 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	62,410,077	..4079.09000000	.....	6,016,266	 (686,639)	 5,329,627	.....	1,670,159	.....	.....	..... (686,639)	.....	.....	.....	0003
165272 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	51,804,443	..4079.09000000	.....	4,993,894	 (569,955)	 4,423,939	.....	1,562,802	.....	.....	..... (569,955)	.....	.....	.....	0003
165277 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	48,949,080	..4079.09000000	.....	4,718,640	 (538,540)	 4,180,100	.....	1,690,118	.....	.....	..... (538,540)	.....	.....	.....	0003
165279 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	50,580,716	..4079.09000000	.....	4,640,421	 (529,613)	 4,110,807	.....	1,863,612	.....	.....	..... (529,613)	.....	.....	.....	0003
165301 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB86K528	.02/17/2023	.02/20/2024	.....	39,844,267	..171.26000000	.....	3,431,310	 (391,617)	 3,039,693	.....	1,445,003	.....	.....	..... (391,617)	.....	.....	.....	0003
165307 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFT09	.02/17/2023	.02/20/2024	.....	17,306,899	..4079.09000000	.....	418,827	 (47,801)	 371,026	.....	265,691	.....	.....	..... (47,801)	.....	.....	.....	0003
165308 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.02/17/2023	.02/18/2028	.....	8,592,432	..4079.09000000	.....	391,815	 (9,007)	 382,808	.....	261,587	.....	.....	..... (9,007)	.....	.....	.....	0003
165310 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.02/17/2023	.02/20/2030	.....	16,958,688	..4079.09000000	.....	827,584	 (13,578)	 814,006	.....	393,155	.....	.....	..... (13,578)	.....	.....	.....	0003
165807 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB86K528	.03/06/2023	.03/06/2024	.....	46,900,497	..171.62000000	.....	3,881,504	 (265,130)	 3,616,374	.....	1,694,737	.....	.....	..... (265,130)	.....	.....	.....	0003
165815 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFT09	.03/06/2023	.03/06/2024		29,250,046	..87.97000000		2,734,948	 (186,813)	 2,548,135		715,811			 (186,813)				0003

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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 Quarter-end (b)
166358 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	.03/20/2023	.03/20/2024	.....	31,394,312	..82.99000000	.....	2,767,283	 (83,170)	2,684,113		..918,511	.....		..... (83,170)			.....	0003
166366 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.03/20/2023	.03/20/2024	.....	1,443,353	..68.23000000	.....	80,595	 (2,422)	78,173		..32,052	.....		..... (2,422)			.....	0003
166374 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZWZ7FF32TWEFA76	.03/20/2023	.03/20/2024	.....	63,730,416	..3951.57000000	.....	6,032,485	 (181,304)	5,851,181		..3,496,263	.....		..... (181,304)			.....	0003
166385 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/20/2023	.03/20/2024	.....	19,494,043	..3951.57000000	.....	432,768	 (13,007)	419,761		..551,444	.....		..... (13,007)			.....	0003
166386 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZWZ7FF32TWEFA76	.03/20/2023	.03/20/2028	.....	10,912,967	..3951.57000000	.....	538,009	 (3,239)	534,770		..439,467	.....		..... (3,239)			.....	0003
166390 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/20/2023	.03/20/2030	.....	13,135,985	..3951.57000000	.....	650,231	 (2,797)	647,434		..632,446	.....		..... (2,797)			.....	0003
166392 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	45,443,055	..3951.57000000	.....	3,972,097	 (119,380)	3,852,717		..1,217,292	.....		..... (119,380)			.....	0003
166399 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	52,160,724	..3951.57000000	.....	4,543,191	 (136,544)	4,406,647		..1,477,684	.....		..... (136,544)			.....	0003
166405 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	47,813,997	..3951.57000000	.....	4,336,761	 (130,340)	4,206,421		..1,531,343	.....		..... (130,340)			.....	0003
166411 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	49,789,782	..3951.57000000	.....	4,515,966	 (135,726)	4,380,240		..1,757,148	.....		..... (135,726)			.....	0003
166415 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	72,708,888	..3951.57000000	.....	6,592,766	 (198,143)	6,394,622		..2,826,516	.....		..... (198,143)			.....	0003
166441 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.03/20/2023	.03/20/2024	.....	27,545,458	..3951.57000000	.....	1,647,218	 (49,507)	1,597,712		..519,622	.....		..... (49,507)			.....	0003
166443 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.09/20/2024	.....	4,741,884	..3951.57000000	.....	401,640	 (8,033)	393,607		..86,530	.....		..... (8,033)			.....	0003
166445 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	74,684,673	..3951.57000000	.....	6,773,949	 (203,589)	6,570,360		..987,878	.....		..... (203,589)			.....	0003
166450 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	66,386,376	..3951.57000000	.....	6,009,848	 (180,624)	5,829,224		..921,113	.....		..... (180,624)			.....	0003
166456 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	48,209,154	..3951.57000000	.....	4,338,933	 (130,405)	4,208,528		..952,816	.....		..... (130,405)			.....	0003
166466 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	49,789,782	..3951.57000000	.....	4,473,064	 (134,436)	4,338,628		..1,221,232	.....		..... (134,436)			.....	0003
0159999999. Subtotal - Purchased Options - Hedging Other - Call Options and Warrants										1,321,581,192	383,890,196	(366,027,443)	822,249,622	XXX	514,339,547	0	0	(365,911,957)	0	0	XXX	XXX
0219999999. Subtotal - Purchased Options - Hedging Other										1,321,581,192	383,890,196	(366,027,443)	822,249,622	XXX	514,339,547	0	0	(365,911,957)	0	0	XXX	XXX
0289999999. Subtotal - Purchased Options - Replications										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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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 Quarter-end (b)	
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	
0439999999. Total Purchased Options - Call Options and Warrants										1,321,581,192	383,890,196	(366,027,443)	822,249,622	XXX	514,339,547	0	0	(365,911,957)	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										1,321,581,192	383,890,196	(366,027,443)	822,249,622	XXX	514,339,547	0	0	(365,911,957)	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	ROMUIWSPUBM8MPRO8K5P83	.04/06/2021	.04/06/2028	.....	2,662,509	..4236.90000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141928 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.04/06/2021	.04/06/2026	.....	669,047	..4232.82000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141923 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE	7H6GLXDRUGQFU57RNE97	.04/20/2021	.04/20/2028	.....	2,225,032	..4316.88000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141927 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE	7H6GLXDRUGQFU57RNE97	.04/20/2021	.04/20/2026	.....	1,074,629	..4300.34000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141922 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.05/06/2021	.05/06/2026	.....	3,051,593	..4369.68000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141926 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.05/06/2021	.05/06/2028	.....	3,678,547	..4384.39000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141921 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.05/20/2021	.05/20/2026	.....	3,369,262	..4327.56000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
141925 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.05/20/2021	.05/19/2028	.....	4,582,427	..4344.20000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142028 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.06/04/2021	.06/05/2026	.....	3,946,952	..4401.20000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142029 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.06/04/2021	.06/06/2028	.....	3,919,696	..4413.89000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142032 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.06/18/2021	.06/19/2026	.....	4,418,795	..4335.19000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142033 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.06/18/2021	.06/20/2028	.....	6,158,364	..4351.86000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142034 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.07/06/2021	.07/06/2026	.....	4,959,571	..4519.45000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142035 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.07/06/2021	.07/06/2028	.....	3,750,662	..4528.14000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142026 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76	.07/20/2021	.07/20/2026	.....	4,354,125	..4500.31000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142027 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76	.07/20/2021	.07/20/2028	.....	2,123,673	..4502.47000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142036 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.08/06/2021	.08/06/2026	.....	4,218,537	..4605.11000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142037 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8MPRO8K5P83	.08/06/2021	.08/04/2028	.....	3,983,239	..4618.42000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142038 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76	.08/20/2021	.08/20/2026	.....	1,876,286	..4606.01000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142039 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWIFA76	.08/20/2021	.08/18/2028	.....	2,228,637	..4630.44000000	.....	0	.....	.....	.....	.....	0	.....	0	.....	.....	0003	.....
142040 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE	7H6GLXDRUGQFU57RNE97	.09/03/2021	.09/04/2026		1,597,923	..4705.51000000		0					0		0			0003	

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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 Quarter-end (b)
142041 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/03/2021	.09/06/2028	.....	.....2,196,401	..4716.85000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142220 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.09/20/2021	.09/18/2026	.....	.....1,218,385	..4518.96601000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142222 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.09/20/2021	.09/20/2028	.....	.....1,947,129	..4529.86033500	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 9R7GPTS07KV3UQJZQ078	.10/06/2021	.04/06/2023	.....	.....6,816,960	..4544.63732500	(446,460)	.....	.....72,642	(5,713)	.....	.....	.....0	0	72,642	.....	.....	.....	0003
142233 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.10/06/2021	.10/06/2026	.....	.....1,870,404	..4527.18312500	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142234 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.10/06/2021	.10/06/2028	.....	.....2,368,393	..4546.81910000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142244 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVIZ7FF32TWEFA76	.10/20/2021	.10/20/2026	.....	.....2,221,902	..4704.02903000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142245 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVIZ7FF32TWEFA76	.10/20/2021	.10/20/2028	.....	.....2,219,393	..4718.99845700	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
142679 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	.10/20/2021	.04/20/2023	.....	.....7,397,784	..4696.31750700	(489,470)	.....	.....79,640	(18,791)	.....	.....	.....0	0	79,640	.....	.....	.....	0003
143686 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.11/05/2021	.05/05/2023	.....	.....8,723,595	..4846.44170100	(574,218)	.....	.....93,600	(37,861)	.....	.....	.....0	0	93,600	.....	.....	.....	0003
143734 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.11/05/2021	.11/06/2028	.....	.....3,354,930	..4885.43120000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
143736 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.11/05/2021	.11/06/2026	.....	.....1,366,674	..4872.75000000	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 9R7GPTS07KV3UQJZQ078	.11/19/2021	.05/19/2023	.....	.....7,774,560	..4859.10002800	(536,176)	.....	.....87,399	(49,100)	.....	.....	.....0	0	87,399	.....	.....	.....	0003
143910 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.11/19/2021	.11/20/2026	.....	.....1,189,404	..4871.78000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
143912 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.11/19/2021	.11/20/2028	.....	.....2,401,016	..4897.15000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
144157 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.12/06/2021	.06/06/2023	.....	.....9,453,330	..4726.66509800	(760,560)	.....	.....123,747	(94,549)	.....	.....	.....0	0	123,747	.....	.....	.....	0003
144236 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVIZ7FF32TWEFA76	.12/06/2021	.12/04/2026	.....	.....755,616	..4758.35000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
144238 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.12/06/2021	.12/06/2028	.....	.....782,197	..4772.12000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
144702 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.12/20/2021	.12/18/2026	.....	.....1,098,660	..4734.30000000	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
144704 Call Options - S&P 500	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBM8MPRO8K5P83	.12/20/2021	.12/20/2028	.....	.....1,756,967	..4757.14000000	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 9R7GPTS07KV3UQJZQ078	.12/20/2021	.06/20/2023	.....	.....9,415,603	..4707.80141200	(751,080)	.....	.....122,205	(112,593)	.....	.....	.....0	0	122,205	.....	.....	.....	0003
145287 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVIZ7FF32TWEFA76	.01/06/2022	.01/06/2027		872,078	..4870.86049988	0						0	0					0003

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145292 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	E570DZIVZ7FF32TWEFA76	.01/06/2022	.01/05/2029	2,158,669	..4884.89463634	0						0	0					0003
145267 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO BNP PARIBAS LONDON	9R7GPTS07KV3UQJZ0078	.01/06/2022	.07/06/2023	6,359,162	..4891.66323581	(438,633)		71,499	(78,729)			0	0	71,499				0003
145771 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.01/20/2022	.01/20/2027	1,109,017	..4658.79505485	0						0	0					0003
145774 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.01/20/2022	.01/19/2029	2,388,575	..4687.35252513	0						0	0					0003
145876 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO BNP PARIBAS LONDON	9R7GPTS07KV3UQJZ0078	.01/20/2022	.07/20/2023	4,208,827	..4676.47472112	(295,767)	48,211	(60,670)			0	0	48,211				0003
146424 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.02/04/2022	.08/04/2023	9,139,814	..4679.20104100	(709,507)		115,652	(165,032)			0	0	115,652				0003
146460 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. BNP PARIBAS LONDON	E570DZIVZ7FF32TWEFA76	.02/04/2022	.02/05/2027	911,857	..4689.10220700	0						0	0					0003
146462 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.02/04/2022	.02/06/2029	2,301,878	..4697.20316100	0						0	0					0003
147094 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPFGFNF3BB653	.02/18/2022	.08/18/2023	7,830,759	..4525.86900900	(630,512)		102,776	(162,824)			0	0	102,776				0003
147152 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.02/18/2022	.02/19/2027	1,656,805	..4533.26208800	0						0	0					0003
147156 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.02/18/2022	.02/20/2029	2,616,900	..4538.48073200	0						0	0					0003
147826 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO BNP PARIBAS LONDON	9R7GPTS07KV3UQJZ0078	.03/04/2022	.09/01/2023	7,605,608	..4473.88714500	(673,642)	109,806	(191,235)			0	0	109,806				0003
147913 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPUBM8MPRO8K5P83	.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	ROMUWISFPUBM8MPRO8K5P83	.03/04/2022	.03/02/2029	3,298,567	..4536.65576000	0						0	0					0003
148449 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	THROUGH CBO BNP PARIBAS LONDON	9R7GPTS07KV3UQJZ0078	.03/18/2022	.09/20/2023	11,109,955	..4629.14806400	(931,248)	150,419	(294,078)			0	0	150,419				0003
148495 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIVZ7FF32TWEFA76	.03/18/2022	.03/19/2027	3,639,522	..4661.72884000	0						0	0					0003
148497 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	E570DZIVZ7FF32TWEFA76	.03/18/2022	.03/20/2029	2,815,500	..4670.20876800	0						0	0					0003
149310 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO JPMORGAN CHASE BANK, N.A.	9R7GPTS07KV3UQJZ0078	.04/06/2022	.04/06/2023	52,944,582	..189.02028600	(3,165,832)		771,943	(60,715)			0	0	771,943				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	42,615,594	..116.87346000	(2,160,269)		526,751	(41,430)			0	0	526,751				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	1,375,374	..76.36408000	(52,665)		12,842	(1,010)			0	0	12,842				0003

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149329 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	10/06/2023		9,739,780	..4637.99025000	(814,275)		132,245	(282,322)			0	0	132,245				0003	
149331 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	53,441,343	..4567.63619500	(4,018,716)	.....	979,906	(77,071)	.....	.....	0	0	979,906	.....	.....	.....	0003	.....
149333 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	64,485,810	..4573.46169000	(4,794,423)	.....	1,169,051	(91,948)	.....	.....	0	0	1,169,051	.....	.....	.....	0003	.....
149337 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	41,725,780	..4636.19779000	(2,614,232)	.....	637,443	(50,136)	.....	.....	0	0	637,443	.....	.....	.....	0003	.....
149340 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	49,419,198	..4662.18846000	(3,058,964)	.....	745,884	(58,665)	.....	.....	0	0	745,884	.....	.....	.....	0003	.....
149341 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	04/06/2022	04/06/2023	.....	82,437,540	..4612.89581000	(5,835,177)	.....	1,422,824	(111,908)	.....	.....	0	0	1,422,824	.....	.....	.....	0003	.....
149344 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	55,602,692	..4672.49510500	(3,366,582)	.....	820,893	(64,565)	.....	.....	0	0	820,893	.....	.....	.....	0003	.....
149345 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	58,759,840	..4649.19312500	(3,896,556)	.....	950,119	(74,728)	.....	.....	0	0	950,119	.....	.....	.....	0003	.....
149347 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	51,974,125	..4682.35363500	(2,983,417)	.....	727,463	(57,216)	.....	.....	0	0	727,463	.....	.....	.....	0003	.....
149350 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	64,827,612	..4711.48111000	(3,779,658)	.....	921,615	(72,487)	.....	.....	0	0	921,615	.....	.....	.....	0003	.....
149351 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	53,526,978	..4695.34897000	(2,925,861)	.....	713,429	(56,112)	.....	.....	0	0	713,429	.....	.....	.....	0003	.....
149354 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/06/2022	04/06/2023	.....	49,790,506	..4741.95293000	(2,591,190)	.....	631,824	(49,694)	.....	.....	0	0	631,824	.....	.....	.....	0003	.....
149363 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	04/06/2022	04/06/2023	.....	71,790,720	..4726.26890500	(4,050,012)	.....	987,537	(77,671)	.....	.....	0	0	987,537	.....	.....	.....	0003	.....
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)	.....	906,112	(71,267)	.....	.....	0	0	906,112	.....	.....	.....	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	.....	.....	.....	.....	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	.....	.....	.....	.....	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)		396,075	(31,152)			0	0	396,075				0003	

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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)		788,191	 (185,978)			0	 0	 788,191				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	.....	52,826,288	4553.99034000	 (3,874,789)	.....	944,812	 (222,933)	.....	.....	0	 0	 944,812	.....	.....	.....	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	.....	62,165,179	4604.82807000	 (4,080,689)	.....	995,017	 (234,779)	.....	.....	0	 0	 995,017	.....	.....	.....	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)	.....	889,774	 (209,947)	.....	.....	0	 0	 889,774	.....	.....	.....	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	.....	68,725,654	4643.62528500	 (4,193,802)	.....	1,022,598	 (241,287)	.....	.....	0	 0	 1,022,598	.....	.....	.....	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)	.....	952,836	 (224,826)	.....	.....	0	 0	 952,836	.....	.....	.....	0003
149971 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	04/20/2022	04/20/2023	.....	41,277,271	192.86867600	 (2,330,970)	.....	568,373	 (134,111)	.....	.....	0	 0	 568,373	.....	.....	.....	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	.....	55,315,731	4687.77384000	 (3,069,871)	.....	748,544	 (176,623)	.....	.....	0	 0	 748,544	.....	.....	.....	0003
149975 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC JPMORGAN CHASE	04/20/2022	04/20/2023	.....	31,762,345	119.30260800	 (1,472,448)	.....	359,035	 (84,716)	.....	.....	0	 0	 359,035	.....	.....	.....	0003
149977 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A.	04/20/2022	04/20/2023	.....	1,653,619	76.33068000	 (57,067)	.....	13,915	 (3,283)	.....	.....	0	 0	 13,915	.....	.....	.....	0003
149980 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	.....	7,445,339	4603.04429000	 (507,224)	.....	82,378	 (188,820)	.....	.....	0	 0	 82,378	.....	.....	.....	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	.....	56,964,881	4707.84136500	 (2,961,361)	.....	722,085	 (170,380)	.....	.....	0	 0	 722,085	.....	.....	.....	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	.....	75,173,751	4727.90889000	 (3,750,565)	.....	914,521	 (215,786)	.....	.....	0	 0	 914,521	.....	.....	.....	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)	.....	691,335	 (163,124)	.....	.....	0	 0	 691,335	.....	.....	.....	0003
150019 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	04/20/2022	04/20/2023	.....	32,406,519	4590.55783000	 (2,273,871)	.....	554,451	 (130,825)	.....	.....	0	 0	 554,451	.....	.....	.....	0003
150022 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2027	.....	4,166,941	4670.82793000	 0	.....	.....	.....	.....	.....	0	 0	.....	.....	.....	.....	0003
150024 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2029		2,515,134	4677.96305000	 0						0	 0					0003

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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 Quarter-end (b)
150385 Call Options – SPDR Gold shares 150387 Call Options – iShares U.S. Real Estate 150389 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC ROYAL BANK OF CANADA	.05/06/2022	.05/05/2023	.....	50,387,944	185.38385600	(3,042,326)	.....	743,865	(300,889)	.....	.....	.....0	0	743,865	.....	.....	.....	0003
150390 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.11/06/2023	.....	8,569,125	4284.56259400	(743,600)	.....	120,547	(299,336)	.....	.....	.....0	0	120,547	.....	.....	.....	0003
150394 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO MORGAN STANLEY & CO. INTERNATIONAL PLC	.05/06/2022	.05/05/2023	.....	57,232,619	4208.28080400	(4,291,616)	.....	1,049,324	(424,446)	.....	.....	.....0	0	1,049,324	.....	.....	.....	0003
150398 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	4PQJHNSJPFQGNF3BB653	.05/06/2022	.05/05/2023	.....	54,912,719	4203.33279600	(4,616,931)	.....	1,128,865	(456,620)	.....	.....	.....0	0	1,128,865	.....	.....	.....	0003
150400 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	.05/06/2022	.05/05/2023	.....	86,082,769	4303.94229200	(6,354,431)	.....	1,553,693	(628,460)	.....	.....	.....0	0	1,553,693	.....	.....	.....	0003
150406 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	55,763,152	4313.83830800	(4,021,002)	.....	983,157	(397,682)	.....	.....	.....0	0	983,157	.....	.....	.....	0003
150408 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	54,412,405	4333.63034000	(3,775,217)	.....	923,061	(373,373)	.....	.....	.....0	0	923,061	.....	.....	.....	0003
150410 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	54,866,366	4351.77303600	(3,675,953)	.....	898,791	(363,556)	.....	.....	.....0	0	898,791	.....	.....	.....	0003
150414 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	55,598,586	4365.79239200	(3,573,616)	.....	873,769	(353,435)	.....	.....	.....0	0	873,769	.....	.....	.....	0003
150416 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	60,893,976	4378.16241200	(3,871,109)	.....	946,507	(382,857)	.....	.....	.....0	0	946,507	.....	.....	.....	0003
150418 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.05/05/2023	.....	61,763,902	4405.78879000	(3,711,615)	.....	907,510	(367,083)	.....	.....	.....0	0	907,510	.....	.....	.....	0003
150419 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.05/05/2023	.....	47,968,257	4244.97853000	(3,335,195)	.....	815,474	(329,854)	.....	.....	.....0	0	815,474	.....	.....	.....	0003
150421 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.05/05/2023	.....	53,443,641	4275.49124600	(3,481,750)	.....	851,307	(344,349)	.....	.....	.....0	0	851,307	.....	.....	.....	0003
150423 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	.05/06/2022	.05/05/2023	.....	53,613,728	4289.09826800	(3,351,170)	.....	819,380	(331,434)	.....	.....	.....0	0	819,380	.....	.....	.....	0003
150450 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.05/06/2022	.05/05/2023	.....	43,192,354	4246.62786600	(3,547,988)	.....	867,503	(350,900)	.....	.....	.....0	0	867,503	.....	.....	.....	0003
150454 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	.05/06/2022	.05/06/2027	.....	2,684,539	4322.49732200	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
150455 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.05/06/2022	.05/04/2029	.....	1,896,215	4328.26999800	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
151001 Call Options – SPDR Gold shares 151039 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	.05/20/2022	.05/19/2023	.....	42,039,200	182.54103300	(2,439,075)	.....	596,367	(335,038)	.....	.....	.....0	0	596,367	.....	.....	.....	0003
	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	.05/20/2022	.05/19/2023		32,537,243	100.84795200	(1,856,449)		453,912	(255,007)			0	0	453,912				0003

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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 Quarter-end (b)
151041 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 62,622,761	..4049.61168000	 (4,912,720)	.....	..... 1,201,187	 (674,824)	.....	.....	..... 0	 0	 1,201,187	.....	.....	.....	0003
151043 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 41,697,933	..4063.65657600	 (3,168,602)	.....	..... 774,741	 (435,248)	.....	.....	..... 0	 0	 774,741	.....	.....	.....	0003
151047 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 55,654,695	..4083.94364800	 (4,095,328)	.....	..... 1,001,330	 (562,545)	.....	.....	..... 0	 0	 1,001,330	.....	.....	.....	0003
151051 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 48,487,235	..4110.08276000	 (3,391,643)	.....	..... 829,275	 (465,885)	.....	.....	..... 0	 0	 829,275	.....	.....	.....	0003
151053 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 60,954,241	..4128.80928800	 (4,027,829)	.....	..... 984,826	 (553,273)	.....	.....	..... 0	 0	 984,826	.....	.....	.....	0003
151055 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/20/2022	.05/19/2023	 53,352,973	..4141.68377600	 (3,257,868)	.....	..... 796,567	 (447,509)	.....	.....	..... 0	 0	 796,567	.....	.....	.....	0003
151056 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	 1,503,294	..71.58545100	 (50,615)	.....	..... 12,376	 (6,953)	.....	.....	..... 0	 0	 12,376	.....	.....	.....	0003
151058 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/20/2022	.11/20/2023	 6,916,838	..4068.72834400	 (658,648)	.....	..... 106,775	 (281,935)	.....	.....	..... 0	 0	 106,775	.....	.....	.....	0003
151060 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	 46,933,751	..3977.43652000	 (4,223,810)	.....	..... 1,032,745	 (580,194)	.....	.....	..... 0	 0	 1,032,745	.....	.....	.....	0003
151062 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	 50,567,946	..3981.72801600	 (4,515,231)	.....	..... 1,103,999	 (620,224)	.....	.....	..... 0	 0	 1,103,999	.....	.....	.....	0003
151064 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	 44,219,575	..4019.96134400	 (3,631,783)	.....	..... 887,991	 (498,871)	.....	.....	..... 0	 0	 887,991	.....	.....	.....	0003
151066 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	 56,614,976	..4073.01984000	 (4,264,520)	.....	..... 1,042,699	 (585,786)	.....	.....	..... 0	 0	 1,042,699	.....	.....	.....	0003
151068 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	 66,641,471	..4165.09193600	 (4,177,920)	.....	..... 1,021,524	 (573,890)	.....	.....	..... 0	 0	 1,021,524	.....	.....	.....	0003
151070 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	 52,409,895	..4192.79159200	 (3,101,125)	.....	..... 758,242	 (425,979)	.....	.....	..... 0	 0	 758,242	.....	.....	.....	0003
151096 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/20/2022	.05/19/2023	 37,753,309	..4019.57120800	 (1,665,059)	.....	..... 407,116	 (228,717)	.....	.....	..... 0	 0	 407,116	.....	.....	.....	0003
151100 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBM8MPRO8K5P83	.05/20/2022	.05/20/2027	 5,349,149	..4116.32493600	 0	.....	.....	.....	.....	.....	..... 0	 0	.....	.....	.....	.....	0003
151101 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUBM8MPRO8K5P83	.05/20/2022	.05/18/2029	 1,342,084	..4115.15452800	 0						 0	 0					0003

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151615 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023		65,431,349	4206.33145800	(5,505,238)		1,342,373	(1,025,633)			0	0	1,342,373				0003
151617 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	61,043,332	4201.79788500	(5,178,123)		1,262,611	(964,691)			0	0	1,262,611				0003
151632 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	.....	48,856,477	182.23229200	(2,635,600)		642,653	(491,016)			0	0	642,653				0003
151635 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	1,514,821	73.53498400	(49,735)		12,127	(9,266)			0	0	12,127				0003
151638 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.12/06/2023	.....	5,173,219	4311.01578000	(460,296)		74,756	(210,829)			0	0	74,756				0003
151643 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	51,719,454	4274.33505300	(3,751,084)		914,648	(698,832)			0	0	914,648				0003
151645 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	48,868,373	4286.69934300	(3,471,290)		846,424	(646,706)			0	0	846,424				0003
151648 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2022	.06/06/2023	.....	51,618,438	4301.53649100	(3,579,240)		872,746	(666,817)			0	0	872,746				0003
151655 Call Options - Ishares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.06/06/2022	.06/06/2023	.....	32,301,502	104.19443100	(1,777,573)		433,435	(331,164)			0	0	433,435				0003
151657 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.06/06/2022	.06/06/2023	.....	42,990,173	4245.48504300	(3,344,201)		815,435	(623,029)			0	0	815,435				0003
151667 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/06/2022	.06/06/2023	.....	59,404,501	4310.60363700	(4,112,456)		1,002,763	(766,156)			0	0	1,002,763				0003
151670 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/06/2022	.06/06/2023	.....	58,451,253	4325.85292800	(3,926,948)		957,530	(731,596)			0	0	957,530				0003
151676 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/06/2022	.06/06/2023	.....	50,719,387	4339.86579000	(3,296,895)		803,901	(614,216)			0	0	803,901				0003
151683 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	71,014,353	4363.77008400	(4,392,609)		1,071,075	(818,349)			0	0	1,071,075				0003
151686 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	54,088,415	4375.31008800	(3,095,072)		754,689	(576,616)			0	0	754,689				0003
151689 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	67,783,122	4399.21438200	(3,921,044)		956,090	(730,496)			0	0	956,090				0003
151692 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/06/2022	.06/06/2023	.....	59,750,599	4430.94939300	(3,231,546)		787,966	(602,041)			0	0	787,966				0003
151702 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/06/2022	.06/06/2023	.....	38,305,169	4243.83647100	(1,585,915)		386,703	(295,458)			0	0	386,703				0003
151706 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPR08K5P83	.06/06/2022	.06/04/2027	.....	4,280,628	4352.64222300	0						0	0					0003
151708 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MPR08K5P83	.06/06/2022	.06/06/2029	.....	1,953,500	4342.75079100	0						0	0					0003
152993 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.06/17/2022	.06/20/2023	.....	35,348,391	3785.08520000	(1,729,669)		418,317	(385,415)			0	0	418,317				0003
152998 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02PNE81BXP4ROTDBPU41	.06/17/2022	.12/20/2023		5,850,553	3844.25012400	(461,399)		74,527	(221,907)			0	0	74,527				0003

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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 Quarter-end (b)
153004 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/18/2027	.....	4,183,227	..3674.84000000	0						0	0				.....	0003
153008 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/20/2029	.....	1,343,448	..3877.69116800	0						0	0				.....	0003
153009 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	.....	49,453,792	..3746.49938000	(4,575,780)		1,106,642	(1,019,603)			0	0	1,106,642			.....	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 THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/17/2022	.06/20/2023	.....	29,268,157	..92.97219600	(1,782,896)		431,190	(397,276)			0	0	431,190			.....	0003
153013 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	.....	60,625,893	..3861.52187200	(4,503,702)		1,089,211	(1,003,542)			0	0	1,089,211			.....	0003
153016 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	.....	47,316,799	..3878.42613600	(3,398,310)		821,874	(757,232)			0	0	821,874			.....	0003
153017 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.06/17/2022	.06/20/2023	.....	1,822,118	..64.38185600	(67,056)		16,217	(14,942)			0	0	16,217			.....	0003
153020 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	.....	46,580,655	..3947.51312800	(2,900,086)		701,379	(646,215)			0	0	701,379			.....	0003
153021 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/17/2022	.06/20/2023	.....	58,071,712	..3752.74660800	(5,412,643)		1,309,036	(1,206,078)			0	0	1,309,036			.....	0003
153025 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.06/17/2022	.06/20/2023	.....	69,535,611	..3802.72443200	(5,857,179)		1,416,546	(1,305,132)			0	0	1,416,546			.....	0003
153047 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	.....	44,003,356	..181.08377100	(2,663,660)		644,200	(593,533)			0	0	644,200			.....	0003
153051 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	.....	52,349,051	..3821.09863200	(4,201,453)		1,016,112	(936,193)			0	0	1,016,112			.....	0003
153053 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	.....	52,893,442	..3832.85812000	(4,154,062)		1,004,651	(925,633)			0	0	1,004,651			.....	0003
153055 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	.....	62,685,237	..3845.72006000	(4,788,252)		1,158,028	(1,066,948)			0	0	1,158,028			.....	0003
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	.....	63,913,552	..3897.16782000	(4,317,824)		1,044,256	(962,124)			0	0	1,044,256			.....	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		50,114,234	..3915.17453600	(3,290,674)		795,842	(733,248)			0	0	795,842				0003

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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 Quarter-end (b)
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)	.....	.....95,733	(302,257)	.....	.....	.....0	0	95,733	.....	.....	.....	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)	.....	.....1,397,243	(1,538,537)	.....	.....	.....0	0	1,397,243	.....	.....	.....	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)	.....	.....1,447,216	(1,583,563)	.....	.....	.....0	0	1,447,216	.....	.....	.....	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	.....	.....2,058,036	..64.71811500	(71,862)	.....	.....17,522	(19,294)	.....	.....	.....0	0	17,522	.....	.....	.....	0003
153818 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....54,430,900	..4111.54404400	(3,374,037)	.....	.....822,710	(905,906)	.....	.....	.....0	0	822,710	.....	.....	.....	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)	.....	.....968,093	(1,065,990)	.....	.....	.....0	0	968,093	.....	.....	.....	0003
153825 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPFQFNF3B8653	.07/06/2022	.07/06/2023	.....	.....42,934,203	..3965.43100400	(3,504,527)	.....	.....854,528	(940,941)	.....	.....	.....0	0	854,528	.....	.....	.....	0003
153830 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....56,187,080	..3992.73107200	(4,398,549)	.....	.....1,072,523	(1,180,980)	.....	.....	.....0	0	1,072,523	.....	.....	.....	0003
153833 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....54,225,214	..4000.03672400	(4,201,432)	.....	.....1,024,459	(1,128,056)	.....	.....	.....0	0	1,024,459	.....	.....	.....	0003
153840 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XB11	.07/06/2022	.07/06/2023	.....	.....50,695,197	..4009.26491600	(3,785,544)	.....	.....923,050	(1,016,393)	.....	.....	.....0	0	923,050	.....	.....	.....	0003
153842 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....64,090,232	..4018.49310800	(4,769,023)	.....	.....1,162,858	(1,280,450)	.....	.....	.....0	0	1,162,858	.....	.....	.....	0003
153846 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....66,162,522	..4032.33539600	(4,783,753)	.....	.....1,166,449	(1,284,405)	.....	.....	.....0	0	1,166,449	.....	.....	.....	0003
153848 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMJWSFPUBMPRO8K5P83	.07/06/2022	.07/06/2029	.....	.....4,579,270	..4064.63406800	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
153849 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....65,711,990	..4069.63267200	(4,320,155)	.....	.....1,053,408	(1,159,932)	.....	.....	.....0	0	1,053,408	.....	.....	.....	0003
153852 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2023	.....	.....58,337,591	..4088.85807200	(3,675,720)	.....	.....896,271	(986,906)	.....	.....	.....0	0	896,271	.....	.....	.....	0003
153854 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	.07/06/2022	.07/06/2027	.....	.....4,382,124	..4066.94111600	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
153902 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNBB6K528	.07/06/2022	.07/06/2023	.....	.....50,345,366	..172.30617800	(2,922,542)	.....	.....712,620	(784,683)	.....	.....	.....0	0	712,620	.....	.....	.....	0003
153908 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	.07/06/2022	.07/06/2023	.....	.....32,852,903	..99.11388200	(1,939,845)	.....	.....473,003	(520,835)	.....	.....	.....0	0	473,003	.....	.....	.....	0003
154440 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XB11	.07/20/2022	.07/20/2023	.....	.....4,921,522	..4101.26843000	(499,176)	.....	.....81,071	(268,717)	.....	.....	.....0	0	81,071	.....	.....	.....	0003
154444 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMJWSFPUBMPRO8K5P83	.07/20/2022	.07/20/2027	.....	.....30,072,609	..4079.88497000	(1,284,281)	.....	.....313,153	(394,081)	.....	.....	.....0	0	313,153	.....	.....	.....	0003
154460 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index					2,701,988	..4182.84237000	0						0	0					0003

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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 Quarter-end (b)
154465 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBM8P08K5P83	.07/20/2022	.07/20/2029	.....	1,833,751	..4186.40628000	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	.07/20/2022	.07/20/2023	.....	50,055,354	..4036.72210000	(4,464,372)	.....	1,088,573	(1,369,889)	.....	.....	0	0	1,088,573	.....	.....	.....	0003
154481 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	.07/20/2022	.07/20/2023	.....	36,524,396	..167.34855600	(2,159,016)	.....	526,445	(662,493)	.....	.....	0	0	526,445	.....	.....	.....	0003
154487 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	64,259,436	..4041.47390000	(5,681,070)	.....	1,385,247	(1,743,232)	.....	.....	0	0	1,385,247	.....	.....	.....	0003
154488 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	.07/20/2022	.07/20/2023	.....	23,571,104	..99.43786800	(1,332,005)	.....	324,790	(408,725)	.....	.....	0	0	324,790	.....	.....	.....	0003
154496 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	.07/20/2022	.07/20/2023	.....	1,815,489	..66.31972200	(82,037)	.....	20,004	(25,173)	.....	.....	0	0	20,004	.....	.....	.....	0003
154508 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	51,302,564	..4137.30352000	(3,784,852)	.....	922,882	(1,161,379)	.....	.....	0	0	922,882	.....	.....	.....	0003
154518 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	49,016,434	..4153.93500000	(3,499,408)	.....	853,280	(1,073,791)	.....	.....	0	0	853,280	.....	.....	.....	0003
154535 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	58,157,626	..4276.29600000	(3,221,024)	.....	785,400	(988,369)	.....	.....	0	0	785,400	.....	.....	.....	0003
154541 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	37,957,661	..4081.46890000	(3,018,803)	.....	736,092	(926,318)	.....	.....	0	0	736,092	.....	.....	.....	0003
154548 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	37,382,802	..4108.00030000	(2,902,842)	.....	707,816	(890,735)	.....	.....	0	0	707,816	.....	.....	.....	0003
154554 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	56,799,697	..4115.92010000	(4,360,735)	.....	1,063,303	(1,338,089)	.....	.....	0	0	1,063,303	.....	.....	.....	0003
154560 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	46,568,068	..4121.06790000	(3,534,272)	.....	861,781	(1,084,489)	.....	.....	0	0	861,781	.....	.....	.....	0003
154568 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	48,216,534	..4192.74210000	(3,113,320)	.....	759,138	(955,320)	.....	.....	0	0	759,138	.....	.....	.....	0003
154575 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.07/20/2022	.07/20/2023	.....	53,971,219	..4216.50150000	(3,291,241)	.....	802,522	(1,009,915)	.....	.....	0	0	802,522	.....	.....	.....	0003
155009 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	.08/05/2022	.08/04/2023	.....	42,729,096	..4276.17800400	(1,706,513)	.....	417,252	(595,404)	.....	.....	0	0	417,252	.....	.....	.....	0003
155014 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	.08/05/2022	.08/04/2023		67,690,188	..4310.16860000	(5,011,263)		1,225,281	(1,748,435)			0	0	1,225,281				0003

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155021 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	08/05/2022	08/04/2023		2,305,869	68.54000000	(91,179)		22,294	(31,813)			0	0	22,294				0003
155026 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	08/05/2022	08/04/2023		64,771,331	4272.86185200	(5,133,690)		1,255,215	(1,791,150)			0	0	1,255,215				0003
155028 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	08/05/2022	08/06/2027		1,414,170	4387.26909600	0						0	0					0003
155035 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	08/05/2022	08/06/2029		2,732,774	4382.70938700	0						0	0					0003
155056 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		27,228,595	104.36445000	(1,478,898)		361,599	(515,989)			0	0	361,599				0003
155061 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL	08/05/2022	02/06/2024		8,098,578	4331.30903100	(935,495)		151,380	(532,381)			0	0	151,380				0003
155069 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	08/05/2022	08/04/2023		70,590,662	4226.02120500	(6,134,176)		1,499,840	(2,140,221)			0	0	1,499,840				0003
155087 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		58,673,295	4483.02298500	(3,092,351)		756,097	(1,078,925)			0	0	756,097				0003
155100 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		64,617,649	4296.90400000	(4,921,334)		1,203,293	(1,717,059)			0	0	1,203,293				0003
155109 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		53,993,163	4320.94605600	(3,929,136)		960,695	(1,370,880)			0	0	960,695				0003
155117 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		54,735,767	4332.96710000	(3,895,653)		952,508	(1,359,197)			0	0	952,508				0003
155123 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		52,008,914	4351.20594300	(3,579,616)		875,236	(1,248,932)			0	0	875,236				0003
155130 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/05/2022	08/04/2023		54,600,488	4390.17072900	(3,358,373)		821,141	(1,171,740)			0	0	821,141				0003
155138 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/05/2022	08/04/2023		66,850,324	4417.11446400	(3,947,219)		965,117	(1,377,189)			0	0	965,117				0003
155147 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	08/05/2022	08/04/2023		44,125,547	175.24045800	(2,432,666)		594,800	(848,760)			0	0	594,800				0003
155159 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	08/05/2022	08/04/2023		59,239,739	4231.40995200	(5,031,443)		1,230,215	(1,755,476)			0	0	1,230,215				0003
155751 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	08/19/2022	08/20/2027		1,644,288	4467.81200000	0						0	0					0003
155755 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	08/19/2022	08/20/2029		1,477,052	4471.61760000	0						0	0					0003
155768 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/19/2022	08/18/2023		35,000,020	4359.14003200	(1,449,026)		354,295	(561,299)			0	0	354,295				0003
155781 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	08/19/2022	08/18/2023		33,401,601	172.53201600	(1,762,640)		430,975	(682,781)			0	0	430,975				0003
155782 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	08/19/2022	02/20/2024		5,965,661	4398.46489600	(591,003)		95,635	(351,378)			0	0	95,635				0003
155784 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	08/19/2022	08/18/2023		60,300,180	4313.04960000	(5,196,457)		1,270,562	(2,012,913)			0	0	1,270,562				0003
155790 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/19/2022	08/18/2023		56,436,331	4436.09836800	(3,872,702)		946,897	(1,500,140)			0	0	946,897				0003
155795 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	08/19/2022	08/18/2023		21,975,762	106.72979800	(1,187,418)		290,330	(459,961)			0	0	290,330				0003
155800 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	08/19/2022	08/18/2023		50,076,603	4573.94681600	(2,583,688)		631,726	(1,000,824)			0	0	631,726				0003

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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 Quarter-end (b)
155806 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GCT1XBUI1	.08/19/2022	.08/18/2023	.....	1,301,878	68.46142700	(60,175)	.....	14,713	(23,310)	.....	.....0	0	14,713	.....	.....	.....	0003
155825 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPU8MPRO8K5P83	.08/19/2022	.08/18/2023	.....	48,758,604	..4317.27808000	(4,169,614)	.....	1,019,493	(1,615,153)	.....	.....0	0	1,019,493	.....	.....	.....	0003
155846 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	52,147,635	..4363.36851200	(4,054,308)	.....	991,300	(1,570,487)	.....	.....0	0	991,300	.....	.....	.....	0003
155855 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	48,091,927	..4387.04800000	(3,611,544)	.....	883,042	(1,398,977)	.....	.....0	0	883,042	.....	.....	.....	0003
155866 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	52,457,764	..4393.81356800	(3,893,488)	.....	951,979	(1,508,192)	.....	.....0	0	951,979	.....	.....	.....	0003
155879 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	54,885,786	..4411.99603200	(3,940,344)	.....	963,436	(1,526,342)	.....	.....0	0	963,436	.....	.....	.....	0003
155885 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	48,908,820	..4474.15468800	(3,057,436)	.....	747,560	(1,184,337)	.....	.....0	0	747,560	.....	.....	.....	0003
155891 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.08/19/2022	.08/18/2023	.....	53,281,040	..4504.17689600	(3,025,814)	.....	739,828	(1,172,087)	.....	.....0	0	739,828	.....	.....	.....	0003
156454 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNB86K528	.09/06/2022	.09/06/2023	.....	37,460,768	...168.00396300	(2,035,720)	.....	496,381	(892,370)	.....	.....0	0	496,381	.....	.....	.....	0003
156459 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.03/06/2024	.....	4,851,158	..4042.63173600	(510,252)	.....	83,021	(319,024)	.....	.....0	0	83,021	.....	.....	.....	0003
156461 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	60,193,942	..3986.35380000	(5,479,941)	.....	1,336,205	(2,402,166)	.....	.....0	0	1,336,205	.....	.....	.....	0003
156466 Call Options - Ishares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.09/06/2022	.09/06/2023	.....	25,927,393	99.89908800	(1,631,043)	.....	397,706	(714,978)	.....	.....0	0	397,706	.....	.....	.....	0003
156486 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GCT1XBUI1	.09/06/2022	.09/06/2023	.....	1,940,995	63.34203200	(111,864)	.....	27,277	(49,036)	.....	.....0	0	27,277	.....	.....	.....	0003
156493 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	52,934,675	..4168.08463500	(3,408,807)	.....	831,189	(1,494,272)	.....	.....0	0	831,189	.....	.....	.....	0003
156499 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWISFPU8MPRO8K5P83	.09/06/2022	.09/06/2023	.....	35,837,571	..4033.25208000	(1,636,652)	.....	399,074	(717,436)	.....	.....0	0	399,074	.....	.....	.....	0003
156503 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.09/06/2022	.09/06/2027	.....	1,651,422	..4125.87618300	0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
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	.....	.....	.....	.....	0003
156522 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	51,095,363	..3991.83000000	(4,587,832)	.....	1,118,677	(2,011,105)	.....	.....0	0	1,118,677	.....	.....	.....	0003
156529 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023	.....	31,037,985	..4030.90716600	(2,590,012)	.....	631,537	(1,135,348)	.....	.....0	0	631,537	.....	.....	.....	0003
156537 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2022	.09/06/2023		56,777,403	..4055.52876300	(4,540,176)		1,107,057	(1,990,214)		0	0	1,107,057				0003

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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		 51,594,557 ..	4062.56000000	 (4,074,502)		993,509	 (1,786,083)			 0	 0	993,509				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	.....	..... 77,441,176 ..	4075.85135100	 (5,971,630)	.....	..... 1,456,096	 (2,617,701)	.....	.....	..... 0	 0	 1,456,096	.....	.....	.....	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	.....	..... 49,154,087 ..	4096.17393900	 (3,632,492)	.....	.....885,731	 (1,592,325)	.....	.....	..... 0	 0	885,731	.....	.....	.....	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	.....	..... 68,595,378 ..	4107.50769000	 (4,882,759)	.....	..... 1,190,590	 (2,140,387)	.....	.....	..... 0	 0	 1,190,590	.....	.....	.....	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	.....	..... 47,730,724 ..	4150.49778000	 (3,064,243)	.....	.....747,172	 (1,343,230)	.....	.....	..... 0	 0	747,172	.....	.....	.....	0003
156623 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GMZ0031MB27	.09/06/2022	.09/06/2023	.....	..... 52,781,811 ..	4233.74222700	 (3,093,921)	.....	.....754,408	 (1,356,239)	.....	.....	..... 0	 0	754,408	.....	.....	.....	0003
156930 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.09/20/2022	.09/20/2023	.....	..... 55,376,776 ..	3931.12063500	 (5,399,168)	.....	..... 1,316,509	 (2,573,850)	.....	.....	..... 0	 0	 1,316,509	.....	.....	.....	0003
156939 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.09/20/2022	.09/20/2023	.....	..... 65,350,393 ..	3994.74348000	 (5,782,974)	.....	..... 1,410,095	 (2,756,815)	.....	.....	..... 0	 0	 1,410,095	.....	.....	.....	0003
156949 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.09/20/2022	.09/20/2023	.....	..... 40,869,977 ..	4008.23923500	 (3,569,060)	.....	.....870,264	 (1,701,415)	.....	.....	..... 0	 0	870,264	.....	.....	.....	0003
156963 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.09/20/2022	.09/20/2023	.....	..... 66,804,937 ..	4168.26033000	 (4,057,282)	.....	.....989,310	 (1,934,156)	.....	.....	..... 0	 0	989,310	.....	.....	.....	0003
156971 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.09/20/2022	.09/20/2023	.....	..... 35,743,020 ..	3974.30705100	 (1,732,533)	.....	.....422,453	 (825,920)	.....	.....	..... 0	 0	422,453	.....	.....	.....	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
156995 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2022	.09/20/2023	.....	..... 31,391,388 ..	164.09507400	 (1,816,319)	.....	.....442,883	 (865,862)	.....	.....	..... 0	 0	442,883	.....	.....	.....	0003
156999 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2022	.03/20/2024	.....	.....7,584,884 ..	3992.04432900	 (819,888)	.....	.....133,400	 (533,602)	.....	.....	..... 0	 0	133,400	.....	.....	.....	0003
157005 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	.....	..... 64,780,241 ..	3950.01469200	 (4,221,462)	.....	..... 1,029,343	 (2,012,423)	.....	.....	..... 0	 0	 1,029,343	.....	.....	.....	0003
157019 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		 52,669,575 ..	4020.57821100	 (2,882,759)		702,919	 (1,374,247)			 0	 0	702,919				0003

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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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 Quarter-end (b)
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	.....	58,948,147	..4037.54430300	(3,103,025)	.....	756,628	(1,479,250)	.....	.....	0	0	756,628	.....	.....	.....	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	.....	48,482,690	..4074.17563800	(2,304,445)	.....	561,906	(1,098,557)	.....	.....	0	0	561,906	.....	.....	.....	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)	.....	542,781	(1,061,167)	.....	.....	0	0	542,781	.....	.....	.....	0003
157070 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	09/20/2022	09/20/2023	.....	21,881,157	..94.40260800	(1,214,818)	.....	296,216	(579,119)	.....	.....	0	0	296,216	.....	.....	.....	0003
157078 Call Options – iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	09/20/2022	09/20/2023	.....	1,179,714	..62.37430200	(66,012)	.....	16,096	(31,469)	.....	.....	0	0	16,096	.....	.....	.....	0003
157994 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	47,695,867	..3857.97895600	(4,438,944)	.....	1,082,373	(2,310,683)	.....	.....	0	0	1,082,373	.....	.....	.....	0003
158009 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	65,523,916	..3883.44169200	(5,844,659)	.....	1,425,136	(3,042,425)	.....	.....	0	0	1,425,136	.....	.....	.....	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)	.....	1,119,561	(2,390,075)	.....	.....	0	0	1,119,561	.....	.....	.....	0003
158023 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	64,908,612	..3907.78107200	(5,649,049)	.....	1,377,439	(2,940,601)	.....	.....	0	0	1,377,439	.....	.....	.....	0003
158034 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	39,794,046	..3908.90442800	(3,416,305)	.....	833,017	(1,778,350)	.....	.....	0	0	833,017	.....	.....	.....	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)	.....	888,561	(1,896,929)	.....	.....	0	0	888,561	.....	.....	.....	0003
158046 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	50,754,934	..3983.42037600	(3,750,247)	.....	914,444	(1,952,183)	.....	.....	0	0	914,444	.....	.....	.....	0003
158065 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	71,732,769	..4109.98515200	(4,178,934)	.....	1,018,973	(2,175,335)	.....	.....	0	0	1,018,973	.....	.....	.....	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	.....	.....	.....	.....	0003
158084 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/05/2029	.....	2,372,230	..4058.68522800	0	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	0003
158090 Call Options – SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	37,338,479	..169.33550400	(2,287,659)	.....	557,813	(1,190,836)	.....	.....	0	0	557,813	.....	.....	.....	0003
158098 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	49,563,590	..3933.61826000	(2,630,240)	.....	641,346	(1,369,166)	.....	.....	0	0	641,346	.....	.....	.....	0003
158115 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	10/06/2022	10/06/2023	.....	39,645,046	..3864.71909200	(1,950,077)	.....	475,498	(1,015,109)	.....	.....	0	0	475,498	.....	.....	.....	0003
158133 Call Options – iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/06/2022	10/06/2023		24,878,033	..85.30288800	(1,810,701)		441,513	(942,556)			0	0	441,513				0003

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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 Quarter-end (b)	
158142 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	10/06/2022	04/05/2024	.....	6,268,896	3878.94826800	(726,742)	.....	118,245	(494,237)	.....	.....	0	0	118,245	.....	.....	.....	0003	.....
158146 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	10/06/2022	10/06/2023	.....	1,765,526	60.79342500	(106,373)	.....	25,937	(55,372)	.....	.....	0	0	25,937	.....	.....	.....	0003	.....
158147 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	10/06/2022	10/06/2023	.....	64,704,067	3819.41040000	(9,580,007)	.....	2,335,947	(4,986,853)	.....	.....	0	0	2,335,947	.....	.....	.....	0003	.....
158157 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3B8653	10/06/2022	10/06/2023	.....	50,824,961	3821.65711200	(5,097,484)	.....	1,242,948	(2,653,485)	.....	.....	0	0	1,242,948	.....	.....	.....	0003	.....
158680 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	10/20/2022	10/20/2023	.....	30,604,498	160.96106000	(1,946,067)	.....	474,520	(1,087,665)	.....	.....	0	0	474,520	.....	.....	.....	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	.....	20,165,715	83.12379600	(1,522,095)	.....	371,141	(850,705)	.....	.....	0	0	371,141	.....	.....	.....	0003	.....
158710 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBU11	10/20/2022	10/20/2023	.....	2,186,888	59.69977600	(60,825)	.....	14,831	(33,996)	.....	.....	0	0	14,831	.....	.....	.....	0003	.....
158721 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	64,711,038	3983.23654800	(4,339,882)	.....	1,058,218	(2,425,578)	.....	.....	0	0	1,058,218	.....	.....	.....	0003	.....
158722 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	10/20/2022	10/20/2023	.....	30,182,779	3776.85313400	(1,612,697)	.....	393,233	(901,343)	.....	.....	0	0	393,233	.....	.....	.....	0003	.....
158728 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)	.....	611,048	(1,400,605)	.....	.....	0	0	611,048	.....	.....	.....	0003	.....
158730 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZVZ7FF32WEFA76	10/20/2022	10/20/2027	.....	7,088,546	3978.83761200	0	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	0003	.....
158734 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUISFPUBMPRO8K5P83	10/20/2022	10/19/2029	.....	3,982,571	3979.93734600	0	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	0003	.....
158746 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)	.....	109,382	(474,399)	.....	.....	0	0	109,382	.....	.....	.....	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	10/20/2023	.....	60,187,635	3738.36244400	(6,234,725)	.....	1,520,248	(3,484,613)	.....	.....	0	0	1,520,248	.....	.....	.....	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	.....	75,207,142	3760.35712400	(7,471,391)	.....	1,821,791	(4,175,791)	.....	.....	0	0	1,821,791	.....	.....	.....	0003	.....
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	.....	45,568,578	3797.38150200	(4,182,970)	.....	1,019,957	(2,337,879)	.....	.....	0	0	1,019,957	.....	.....	.....	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	.....	83,262,401	3819.37618200	(7,520,804)	.....	1,833,840	(4,203,408)	.....	.....	0	0	1,833,840	.....	.....	.....	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	.....	33,270,033	3824.14169600	(2,967,803)	.....	723,656	(1,658,717)	.....	.....	0	0	723,656	.....	.....	.....	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		52,757,356	3850.90189000	(4,328,548)		1,055,454	(2,419,243)			0	0	1,055,454				0003	

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159829 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		61,835,513	..3889.02600200	(4,936,791)		1,203,765	(2,759,193)			0	0	1,203,765				0003
159732 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	41,220,243	..3902.89630500	(3,731,185)	.....	904,838	(2,246,844)	.....	.....	.....0	0	904,838	.....	.....	.....	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)	.....	992,016	(2,463,321)	.....	.....	.....0	0	992,016	.....	.....	.....	0003
159752 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	56,377,977	..3927.40488000	(4,987,835)	.....	1,209,584	(3,003,573)	.....	.....	.....0	0	1,209,584	.....	.....	.....	0003
159764 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	59,615,545	..3938.71653000	(5,171,384)	.....	1,254,096	(3,114,103)	.....	.....	.....0	0	1,254,096	.....	.....	.....	0003
159803 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	47,624,939	..3957.56928000	(3,772,585)	.....	914,878	(2,271,775)	.....	.....	.....0	0	914,878	.....	.....	.....	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)	.....	1,110,363	(2,757,192)	.....	.....	.....0	0	1,110,363	.....	.....	.....	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)	.....	1,007,068	(2,500,696)	.....	.....	.....0	0	1,007,068	.....	.....	.....	0003
159826 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	57,551,337	..4054.09536000	(3,959,586)	.....	960,227	(2,384,383)	.....	.....	.....0	0	960,227	.....	.....	.....	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)	.....	1,138,692	(2,827,539)	.....	.....	.....0	0	1,138,692	.....	.....	.....	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	.....	.....	.....	.....	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	.....	.....	.....	.....	0003
159844 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	05/06/2024	.....	8,588,031	..3903.65041500	(995,434)	.....	161,373	(730,710)	.....	.....	.....0	0	161,373	.....	.....	.....	0003
159851 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	11/06/2023	.....	83,833,730	..3845.58394500	(8,352,234)	.....	2,025,474	(5,029,547)	.....	.....	.....0	0	2,025,474	.....	.....	.....	0003
159856 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	11/06/2023	.....	48,901,168	..3850.48566000	(4,823,960)	.....	1,169,843	(2,904,892)	.....	.....	.....0	0	1,169,843	.....	.....	.....	0003
159873 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMVCMJUFXT09	11/04/2022	11/06/2023	.....	33,477,550	..165.99902300	(2,120,784)	.....	514,304	(1,277,093)	.....	.....	.....0	0	514,304	.....	.....	.....	0003
159887 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMVCMJUFXT09	11/04/2022	11/06/2023	.....	26,414,485	..87.60073500	(1,876,116)	.....	454,971	(1,129,759)	.....	.....	.....0	0	454,971	.....	.....	.....	0003
159899 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U8H1GCT1XBU11	11/04/2022	11/06/2023	.....	1,611,269	..63.69637500	(83,285)	.....	20,197	(50,153)	.....	.....	.....0	0	20,197	.....	.....	.....	0003
159904 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	11/04/2022	11/06/2023	.....	41,881,396	..3888.56821500	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
159910 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	59,052,975	..3882.91239000	(5,667,405)	.....	1,374,384	(3,412,797)	.....	.....	.....0	0	1,374,384	.....	.....	.....	0003
160845 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPRO8K5P83	11/18/2022	11/19/2027	.....	13,083,553	..4298.82509400	0	.....	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
160848 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPRO8K5P83	11/18/2022	11/20/2029		8,257,298	..4314.28992000	0						0	0					0003

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	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 Quarter-end (b)	
160861 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	.....	31,422,777	172.08530900	(1,946,185)	.....	471,963	(1,246,195)	.....	.....	0	0	471,963	.....	.....	.....	0003
160867 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL MORGAN STANLEY & CO. INTERNATIONAL PLC	W22LR0WP21HZNB6K528	11/18/2022	11/20/2023	.....	19,926,180	91.69881000	(1,252,240)	.....	303,677	(801,843)	.....	.....	0	0	303,677	.....	.....	.....	0003
160891 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	4PQUHN3JPF6FNF3BB653	11/18/2022	05/20/2024	.....	6,833,287	4115.22985200	(597,009)	.....	96,783	(453,466)	.....	.....	0	0	96,783	.....	.....	.....	0003
160892 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	.....	1,830,037	68.79840000	(63,536)	.....	15,408	(40,684)	.....	.....	0	0	15,408	.....	.....	.....	0003
160900 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	.....	49,544,782	4094.61008400	(4,287,603)	.....	1,039,773	(2,745,468)	.....	.....	0	0	1,039,773	.....	.....	.....	0003
160903 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZWZ7FF32WFEA76	11/18/2022	11/20/2023	.....	70,276,392	4044.25026600	(6,822,355)	.....	1,654,467	(4,368,538)	.....	.....	0	0	1,654,467	.....	.....	.....	0003
160914 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	.....	49,259,079	4139.41842600	(3,976,349)	.....	964,292	(2,546,163)	.....	.....	0	0	964,292	.....	.....	.....	0003
160915 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZWZ7FF32WFEA76	11/18/2022	11/20/2023	.....	62,460,221	4061.30122800	(5,879,927)	.....	1,425,922	(3,765,076)	.....	.....	0	0	1,425,922	.....	.....	.....	0003
160927 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	.....	35,766,098	4158.84859200	(2,694,846)	.....	653,519	(1,725,583)	.....	.....	0	0	653,519	.....	.....	.....	0003
160937 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	.....	71,518,555	4158.05552400	(5,411,945)	.....	1,312,434	(3,465,415)	.....	.....	0	0	1,312,434	.....	.....	.....	0003
160940 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZWZ7FF32WFEA76	11/18/2022	11/20/2023	.....	47,437,050	4128.31547400	(3,978,259)	.....	964,755	(2,547,386)	.....	.....	0	0	964,755	.....	.....	.....	0003
160957 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/18/2022	11/20/2023	.....	57,308,777	4390.02791400	(2,887,987)	.....	700,357	(1,849,256)	.....	.....	0	0	700,357	.....	.....	.....	0003
160978 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	G5GSEF7VJP5170UK5573	11/18/2022	11/20/2023	.....	35,895,178	4085.09326800	(1,558,822)	.....	378,025	(998,155)	.....	.....	0	0	378,025	.....	.....	.....	0003
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)	.....	855,570	(2,259,089)	.....	.....	0	0	855,570	.....	.....	.....	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	.....	54,549,438	4228.63857600	(3,733,855)	.....	905,485	(2,390,888)	.....	.....	0	0	905,485	.....	.....	.....	0003
161837 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	O2RNE81BX4R0TD8PU41	12/06/2022	12/06/2023	.....	20,340,796	91.39673400	(1,188,754)	.....	289,861	(817,472)	.....	.....	0	0	289,861	.....	.....	.....	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		30,517,362	174.28533200	(1,805,074)		440,141	(1,241,297)			0	0	440,141				0003

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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 Quarter-end (b)	
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	.....	2,770,149	70.84779700	 (42,183)	.....	10,286	 (29,008)	.....	.....	0	 0	 10,286	.....	.....	.....	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)	.....	112,197	 (547,119)	.....	.....	0	 0	 112,197	.....	.....	.....	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	.....	43,891,960	4026.78534200	 (4,035,777)	.....	984,066	 (2,775,288)	.....	.....	0	 0	 984,066	.....	.....	.....	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)	.....	1,498,080	 (4,224,921)	.....	.....	0	 0	 1,498,080	.....	.....	.....	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	.....	43,851,089	4060.28605200	 (3,765,625)	.....	918,194	 (2,589,512)	.....	.....	0	 0	 918,194	.....	.....	.....	0003	.....
161905 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	51,513,568	4087.87487200	 (4,332,906)	.....	1,056,517	 (2,979,615)	.....	.....	0	 0	 1,056,517	.....	.....	.....	0003	.....
161932 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	40,556,599	4107.58117200	 (3,272,372)	.....	797,921	 (2,250,316)	.....	.....	0	 0	 797,921	.....	.....	.....	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)	.....	288,305	 (813,085)	.....	.....	0	 0	 288,305	.....	.....	.....	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)	.....	1,023,495	 (2,886,486)	.....	.....	0	 0	 1,023,495	.....	.....	.....	0003	.....
161947 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	51,014,371	4128.86397600	 (3,500,175)	.....	853,467	 (2,406,970)	.....	.....	0	 0	 853,467	.....	.....	.....	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)	.....	1,140,726	 (3,217,103)	.....	.....	0	 0	 1,140,726	.....	.....	.....	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)	.....	1,207,588	 (3,405,668)	.....	.....	0	 0	 1,207,588	.....	.....	.....	0003	.....
161967 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2027	.....	8,949,414	4275.08472200	 0	.....	.....	.....	.....	.....	0	 0	.....	.....	.....	.....	0003	.....
161971 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2029	.....	11,421,597	4288.87913200	 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	.....	62,116,739	4331.83886600	 (2,975,747)	.....	725,593	 (2,046,335)	.....	.....	0	 0	 725,593	.....	.....	.....	0003	.....
162528 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHG71XBU11	12/20/2022	12/20/2023	.....	30,723,667	3932.82914200	 (1,439,006)	.....	350,881	 (1,044,758)	.....	.....	0	 0	 350,881	.....	.....	.....	0003	.....
162534 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBM8PRO8K5P83	12/20/2022	12/20/2027	.....	7,255,213	4141.10743200	 0	.....	.....	.....	.....	.....	0	 0	.....	.....	.....	.....	0003	.....
162538 Call Options – S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPUBM8PRO8K5P83	12/20/2022	12/20/2029	.....	11,042,350	4157.15823600	 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	.....	29,568,274	178.76828400	 (1,751,634)	.....	427,111	 (1,271,734)	.....	.....	0	 0	 427,111	.....	.....	.....	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		1,129,974	68.90083200	 (32,723)		7,979	 (23,757)			0	 0	 7,979				0003	

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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)		111,532	 (561,419)			0	 0	111,532				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)	.....	1,234,499	 (3,675,757)	.....	.....	0	 0	1,234,499	.....	.....	.....	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	.....	48,806,864	..3904.54915400	 (4,556,113)	.....	1,110,943	 (3,307,863)	.....	.....	0	 0	1,110,943	.....	.....	.....	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	.....	46,452,479	..3936.65076200	 (4,031,347)	.....	982,986	 (2,926,869)	.....	.....	0	 0	982,986	.....	.....	.....	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	.....	47,542,481	..3961.87345400	 (3,994,195)	.....	973,927	 (2,899,895)	.....	.....	0	 0	973,927	.....	.....	.....	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	.....	52,100,795	..3977.15993400	 (4,244,871)	.....	1,035,051	 (3,081,893)	.....	.....	0	 0	1,035,051	.....	.....	.....	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	.....	56,255,775	..3989.77128000	 (4,363,080)	.....	1,063,874	 (3,167,715)	.....	.....	0	 0	1,063,874	.....	.....	.....	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	.....	69,084,189	..4016.52262000	 (5,074,681)	.....	1,237,388	 (3,684,357)	.....	.....	0	 0	1,237,388	.....	.....	.....	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)	.....	917,612	 (2,732,215)	.....	.....	0	 0	917,612	.....	.....	.....	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	.....	53,447,496	..4079.96151200	 (3,359,802)	.....	819,239	 (2,439,308)	.....	.....	0	 0	819,239	.....	.....	.....	0003
162689 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGUF57RNE97	12/20/2022	12/20/2023	.....	21,007,895	..88.21243900	 (1,385,231)	.....	337,769	 (1,005,716)	.....	.....	0	 0	337,769	.....	.....	.....	0003
162695 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	12/20/2022	12/20/2023	.....	37,008,075	..4235.50144600	 (1,789,770)	.....	436,410	 (1,299,422)	.....	.....	0	 0	436,410	.....	.....	.....	0003
163196 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	01/06/2023	01/05/2024	.....	45,646,236	..4010.37436800	 (3,856,213)	.....	889,895	 (2,966,318)	.....	.....	0	 0	889,895	.....	.....	.....	0003
163294 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	01/06/2023	01/05/2024	.....	66,107,802	..4072.69564800	 (4,878,859)	.....	1,125,890	 (3,752,968)	.....	.....	0	 0	1,125,890	.....	.....	.....	0003
163305 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNPJGFGFNF3BB653	01/06/2023	01/05/2024	.....	37,409,177	..4082.82285600	 (2,616,491)	.....	603,806	 (2,012,685)	.....	.....	0	 0	603,806	.....	.....	.....	0003
163315 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	55,682,351	..4115.93103600	 (3,819,423)	.....	881,405	 (2,938,018)	.....	.....	0	 0	881,405	.....	.....	.....	0003
163328 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	52,932,248	..4146.70216800	 (3,382,389)	.....	780,551	 (2,601,838)	.....	.....	0	 0	780,551	.....	.....	.....	0003
163334 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024		48,038,187	..4299.38930400	 (2,128,687)		491,235	 (1,637,451)			0	 0	491,235				0003

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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 Quarter-end (b)
163339 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2023	.01/05/2024	.....	67,518,230	..4040.36648400	.....	....(5,386,092)	1,242,944	(4,143,148)	.....	.....	.....0	0	1,242,944	.....	.....	.....	.....0003
163343 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHHG71XBUI1	.01/06/2023	.01/05/2024	.....	30,593,196	..4006.86879600	.....	....(1,302,597)	300,599	(1,001,998)	.....	.....	.....0	0	300,599	.....	.....	.....	.....0003
163354 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2023	.01/06/2028	.....	12,190,909	..4212.52902000	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	.....0003
163355 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0IWP2IHZNBB6K528	.01/06/2023	.01/05/2024	.....	18,491,553	..90.96017100	.....	....(1,136,908)	262,363	(874,545)	.....	.....	.....0	0	262,363	.....	.....	.....	.....0003
163357 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2023	.01/04/2030	.....	14,877,934	..4223.82475200	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	.....0003
163363 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.01/06/2023	.01/05/2024	.....	1,648,458	..71.46155700	.....	....(68,278)	15,756	(52,521)	.....	.....	.....0	0	15,756	.....	.....	.....	.....0003
163371 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2023	.01/05/2024	.....	54,924,863	..3972.98160000	.....	....(4,997,412)	1,153,249	(3,844,163)	.....	.....	.....0	0	1,153,249	.....	.....	.....	.....0003
163377 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/06/2023	.01/05/2024	.....	51,104,843	..3973.37110800	.....	....(4,647,992)	1,072,614	(3,575,379)	.....	.....	.....0	0	1,072,614	.....	.....	.....	.....0003
163383 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.01/05/2024	.....	35,231,655	..183.21193700	.....	....(2,177,248)	502,442	(1,674,806)	.....	.....	.....0	0	502,442	.....	.....	.....	.....0003
163387 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.07/05/2024	.....	4,464,112	..4058.28385200	.....	....(439,252)	67,577	(371,675)	.....	.....	.....0	0	67,577	.....	.....	.....	.....0003
163392 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.01/05/2024	.....	35,699,187	..4056.72582000	.....	....(2,677,429)	617,868	(2,059,561)	.....	.....	.....0	0	617,868	.....	.....	.....	.....0003
163829 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8MPR08K5P83	.01/20/2023	.01/19/2024	.....	49,541,615	..4057.62385400	.....	....(4,123,779)	793,034	(3,330,745)	.....	.....	.....0	0	793,034	.....	.....	.....	.....0003
163850 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.01/20/2023	.01/19/2024	.....	49,475,701	..4095.36364900	.....	....(3,793,197)	729,461	(3,063,736)	.....	.....	.....0	0	729,461	.....	.....	.....	.....0003
163868 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8MPR08K5P83	.01/20/2023	.01/19/2024	.....	56,218,809	..4132.70618300	.....	....(3,955,312)	760,637	(3,194,675)	.....	.....	.....0	0	760,637	.....	.....	.....	.....0003
163876 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.01/20/2023	.01/19/2024	.....	70,852,401	..4157.73362600	.....	....(4,682,033)	900,391	(3,781,642)	.....	.....	.....0	0	900,391	.....	.....	.....	.....0003
163884 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	68,308,421	..4182.76106900	.....	....(4,189,462)	805,666	(3,383,796)	.....	.....	.....0	0	805,666	.....	.....	.....	.....0003
163906 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	63,067,009	..4218.51455900	.....	....(3,624,022)	696,927	(2,927,094)	.....	.....	.....0	0	696,927	.....	.....	.....	.....0003
163911 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.01/20/2023	.01/19/2024	.....	53,479,136	..4359.93947500	.....	....(2,100,904)	404,020	(1,696,884)	.....	.....	.....0	0	404,020	.....	.....	.....	.....0003
163918 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHHG71XBUI1	.01/20/2023	.01/19/2024	.....	24,538,316	..4092.58282200	.....	....(897,976)	172,688	(725,288)	.....	.....	.....0	0	172,688	.....	.....	.....	.....0003
163923 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/20/2028	.....	6,175,508	..4299.55580300	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	.....0003
163926 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.01/20/2023	.01/18/2030	.....	19,648,191	..4314.65172100	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	.....0003
163950 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0IWP2IHZNBB6K528	.01/20/2023	.01/19/2024	.....	19,276,920	..94.73083600	.....	....(1,112,346)	213,913	(898,433)	.....	.....	.....0	0	213,913	.....	.....	.....	.....0003
163955 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.01/20/2023	.07/19/2024		4,217,308	..4143.03496900		(399,368)	51,201	(348,167)			0	0	51,201				0003

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	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 Quarter-end (b)	
163965 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	ROMUWSPUBMPR08K5P83	01/20/2023	01/19/2024	.....	51,653,498	4050.87041700	.....	(4,357,393)	837,960	.....	(3,519,433)	.....	0	.....	837,960	.....	.....	.....	0003
163969 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	01/20/2023	01/19/2024	.....	29,101,528	189.95775500	.....	(1,774,701)	341,289	.....	(1,433,412)	.....	0	.....	341,289	.....	.....	.....	0003
163976 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	01/20/2023	01/19/2024	.....	1,261,753	74.65991400	.....	(49,063)	9,435	.....	(39,628)	.....	0	.....	9,435	.....	.....	.....	0003
164468 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFX09	02/06/2023	02/06/2024	.....	65,277,722	4194.12381600	.....	(5,253,187)	762,791	.....	(4,490,395)	.....	0	.....	762,791	.....	.....	.....	0003
164503 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	51,784,002	4232.35686000	.....	(3,806,614)	552,741	.....	(3,253,872)	.....	0	.....	552,741	.....	.....	.....	0003
164531 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	34,516,558	4261.54552800	.....	(2,382,100)	345,894	.....	(2,036,206)	.....	0	.....	345,894	.....	.....	.....	0003
164540 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	53,864,247	4290.73419600	.....	(3,439,966)	499,502	.....	(2,940,464)	.....	0	.....	499,502	.....	.....	.....	0003
164566 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	79,361,331	4300.60078800	.....	(4,906,263)	712,416	.....	(4,193,846)	.....	0	.....	712,416	.....	.....	.....	0003
164573 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	39,813,179	4309.23405600	.....	(2,481,574)	360,338	.....	(2,121,236)	.....	0	.....	360,338	.....	.....	.....	0003
164577 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	02/06/2024	.....	53,306,957	4340.47826400	.....	(3,086,673)	448,202	.....	(2,638,471)	.....	0	.....	448,202	.....	.....	.....	0003
164583 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	02/06/2023	02/06/2024	.....	47,776,817	4362.67809600	.....	(2,639,160)	383,221	.....	(2,255,940)	.....	0	.....	383,221	.....	.....	.....	0003
164588 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	02/06/2023	02/06/2024	.....	53,123,532	4381.58906400	.....	(2,784,214)	404,283	.....	(2,379,931)	.....	0	.....	404,283	.....	.....	.....	0003
164596 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	02/06/2023	02/06/2024	.....	56,584,975	4530.82126800	.....	(1,863,808)	270,635	.....	(1,593,173)	.....	0	.....	270,635	.....	.....	.....	0003
164601 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	ES70DZIWZ7FF32TWEFA76	02/06/2023	02/04/2028	.....	6,031,541	4443.25526400	.....	0	.....	.....	.....	0	.....	.....	.....	.....	.....	0003	
164604 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	ES70DZIWZ7FF32TWEFA76	02/06/2023	02/06/2030	.....	22,611,987	4460.52180000	.....	0	.....	.....	.....	0	.....	.....	.....	.....	.....	0003	
164608 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	9R7GPTS07KV3UQJZ0078	02/06/2023	02/06/2024	.....	3,380,679	75.46157500	.....	(99,493)	14,447	.....	(85,046)	.....	0	.....	14,447	.....	.....	.....	0003
164618 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROWP21HZNB6K528	02/06/2023	02/06/2024	.....	48,083,871	184.07538000	.....	(2,604,165)	378,139	.....	(2,226,026)	.....	0	.....	378,139	.....	.....	.....	0003
164625 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	02/06/2023	02/06/2024	.....	30,365,457	98.34149600	.....	(1,605,392)	233,112	.....	(1,372,280)	.....	0	.....	233,112	.....	.....	.....	0003
164629 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	02/06/2023	08/06/2024	.....	7,077,128	4275.93430800	.....	(653,884)	63,356	.....	(590,528)	.....	0	.....	63,356	.....	.....	.....	0003
164634 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFX09	02/06/2023	02/06/2024	.....	67,641,836	4193.30160000	.....	(5,451,136)	791,535	.....	(4,659,601)	.....	0	.....	791,535	.....	.....	.....	0003
164640 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHIGC71XBU11	02/06/2023	02/06/2024	.....	30,526,625	4227.01245600	.....	(1,098,507)	159,509	.....	(938,998)	.....	0	.....	159,509	.....	.....	.....	0003
165123 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROWP21HZNB6K528	02/17/2023	02/20/2024	.....	28,293,822	96.02707200	.....	(1,609,829)	183,730	.....	(1,426,098)	.....	0	.....	183,730	.....	.....	.....	0003
165134 Call Options - Ishares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPUBMPR08K5P83	02/17/2023	02/20/2024	.....	1,871,095	75.50136200	.....	(49,715)	5,674	.....	(44,041)	.....	0	.....	5,674	.....	.....	.....	0003
165166 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	02/17/2023	02/20/2024		55,872,529	4234.09542000		(3,881,715)	443,022		(3,438,693)		0		443,022				0003

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165181 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024		54,235,832	..4266.72814000		(3,458,226)	394,689	(3,063,537)			0	0	394,689				0003
165197 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.02/17/2023	.02/20/2024	.....	41,142,004	..4487.81481800	.....	....(1,616,259)	184,464	(1,431,795)	.....	.....	.....0	0	184,464	.....	.....	.....	0003
165231 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.02/17/2023	.02/20/2024	.....	24,973,199	..4191.67288400	.....	....(898,579)	102,555	(796,024)	.....	.....	.....0	0	102,555	.....	.....	.....	0003
165238 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.08/20/2024	.....	7,200,043	..4235.31914700	.....	....(677,076)	51,704	(625,372)	.....	.....	.....0	0	51,704	.....	.....	.....	0003
165241 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	57,810,658	..4159.04016400	.....	....(4,773,399)	544,790	(4,228,609)	.....	.....	.....0	0	544,790	.....	.....	.....	0003
165253 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	56,240,657	..4165.97461700	.....	....(4,561,556)	520,612	(4,040,943)	.....	.....	.....0	0	520,612	.....	.....	.....	0003
165263 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	46,207,116	..4200.65000000	.....	....(3,470,364)	396,074	(3,074,290)	.....	.....	.....0	0	396,074	.....	.....	.....	0003
165271 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	65,149,879	..4258.16205100	.....	....(4,367,385)	498,452	(3,868,933)	.....	.....	.....0	0	498,452	.....	.....	.....	0003
165273 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	54,394,665	..4283.04450000	.....	....(3,448,050)	393,527	(3,054,523)	.....	.....	.....0	0	393,527	.....	.....	.....	0003
165278 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	51,783,232	..4315.26931100	.....	....(3,048,000)	347,870	(2,700,130)	.....	.....	.....0	0	347,870	.....	.....	.....	0003
165282 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	53,903,869	..4347.08621300	.....	....(2,798,154)	319,355	(2,478,800)	.....	.....	.....0	0	319,355	.....	.....	.....	0003
165304 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.02/17/2023	.02/20/2024	.....	42,159,218	..181.21020600	.....	....(2,321,869)	264,996	(2,056,873)	.....	.....	.....0	0	264,996	.....	.....	.....	0003
165309 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8MPROBK5P83	.02/17/2023	.02/18/2028	.....	9,260,923	..4396.44320200	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
165311 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBM8MPROBK5P83	.02/17/2023	.02/20/2030	.....	18,378,131	..4420.50983300	.....	.....0	.....	.....	.....	.....	.....0	0	.....	.....	.....	.....	0003
165810 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	.03/06/2023	.03/06/2024	.....	49,648,866	..181.67693200	.....	....(2,536,711)	173,273	(2,363,439)	.....	.....	.....0	0	173,273	.....	.....	.....	0003
165819 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	30,923,149	..93.00188400	.....	....(1,883,693)	128,668	(1,755,025)	.....	.....	.....0	0	128,668	.....	.....	.....	0003
165828 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFUS7RNE97	.03/06/2023	.03/06/2024	.....	2,196,872	..73.76131000	.....	....(82,670)	5,647	(77,023)	.....	.....	.....0	0	5,647	.....	.....	.....	0003
165835 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/06/2023	.09/06/2024		4,591,313	..4173.92102000		(415,217)	18,874	(396,344)			0	0	18,874				0003

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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 Quarter-end (b)	
165838 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/06/2023	.03/06/2024	.....	66,915,767	..4130.60292600	.....	..... (4,973,400)	339,713	 (4,633,687)	.....	.....	..... 0	 0	339,713	.....	.....	.....	0003	.....
165847 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/06/2023	.03/06/2024	.....	55,015,599	..4167.84839000	.....	..... (3,696,798)	252,514	 (3,444,284)	.....	.....	..... 0	 0	252,514	.....	.....	.....	0003	.....
165864 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/06/2023	.03/06/2028	.....	9,926,288	..4378.77107200	.....	..... 0	.....	.....	.....	.....	..... 0	 0	.....	.....	.....	.....	0003	.....
165867 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIZ7FF32TWEFA76	.03/06/2023	.03/06/2030	.....	14,922,988	..4373.91296800	.....	..... 0	.....	.....	.....	.....	..... 0	 0	.....	.....	.....	.....	0003	.....
165882 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	67,446,867	..4129.38840000	.....	..... (5,580,898)	381,209	 (5,199,689)	.....	.....	..... 0	 0	381,209	.....	.....	.....	0003	.....
165902 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	50,336,499	..4199.42606600	.....	..... (3,574,379)	244,152	 (3,330,227)	.....	.....	..... 0	 0	244,152	.....	.....	.....	0003	.....
165906 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	54,409,612	..4301.85109200	.....	..... (3,081,602)	210,492	 (2,871,110)	.....	.....	..... 0	 0	210,492	.....	.....	.....	0003	.....
165912 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	84,616,405	..4250.84100000	.....	..... (5,324,658)	363,706	 (4,960,952)	.....	.....	..... 0	 0	363,706	.....	.....	.....	0003	.....
165921 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	51,455,926	..4434.63926800	.....	..... (1,916,105)	130,882	 (1,785,224)	.....	.....	..... 0	 0	130,882	.....	.....	.....	0003	.....
165926 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	67,416,861	..4224.12142800	.....	..... (4,574,577)	312,471	 (4,262,106)	.....	.....	..... 0	 0	312,471	.....	.....	.....	0003	.....
165930 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.03/06/2023	.03/06/2024	.....	31,676,238	..4162.99028600	.....	..... (1,207,535)	82,482	 (1,125,053)	.....	.....	..... 0	 0	82,482	.....	.....	.....	0003	.....
165937 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	40,326,686	..4243.55384400	.....	..... (2,569,662)	175,523	 (2,394,138)	.....	.....	..... 0	 0	175,523	.....	.....	.....	0003	.....
165943 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	32,827,213	..4269.46373200	.....	..... (2,010,846)	137,353	 (1,873,493)	.....	.....	..... 0	 0	137,353	.....	.....	.....	0003	.....
165945 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/06/2023	.03/06/2024	.....	47,749,734	..4286.46709600	.....	..... (2,814,114)	192,221	 (2,621,893)	.....	.....	..... 0	 0	192,221	.....	.....	.....	0003	.....
166354 Call Options - SPDR Gold shares	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4R0TD8PU41	.03/20/2023	.03/20/2024	.....	48,255,979	...194.37403200	.....	..... (2,934,313)	88,190	 (2,846,123)	.....	.....	..... 0	 0	88,190	.....	.....	.....	0003	.....
166362 Call Options - iShares U.S. Real Estate	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4R0TD8PU41	.03/20/2023	.03/20/2024	.....	33,121,000	...87.55445000	.....	..... (1,906,351)	57,295	 (1,849,056)	.....	.....	..... 0	 0	57,295	.....	.....	.....	0003	.....
166371 Call Options - iShares MSCI EAFE	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.03/20/2023	.03/20/2024	.....	1,523,314	...72.00994200	.....	..... (53,428)	1,606	 (51,822)	.....	.....	..... 0	 0	1,606	.....	.....	.....	0003	.....
166379 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIZ7FF32TWEFA76	.03/20/2023	.03/20/2024	.....	69,663,718	..4319.46116700	.....	..... (2,918,085)	87,702	 (2,830,383)	.....	.....	..... 0	 0	87,702	.....	.....	.....	0003	.....
166388 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIZ7FF32TWEFA76	.03/20/2023	.03/20/2028	.....	11,891,860	..4306.02582900	.....	..... 0	.....	.....	.....	.....	..... 0	 0	.....	.....	.....	.....	0003	.....
166391 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/20/2023	.03/20/2030	.....	14,285,384	..4297.33237500	.....	..... 0	.....	.....	.....	.....	..... 0	 0	.....	.....	.....	.....	0003	.....
166396 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/20/2023	.03/20/2024	.....	47,347,119	..4117.14078300	.....	..... (2,877,695)	86,488	 (2,791,207)	.....	.....	..... 0	 0	86,488	.....	.....	.....	0003	.....
166402 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.03/20/2023	.03/20/2024		54,487,092	..4127.81002200		 (3,215,257)	96,633	 (3,118,624)			 0	 0	96,633				0003	

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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 Quarter-end (b)
166407 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	50,142,539	.. 4144.01145900	.....	..... (2,960,144)	 88,966	 (2,871,178)	.....	.....	..... 0	 0	 88,966	.....	.....	.....	0003
166412 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	52,478,430	.. 4164.95478000	.....	..... (2,937,186)	 88,276	 (2,848,910)	.....	.....	..... 0	 0	 88,276	.....	.....	.....	0003
166419 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	77,064,150	.. 4188.26904300	.....	..... (4,056,719)	 121,923	 (3,934,795)	.....	.....	..... 0	 0	 121,923	.....	.....	.....	0003
166442 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	03/20/2023	03/20/2024	.....	28,311,222	.. 4061.42364600	.....	..... (1,198,227)	 36,012	 (1,162,215)	.....	.....	..... 0	 0	 36,012	.....	.....	.....	0003
166444 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	09/20/2024	.....	4,876,079	.. 4063.39943100	.....	..... (322,068)	 6,441	 (315,627)	.....	.....	..... 0	 0	 6,441	.....	.....	.....	0003
166447 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	76,148,493	.. 4029.02077200	.....	..... (5,877,711)	 176,653	 (5,701,058)	.....	.....	..... 0	 0	 176,653	.....	.....	.....	0003
166453 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	67,753,935	.. 4032.97234200	.....	..... (5,174,965)	 155,532	 (5,019,433)	.....	.....	..... 0	 0	 155,532	.....	.....	.....	0003
166459 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	49,640,966	.. 4068.93162900	.....	..... (3,479,282)	 104,569	 (3,374,713)	.....	.....	..... 0	 0	 104,569	.....	.....	.....	0003
166469 Call Options - S&P 500	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	03/20/2023	03/20/2024	.....	51,641,962	.. 4098.56840400	.....	..... (3,372,801)	 101,368	 (3,271,433)	.....	.....	..... 0	 0	 101,368	.....	.....	.....	0003
0649999999. Subtotal - Written Options - Hedging Other - Call Options and Warrants										(934,756,257)	(253,238,230)	258,452,515	(564,386,288)	XXX	0	0	0	258,452,515	0	0	XXX	XXX
0709999999. Subtotal - Written Options - Hedging Other										(934,756,257)	(253,238,230)	258,452,515	(564,386,288)	XXX	0	0	0	258,452,515	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										(934,756,257)	(253,238,230)	258,452,515	(564,386,288)	XXX	0	0	0	258,452,515	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										(934,756,257)	(253,238,230)	258,452,515	(564,386,288)	XXX	0	0	0	258,452,515	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

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Interest Rate Swap /140377	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.06/04/2015	.06/23/2030		78,000,000	.2.434% [LIBOR]	0		(458,251)	(4,619,989)		(4,619,989)	1,344,316				1,048,658		0001
Interest Rate Swap /140456	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.10/06/2016	.06/23/2030	.....	.....180,000,000	.1.618% [LIBOR]	0	.....	.....(1,440,761)	(17,042,330)	.....	....(17,042,330)	3,175,164	.....	.....	.....	.....2,419,979	.....	0001
Interest Rate Swap /140458	LIABILITY HEDGE	Exhibit 5 ...	Interest	MERRILL LYNCH CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.11/10/2016	.12/25/2023	.....	.....15,000,000	.1.385% [LIBOR]	0	.....	.....(122,304)	(329,052)	.....	.....(329,052)	127,166	.....	.....	.....	.....64,517	.....	0001
Interest Rate Swap /140462	LIABILITY HEDGE	Exhibit 5 ...	Interest	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.07/14/2017	.04/15/2024	.....	.....217,000,000	.2.005% [LIBOR]	0	.....	.....(1,463,668)	(5,590,285)	.....	.....(5,590,285)	1,550,048	.....	.....	.....	.....1,106,487	.....	0001
Interest Rate Swap /140467	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY & COMPANY / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.10/25/2017	.06/23/2030	.....	.....72,000,000	.2.4175% [LIBOR]	0	.....	.....(426,401)	(4,175,690)	.....	.....(4,175,690)	1,189,173	.....	.....	.....	.....967,992	.....	0001
Interest Rate Swap /140473	LIABILITY HEDGE	Exhibit 5 ...	Interest	MORGAN STANLEY & COMPANY / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.10/25/2017	.10/25/2025	.....	.....100,000,000	.2.233% [LIBOR]	0	.....	.....(625,478)	(3,173,571)	.....	.....(3,173,571)	765,410	.....	.....	.....	.....803,119	.....	0001
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	.....	.....253,000,000	.2.9741% [LIBOR]	0	.....	.....(1,076,764)	(4,190,280)	.....	.....(4,190,280)	1,196,321	.....	.....	.....	.....1,290,052	.....	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	.....	.....120,000,000	.2.998% [LIBOR]	0	.....	.....(506,053)	(2,116,044)	.....	.....(2,116,044)	576,632	.....	.....	.....	.....611,882	.....	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	.....	.....62,000,000	.3.1675% [LIBOR]	0	.....	.....(252,371)	(1,000,358)	.....	.....(1,000,358)	301,845	.....	.....	.....	.....329,535	.....	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	.....	.....6,326,531	LIBOR [3.1675%]	(402,000)	.....	.....25,752	102,077	.....	.....102,077	(30,800)	.....	.....	.....	.....33,626	.....	0001
Interest Rate Swap /145478	LIABILITY HEDGE	Exhibit 5 ...	Interest	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.01/13/2022	.01/18/2030	.....	.....286,000,000	.1.481% [SOFR]	0	.....	.....(2,212,677)	(30,925,765)	.....	....(30,925,765)	6,167,530	.....	.....	.....	.....3,731,725	.....	0001
Interest Rate Swap /162729	Portfolio Hedge .....	.....	Interest	MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	.12/21/2022	.12/23/2042	.....	.....240,000,000	..SOFR [3.28%]	0	.....	.....740,883	(3,612,542)	.....	.....(3,612,542)	(8,772,430)	.....	.....	.....	.....5,331,566	.....	0001

STATEMENT AS OF MARCH 31, 2023 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 Current Statement Date

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 Quarter-end (b)
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	.....	808,364	 (3,288,929)	.....	(3,288,929)	 (7,022,627)	.....	.....	.....	4,369,256	.....	0001
Interest Rate Swap /162731	Portfolio Hedge .....	.....	Interest	MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2024	.....	855,000,000	4.2535% [SOFR]	 0	.....	(558,540)	 (202,861)	.....	(202,861)	 3,108,256	.....	.....	.....	5,639,112	.....	0001
Interest Rate Swap /162732	Portfolio Hedge .....	.....	Interest	MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2032	.....	195,000,000	SOFR [3.354%]	 0	.....	565,893	 (2,193,683)	.....	(2,193,683)	 (4,891,327)	.....	.....	.....	3,042,875	.....	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	.....	743,283	 (3,472,866)	.....	(3,472,866)	 (8,770,069)	.....	.....	.....	5,331,566	.....	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	.....	1,038,760	 (1,541,265)	.....	(1,541,265)	 555,172	.....	.....	.....	6,989,389	.....	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	.....	1,160,305	 (4,516,413)	.....	(4,516,413)	... (10,033,394)	.....	.....	.....	6,241,795	.....	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	.....	551,382	 (2,137,435)	.....	(2,137,435)	 (4,765,908)	.....	.....	.....	2,964,852	.....	0001
1119999999. Subtotal - Swaps - Hedging Other - Interest Rate										(402,000)	0	(3,508,645)	(94,027,281)	XXX	(94,027,281)	(24,229,525)	0	0	0	52,317,983	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%]	.....	.....	98,405	 (568,429)	.....	(568,429)	 (246,601)	 1,617	.....	.....	240,664	.....	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%]	.....	.....	(10,306)	 (1,388,705)	.....	(1,388,705)	 (497,781)	 228	.....	.....	302,641	.....	0002
Currency Swap /158392	ASSET HEDGE	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHI G C71XB U11	10/13/2022	10/30/2027	.....	21,802,500	7.672% [6.04%]	.....	.....	53,719	 (2,364,920)	.....	(2,364,920)	 (162,409)	 17,333	.....	.....	233,551	.....	0002
Currency Swap /158652	ASSET HEDGE	Schedule D ..	Currency.....	CITIBANK N.A. E570DZIVZ7F32TWEFA76	10/20/2022	10/19/2027	.....	4,895,000	 7.7987% [6.408%]	.....	.....	18,362	 18,362	.....	18,362	 40,893	.....	.....	.....	52,207	.....	0002
Currency Swap /158899	ASSET HEDGE	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHI G C71XB U11	10/25/2022	01/31/2030	.....	27,528,000	6.22%]	.....	.....	(14,688)	 (2,179,710)	.....	(2,179,710)	 (2,080,444)	 6,166	.....	.....	359,712	.....	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%]	.....	.....	(1,282)	 (402,975)	.....	(402,975)	 (138,701)	.....	.....	.....	41,816	.....	0002
Currency Swap /159089	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFUS7RNE97	10/27/2022	11/09/2037	.....	18,528,000	6.282% [6.07%]	.....	.....	(3,940)	 (1,342,529)	.....	(1,342,529)	 (409,320)	 8,982	.....	.....	354,098	.....	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%]	.....	.....	48,005	 (1,077,207)	.....	(1,077,207)	 (1,623,415)	 2,783	.....	.....	261,343	.....	0002
Currency Swap /161475	ASSET HEDGE	Schedule D ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. 17331LVCZKQKXST7XV54	12/02/2022	06/27/2030	.....	18,445,000	6.418% [5.08%]	.....	.....	450,537	 450,537	.....	450,537	 61,550	.....	.....	.....	248,152	.....	0002
Currency Swap /162602	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFUS7RNE97	12/21/2022	01/04/2032	.....	21,180,000	 6.6425% [5.478%]	.....	.....	55,887	 (386,919)	.....	(386,919)	 (366,003)	 3,695	.....	.....	313,435	.....	0002
Currency Swap /166905	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFUS7RNE97	03/28/2023	08/23/2029	.....	17,262,000	.. 6.13% [6.2%]	.....	.....	.....	77,734	.....	77,734	 77,734	.....	.....	.....	218,349	.....	0002

STATEMENT AS OF MARCH 31, 2023 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 Current Statement Date

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 Quarter-end (b)
Currency Swap /166906	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/28/2023	.08/23/2031	.....	11,097,000	 6.2675% [6.26%]	.....	.....	.....	66,717	.....	66,717	66,717	.....	.....	.....	160,907	.....	0002
Currency Swap /166959	ASSET HEDGE	Schedule D ..	Currency.....	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.03/30/2023	.06/29/2030	.....	24,760,000	6.055% [6.11%]	.....	.....	.....	92,326	.....	92,326	92,326	.....	.....	.....	333,342	.....	0002
Currency Swap /167021	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/31/2023	.06/30/2028	.....	27,175,000	6.839% [5.62%]	.....	.....	.....	(40,100)	.....	(40,100)	(40,100)	.....	.....	.....	311,329	.....	0002
1139999999. Subtotal - Swaps - Hedging Other - Foreign Exchange										0	0	225,799	(9,045,818)	XXX	(9,045,818)	(5,225,554)	40,805	0	0	3,431,546	XXX	XXX
1169999999. Subtotal - Swaps - Hedging Other										(402,000)	0	(3,282,846)	(103,073,098)	XXX	(103,073,098)	(29,455,079)	40,805	0	0	55,749,529	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	(3,508,645)	(94,027,281)	XXX	(94,027,281)	(24,229,525)	0	0	0	52,317,983	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	225,799	(9,045,818)	XXX	(9,045,818)	(5,225,554)	40,805	0	0	3,431,546	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	(3,282,846)	(103,073,098)	XXX	(103,073,098)	(29,455,079)	40,805	0	0	55,749,529	XXX	XXX
REC 62567.83 USD PAY [58050.00] EUR /166630	Asset Hedge	Schedule BA ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.03/24/2023	.04/24/2023	.....	62,568	1.07782653	.....	.....	.....	(573)	.....	(573)	(573)	.....	.....	.....	83	.....	0002
REC 140371.75 USD PAY [116000.00] GBP /165354	Asset Hedge	Schedule BA ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21GI19DL770XOHC3ZE78	.02/22/2023	.05/24/2023	.....	140,372	1.21010129	.....	.....	.....	(2,851)	.....	(2,851)	(2,851)	.....	.....	.....	272	.....	0002
REC 239970.54 USD PAY [199000.00] GBP /165519	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.02/23/2023	.05/25/2023	.....	239,971	1.20588211	.....	.....	.....	(6,395)	.....	(6,395)	(6,395)	.....	.....	.....	465	.....	0002
REC 600000.00 GBP PAY [725323.20] USD /166196	Asset Hedge	Schedule BA ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21GI19DL770XOHC3ZE78	.03/16/2023	.06/16/2023	.....	725,323	1.20887200	.....	.....	.....	15,741	.....	15,741	15,741	.....	.....	.....	1,662	.....	0002
REC 661842.26 USD PAY [612000.00] EUR /164346	Asset Hedge	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.02/06/2023	.05/09/2023	.....	661,842	1.08144160	.....	.....	.....	(3,830)	.....	(3,830)	(3,830)	.....	.....	.....	1,098	.....	0002
REC 743502.00 USD PAY [600000.00] GBP /166964	Asset Hedge	Schedule BA ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21GI19DL770XOHC3ZE78	.03/31/2023	.06/16/2023	.....	743,502	1.23917000	.....	.....	.....	2,249	.....	2,249	2,249	.....	.....	.....	1,704	.....	0002
REC 804000.00 EUR PAY [857822.98] USD /166170	Asset Hedge	Schedule BA ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBUI1	.03/16/2023	.06/16/2023	.....	857,823	1.06694400	.....	.....	.....	17,635	.....	17,635	17,635	.....	.....	.....	1,966	.....	0002
REC 877742.88 USD PAY [804000.00] EUR /166982	Asset Hedge	Schedule BA ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. 17331LVCZKQKX5T7XV54	.03/31/2023	.06/16/2023	.....	877,743	1.09172000	.....	.....	.....	1,163	.....	1,163	1,163	.....	.....	.....	2,011	.....	0002
REC 1087830.54 USD PAY [890000.00] GBP /163165	Asset Hedge	Schedule D ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.01/09/2023	.04/11/2023	.....	1,087,831	1.22228151	.....	.....	.....	(10,310)	.....	(10,310)	(10,310)	.....	.....	.....	942	.....	0002
REC 3542374.12 USD PAY [3236000.00] EUR /164154	Asset Hedge	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.01/30/2023	.05/02/2023	.....	3,542,374	1.09467680	.....	.....	.....	23,751	.....	23,751	23,751	.....	.....	.....	5,314	.....	0002
REC 5598495.04 USD PAY [4646000.00] GBP /163028	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBUI1	.01/03/2023	.04/05/2023	.....	5,598,495	1.20501400	.....	.....	.....	(132,849)	.....	(132,849)	(132,849)	.....	.....	.....	2,799	.....	0002
REC 9676044.59 USD PAY [8950000.00] EUR /166319	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21GI19DL770XOHC3ZE78	.03/21/2023	.06/06/2023	.....	9,676,045	1.08112230	.....	.....	.....	(64,156)	.....	(64,156)	(64,156)	.....	.....	.....	20,526	.....	0002

STATEMENT AS OF MARCH 31, 2023 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 Current Statement Date

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 Quarter-end (b)	
REC 10143385.40 USD PAY [9345000.00] EUR /166868	Asset Hedge	Schedule D ..	Currency.....	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.03/28/2023	.04/14/2023	.....	10,143,385	1.08543450	.....	.....	.....	(14,997)	.....	(14,997)	(14,997)	.....	.....	.....	10,143	.....	0002	
REC 13697776.01 USD PAY [11291000.00] GBP /165343	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 2IGI19DL770XOHC3ZE78	.02/22/2023	.05/25/2023	.....	13,697,776	1.21315880	.....	.....	.....	(243,443)	.....	(243,443)	(243,443)	.....	.....	.....	26,526	.....	0002	
REC 20211000.00 EUR PAY [21674310.76] USD /164725	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 2IGI19DL770XOHC3ZE78	.02/10/2023	.05/10/2023	.....	21,674,311	1.07240170	.....	.....	.....	287,299	.....	287,299	287,299	.....	.....	.....	35,943	.....	0002	
REC 20236000.00 EUR PAY [21810360.80] USD /166473	Asset Hedge	Schedule BA ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/21/2023	.04/24/2023	.....	21,810,361	1.07780000	.....	.....	.....	181,597	.....	181,597	181,597	.....	.....	.....	28,852	.....	0002	
REC 25630044.84 USD PAY [23032031.67] EUR /166475	Asset Hedge	Schedule BA ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.03/21/2023	.03/27/2026	.....	25,630,045	1.11280000	.....	.....	.....	(72,573)	.....	(72,573)	(72,573)	.....	.....	.....	221,592	.....	0002	
REC 25831449.17 USD PAY [24080000.00] EUR /164512	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.02/07/2023	.05/10/2023	.....	25,831,449	1.07273460	.....	.....	.....	(383,832)	.....	(383,832)	(383,832)	.....	.....	.....	42,837	.....	0002	
REC 38394929.73 USD PAY [35335000.00] EUR /163588	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.01/12/2023	.04/14/2023	.....	38,394,930	1.08659770	.....	.....	.....	(18,506)	.....	(18,506)	(18,506)	.....	.....	.....	38,395	.....	0002	
1439999999. Subtotal - Forwards - Hedging Other										0	0	0	(424,881)	XXX	(424,881)	(424,881)	0	0	0	443,130	XXX	XXX	
1479999999. Subtotal - Forwards										0	0	0	(424,881)	XXX	(424,881)	(424,881)	0	0	0	443,130	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										386,422,936	130,651,966	(110,857,775)	154,365,355	XXX	410,841,567	(29,879,960)	40,805	(107,459,442)	0	56,192,659	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										386,422,936	130,651,966	(110,857,775)	154,365,355	XXX	410,841,567	(29,879,960)	40,805	(107,459,442)	0	56,192,659	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

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

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE DB - PART D - SECTION 1

Counterparty Exposure for Derivative Instruments Open as of Current Statement Date

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	33,210,000		36,078,679	(24,527,022)	0	19,212,205		0	81,780	0
Barclays Bank PLC	Y	Y	92,520,000		117,808,517	(80,548,519)	0	85,840,277		0		0
BNP Paribas London	Y	Y	42,370,000		50,132,559	(32,372,201)	0	22,909,058		0		0
Canadian Imperial Bank of Commerce	Y	Y	0		305,289	(310,450)	0		(5,161)	0	86,633	81,472
Citibank N.A.	Y	Y	59,315,867		115,230,544	(83,112,506)	0	65,243,999		5,928,132	395,692	0
Credit Suisse International	Y	Y	0				0			0		0
Goldman Sachs International	Y	Y	21,330,000		22,579,525	(15,251,499)	0	15,732,530		0		0
JPMorgan Chase Bank, N.A.	Y	Y	26,810,000		27,716,134	(7,962,661)	0	32,222,059		5,412,059	1,364,530	0
Morgan Stanley & Co International PLC	Y	Y	29,915,000		35,883,734	(27,331,618)	0	31,138,880		1,223,880		0
Morgan Stanley Capital Services	Y	Y	380,000		451,700	71,700		451,700		71,700	250,163	250,163
MORGAN STANLEYCBO	Y	Y			291,974,709	(225,332,746)	66,641,963	162,831,095		162,831,095		0
Royal Bank of Canada	Y	Y	17,230,000		24,559,546	(20,315,410)	0	8,920,795		0	598,028	0
Societe Generale	Y	Y	25,320,000		8,783,780	(6,285,731)	0	2,902,078		0		0
UBS AG	Y	Y	13,960,000		13,928,903	(3,318,543)	0	15,101,858		1,141,858		0
Wells Fargo Bank, N.A.	Y	Y	40,530,000		78,051,115	(48,423,193)	0	42,367,475		1,837,475	1,097,850	0
0299999999. Total NAIC 1 Designation			402,890,867	0	823,484,734	(575,092,099)	66,713,663	504,874,009	(5,161)	178,446,198	3,874,676	331,635
0899999999. Aggregate Sum of Central Clearinghouses (Excluding Exchange Traded)					102,077	(94,129,358)	0		(94,027,281)	0	52,317,983	
0999999999 - Gross Totals			402,890,867	0	823,586,811	(669,221,456)	66,713,663	504,874,009	(94,032,441)	178,446,198	56,192,659	331,635
1. Offset per SSAP No. 64												
2. Net after right of offset per SSAP No. 64					823,586,811	(669,221,456)						

Collateral for Derivative Instruments Open as of Current Statement Date

[illegible]

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)
Morgan Stanley Capital Services	17331LVCZKQX5T7XV54	Cash.....	Cash Collateral	380,000	380,000	XXX		V.....
Morgan Stanley & Co International PLC	4PQUH3JPGFNF3BB653	Cash.....	Cash Collateral	29,915,000	29,915,000	XXX		V.....
Royal Bank of Canada	ES71P3U3RAH1GC71XB11	Cash.....	Cash Collateral	17,230,000	17,230,000	XXX		V.....
Societe Generale	02RNE81BXP4ROTDBU41	Cash.....	Cash Collateral	25,320,000	25,320,000	XXX		V.....
UBS AG	BFM8T61CT2L1QCEM1K50	Cash.....	Cash Collateral	13,960,000	13,960,000	XXX		V.....
JPMorgan Chase Bank, N.A.	7H6GLXDRUGOFU57RNE97	Cash.....	Cash Collateral	26,810,000	26,810,000	XXX		V.....
Wells Fargo Bank NA	KB1H1D5PRAFMVMCUFXT09	Cash.....	Cash Collateral	40,530,000	40,530,000	XXX		V.....
Goldman Sachs International	W22LR0WP21HZNBB6K528	Cash.....	Cash Collateral	21,330,000	21,330,000	XXX		V.....
Bank Of America NA	B4TYDEB6GKMZ0031MB27	Cash.....	Cash Collateral	33,210,000	33,210,000	XXX		V.....
Barclays Bank Plc	G5GSEF7VJPS170UK5573	Cash.....	Cash Collateral	92,520,000	92,520,000	XXX		V.....
BNP Paribas	ROMJWSFPUBMPRO8K5P83	Cash.....	Cash Collateral	42,370,000	42,370,000	XXX		V.....
Citibank NA	E570D2NZ7FF32WIEFA76	Cash.....	Cash Collateral	59,315,867	59,315,867	XXX		V.....
0299999999 - Total				402,890,867	402,890,867	XXX	XXX	XXX

Schedule DB - Part E - Derivatives Hedging Variable Annuity Guarantees

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

SCHEDULE E - PART 1 - CASH

Month End Depository Balances

1	2	3	4	5	Book Balance at End of Each Month During Current Quarter			9
					6	7	8	
					First Month	Second Month	Third Month	
Depository	Code	Rate of Interest	Amount of Interest Received During Current Quarter	Amount of Interest Accrued at Current Statement Date				*
Bank of New York Mellon New York, NY .....	.....	.....	.....	.....	..... 71,022,471	 66,509,499	 68,911,531	..XXX.
PNC Bank Pittsburgh, PA .....	.....	.....	.....	.....	..... (113,759,934)	 78,802,937	 (110,604,458)	..XXX.
Wells Fargo Bank / Norwest Bank Phoenix, AZ .....	.....	.....	.....	.....	..... (99,816)	 (718,047)	 (597,898)	..XXX.
Huntington Bank Columbus, OH .....	.....	.....	.....	.....	..... 50,042	 54,456	 55,022	..XXX.
FHLB Cincinnati, OH .....	.....	.. 4.150	 230,290	.....	..... 21,056,570	 49,388,231	 26,211,174	..XXX.
State Street Global Services Kansas City, MO .....	.....	.....	.....	.....	..... 11,036,224	 15,704,463	 7,910,500	..XXX.
Morgan Stanley New York, NY .....	.....	.....	.....	.....	..... 135,769	 135,769	 135,769	..XXX.
0199998. Deposits in ... depositories that do not exceed the allowable limit in any one depository (See instructions) - Open Depositories	XXX	XXX	.....	.....	.....	.....	.....	XXX
0199999. Totals - Open Depositories	XXX	XXX	230,290	0	(10,558,674)	209,877,308	(7,978,361)	XXX
0299998. Deposits in ... depositories that 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	0	0	XXX
0399999. Total Cash on Deposit	XXX	XXX	230,290	0	(10,558,674)	209,877,308	(7,978,361)	XXX
0499999. Cash in Company's Office	XXX	XXX	XXX	XXX	.....	.....	.....	XXX
.....								
.....								
.....								
.....								
.....								
0599999. Total - Cash	XXX	XXX	230,290	0	(10,558,674)	209,877,308	(7,978,361)	XXX

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned End of Current Quarter

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	.....	03/28/2023	0.000	04/20/2023	9,971,751	0	4,446
.....	AMEREN CORP COMMERCIAL PAPER	.....	03/27/2023	0.000	04/27/2023	9,961,700	0	5,866
.....	AMERICAN ELECTRIC POWER CO INC COMMERCIA	.....	03/15/2023	0.000	04/18/2023	14,962,364	0	37,447
.....	AMERICAN ELECTRIC POWER CO INC COMMERCIA	.....	03/14/2023	0.000	05/03/2023	9,953,217	0	24,676
.....	AMERICAN HONDA FINANCE CORP COMMERCIAL P	.....	03/15/2023	0.000	05/08/2023	10,173,607	0	25,702
.....	AON CORP COMMERCIAL PAPER	.....	03/13/2023	0.000	04/11/2023	7,988,748	0	21,292
.....	AUTOZONE INC COMMERCIAL PAPER	.....	03/28/2023	0.000	04/05/2023	19,988,883	0	11,105
.....	AVANGRID INC COMMERCIAL PAPER	.....	03/22/2023	0.000	04/14/2023	14,969,511	0	23,369
.....	AVANGRID INC COMMERCIAL PAPER	.....	03/22/2023	0.000	04/19/2023	3,736,492	0	5,812
.....	AVANGRID INC COMMERCIAL PAPER	.....	03/23/2023	0.000	05/01/2023	24,886,303	0	33,908
.....	BECTON DICKINSON AND CO COMMERCIAL PAPER	.....	03/14/2023	0.000	04/13/2023	19,965,918	0	48,085
.....	BECTON DICKINSON & CO COMMERCIAL PAPER	.....	03/28/2023	0.000	04/25/2023	2,491,413	0	1,069
.....	BERKSHIRE HATHAWAY ENERGY CO COMMERCIAL	.....	03/27/2023	0.000	04/17/2023	19,953,744	0	14,411
.....	CAMPBELL SOUP CO COMMERCIAL PAPER	.....	03/28/2023	0.000	04/10/2023	4,993,747	0	2,774
.....	CAMPBELL SOUP CO COMMERCIAL PAPER	.....	03/28/2023	0.000	04/13/2023	7,886,828	0	3,286
.....	CENTERPOINT ENERGY INC COMMERCIAL PAPER	.....	03/17/2023	0.000	05/03/2023	7,460,570	0	18,341
.....	COMMONWEALTH EDISON CO COMMERCIAL PAPER	.....	03/27/2023	0.000	04/10/2023	24,968,102	0	17,686
.....	DOLLAR GENERAL CORP COMMERCIAL PAPER	.....	03/15/2023	0.000	04/13/2023	36,934,469	0	92,439
.....	DOMINION ENERGY SOUTH CAROLINA INC COMME	.....	03/21/2023	0.000	04/13/2023	9,980,800	0	17,536
.....	DOVER CORP COMMERCIAL PAPER	.....	03/28/2023	0.000	04/05/2023	29,982,993	0	12,743
.....	DUKE ENERGY CORP FIXED COUPON 0 MATURIT	.....	03/17/2023	0.000	05/04/2023	7,957,732	0	19,065
.....	ERAC USA FINANCE LLC COMMERCIAL PAPER	.....	03/15/2023	0.000	04/13/2023	21,962,141	0	53,411
.....	ENBRIDGE US INC COMMERCIAL PAPER	.....	03/23/2023	0.000	04/13/2023	34,934,575	0	48,908
.....	ENBRIDGE US INC COMMERCIAL PAPER	.....	03/23/2023	0.000	04/26/2023	13,247,742	0	18,712
.....	EQUIFAX INC FIXED COUPON 0 MATURITY 201	.....	03/15/2023	0.000	04/14/2023	14,970,952	0	35,598
.....	EVERGY KANSAS CENTRAL INC COMMERCIAL PAP	.....	03/27/2023	0.000	04/25/2023	11,957,575	0	7,042
.....	FIDELITY NATIONAL INFORMATION SERVICES I	.....	03/23/2023	0.000	04/14/2023	14,569,800	0	20,835
.....	FISERV INC COMMERCIAL PAPER	.....	03/22/2023	0.000	04/04/2023	24,988,315	0	38,871
.....	HP INC COMMERCIAL PAPER	.....	02/24/2023	0.000	04/25/2023	14,948,537	0	76,537
.....	KELLOGG CO COMMERCIAL PAPER	.....	03/22/2023	0.000	04/06/2023	14,988,733	0	22,483
.....	KELLOGG CO COMMERCIAL PAPER	.....	03/31/2023	0.000	04/14/2023	9,981,761	0	1,400
.....	KEURIG DR PEPPER INC COMMERCIAL PAPER	.....	03/24/2023	0.000	04/04/2023	17,992,492	0	19,992
.....	LEGGETT & PLATT INC COMMERCIAL PAPER	.....	03/27/2023	0.000	04/03/2023	7,157,910	0	5,219
.....	LEGGETT & PLATT INC COMMERCIAL PAPER	.....	03/23/2023	0.000	04/06/2023	24,981,225	0	33,725
.....	LOWE'S COS INC COMMERCIAL PAPER	.....	03/21/2023	0.000	04/05/2023	14,990,734	0	25,422
.....	LYONDELLBASELL INVESTMENT LLC COMMERCIAL	.....	03/27/2023	0.000	04/25/2023	9,967,111	0	6,825
.....	MCCORMICK & CO INC/MD COMMERCIAL PAPER	.....	03/21/2023	0.000	04/05/2023	19,987,536	0	31,092
.....	MCCORMICK & CO INC/MD COMMERCIAL PAPER	.....	03/24/2023	0.000	04/06/2023	32,976,598	0	37,373
.....	MERCEDES-BENZ FINANCE NORTH AMERICA LLC	.....	03/24/2023	0.000	04/21/2023	29,910,988	0	41,432
.....	MERCEDES-BENZ FINANCE NORTH AMERICA LLC	.....	03/22/2023	0.000	05/04/2023	14,924,271	0	20,521
.....	MONDELEZ INTERNATIONAL INC COMMERCIAL PA	.....	03/20/2023	0.000	04/13/2023	24,953,664	0	46,164
.....	MOSAIC CO/THE COMMERCIAL PAPER	.....	03/15/2023	0.000	04/14/2023	24,950,218	0	64,801
.....	NASDAQ INC COMMERCIAL PAPER	.....	03/27/2023	0.000	05/10/2023	1,491,465	0	653
.....	ORACLE CORP COMMERCIAL PAPER	.....	03/24/2023	0.000	04/21/2023	49,858,173	0	56,506
.....	ORACLE CORP COMMERCIAL PAPER	.....	03/20/2023	0.000	05/02/2023	9,952,127	0	16,877
.....	PENSKE TRUCK LEASING CO LP COMMERCIAL PA	.....	03/28/2023	0.000	04/18/2023	16,957,830	0	9,892
.....	RELX INC COMMERCIAL PAPER	.....	03/23/2023	0.000	04/06/2023	24,981,051	0	34,037
.....	SEMPRA ENERGY COMMERCIAL PAPER	.....	03/24/2023	0.000	05/01/2023	9,956,199	0	11,616
.....	SHERWIN-WILLIAMS CO/THE COMMERCIAL PAPER	.....	03/27/2023	0.000	04/18/2023	15,860,778	0	11,499
.....	SOUTHERN POWER CO COMMERCIAL PAPER	.....	03/27/2023	0.000	04/03/2023	13,995,758	0	10,584
.....	STANLEY BLACK & DECKER INC COMMERCIAL PA	.....	03/27/2023	0.000	04/25/2023	14,947,462	0	10,899

STATEMENT AS OF MARCH 31, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned End of Current Quarter

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
.....	STANLEY BLACK & DECKER INC COMMERCIAL PA .....	.....	03/24/2023	0.000	04/26/2023	11,956,199	0	13,949
.....	TAMPA ELECTRIC CO COMMERCIAL PAPER .....	.....	03/23/2023	0.000	04/10/2023	16,976,337	0	23,597
.....	TYSON FOODS INC COMMERCIAL PAPER .....	.....	03/21/2023	0.000	04/04/2023	19,990,483	0	34,817
.....	UNITEDHEALTH GROUP INC COMMERCIAL PAPER .....	.....	03/23/2023	0.000	06/01/2023	23,532,394	0	31,769
.....	VERIZON COMMUNICATIONS INC COMMERCIAL PA .....	.....	03/31/2023	0.000	04/03/2023	34,990,432	0	4,782
.....	VOLVO TREASURY NORTH AMERICA LP COMMERC .....	.....	03/21/2023	0.000	04/21/2023	10,965,719	0	18,764
.....	WISCONSIN GAS LLC COMMERCIAL PAPER .....	.....	03/27/2023	0.000	04/03/2023	9,997,220	0	6,943
.....	XCEL ENERGY INC COMMERCIAL PAPER .....	.....	03/15/2023	0.000	04/14/2023	19,960,180	0	48,792
.....	ROGERS COMMUNICATIONS INC COMMERCIAL PAP .....	.....	03/06/2023	0.000	04/06/2023	9,992,752	0	36,085
.....	ROGERS COMMUNICATIONS INC COMMERCIAL PAP .....	.....	03/09/2023	0.000	05/11/2023	14,908,024	0	50,108
.....	SUNCOR ENERGY INC COMMERCIAL PAPER .....	.....	01/11/2023	0.000	04/11/2023	9,985,673	0	111,756
.....	SUNCOR ENERGY INC COMMERCIAL PAPER .....	.....	03/23/2023	0.000	04/21/2023	37,092,514	0	53,757
.....	THOMSON REUTERS CORP COMMERCIAL PAPER .....	.....	03/14/2023	0.000	04/12/2023	14,976,338	0	36,422
.....	DAIMLER TRUCK FINANCE NORTH AMERICA LLC .....	.....	03/02/2023	0.000	04/03/2023	14,995,900	0	61,233
.....	RECKITT BENCKISER TREASURY SERVICES PLC .....	.....	03/23/2023	0.000	04/20/2023	10,719,037	0	14,605
.....	TYCO ELECTRONICS GROUP SA COMMERCIAL PAP .....	.....	03/31/2023	0.000	04/03/2023	9,997,222	0	1,389
1019999999	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations					1,127,549,037	0	1,808,762
1109999999	Total - Industrial and Miscellaneous (Unaffiliated) Bonds					1,127,549,037	0	1,808,762
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					1,127,549,037	0	1,808,762
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					1,127,549,037	0	1,808,762
09248U-71-8	BLACKROCK LIQUIDITY FUND-EXEMPT MONEY MA .....	.....	03/31/2023	0.000 .....	.....	211,000,000	0	0
825252-40-6	INVESCO ADVISERS TREASURY PORT INSTL CL .....	.....	03/28/2023	0.000 .....	.....	19,359,739	0	137,468
8209999999	Subtotal - Exempt Money Market Mutual Funds - as Identified by the SVO					230,359,739	0	137,468
8609999999	Total Cash Equivalents					1,357,908,776	0	1,946,230