



QUARTERLY STATEMENT

As of June 30, 2021

of the Condition and Affairs of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

NAIC Group Code.....0435, 0084 (Current Period) (Prior Period)	NAIC Company Code..... 67083	Employer's ID Number..... 45-0252531
Organized under the Laws of OH	State of Domicile or Port of Entry OH	Country of Domicile US
Licensed as Business Type:	Life, Accident & Health	
Incorporated/Organized..... December 20, 1956	Commenced Business..... January 4, 1957	
Statutory Home Office	301 East Fourth Street .. Cincinnati .. OH .. US .. 45202 (Street and Number) (City or Town, State, Country and Zip Code)	
Main Administrative Office	301 East Fourth Street .. Cincinnati .. OH .. US .. 45202 (Street and Number) (City or Town, State, Country and Zip Code)	513-357-3300 (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	301 East Fourth Street .. Cincinnati .. OH .. US .. 45202 (Street and Number) (City or Town, State, Country and Zip Code)	513-357-3300 (Area Code) (Telephone Number)
Internet Web Site Address	www.massmutual.com	
Statutory Statement Contact	Robert Mayhew Earle II (Name) rearle@gaig.com (E-Mail Address)	513-412-1735 (Area Code) (Telephone Number) (Extension) 513-412-1673 (Fax Number)

OFFICERS

Name	Title	Name	Title
1. Mark Francis Muething	President	2. John Paul Gruber	Secretary
3. Christopher Patrick Miliano	Treasurer	4. Dominic Joseph Moster	Appointed Actuary
OTHER			
Adrienne Susan Baglier	Executive Vice President	Michael Robert Fanning #	Chief Executive Officer
Brian Patrick Sponagle	Vice President		

DIRECTORS OR TRUSTEES

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

State of..... Ohio
County of..... Hamilton

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

(Signature)	(Signature)	(Signature)
Mark Francis Muething	John Paul Gruber	Christopher Patrick Miliano
1. (Printed Name)	2. (Printed Name)	3. (Printed Name)
President	Secretary	Treasurer
(Title)	(Title)	(Title)

Subscribed and sworn to before me
This _____ day of _____ August 2021

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 June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

ASSETS

	Current Statement Date			4
	1	2	3	
	Assets	Nonadmitted Assets	Net Admitted Assets (Cols. 1 - 2)	December 31 Prior Year Net Admitted Assets
1. Bonds.....	106,897,525		106,897,525	108,936,961
2. Stocks:				
2.1 Preferred stocks.....			0	
2.2 Common stocks.....			0	
3. Mortgage loans on real estate:				
3.1 First liens.....			0	
3.2 Other than first liens.....			0	
4. Real estate:				
4.1 Properties occupied by the company (less \$.....0 encumbrances).....			0	
4.2 Properties held for the production of income (less \$.....0 encumbrances).....			0	
4.3 Properties held for sale (less \$.....0 encumbrances).....			0	
5. Cash (\$.....769,767), cash equivalents (\$.....24,161,372) and short-term investments (\$.....0).....	24,931,139		24,931,139	18,601,102
6. Contract loans (including \$.....0 premium notes).....	4,940,961		4,940,961	5,018,848
7. Derivatives.....			0	
8. Other invested assets.....			0	
9. Receivables for securities.....			0	
10. Securities lending reinvested collateral assets.....			0	
11. Aggregate write-ins for invested assets.....	0	0	0	0
12. Subtotals, cash and invested assets (Lines 1 to 11).....	136,769,625	0	136,769,625	132,556,911
13. Title plants less \$.....0 charged off (for Title insurers only).....			0	
14. Investment income due and accrued.....	1,375,202		1,375,202	1,399,352
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection.....	162,406	29,969	132,437	207,709
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$.....0 earned but unbilled premiums).....	3,403,073	19,800	3,383,273	3,449,388
15.3 Accrued retrospective premiums (\$.....0) and contracts subject to redetermination (\$.....0).....			0	
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers.....	26,813		26,813	526,352
16.2 Funds held by or deposited with reinsured companies.....			0	
16.3 Other amounts receivable under reinsurance contracts.....			0	
17. Amounts receivable relating to uninsured plans.....			0	
18.1 Current federal and foreign income tax recoverable and interest thereon.....	33,780		33,780	179,614
18.2 Net deferred tax asset.....	2,618,736	1,483,882	1,134,854	1,211,219
19. Guaranty funds receivable or on deposit.....	115,714		115,714	127,699
20. Electronic data processing equipment and software.....			0	
21. Furniture and equipment, including health care delivery assets (\$.....0).....			0	
22. Net adjustment in assets and liabilities due to foreign exchange rates.....			0	
23. Receivables from parent, subsidiaries and affiliates.....			0	17,540
24. Health care (\$.....0) and other amounts receivable.....			0	
25. Aggregate write-ins for other than invested assets.....	4,862	0	4,862	0
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 through 25).....	144,510,211	1,533,651	142,976,560	139,675,784
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts.....			0	
28. Total (Lines 26 and 27).....	144,510,211	1,533,651	142,976,560	139,675,784

DETAILS OF WRITE-INS				
1101.			0	
1102.			0	
1103.			0	
1198. Summary of remaining write-ins for Line 11 from overflow page.....	0	0	0	0
1199. Totals (Lines 1101 thru 1103 plus 1198) (Line 11 above).....	0	0	0	0
2501. Miscellaneous receivable.....	4,862		4,862	
2502.			0	
2503.			0	
2598. Summary of remaining write-ins for Line 25 from overflow page.....	0	0	0	0
2599. Totals (Lines 2501 thru 2503 plus 2598) (Line 25 above).....	4,862	0	4,862	0

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$....63,775,383 less \$.....0 included in Line 6.3 (including \$.....0 Modco Reserve).....	63,775,383	65,985,628
2. Aggregate reserve for accident and health contracts (including \$.....0 Modco Reserve).....	90,519	92,626
3. Liability for deposit-type contracts (including \$.....0 Modco Reserve).....	1,548,698	1,671,237
4. Contract claims:		
4.1 Life.....	4,939,947	3,464,491
4.2 Accident and health.....		
5. Policyholders' dividends/refunds to members \$.....0 and coupons \$.....0 due and unpaid.....		
6. Provision for policyholders' dividends/refunds to members and coupons payable in following calendar year - estimated amounts:		
6.1 Policyholder's dividends/refunds to members apportioned for payment (including \$.....0 Modco).....	10,000	10,000
6.2 Policyholder's dividends/refunds to members not yet apportioned (including \$.....0 Modco).....		
6.3 Coupons and similar benefits (including \$.....0 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 \$.....0 discount; including \$.....0 accident and health premiums.....	38,118	17,441
9. Contract liabilities not included elsewhere:		
9.1 Surrender values on canceled contracts.....		
9.2 Provision for experience rating refunds, including the liability of \$.....0 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 \$.....0 assumed and \$....41,271 ceded.....	41,271	
9.4 Interest Maintenance Reserve.....	3,464,968	3,642,902
10. Commissions to agents due or accrued - life and annuity contracts \$.....0, accident and health \$.....0 and deposit-type contract funds \$.....0.....		
11. Commissions and expense allowances payable on reinsurance assumed.....		
12. General expenses due or accrued.....	103,923	103,925
13. Transfers to Separate Accounts due or accrued (net) (including \$.....0 accrued for expense allowances recognized in reserves, net of reinsured allowances).....		
14. Taxes, licenses and fees due or accrued, excluding federal income taxes.....	261,903	335,392
15.1 Current federal and foreign income taxes, including \$.....0 on realized capital gains (losses).....		
15.2 Net deferred tax liability.....		
16. Unearned investment income.....	39,401	46,138
17. Amounts withheld or retained by reporting entity as agent or trustee.....		16,952
18. Amounts held for agents' account, including \$....418,433 agents' credit balances.....	418,433	389,257
19. Remittances and items not allocated.....	1,396,631	1,122,129
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 \$.....0 and interest thereon \$.....0.....		
23. Dividends to stockholders declared and unpaid.....		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve.....	414,189	288,326
24.02 Reinsurance in unauthorized and certified (\$.....0) companies.....		
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$.....0) reinsurers.....		
24.04 Payable to parent, subsidiaries and affiliates.....	874,274	2,599
24.05 Drafts outstanding.....		
24.06 Liability for amounts held under uninsured plans.....		
24.07 Funds held under coinsurance.....	51,711,584	52,535,265
24.08 Derivatives.....		
24.09 Payable for securities.....	1,312	
24.10 Payable for securities lending.....		
24.11 Capital notes \$.....0 and interest thereon \$.....0.....		
25. Aggregate write-ins for liabilities.....	546,801	758,152
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25).....	129,677,355	130,482,460
27. From Separate Accounts statement.....		
28. Total liabilities (Lines 26 and 27).....	129,677,355	130,482,460
29. Common capital stock.....	2,500,000	2,500,000
30. Preferred capital stock.....		
31. Aggregate write-ins for other-than-special surplus funds.....	0	0
32. Surplus notes.....		
33. Gross paid in and contributed surplus.....	127,467,887	122,467,887
34. Aggregate write-ins for special surplus funds.....	0	0
35. Unassigned funds (surplus).....	(116,668,682)	(115,774,563)
36. Less treasury stock, at cost:		
36.1 ....0.000 shares common (value included in Line 29 \$.....0).....		
36.2 ....0.000 shares preferred (value included in Line 30 \$.....0).....		
37. Surplus (Total Lines 31 + 32 + 33 + 34 + 35 - 36) (including \$.....0 in Separate Accounts Statement).....	10,799,205	6,693,324
38. Totals of Lines 29, 30 and 37.....	13,299,205	9,193,324
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3).....	142,976,560	139,675,784

DETAILS OF WRITE-INS		
2501. Unclaimed funds.....	546,801	758,152
2502.		
2503.		
2598. Summary of remaining write-ins for Line 25 from overflow page.....	0	0
2599. Totals (Lines 2501 thru 2503 plus 2598) (Line 25 above).....	546,801	758,152
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page.....	0	0
3199. Totals (Lines 3101 thru 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 thru 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.....	2,889,454	2,859,272	5,651,162
2. Considerations for supplementary contracts with life contingencies.....			
3. Net investment income.....	1,563,378	1,682,434	3,247,689
4. Amortization of Interest Maintenance Reserve (IMR).....	177,934	193,846	387,259
5. Separate Accounts net gain from operations excluding unrealized gains or losses.....			
6. Commissions and expense allowances on reinsurance ceded.....	260,193	275,189	545,985
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.....			
8.2 Charges and fees for deposit-type contracts.....			
8.3 Aggregate write-ins for miscellaneous income.....	0	0	0
9. Totals (Lines 1 to 8.3).....	4,890,959	5,010,741	9,832,095
10. Death benefits.....	4,643,142	4,967,168	9,112,795
11. Matured endowments (excluding guaranteed annual pure endowments).....	5,995	15,822	18,249
12. Annuity benefits.....	1,252,514	460,670	858,385
13. Disability benefits and benefits under accident and health contracts.....			
14. Coupons, guaranteed annual pure endowments and similar benefits.....			
15. Surrender benefits and withdrawals for life contracts.....	777,915	892,329	1,543,595
16. Group conversions.....			
17. Interest and adjustments on contract or deposit-type contract funds.....	1,694	7,919	15,530
18. Payments on supplementary contracts with life contingencies.....			
19. Increase in aggregate reserves for life and accident and health contracts.....	(2,212,352)	(2,097,158)	(12,082)
20. Totals (Lines 10 to 19).....	4,468,908	4,246,750	11,536,472
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only).....	119,661	119,175	232,080
22. Commissions and expense allowances on reinsurance assumed.....			
23. General insurance expenses and fraternal expenses.....	896,435	558,564	1,057,577
24. Insurance taxes, licenses and fees, excluding federal income taxes.....	160,477	164,708	372,811
25. Increase in loading on deferred and uncollected premiums.....	(1,683)	470	2,625
26. Net transfers to or (from) Separate Accounts net of reinsurance.....			
27. Aggregate write-ins for deductions.....	239,404	273,087	428,339
28. Totals (Lines 20 to 27).....	5,883,202	5,362,754	13,629,904
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28).....	(992,243)	(352,013)	(3,797,809)
30. Dividends to policyholders and refunds to members.....	11,307	12,042	23,533
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30).....	(1,003,550)	(364,055)	(3,821,342)
32. Federal and foreign income taxes incurred (excluding tax on capital gains).....	(318,688)	(196,895)	(446,991)
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).....	(684,862)	(167,160)	(3,374,351)
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$.....(7,707) (excluding taxes of \$.....0 transferred to the IMR).....	7,707	(735,652)	(918,688)
35. Net income (Line 33 plus Line 34).....	(677,155)	(902,812)	(4,293,039)
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year.....	9,193,324	9,860,318	9,860,318
37. Net income (Line 35).....	(677,155)	(902,812)	(4,293,039)
38. Change in net unrealized capital gains (losses) less capital gains tax of \$.....(1,143).....	(4,299)		(33,862)
39. Change in net unrealized foreign exchange capital gain (loss).....			
40. Change in net deferred income tax.....	(53,732)	(122,327)	460,924
41. Change in nonadmitted assets.....	(33,070)	201	(514,921)
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.....			
44. Change in asset valuation reserve.....	(125,863)	511,472	713,904
45. Change in treasury stock.....			
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.....			
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.....	5,000,000		3,000,000
51.2 Transferred to capital (Stock Dividend).....			
51.3 Transferred from capital.....			
51.4 Change in surplus as a result of reinsurance.....			
52. Dividends to stockholders.....			
53. Aggregate write-ins for gains and losses in surplus.....	0	0	0
54. Net change in capital and surplus (Lines 37 through 53).....	4,105,881	(513,466)	(666,994)
55. Capital and surplus as of statement date (Lines 36 + 54).....	13,299,205	9,346,852	9,193,324
DETAILS OF WRITE-INS			
08.301.			
08.302.			
08.303.			
08.398. Summary of remaining write-ins for Line 8.3 from overflow page.....	0	0	0
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above).....	0	0	0
2701. Reinsurance administration agreement expense.....	239,404	273,087	428,339
2702.			
2703.			
2798. Summary of remaining write-ins for Line 27 from overflow page.....	0	0	0
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above).....	239,404	273,087	428,339
5301.			
5302.			
5303.			
5398. Summary of remaining write-ins for Line 53 from overflow page.....	0	0	0
5399. Totals (Lines 5301 thru 5303 plus 5398) (Line 53 above).....	0	0	0

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL 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.....	3,043,874	2,936,471	5,701,266
2. Net investment income.....	1,473,207	1,750,382	3,266,812
3. Miscellaneous income.....	260,193	275,189	545,985
4. Total (Lines 1 through 3).....	4,777,274	4,962,042	9,514,063
5. Benefit and loss related payments.....	4,663,300	5,922,436	10,847,325
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts.....			
7. Commissions, expenses paid and aggregate write-ins for deductions.....	1,688,834	985,252	1,886,274
8. Dividends paid to policyholders.....	3,306	4,278	8,087
9. Federal and foreign income taxes paid (recovered) net of \$(7,707) tax on capital gains (losses).....	(472,229)		(730,390)
10. Total (Lines 5 through 9).....	5,883,211	6,911,966	12,011,296
11. Net cash from operations (Line 4 minus Line 10).....	(1,105,937)	(1,949,924)	(2,497,233)
CASH FROM INVESTMENTS			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds.....	2,141,576	8,752,377	13,082,295
12.2 Stocks.....			
12.3 Mortgage loans.....			
12.4 Real estate.....			
12.5 Other invested assets.....			
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments.....		89	90
12.7 Miscellaneous proceeds.....	1,312		
12.8 Total investment proceeds (Lines 12.1 to 12.7).....	2,142,888	8,752,466	13,082,385
13. Cost of investments acquired (long-term only):			
13.1 Bonds.....			599,906
13.2 Stocks.....			
13.3 Mortgage loans.....			
13.4 Real estate.....			
13.5 Other invested assets.....			
13.6 Miscellaneous applications.....		192,205	
13.7 Total investments acquired (Lines 13.1 to 13.6).....	0	192,205	599,906
14. Net increase or (decrease) in contract loans and premium notes.....	(77,887)	(431,090)	(506,781)
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14).....	2,220,775	8,991,351	12,989,260
CASH FROM FINANCING AND MISCELLANEOUS SOURCES			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes.....			
16.2 Capital and paid in surplus, less treasury stock.....	5,000,000		3,000,000
16.3 Borrowed funds.....			
16.4 Net deposits on deposit-type contracts and other insurance liabilities.....	(132,232)	41,319	(145,472)
16.5 Dividends to stockholders.....			
16.6 Other cash provided (applied).....	347,431	(1,022,675)	(2,410,633)
17. Net cash from financing and miscellaneous sources (Lines 16.1 through 16.4 minus Line 16.5 plus Line 16.6).....	5,215,199	(981,356)	443,895
RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18. Net change in cash, cash equivalents and short-term investments (Line 11 plus Line 15 plus Line 17).....	6,330,037	6,060,071	10,935,922
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year.....	18,601,102	7,665,180	7,665,180
19.2 End of period (Line 18 plus Line 19.1).....	24,931,139	13,725,251	18,601,102
Note: Supplemental disclosures of cash flow information for non-cash transactions:			
20.0001 Exchange of debt securities.....			292,500

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

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.....			
2. Ordinary life insurance.....	6,351,918	6,323,160	12,633,848
3. Ordinary individual annuities.....	100,611	84,702	101,225
4. Credit life (group and individual).....			
5. Group life insurance.....			
6. Group annuities.....			
7. A&H - group.....			
8. A&H - credit (group and individual).....			
9. A&H - other.....	39,025	45,931	85,555
10. Aggregate of all other lines of business.....	0	0	0
11. Subtotal (Lines 1 through 10).....	6,491,554	6,453,793	12,820,628
12. Fraternal (Fraternal Benefit Societies Only).....			
13. Subtotal (Lines 11 through 12).....	6,491,554	6,453,793	12,820,628
14. Deposit-type contracts.....			
15. Total (Lines 13 and 14).....	6,491,554	6,453,793	12,820,628

DETAILS OF WRITE-INS

1001.			
1002.			
1003.			
1098. Summary of remaining write-ins for Line 10 from overflow page.....	0	0	0
1099. Total (Lines 1001 thru 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 Manhattan National Life Insurance Company (the “Company”) are presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance.

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. The Company has no prescribed or permitted practices that would result in differences between NAIC Statutory Accounting Principles (“NAIC SAP”) and the State of Ohio basis, as shown below:

Net Income	June 30, 2021	December 31, 2020
(1) State basis	\$ (677,155)	\$ (4,293,039)
(2) State prescribed practices that increase/(decrease) NAIC SAP	-	-
(3) State permitted practices that increase/(decrease) NAIC SAP	-	-
(4) NAIC SAP	<u>\$ (677,155)</u>	<u>\$ (4,293,039)</u>
Surplus		
(5) State basis	\$ 13,299,205	\$ 9,193,324
(6) State prescribed practices that increase/(decrease) NAIC SAP	-	-
(7) State permitted practices that increase/(decrease) NAIC SAP	-	-
(8) NAIC SAP	<u>\$ 13,299,205</u>	<u>\$ 9,193,324</u>

B, C & D – No significant changes.

Note 2 - Accounting Changes and Corrections of Errors

Not applicable.

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.
- (3) The Company has no loan-backed securities with a credit-related OTTI charge recognized during the period.
- (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 | \$13,334 |
| 2. 12 months or longer | 50,913 |
| b. The aggregate related fair value of securities with unrealized losses: | |
| 1. Less than 12 months | \$163,279 |
| 2. 12 months or longer | 255,966 |
- (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 at June 30, 2021. 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.

NOTES TO FINANCIAL STATEMENTS

- 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 – Not applicable.
- P. Short Sales – Not Applicable.
- Q. Prepayment Penalty and Acceleration Fees – Not applicable.
- R. Share of Cash Pool by Asset Type – Not applicable.

Note 6 - Joint Ventures, Partnerships and Limited Liability Companies

Not applicable.

Note 7 - Investment Income

No significant change.

Note 8 - Derivative Instruments

Not applicable.

Note 9 - Income Taxes

No significant change.

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

A.,B. & C.

The Company is an indirect 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 Manhattan National Holding Corporation ("MNHC"). The Company's common stock was contributed to MNHC on September 25, 2008, from Great American Life Insurance Company ("GALIC"). See Schedule Y, Part 1, Organizational Chart.

During the period, the Company paid (received) federal income tax payments in cash to (from) GALIC:

4/13/2021	(\$111,606)
4/13/2021	(\$196,000)
5/27/2021	(\$164,623)

The Company received a \$5,000,000 capital contribution from MNHC in April.

- D. The Company reported \$874,274 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 including the Company:
 - (1) The Company has an agreement with Barings (an affiliate) which provides investment advisory services to the Company.
 - (2) Certain administrative, management, 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 MNHC.
- 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.
- 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 does not hold an investment in a downstream non-insurance holding company.
- M. Valuation of Subsidiary, Controlled and Affiliated Entities (excluding U.S. Insurance Entities) – Not applicable.
- N. The Company has no investments in insurance subsidiary, controlled, or affiliated entities.
- O. Subsidiary, Controlled, and Affiliated Entities Loss Tracking – Not applicable.

Note 11 - Debt

Not applicable.

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.

NOTES TO FINANCIAL STATEMENTS

E. Defined Contribution Plan

The Company participates in the retirement plans of MMLIC. MMLIC sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for its employees, agents and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$4,004,590,802 as of June 30, 2021 and \$3,862,452,761 as of December 31, 2020. The Company match for the qualified 401(k) thrift savings plan is limited to 5% of eligible W-2 compensation. GALIC's total matching thrift savings contributions included in general insurance expenses were \$1,890,870 for the six months ended June 30, 2021 and \$2,800,054 for the year ended December 31, 2020.

- 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

Not applicable.

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

Not applicable.

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.

Note 20 - Fair Value

- A.
- (1) Fair Value Measurements at Reporting Date

The Company has categorized its assets and liabilities measured at fair value or net asset value ("NAV") 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:					
U.S. Government and government agencies	\$ -	\$ -	\$ -	\$ -	\$ -
States, municipalities and political subdivisions	-	-	-	-	-
Foreign government	-	-	-	-	-
Residential mortgage-backed securities	-	102,714	-	-	102,714
Commerical mortgage-backed securities	-	-	-	-	-
Asset-backed securities	-	-	-	-	-
All other bonds	-	-	-	-	-
Total bonds	-	102,714	-	-	102,714
Non-affiliated preferred stock	-	-	-	-	-
Non-affiliated common stock	-	-	-	-	-
Total assets accounted for at fair value/NAV	\$ -	\$ 102,714	\$ -	\$ -	\$ 102,714

- (2) The Company does not have any Level 3 securities carried at fair value.

- (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. There were no Level 3 transfers during 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.

NOTES TO FINANCIAL STATEMENTS

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 does not have any Level 3 assets or liabilities carried at fair value at June 30, 2021.

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 – Not applicable.

- B. The Company has no additional fair value disclosures.
- 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. Government and government agencies	\$ 5,966,964	\$ 5,733,403	\$ -	\$ 5,966,964	\$ -	\$ -	\$ -
States, municipalities and political subdivisions	24,556,432	19,715,295	-	24,556,432	-	-	-
Residential mortgage backed securities	1,147,002	1,047,162	-	1,147,002	-	-	-
Asset backed securities	2,759,493	2,714,490	-	2,759,493	-	-	-
All other bonds	88,166,864	77,687,175	-	88,166,864	-	-	-
Total bonds	\$ 122,596,755	\$ 106,897,525	\$ -	\$ 122,596,755	\$ -	\$ -	\$ -
Cash and cash equivalents	24,931,139	24,931,139	24,931,139	-	-	-	-
Policy loans	4,940,961	4,940,961	-	-	4,940,961	-	-
Total financial assets	\$ 152,468,855	\$ 136,769,625	\$ 24,931,139	\$ 122,596,755	\$ 4,940,961	\$ -	\$ -

- 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

No significant change.

Note 22 - Events Subsequent/Other Items of Note

On May 28, 2021, American Financial Group announced the closing of the sale of the Company's parent (GALIC) to Massachusetts Mutual Life Insurance Company. The sale included the Company and the parent's other insurance subsidiary.

Note 23 - Reinsurance

No significant change.

Note 24 - Retrospectively Rated Contracts & Contracts Subject to Redetermination

Not applicable.

Note 25 - Change in Incurred Losses and Loss Adjustment Expenses

The Company had no changes in the provision for incurred loss or loss adjustment expenses attributable to insured events of prior years.

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.

NOTES TO FINANCIAL STATEMENTS

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

Not applicable.

Note 36 - Loss/Claim Adjustment Expenses

Not applicable.

Statement as of June 30, 2021 of the **MANHATTAN NATIONAL 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 [☒ X]

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 [☒ X]

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 [☒ X] No [☐]

3.2

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

Yes [☒ X] No [☐]

3.3

If the response to 3.2 is yes, provide a brief description of those changes.
Effective May 28, 2021, the Company became an indirect wholly-owned subsidiary of Massachusetts Mutual Life Insurance Company.

3.4

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

Yes [☐] No [☒ X]

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?
If yes, complete and file the merger history data file with the NAIC for the annual filing corresponding to this period.

Yes [☐] No [☒ X]

4.2

If yes, provide name of 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 [☒ X] N/A [☐]

6.1

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

12/31/2016

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?
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 [☒ X]

6.6

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

Yes [☐] No [☐] N/A [☒ X]

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 [☒ X]

7.2

If yes, give full information:

8.1

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

Yes [☐] No [☒ X]

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 [☒ X] No [☐]

8.4

If the 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
Great American Advisors	Cincinnati, OH	NO	NO	NO	YES

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 [☒ X] No [☐]

9.21

If the response to 9.2 is Yes, provide information related to amendment(s).
As a result of the transaction described in item 3.3 above, the senior officers became subject to the code of ethics maintained by Massachusetts Mutual Life Insurance Company.

9.3

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

Yes [☐] No [☒ X]

Statement as of June 30, 2021 of the **MANHATTAN NATIONAL LIFE INSURANCE COMPANY**

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

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 [☐] No [☒]

10.2 If yes, indicate any amounts receivable from parent included in the Page 2 amount: \$ 0

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 [☒]

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: \$ 0

13. Amount of real estate and mortgages held in short-term investments: \$ 0

14.1 Does the reporting entity have any investments in parent, subsidiaries and affiliates? Yes [☐] No [☒]

14.2 If yes, please complete the following:

14.21 Bonds

14.22 Preferred Stock

14.23 Common Stock

14.24 Short-Term Investments

14.25 Mortgage Loans on Real Estate

14.26 All Other

14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)

14.28 Total Investment in Parent included in Lines 14.21 to 14.26 above

1 Prior Year End Book/Adjusted Carrying Value	2 Current Quarter Book/Adjusted Carrying Value
\$ 0	\$ 0
0	0
0	0
0	0
0	0
0	0
\$ 0	\$ 0
\$ 0	\$ 0

15.1 Has the reporting entity entered into any hedging transactions reported on Schedule DB? Yes [☐] No [☒]

15.2 If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes [☐] 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 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

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 [☒] 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

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 [☒]

17.4 If yes, give full and complete 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
Barings LLC	A

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 [☒]

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 [☒]

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
106006	Barings LLC	R6ZXK501NPHXSY1S07	SEC	DS

18.1 Have all the filing requirements of the *Purposes and Procedures Manual of the NAIC Investment Analysis Office* been followed? Yes [☒] No [☐]

18.2 If no, list exceptions:

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

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 [☐] No [☒]
20.

By self-designating PLGI securities, the reporting entity is certifying the following elements for 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 [☒]
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 security was 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 reporting 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 [☒]

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

Life and Accident and Health Companies/Fraternal Benefit Societies

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

1.1 Long-term mortgages in good standing

1.11 Farm mortgages.....

1.12 Residential mortgages.....

1.13 Commercial mortgages.....

1.14 Total mortgages in good standing.....

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.....

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.....

1.5 Total mortgage loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)

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.....

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?.....

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?.....

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?.....

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?.....

Amount

\$.....

\$.....

\$.....

\$.....0

\$.....

\$.....

\$.....

\$.....

\$.....0

\$.....

\$.....

\$.....

\$.....0

\$.....

\$.....

\$.....

\$.....0.6

Yes [] No [X]

\$.....

Yes [] No [X]

\$.....

Yes [X] No []

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 reinsurance for reserve equal to that which the original company would have been required to establish had it retained the risks. Has this been done?

5.2 If no, explain:

Yes [] No [] N/A []

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

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

Yes [] No []

Date	Outstanding Lien Amount
	

Q09

SCHEDULE S - CEDED REINSURANCE
Showing All New Reinsurance Treaties - Current Year to Date

1	2	3	4	5	6	7	8	9	10
NAIC Company Code	ID Number	Effective Date	Name of Reinsurer	Domiciliary Jurisdiction	Type of Reinsurance Ceded	Type of Business Ceded	Type of Reinsurer	Certified Reinsurer Rating (1 through 6)	Effective Date of Certified Reinsurer Rating

NONE

MANHATTAN NATIONAL LIFE INSURANCE COMPANY
SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year to Date - Allocated by States and Territories

States, Etc.			1	Direct Business Only					
			Active Status (a)	Life Contracts		4	5	6	7
				2	3				
				Life Insurance Premiums	Annuity Considerations	A&H Insurance Premiums, Including Policy Membership and Other Fees	Other Considerations	Total Columns 2 through 5	Deposit-Type Contracts
1.	Alabama.....	AL	L	26,620				26,620	
2.	Alaska.....	AK	L	5,273				5,273	
3.	Arizona.....	AZ	L	57,469				57,469	
4.	Arkansas.....	AR	L	52,181				52,181	
5.	California.....	CA	L	760,635	861			761,496	
6.	Colorado.....	CO	L	79,382	100			79,482	
7.	Connecticut.....	CT	L	63,867				63,867	
8.	Delaware.....	DE	L	21,856				21,856	
9.	District of Columbia.....	DC	L	3,907				3,907	
10.	Florida.....	FL	L	353,827	561	34,249		388,637	
11.	Georgia.....	GA	L	184,359	1,300	660		186,318	
12.	Hawaii.....	HI	L	30,613				30,613	
13.	Idaho.....	ID	L	9,782				9,782	
14.	Illinois.....	IL	L	174,086	5,640			179,726	
15.	Indiana.....	IN	L	276,787	1,020	181		277,988	
16.	Iowa.....	IA	L	67,167	5,870	869		73,906	
17.	Kansas.....	KS	L	70,979	3,086			74,065	
18.	Kentucky.....	KY	L	74,052				74,052	
19.	Louisiana.....	LA	L	114,745				114,745	
20.	Maine.....	ME	L	35,786				35,786	
21.	Maryland.....	MD	L	216,686				216,686	
22.	Massachusetts.....	MA	L	138,917				138,917	
23.	Michigan.....	MI	L	244,478	13,001	272		257,751	
24.	Minnesota.....	MN	L	315,097	8,625			323,722	
25.	Mississippi.....	MS	L	67,505	720			68,225	
26.	Missouri.....	MO	L	182,763	6,983	303		190,048	
27.	Montana.....	MT	L	5,173				5,173	
28.	Nebraska.....	NE	L	38,666				38,666	
29.	Nevada.....	NV	L	58,598				58,598	
30.	New Hampshire.....	NH	L	32,252				32,252	
31.	New Jersey.....	NJ	L	208,050				208,050	
32.	New Mexico.....	NM	L	17,025		567		17,591	
33.	New York.....	NY	N	71,412				71,412	
34.	North Carolina.....	NC	L	132,153	300			132,453	
35.	North Dakota.....	ND	L	60,054	100			60,154	
36.	Ohio.....	OH	L	208,895	280	129		209,303	
37.	Oklahoma.....	OK	L	56,708				56,708	
38.	Oregon.....	OR	L	48,032				48,032	
39.	Pennsylvania.....	PA	L	183,387		212		183,600	
40.	Rhode Island.....	RI	L	6,460				6,460	
41.	South Carolina.....	SC	L	120,353	380			120,733	
42.	South Dakota.....	SD	L	12,806	200			13,006	
43.	Tennessee.....	TN	L	154,561		330		154,891	
44.	Texas.....	TX	L	426,506		135		426,640	
45.	Utah.....	UT	L	22,950	71			23,021	
46.	Vermont.....	VT	L	12,377				12,377	
47.	Virginia.....	VA	L	118,427	4,120			122,547	
48.	Washington.....	WA	L	73,393				73,393	
49.	West Virginia.....	WV	L	9,769				9,769	
50.	Wisconsin.....	WI	L	664,300	47,394	1,229		712,922	
51.	Wyoming.....	WY	L	9,096				9,096	
52.	American Samoa.....	AS	N					0	
53.	Guam.....	GU	N					0	
54.	Puerto Rico.....	PR	N					0	
55.	US Virgin Islands.....	VI	N					0	
56.	Northern Mariana Islands.....	MP	N					0	
57.	Canada.....	CAN	N	734				734	
58.	Aggregate Other Alien.....	OT	XXX	546	0	0	0	546	0
59.	Subtotal.....		XXX	6,381,500	100,611	39,134	0	6,521,245	0
90.	Reporting entity contributions for employee benefit plans.....		XXX					0	
91.	Dividends or refunds applied to purchase paid-up additions and annuities.....		XXX					0	
92.	Dividends or refunds applied to shorten endowment or premium paying period.....		XXX					0	
93.	Premium or annuity considerations waived under disability or other contract provisions.....		XXX	124,729				124,729	
94.	Aggregate other amounts not allocable by State.....		XXX	0	0	0	0	0	0
95.	Totals (Direct Business).....		XXX	6,506,229	100,611	39,134	0	6,645,974	0
96.	Plus Reinsurance Assumed.....		XXX					0	
97.	Totals (All Business).....		XXX	6,506,229	100,611	39,134	0	6,645,974	0
98.	Less Reinsurance Ceded.....		XXX	3,526,520	45,275	36,746		3,608,541	
99.	Totals (All Business) less Reinsurance Ceded.....		XXX	2,979,709	55,336	2,388	0	3,037,433	0

DETAILS OF WRITE-INS									
58001.	Other Alien.....	XXX	546					546	
58002.	.....	XXX						0	
58003.	.....	XXX						0	
58998.	Summary of remaining write-ins for line 58 from overflow page.....	XXX	0	0	0	0	0	0	0
58999.	Total (Lines 58001 thru 58003 plus 58998) (Line 58 above).....	XXX	546	0	0	0	0	546	0
9401.	.....	XXX						0	
9402.	.....	XXX						0	
9403.	.....	XXX						0	
9498.	Summary of remaining write-ins for line 94 from overflow page.....	XXX	0	0	0	0	0	0	0
9499.	Total (Lines 9401 thru 9403 plus 9498) (Line 94 above).....	XXX	0	0	0	0	0	0	0

(a) Active Status Count

L - Licensed or Chartered - Licensed insurance carrier or domiciled RRG..... 50
E - Eligible - Reporting entities eligible or approved to write surplus lines in the state 0

R - Registered - Non-domiciled RRGs..... 0
Q - Qualified - Qualified or accredited reinsurer..... 0
N - None of the above - Not allowed to write business in the state 7

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 Mezzanine Investor III, LLC	06-1041383		Delaware
CML Special Situations Investor 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 I I LLC	None		Delaware
MM Global Capabilities I II LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
New Haven Holdco LLC	04-1590850		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
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Private Equity Funds LLC	04-1590850		Delaware
MassMutual Private Equity Funds Subsidiary 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
Jefferies Finance LLC	27-0105644		Delaware
APEX Credit Partners LLC	None		Delaware
Jefferies Credit Partners LLC	None		Delaware
Jefferies Credit Management LLC	None		Delaware
Jefferies Private Credit GP LLC	None		Maryland
Jefferies Private Credit Fund LP	None		Delaware
Jefferies Private Credit BDC Inc.	None		Delaware
JFIN GP Adviser 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

Q12.1

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
JFIN Fund III LLC	None		Delaware
JFIN Fund VI LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
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
JFIN Revolver Holdings LLC	None		Delaware
JFIN Revolver Holdings II 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 High Yield Investments LLC	None		Delaware
JFIN LC Fund 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 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-III Ltd.	None		Delaware
JFIN Revolver Fund, L.P.	None		Delaware
JFIN Revolver Funding 2021 Ltd.	None		Delaware
Apex Credit CLO 2015-II Ltd.*	None		Cayman Islands
Apex Credit CLO 2016 Ltd.	None		Cayman Islands
Apex Credit CLO 2017 Ltd.	None		Cayman Islands
Apex Credit CLO 2017-II Ltd.	None		Cayman Islands
Glidepath Holdings Inc.	86-2294635		Delaware
Great American Life Insurance Company	13-1935920	63312	Ohio
AAG Insurance Agency, LLC	31-1422717		Kentucky

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

Q12.2

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
Great American Advisors, 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
MM Investment Holding	None		Cayman Islands
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2013-A	90-1005837		Delaware
MMAF Equipment Finance LLC 2014-A	36-4785301		Delaware
MMAF Equipment Finance LLC 2015-A	38-3969560		Delaware
MMAF Equipment Finance LLC 2016-A	32-0489588		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 2021-A	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 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
Sleeper Street LLC	None		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina

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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 Capital Partners LLC	04-1590850		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 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
Open Alternatives LLC	None		Delaware
MM Catalyst Fund LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
Rothesay Limited	None		United Kingdom
Rothesay Life Plc	None		United Kingdom
Rothesay Assurance Limited	None		United Kingdom
Rothesay MA No.1 Limited	None		United Kingdom
Rothesay MA No.2 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 US LLC	None		Delaware
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

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

Q12.4

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings Singapore Pte. Ltd.	None		Singapore
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		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 Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings Asset Management Spain SL	None		Spain
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Finland Oy	None		Finland
Barings Netherlands B.V.	None		Netherlands
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate GmbH	98-1194368		Germany
Baring Asset Management Limited	98-0241935		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
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 Asset Management GmbH	98-0465031		Germany
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sàrl	None		Switzerland
Baring France SAS	98-0497550		France
Baring Fund Managers Limited	98-0457586		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Baring Pension Trustees Limited	98-0457574		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

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

Q12.5

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
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
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
Newpoint Real Estate Capital	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Aland Royalty Holdings LP	None		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		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
Teaktree Acquisition, LLC	None		Delaware
Techquity, LP	None		Delaware
Validus Holding Company LLC	46-0687392		Delaware
Validus Pharmaceuticals LLC	None		Delaware
VGS Acquisition Holding, LLC	None		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
Barings Alternative Investments SLP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings Investment Series LLC	None		Delaware
Barings Capital Investment LLC	None		Maryland
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Barings ABIF SLP, LLC	None		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
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings GPSF	None		Delaware

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

Q12.6

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund Management II, LLC	None		Delaware
Barings Private Credit Corporation	None		Maryland
Barings Small Business Fund LLC	84-5063008		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BRECS VII GP LLC	None		Delaware
CCM Fund I REIT Manager LLC	None		Delaware
CEMF I GP LLC	None		Delaware
CHY Venture GP LLC	None		Delaware
CREF X GP LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Loan Strategies Management LLC	04-1590850		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
Somerset Special Opportunities Management LLC	04-1590850		Delaware
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
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	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
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 Asset-Based Income Fund (US) LP	36-4868350		Delaware
Barings Emerging Markets Corporate Bond 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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings European Real Estate Debt Income Fund	None		Luxembourg
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
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. 2014-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 2021-1	ZJX0JI.99999.SL.136		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
Babson Euro CLO 2016-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 Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Inv. Grade Strat Fund	None		Ireland
Barings Global Private Loan Fund	None		Luxembourg
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings Global Special Situations Credit 4 Delaware*	85-1465973		Delaware
Barings Global Special Situations Credit 4 LUX*	98-1570693		Luxembourg
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

*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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings North American Private Loan Fund LP	38-4010344		Delaware
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Euro Value Add II (BREEVA II)*	K15Q2K.99999.SL.442		Luxembourg
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Barings Real Estate Debt Income Fund LP*	85-3449260		Delaware
Braemar Energy Ventures I, L.P. *	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Benchmark 2018-B8	38-4096530		New York
Braselton Point LLC	04-1590850		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Cornerstone Permanent Mortgage Fund III LLC	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV LLC	61-1793735		Massachusetts
GASL Holdings, LLC	82-2932156		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
KKR-MM Vector LP	82-1512591		Delaware
Marco Hotel LLC	46-4255307		Delaware
Miami Douglas One GP LLC*	04-1590850		Delaware
Miami Douglas Two GP LLC*	04-1590850		Delaware
Miami Douglas One LP*	04-1590850		Delaware
Miami Douglas Two LP*	04-1590850		Delaware
MM BIG Peninsula Co-Invest Member LLC	04-1590850		Massachusetts
NYDIG Digital Assets Fund II LP	85-3886824		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
MM CM Holding LLC	None		Delaware
MM Debt Participations LLC	81-3000420		Delaware
RB Apartments LLC	82-4411267		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Rockville Town Center LLC	54-2055778		Virginia
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
SouthPointe Industrial LLC	04-1590850		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

*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

Q12.9

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Trailside MM Member LLC*	04-1590850		Delaware
Washington Gateway Two LLC*	83-1325764		Delaware
Washington Gateway Three LLC*	32-0574045		Delaware
West 46 th Street Hotel LLC	05-1590850		Delaware
Barings Affiliates & Funds:			
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	HU7DQI.00015.SF.826		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:			
50 Liberty LLC*	36-4823011		Delaware
Barings California Mortgage Fund IV	None		California
Barings Hotel Opportunity Venture	87-0977058		Delaware
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
CREA Madison Member LLC	81-0890084		Delaware
Danville Riverwalk Venture, LLC	82-2783393		Delaware
Fan Pier Development LLC*	20-3347091		Delaware
GIA EU Holdings LLC	04-1590850		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
MM Island Member LLC	04-1590850		Delaware
NoHo West Venture LLC	83-0881588		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
PACO France Logistics LLC	04-1590850		Delaware
Portland 400 Sixth Manager LLC	82-3393166		Delaware
Raleigh Crossing Phase I Holdings LLC	None		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Sawgrass Village Shopping Center LLC*	27-2977720		Delaware

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

Q12.10

	Federal Tax ID	NAIC Co Code	State of Domicile
STOA Holding LLC	None		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Twenty Two Liberty LLC*	35-2484550		Massachusetts
Unna, Dortmund Holding LLC	82-3250684		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
MassMutual Premier Funds:			
MassMutual Premier Focused International Fund	02-0754273		Massachusetts
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Select Funds:			
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
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 Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MML Series II Special Situations Fund	47-3559064		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

*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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
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

*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

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
Members															
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	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.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP...	...100.000	MMLIC.....		
0000			06-1041383..				CML Mezzanine Investor III, 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.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	...100.000	MMLIC.....		
0000							MM Global Capabilities (Netherlands) B.V.....	NLD.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	...100.000	MMLIC.....		
0000							MassMutual Global Business Services Romania S.R.L.	ROU.....	NIA.....	Massachusetts Mutual Life Insurance Company	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			04-1590850..				New Haven Holdco 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.....	OWNERSHIP...		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.....	Timberland Forest Holding LLC.....	OWNERSHIP...	...100.000	MMLIC.....		
0000							Lyme Adirondack Timberlands II, LLC.....	DE.....	NIA.....	Timberland Forest Holding LLC.....	OWNERSHIP...	...100.000	MMLIC.....		
0000			04-1590850..				Berkshire Way LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	...100.000	MMLIC.....		

Q13

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.1

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
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			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 Private Equity Funds LLC	DE	NIA	MassMutual Trad Private Equity LLC	OWNERSHIP	100.000	MMLIC		
0000			04-1590850				MassMutual Private Equity Funds Subsidiary LLC	DE	NIA	MassMutual Private Equity Funds 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			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	50.000	MMLIC		1
0000			86-2294635				Glidepath Holdings Inc	DE	UIP	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0435	Massachusetts Mut Life Ins Co	63312	13-1935920				Great American Life Insurance Company	OH	UIP	Glidepath Holdings Inc	OWNERSHIP	100.000	MMLIC		
0000			31-1422717				AAG Insurance Agency, LLC	KY	NIA	Great American Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0435	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	OH	IA	Great American Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			31-1395344				Great American Advisors, LLC	OH	NIA	Great American Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			26-3260520				Manhattan National Holding, LLC	OH	UDP	Great American Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0435	Massachusetts Mut Life Ins Co	67083	45-0252531				Manhattan National Life Insurance Company	OH	RE	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							Apex Credit Partners 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							Jefferies Credit Management LLC	DE	NIA	Jefferies Credit Partners LLC	OWNERSHIP	100.000	MMLIC		
0000							Jefferies Private Credit GP LLC	DE	NIA	Jefferies Credit Management LLC	OWNERSHIP	100.000	MMLIC		
0000							Jefferies Private Credit Fund LP	DE	NIA	Jefferies Private Credit GP LLC	OWNERSHIP	100.000	MMLIC		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.2

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
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							JFIN Fund VI LLC.....	DE.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFIN Asset Management LLC.....	DE.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFAM GP LLC.....	DE.....	NIA.....	JFIN Asset Management, LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFAM GP LP.....	DE.....	NIA.....	JFIN Asset Management, LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							Jefferies Direct Lending Fund C LP.....	DE.....	NIA.....	JFIN Asset Management, LLC.....	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							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 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 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							JFIN CLO 2012 Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFIN CLO 2013 Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFIN CLO 2014-II Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFIN CLO 2015 Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	44.000	MMLIC.....		
0000							JFIN CLO 2015 Ltd.....	CYM.....	NIA.....	Apex Credit Partners LLC.....	OWNERSHIP.....	56.000	MMLIC.....		
0000							JFIN Revolver CLO 2014 Ltd.....	CYM.....	NIA.....	Jefferies Finance 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-III Ltd.....	DE.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							JFIN Revolver Fund, L.P.....	DE.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP.....	90.000	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.3

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							JFIN Revolver Funding 2021 Ltd.....	DE.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Apex Credit CLO 2015-II Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP....	33.000	MMLIC.....		
0000							Apex Credit CLO 2015-II Ltd.....	CYM.....	NIA.....	Apex Credit Partners LLC.....	OWNERSHIP....	53.000	MMLIC.....		
0000							Apex Credit CLO 2016 Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Apex Credit CLO 2017 Ltd.....	CYM.....	NIA.....	Jefferies Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Apex Credit CLO 2017-II Ltd.....	CYM.....	NIA.....	Jefferies Finance 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							MM Investment Holding.....	CYM.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	100.000	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			90-1005837..				MMAF Equipment Finance LLC 2013-A.....	DE.....	NIA.....	MassMutual Asset Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000			36-4785301..				MMAF Equipment Finance LLC 2014-A.....	DE.....	NIA.....	MassMutual Asset Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000			38-3969560..				MMAF Equipment Finance LLC 2015-A.....	DE.....	NIA.....	MassMutual Asset Finance LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000			32-0489588..				MMAF Equipment Finance LLC 2016-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 2021-A.....	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.....	.Y.....	
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 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....	100.000	MMLIC.....		
0000			04-3356880..				MML Distributors LLC.....	MA.....	NIA.....	MassMutual Holding LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							MML Investment Advisers, LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	100.000	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.4

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
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.....	...Y.....	
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.....	MML Private Equity Fund Investor LLC.....	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.....	...Y.....	
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							Sleeper Street 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							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 Holding 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 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							Open Alternatives LLC.....	DE.....	NIA.....	MassMutual Ventures Holding LLC.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			04-1590850..				MM Rothesay Holdco US LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...100.000	MMLIC.....		
0000							Rothesay Limited.....	GBR.....	NIA.....	MM Rothesay Holdco US LLC.....	OWNERSHIP....	...100.000	MMLIC.....		
0000							Rothesay Life Plc.....	GBR.....	NIA.....	Rothesay Limited.....	OWNERSHIP....	...100.000	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.5

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							Rothesay Assurance Limited.....	GBR.....	NIA.....	Rothesay Life PLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Rothesay MA No.1 Limited.....	GBR.....	NIA.....	Rothesay Life PLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Rothesay MA No.2 Limited.....	GBR.....	NIA.....	Rothesay Life PLC.....	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 Limited.....	OWNERSHIP....	100.000	MMLIC.....		
0000							Rothesay Property Partnership 1 LLP.....	GBR.....	NIA.....	Rothesay Limited.....	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.....		
0000							Rothesay Asset Management US 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			47-1466022..				LifeScore Labs, 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			45-4000072..				MM Asset Management Holding LLC.....	DE.....	NIA.....	MassMutual Holding 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.....	Baring Asset Management (Asia) 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.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.6

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			98-0457456..				Barings Australia Pty Ltd.....	AUS.....	NIA.....	Baring Australia Holding Company 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			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.....		
0000							Barings Asset Management Spain SL.....	ESP.....	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 Finland Oy.....	FIN.....	NIA.....	Barings Europe Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000							Barings Netherlands B.V.....	NLD.....	NIA.....	Barings Europe Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000							Barings Real Estate UK Holdings Limited.....	DE.....	NIA.....	Barings Europe Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000							BREAE AIFM LLP.....	GBR.....	NIA.....	Barings Real Estate UK Holdings Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0654401..				Barings Real Estate Advisers (Continental Europe) Limited	GBR.....	NIA.....	Barings Real Estate UK Holdings Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0654388..				Barings Real Estate Advisers Europe LLP.....	GBR.....	NIA.....	Barings Real Estate UK Holdings Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0654412..				Barings Real Estate Advisers Europe Finance LLP	GBR.....	NIA.....	Barings Real Estate UK Holdings Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-1194368..				Barings Real Estate GmbH.....	DEU.....	NIA.....	Barings Real Estate UK Holdings Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0241935..				Baring Asset Management Limited.....	GBR.....	NIA.....	MassMutual Holdings (Bermuda) Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000							Barings European Direct Lending 1 GP LLP.....	GBR.....	NIA.....	Baring Asset Management Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-1012393..				Barings Global Advisors Limited.....	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			98-0457587..				Baring International Investment Management Holdings	GBR.....	NIA.....	Baring Asset Management Limited.....	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0457576..				Baring Asset Management UK Holdings Limited	GBR.....	NIA.....	Baring International Investment Management Holdings	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0465031..				Baring Asset Management GmbH.....	DEU.....	NIA.....	Baring Asset Management UK Holdings Limited	OWNERSHIP....	...100.000	MMLIC.....		
0000			98-0524272..				Baring International Fund Managers (Ireland) Limited	IRL.....	NIA.....	Baring Asset Management UK Holdings Limited	OWNERSHIP....	...100.000	MMLIC.....		
0000							Baring Asset Management Switzerland Sàrl.....	CHE.....	NIA.....	Baring Asset Management UK Holdings Limited	OWNERSHIP....	...100.000	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.7

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			98-0497550				Baring France SAS	FRA	NIA	Baring Asset Management UK Holdings 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			98-0457574				Baring Pension Trustees Limited	GBR	NIA	Baring Asset Management 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 Sarl	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			98-0432153				Barings (U.K.) Limited	GBR	NIA	Barings Guernsey Limited	OWNERSHIP	100.000	MMLIC		
0000							Newpoint Real Estate Capital	DE	NIA	Barings LLC	OWNERSHIP	100.000	MMLIC		
0000			04-3238351	3456895			Barings Real Estate Advisers Inc	CA	NIA	Barings Real Estate Advisers LLC	OWNERSHIP	100.000	MMLIC		
0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	Barings LLC	INFLUENCE		MMLIC		
0000			81-4258759				CRA Aircraft 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			83-0560183				Aland Royalty Holdings LP	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	26.700	MMLIC		
0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Barings LLC	MANAGEMENT		MMLIC		
0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	18.000	MMLIC		
0000			47-3055009				Milestone Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	19.700	MMLIC		
0000			47-3055009				Milestone Acquisition Holding, LLC	DE	NIA	Barings LLC	INFLUENCE		MMLIC		
0000							Novation Companies, Inc.	MD	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	17.100	MMLIC		
0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.500	MMLIC		
0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Barings LLC	INFLUENCE		MMLIC		
0000			81-4065378				Remington L & W Holdings LLC	CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.300	MMLIC		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.8

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			81-4065378				Remington L & W Holdings LLC	CT	NIA	Barings LLC	INFLUENCE		MMLIC		
0000							Tamiami Citurus, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	15.700	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			46-0687392				Validus Holdings Company LLC	DE	NIA	Barings LLC	OWNERSHIP	40.400	MMLIC		
0000							Validus Pharmaceuticals LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	70.000	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 Investment Series LLC	DE	NIA	Barings LLC	OWNERSHIP	100.000	MMLIC		
0000							Barings Capital Investment LLC	MD	NIA	Barings LLC	OWNERSHIP	100.000	MMLIC		
0000							Barings Emerging Generation Fund 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 ABIF SLP, 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	73.500	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 North American Private Loan Fund Management, LLC	DE	NIA	Barings LLC	OWNERSHIP	100.000	MMLIC		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.9

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							Barings North American Private Loan Fund Management II, 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.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							Barings Private Credit Corporation.....	MD.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			84-5063008..				Barings Small Business Fund LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	42.300	MMLIC.....		
0000			84-5063008..				Barings Small Business Fund LLC.....	DE.....	NIA.....	Barings LLC.....	MANAGEMENT.....		MMLIC.....		
0000			98-0536233..				Benton Street Advisors, Inc.....	CYM.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							BRECS VII GP LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							CCM Fund I REIT Manager LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							CHY Venture GP LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							CREF X GP LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				Great Lakes III GP, LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				Lake Jackson LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			41-2280126..				Loan Strategies Management LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			80-0920285..				Mezzco III LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	99.300	MMLIC.....		
0000							Mezzco IV LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	99.300	MMLIC.....		
0000							Mezzco Australia II LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							RECSA-NY GP LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				SBNP SIA II LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							SBNP SIA III LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				Somerset Special Opportunities Management LLC	DE.....	NIA.....	Barings LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							Amherst Long Term Holdings, LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	24.500	MMLIC.....		
0000			04-3313782..				MassMutual International LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	100.000	MMLIC.....	Y.....	
0000							MassMutual Solutions LLC.....	DE.....	NIA.....	MassMutual International LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							Haven Technologies Asia Limited.....	HKG.....	NIA.....	MassMutual International LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000							Yunfeng Financial Group Limited.....	HKG.....	NIA.....	MassMutual International LLC.....	OWNERSHIP.....	24.900	MMLIC.....		
0000							MassMutual Asia Limited (SPV).....	HKG.....	NIA.....	MassMutual International LLC.....	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				MML Mezzanine Investor II, LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	100.000	MMLIC.....		
0000			04-1590850..				MML Mezzanine Investor III, LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	11.100	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.10

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			27-3576835				MassMutual External Benefits Group LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000			04-1590850				100 w. 3rd Street LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000			04-1590850				2160 Grand Manager LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...98.100	MMLIC.....		
0000			82-2432216				300 South Tryon Hotel LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000			04-1590850				300 South Tryon LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000							Almack Mezzanine Fund II Unleveraged LP.....	GBR.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	...72.900	MMLIC.....		
0000							Barings Affordable Housing Mortgage Fund I LLC	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000							Barings Affordable Housing Mortgage Fund I LLC	DE.....	NIA.....	Barings LLC.....	MANAGEMENT.....		MMLIC.....		
0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	...100.000	MMLIC.....		
0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	DE.....	NIA.....	Barings LLC.....	MANAGEMENT.....		MMLIC.....		
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.....	Massachusetts Mutual Life Insurance Company	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	...77.800	MMLIC.....		
0000							Barings Emerging Markets Corporate Bond Fund	IRL.....	NIA.....	Barings LLC.....	MANAGEMENT.....		MMLIC.....		
0000							Barings European Real Estate Debt Income Fund	LUX.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	...100.000	MMLIC.....		
0000							Barings European Real Estate Debt Income Fund	LUX.....	NIA.....	Barings LLC.....	INFLUENCE.....		MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.11

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			98-1206017..				Babson Capital Global Special Situation Credit Fund 2	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	23.600	MMLIC.....		
0000			98-1206017..				Babson Capital Global Special Situation Credit Fund 2	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	1.500	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	57.200	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.....		3.....
0000							Babson CLO Ltd. 2014-I.....	CYM.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		2.....
0000							Babson CLO Ltd. 2015-I.....	CYM.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		4.....
0000							Babson CLO Ltd. 2015-II.....	CYM.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		5.....
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							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.....		
0000							Babson Euro CLO 2015-I BV.....	NLD.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		
0000							Babson Euro CLO 2016-I BV.....	NLD.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		
0000			36-03726OH.				Barings Euro CLO 2019-I BV.....	IRL.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		
0000							Barings Euro CLO 2019-II BV.....	IRL.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.12

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							Barings Euro CLO 2020-I DAC.....	IRL.....	NIA.....	Barings LLC.....	INFLUENCE.....		MMLIC.....		
0000			37-15576VH..				Barings Euro CLO 2021-I DAC.....	IRL.....	NIA.....	Barings LLC.....	INFLUENCE.....		MMLIC.....		
0000			81-0841854..				Barings CLO Investment Partners LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.300	MMLIC.....		
0000			81-0841854..				Barings CLO Investment Partners LP.....	DE.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000							Barings Euro Value Add II (BREEVA II).....	LUX.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	69.900	MMLIC.....		
0000							Barings Euro Value Add II (BREEVA II).....	LUX.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	6.100	MMLIC.....		
0000							Barings Euro Value Add II (BREEVA II).....	LUX.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000							Barings Real Estate European Value Add I SCSp	GBR.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	44.700	MMLIC.....		
0000							Barings Real Estate European Value Add I SCSp	GBR.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	5.000	MMLIC.....		
0000							Barings Real Estate European Value Add I SCSp	GBR.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000			85-3449260..				Barings Real Estate Debt Income Fund LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC.....		
0000			85-3449260..				Barings Real Estate Debt Income Fund LP.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....		MMLIC.....		
0000			85-3449260..				Barings Real Estate Debt Income Fund LP.....	DE.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000			82-5330194..				Barings Global Em. Markets Equity Fund.....	NC.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000			98-1332384..				Barings Global Energy Infrastructure Fund I LP.	CYM.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.200	MMLIC.....		
0000			98-1332384..				Barings Global Energy Infrastructure Fund I LP.	CYM.....	NIA.....	Baring Asset Management Limited.....	MANAGEMENT..		MMLIC.....		
0000							Barings Global Dividends Champion Fund.....	IRL.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000							Barings Global Inv. Grade Strat Fund.....	IRL.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000							Barings Global Private Loan Fund.....	LUX.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	12.300	MMLIC.....		
0000							Barings Global Private Loan Fund.....	LUX.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000			82-3867745..				Barings Global Real Assets Fund LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.700	MMLIC.....		
0000			82-3867745..				Barings Global Real Assets Fund LP.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	7.500	MMLIC.....		
0000			82-3867745..				Barings Global Real Assets Fund LP.....	DE.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000							Barings Global Special Situations Credit Fund 3	IRL.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	16.000	MMLIC.....		
0000							Barings Global Special Situations Credit 4 Delaware	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	67.600	MMLIC.....		
0000							Barings Global Special Situations Credit 4 Delaware	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	3.600	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.13

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							Barings Global Special Situations Credit 4 Delaware	DE.....	NIA.....	Barings LLC.....	MANAGEMENT.		MMLIC.....		
0000							Barings Global Special Situations Credit 4 LUX.	LUX.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	17.400	MMLIC.....		
0000							Barings Global Special Situations Credit 4 LUX.	LUX.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	0.900	MMLIC.....		
0000							Barings Global Special Situations Credit 4 LUX.	LUX.....	NIA.....	Barings LLC.....	MANAGEMENT.		MMLIC.....		
0000							Barings Global Special Situations Credit Fund 3	IRL.....	NIA.....	Barings LLC.....	MANAGEMENT.		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			38-4010344..				Barings North American Private Loan Fund LP.	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.700	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	34.000	MMLIC.....		
0000			98-1332384..				Barings RE Credit Strategies VII LP.....	DE.....	NIA.....	Baring Asset Management Limited.....	MANAGEMENT.		MMLIC.....		
0000							Braemar Energy Ventures I, L.P.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	89.800	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							Barings European Core Property Fund SCSp...	LUX.....	NIA.....	MassMutual Holding LLC.....	Ownership/Influence	9.800	MMLIC.....		
0000							Barings European Core Property Fund SCSp...	LUX.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	0.600	MMLIC.....		
0000							Barings European Core Property Fund SCSp...	LUX.....	NIA.....	Barings Real Estate Advisers LLC.....	MANAGEMENT.		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			04-1590850..				Braselton Point LLC.....	DE.....	NIA.....	Barings LLC.....	OWNERSHIP....	100.000	MMLIC.....		
0000			20-5578089..				Barings Core Property Fund LP.....	DE.....	NIA.....	MassMutual Holding LLC.....	Ownership/Influence	20.200	MMLIC.....		
0000			20-5578089..				Barings Core Property Fund LP.....	DE.....	NIA.....	Barings Real Estate Advisers LLC.....	MANAGEMENT.		MMLIC.....		
0000			46-5432619..				Cornerstone Real Estate Fund X LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	25.300	MMLIC.....		
0000			46-5432619..				Cornerstone Real Estate Fund X LP.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	2.800	MMLIC.....		
0000			46-5432619..				Cornerstone Real Estate Fund X LP.....	DE.....	NIA.....	Barings Real Estate Advisers LLC.....	MANAGEMENT.		MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.14

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
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..		...1597511		Gateway Mezzanine Partners II LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	...33.000	MMLIC.....		
0000			90-0991195..		...1597511		Gateway Mezzanine Partners II LP.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	...4.900	MMLIC.....		
0000			82-2932156..				GASL Holdings, LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	...11.300	MMLIC.....		
0000			90-0991195..		...1597511		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.....		
0000			37-1708623..				Great Lakes III, L.P.....	DE.....	NIA.....	Barings LLC.....	MANAGEMENT..		MMLIC.....		
0000			38-4041011..				JPMCC Commercial Mortgage Securities Trust 2017-JP7	NY.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		
0000			38-4032059..				JPMDB Commercial Mortgage Securities Trust 2017-C5	NY.....	NIA.....	Barings LLC.....	INFLUENCE....		MMLIC.....		
0000			82-1512591..				KKR-MM Vector LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	...100.000	MMLIC.....		
0000			46-4255307..				Marco Hotel LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...100.000	MMLIC.....		
0000			04-1590850..				Miami Douglas One GP LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		
0000			04-1590850..				Miami Douglas One GP LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	...5.500	MMLIC.....		
0000			04-1590850..				Miami Douglas Two GP LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		
0000			04-1590850..				Miami Douglas Two GP LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....		MMLIC.....		
0000			04-1590850..				Miami Douglas One LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...90.000	MMLIC.....		
0000			04-1590850..				Miami Douglas One LP.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	...10.000	MMLIC.....		
0000			04-1590850..				Miami Douglas Two LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...90.000	MMLIC.....		
0000			04-1590850..				MM BIG Peninsula Co-Invest Member LLC.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...91.300	MMLIC.....		
0000			04-1590850..				MM BIG Peninsula Co-Invest Member LLC.....	MA.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	...3.000	MMLIC.....		
0000			85-3886824..				NYDIG Digital Assets Fund II LP.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...100.000	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.15

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			04-1590850				Miami Douglas Two LP	DE	NIA	C.M. Life Insurance Company	OWNERSHIP		MMLIC		
0000			45-3623262				HB Naples Golf Owner LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000							MM CM Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			81-3000420				MM Debt Participations LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC		
0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	MANAGEMENT		MMLIC		
0000			82-4411267				RB Apartments LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			75-2901061				Reston Arboretum LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			54-2055778				Rockville Town Center LLC	VA	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.100	MMLIC		
0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	OWNERSHIP	1.900	MMLIC		
0000			04-1590850				SouthPointe Industrial LLC	DE	NIA	Barings LLC	OWNERSHIP	100.000	MMLIC		
0000			35-2553915				Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		
0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	MANAGEMENT		MMLIC		
0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	15.900	MMLIC		
0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	85.100	MMLIC		
0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Barings LLC	MANAGEMENT		MMLIC		
0000			04-1590850				Trailside MM Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	59.600	MMLIC		
0000			04-1590850				Trailside MM Member LLC	DE	NIA	C.M. Life Insurance Company	OWNERSHIP	7.400	MMLIC		
0000			83-1325764				Washington Gateway Two LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	88.700	MMLIC		
0000			83-1325764				Washington Gateway Two LLC	DE	NIA	C.M. Life Insurance Company	OWNERSHIP	6.700	MMLIC		
0000			32-0574045				Washington Gateway Three LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	83.700	MMLIC		
0000			32-0574045				Washington Gateway Three LLC	DE	NIA	C.M. Life Insurance Company	OWNERSHIP	11.400	MMLIC		
0000			04-1590850				West 46th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	OWNERSHIP	100.000	MMLIC		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.16

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000							Babson Capital Loan Strategies Master Fund LP	CYM.....	NIA.....	Barings LLC.....	MANAGEMENT.		MMLIC.....		
0000							Barings China Aggregate Bond Private Securities Investment Fund	CHN.....	NIA.....	Barings LLC.....	MANAGEMENT.		MMLIC.....		
0000							Barings European Growth Trust Fund.....	GBR.....	NIA.....	Barings LLC.....	Ownership/Influence	22.500	MMLIC.....		
0000			47-3790192..				Barings Global High Yield Fund.....	MA.....	NIA.....	Barings LLC.....	MANAGEMENT.		MMLIC.....		
0000							CCIC Fund.....	CHN.....	NIA.....	Barings LLC.....	Ownership/Influence	51.600	MMLIC.....		
0000			71-1018134..				Great Lakes II LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	11.200	MMLIC.....		
0000			71-1018134..				Great Lakes II LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP.....	1.000	MMLIC.....		
0000			04-1590850..				Wood Creek Venture Fund LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	40.000	MMLIC.....		
0000			36-4823011..				50 Liberty LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	65.000	MMLIC.....		
0000			36-4823011..				50 Liberty LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP.....	5.800	MMLIC.....		
0000			87-0977058..				Barings Hotel Opportunity Ventures.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	50.000	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.....	26.100	MMLIC.....		
0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	LUX.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP.....	2.300	MMLIC.....		
0000			82-2285211..				Calgary Railway Holding LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP.....	90.000	MMLIC.....		
0000			82-2285211..				Calgary Railway Holding LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP.....	10.000	MMLIC.....		
0000			82-3307907..				Cornbrook PRS Holdings LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance 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.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.17

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			56-2630592..				Cornerstone Fort Pierce Development LLC.....	DE.....	NIA.....	C.M. Life Insurance 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.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...100.000	MMLIC.....		
0000			61-1750537..				Cornerstone Permanent Mortgage Fund II.....	MA.....	NIA.....	Barings LLC.....	MANAGEMENT..	.....	MMLIC.....		
0000			61-1793735..				Cornerstone Permanent Mortgage Fund IV.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...100.000	MMLIC.....		
0000			81-0890084..				CREA Madison Member LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	...100.000	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....	...94.400	MMLIC.....		
0000			20-3347091..				Fan Pier Development LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...66.200	MMLIC.....		
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 Island Member LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...49.000	MMLIC.....		
0000			83-0881588..				NoHo West Venture LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...94.800	MMLIC.....		
0000			80-0948028..				One Harbor Shore LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...76.000	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			82-3393166..				Portland 400 Sixth Manager LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...95.000	MMLIC.....		
0000							Raleigh Crossing Phase I Holdings LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	...90.000	MMLIC.....		
0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE.....	NIA.....	Barings Real Estate Advisers LLC.....	INFLUENCE.....	.....	MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.18

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			27-2977720..				Sawgrass Village Shopping Center LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	84.200	MMLIC.....		
0000			27-2977720..				Sawgrass Village Shopping Center LLC.....	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	15.800	MMLIC.....		
0000							STOA Holding LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	50.000	MMLIC.....		
0000			81-5273574..				Three PW Office Holding LLC.....	DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	95.100	MMLIC.....		
0000			35-2484550..				Twenty Two Liberty LLC.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	65.000	MMLIC.....		
0000			35-2484550..				Twenty Two Liberty LLC.....	MA.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	35.000	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....	90.700	MMLIC.....		
0000			45-5401109..				Washington Gateway Apartments Venture LLC.	DE.....	NIA.....	C.M. Life Insurance Company.....	OWNERSHIP....	4.800	MMLIC.....		
0000			51-0529328..		927972	OQ.....	MassMutual Premier Main Street Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	91.900	MMLIC.....		
0000			26-3229251..		927972	OQ.....	MassMutual Premier Strategic Emerging Markets Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	3.300	MMLIC.....		
0000			01-0821120..		916053	OQ.....	MassMutual Select Diversified Value Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	0.800	MMLIC.....		
0000			04-3512593..		916053	OQ.....	MassMutual Select Fundamental Growth Fund.	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	2.800	MMLIC.....		
0000			42-1710935..		916053	OQ.....	MassMutual Select Mid-Cap Value Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	23.000	MMLIC.....		
0000			02-0769954..		916053	OQ.....	MassMutual Select Small Capital Value Equity Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		
0000			04-3584140..		916053	OQ.....	MassMutual Select Small Company Value Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	9.900	MMLIC.....		
0000			82-3347422..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2005 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	5.700	MMLIC.....		
0000			82-3355639..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2010 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		
0000			82-3382389..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2015 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		
0000			82-3396442..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2020 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....		MMLIC.....		

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

Q13.19

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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			82-3417420..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2025 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3430358..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2030 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3439837..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2035 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3451779..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2040 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3472295..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2045 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3481715..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2050 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3502011..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2055 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3525148..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement 2060 Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			82-3533944..		916053	OQ.....	MassMutual Select T. Rowe Price Retirement Balanced Fund	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			46-4257056..				MML Series International Equity Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			47-3517233..				MML Series II Asset Momentum Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	100.000	MMLIC.....		
0000			47-3529636..				MML Series II Dynamic Bond Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		MMLIC.....		
0000			47-3544629..				MML Series II Equity Rotation Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	95.000	MMLIC.....		
0000			47-3559064..				MML Series II Special Situations Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	97.400	MMLIC.....		
0000			27-1933389..		916053	OQ.....	MassMutual RetireSMART 2035 Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	3.000	MMLIC.....		
0000			27-1932769..		916053	OQ.....	MassMutual RetireSMART 2045 Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	8.300	MMLIC.....		
0000			46-3289207..		916053	OQ.....	MassMutual RetireSMART 2055 Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	24.300	MMLIC.....		
0000			47-5326235..		916053	OQ.....	MassMutual RetireSMART 2060 Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...	55.800	MMLIC.....		
0000			45-1618155..		916053	OQ.....	MassMutual 20/80 Allocation Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP...		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	Domiciliary Location	Relationship 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 Required? (Y/N)	*
0000			45-1618222..		916053	OQ.....	MassMutual 80/20 Allocation Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	.....	MMLIC.....		
0000			03-0532464..		916053	OQ.....	MassMutual RetireSMART In Retirement Fund.	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	1.700	MMLIC.....		
0000			45-1618262..		916053	OQ.....	MassMutual 40/60 Allocation Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	.....	MMLIC.....		
0000			45-1618046..		916053	OQ.....	MassMutual 60/40 Allocation Fund.....	MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	OWNERSHIP....	.....	MMLIC.....		

Asteri	Explanation
1	Massachusetts Mutual Life Insurance Company owns 14.23% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own .6% and includes only Great Lakes III, L.P.
3	Debt investors own 9.6% and includes only Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own .5% and includes only Great Lakes III, L.P.
5	Debt investors own .2% and includes only Great Lakes III, L.P.

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

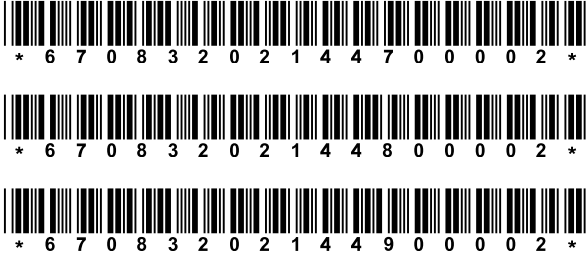
The following supplemental reports are required to be filed as part of your statement filing. However, in the event that your company does not transact the type of business for which the special report must be filed, your response of NO to the specific interrogatory will be accepted in lieu of filing 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?	NO
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 Quarterly Only). The response for 1st and 3rd quarters should be N/A. A NO response resulting with a barcode is only appropriate in the 2nd quarter.	YES

Explanations:

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.
4. 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.
8.

Bar Code:



NONE

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

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.....	0	
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 end of current period (Lines 1+2+3+4-5+6-7-8).....	0	0
10. Deduct total nonadmitted amounts.....		
11. Statement value at end of current period (Line 9 minus Line 10).....	0	0

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.....	0	
2. Cost of acquired:		
2.1 Actual cost at time of acquisition.....		
2.2 Additional investment made after acquisition.....		
3. Capitalized deferred interest and other.....		
4. Accrual of discount.....		
5. Unrealized valuation increase (decrease).....		
6. Total gain (loss) on disposals.....		
7. Deduct amounts received on disposals.....		
8. Deduct amortization of premium and mortgage interest points and commitment fees.....		
9. Total foreign exchange change in book value/recorded investment excluding accrued interest.....		
10. Deduct current year's other-than-temporary impairment recognized.....		
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10).....	0	0
12. Total valuation allowance.....		
13. Subtotal (Line 11 plus Line 12).....	0	0
14. Deduct total nonadmitted amounts.....		
15. Statement value at end of current period (Line 13 minus Line 14).....	0	0

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.....	0	
2. Cost of acquired:		
2.1 Actual cost at time of acquisition.....		
2.2 Additional investment made after acquisition.....		
3. Capitalized deferred interest and other.....		
4. Accrual of discount.....		
5. Unrealized valuation increase (decrease).....		
6. Total gain (loss) on disposals.....		
7. Deduct amounts received on disposals.....		
8. Deduct amortization of premium and depreciation.....		
9. Total foreign exchange change in book/adjusted carrying value.....		
10. Deduct current year's other-than-temporary impairment recognized.....		
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10).....	0	0
12. Deduct total nonadmitted amounts.....		
13. Statement value at end of current period (Line 11 minus Line 12).....	0	0

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.....	108,936,961	122,772,518
2. Cost of bonds and stocks acquired.....		892,406
3. Accrual of discount.....	156,121	305,432
4. Unrealized valuation increase (decrease).....	(5,444)	(42,863)
5. Total gain (loss) on disposals.....		(704,533)
6. Deduct consideration for bonds and stocks disposed of.....	2,141,576	13,489,161
7. Deduct amortization of premium.....	48,537	117,860
8. Total foreign exchange change in book/adjusted carrying value.....		
9. Deduct current year's other-than-temporary impairment recognized.....		793,345
10. Total investment income recognized as a result of prepayment penalties and/or acceleration fees.....		114,366
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10).....	106,897,525	108,936,961
12. Deduct total nonadmitted amounts.....		
13. Statement value at end of current period (Line 11 minus Line 12).....	106,897,525	108,936,961

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

QS102

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).....	57,606,307		292,413	160,865	57,606,307	57,474,759		57,298,708
2. NAIC 2 (a).....	43,863,411		131,239	4,435	43,863,411	43,736,608		45,830,265
3. NAIC 3 (a).....	3,525,205			(121,604)	3,525,205	3,403,601		5,510,763
4. NAIC 4 (a).....	1,975,186			768	1,975,186	1,975,953		
5. NAIC 5 (a).....	301,762			4,842	301,762	306,604		297,225
6. NAIC 6 (a).....						0		
7. Total Bonds.....	107,271,871	0	423,651	49,305	107,271,871	106,897,525	0	108,936,961
PREFERRED STOCK								
8. NAIC 1.....						0		
9. NAIC 2.....						0		
10. NAIC 3.....						0		
11. NAIC 4.....						0		
12. NAIC 5.....						0		
13. NAIC 6.....						0		
14. Total Preferred Stock.....	0	0	0	0	0	0	0	0
15. Total Bonds and Preferred Stock.....	107,271,871	0	423,651	49,305	107,271,871	106,897,525	0	108,936,961

(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 \$.....0; NAIC 2 \$.....0; NAIC 3 \$.....0; NAIC 4 \$.....0; NAIC 5 \$.....0; NAIC 6 \$.....0.

Sch. DA - Pt. 1
NONE

Sch. DA - Verification
NONE

Sch. DB - Pt. A - Verification
NONE

Sch. DB - Pt. B - Verification
NONE

Sch. DB - Pt. C - Sn. 1
NONE

Sch. DB - Pt. C - Sn. 2
NONE

Sch. DB - Verification
NONE

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

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.....	18,796,067	7,984,674
2. Cost of cash equivalents acquired.....	59,794,613	34,959,217
3. Accrual of discount.....		
4. Unrealized valuation increase (decrease).....		
5. Total gain (loss) on disposals.....		90
6. Deduct consideration received on disposals.....	54,429,308	24,147,913
7. Deduct amortization of premium.....		
8. Total foreign exchange change in book/ adjusted carrying value.....		
9. Deduct current year's other-than-temporary impairment recognized.....		
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9).....	24,161,372	18,796,067
11. Deduct total nonadmitted amounts.....		
12. Statement value at end of current period (Line 10 minus Line 11).....	24,161,372	18,796,067

Sch. A Pt. 2
NONE

Sch. A Pt. 3
NONE

Sch. B - Pt. 2
NONE

Sch. B - Pt. 3
NONE

Sch. BA - Pt. 2
NONE

Sch. BA - Pt. 3
NONE

Sch. D - Pt. 3
NONE

SCHEDULE D - PART 4

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

1	2		3	4	5	6	7	8	9	10	Change in Book/Adjusted Carrying Value					16	17	18	19	20	21	22
											11	12	13	14	15							
CUSIP Identification	Description		F o r e i g n	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/Adjusted Carrying Value	Unrealized Valuation Increase (Decrease)	Current Year's (Amortization) / Accretion	Current Year's Other-Than- Temporary Impairment Recognized	Total Change in B./A.C.V. (11+12-13)	Total Foreign Exchange Change in B./A.C.V.	Book/Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest / Stock Dividends Received During Year	Stated Contractual Maturity Date	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol
Bonds - U.S. Government																						
31287P	D8	3		06/01/2021.	Paydown.....		73	73	73	68	.....	.....5	.....	.....5	.....	.....73	.....	.....	.....0	2	02/01/2032.	1.A
31287S	6R	3		06/01/2021.	Paydown.....		79	79	80	77	.....	.....3	.....	.....3	.....	.....79	.....	.....	.....0	2	05/01/2032.	1.A
31287S	FS	1		06/01/2021.	Paydown.....		107	107	108	101	.....	.....6	.....	.....6	.....	.....107	.....	.....	.....0	3	04/01/2032.	1.A
31287T	GK	5		06/01/2021.	Paydown.....		31	31	31	29	.....	.....2	.....	.....2	.....	.....31	.....	.....	.....0	1	05/01/2032.	1.A
31287U	EQ	1		06/01/2021.	Paydown.....		42	42	42	14	.....	.....27	.....	.....27	.....	.....42	.....	.....	.....0	1	06/01/2032.	1.A
31288H	7A	2		06/01/2021.	Paydown.....		9,632	9,632	9,882	7,559	.....	.....2,073	.....	.....2,073	.....	.....9,632	.....	.....	.....0	209	05/01/2033.	1.A
31292G	5V	4		06/01/2021.	Paydown.....		724	724	729	615	.....	.....109	.....	.....109	.....	.....724	.....	.....	.....0	19	09/01/2029.	1.A
31292H	NH	3		06/01/2021.	Paydown.....		1,798	1,798	1,805	1,401	.....	.....397	.....	.....397	.....	.....1,798	.....	.....	.....0	46	02/01/2032.	1.A
31292H	QN	7		06/01/2021.	Paydown.....		513	513	518	480	.....	.....33	.....	.....33	.....	.....513	.....	.....	.....0	13	05/01/2032.	1.A
36207H	VH	7		06/01/2021.	Paydown.....		84	84	85	84	.....	.....1	.....	.....1	.....	.....84	.....	.....	.....0	3	06/15/2026.	1.A
36208C	Y9	2		06/01/2021.	Paydown.....		29	29	29	29	.....	.....0	.....	.....0	.....	.....29	.....	.....	.....0	1	06/15/2027.	1.A
0599999.	Total - Bonds - U.S. Government.....						13,111	13,111	13,381	10,456	0	2,655	0	2,655	0	13,111	0	0	0	299	XXX	XXX
Bonds - U.S. Special Revenue and Special Assessment																						
312914	VY	7		06/01/2021.	Paydown.....		580	580	570	577	.....	.....4	.....	.....4	.....	.....580	.....	.....	.....0	18	02/15/2023.	1.A
313398	FC	8		06/01/2021.	Paydown.....		542	542	521	643	.....	.....(101)	.....	.....(101)	.....	.....542	.....	.....	.....0	15	07/15/2031.	1.A
3133TT	RX	1		06/01/2021.	Paydown.....		7,705	7,705	7,319	8,881	.....	.....(1,176)	.....	.....(1,176)	.....	.....7,705	.....	.....	.....0	204	06/15/2031.	1.A
3133TV	EW	2		06/01/2021.	Paydown.....		424	424	419	419	.....	.....5	.....	.....5	.....	.....424	.....	.....	.....0	11	09/15/2031.	1.A
313920	CW	8		06/01/2021.	Paydown.....		17,056	17,056	17,120	18,951	.....	.....(1,895)	.....	.....(1,895)	.....	.....17,056	.....	.....	.....0	387	07/25/2031.	1.A
913366	DG	2		05/17/2021.	Direct.....		60,000	60,000	59,651	59,993	.....	.....7	.....	.....7	.....	.....60,000	.....	.....	.....0	1,937	05/15/2029.	1.D FE.....
92812U	Q3	5		06/01/2021.	Paydown.....		83,244	83,244	83,244	83,077	.....	.....166	.....	.....166	.....	.....83,244	.....	.....	.....0	1,498	12/25/2043.	1.A FE.....
3199999.	Total - Bonds - U.S. Special Revenue and Special Assessments.....						169,550	169,550	168,843	172,541	0	(2,990)	0	(2,990)	0	169,550	0	0	0	4,071	XXX	XXX
Bonds - Industrial and Miscellaneous																						
02665U	AA	3		06/01/2021.	Paydown.....		2,704	2,704	2,780	2,733	.....	.....(30)	.....	.....(30)	.....	.....2,704	.....	.....	.....0	42	10/17/2036.	1.A FE.....
05949T	AX	7		06/01/2021.	Paydown.....		67,581	67,582	66,093	66,946	.....	.....635	.....	.....635	.....	.....67,581	.....	.....	.....0	1,502	01/25/2036.	1.D FM.....
12667F	EG	6		06/01/2021.	Paydown.....		2,755	2,755	2,710	2,737	.....	.....18	.....	.....18	.....	.....2,755	.....	.....	.....0	64	04/25/2034.	1.D FM.....
126694	LC	0		05/01/2021.	Paydown.....		6,239	5,927	6,085	4,667	.....	.....1,572	.....	.....1,572	.....	.....6,239	.....	.....	.....0	109	11/25/2035.	2.B FM.....
126694	LC	0		06/01/2021.	Paydown.....		7,220	7,294	7,488	5,286	.....	.....1,934	.....	.....1,934	.....	.....7,220	.....	.....	.....0	193	11/25/2035.	1.D FM.....
16165Y	AV	4		06/01/2021.	Paydown.....		5,533	6,155	5,342	5,458	.....	.....75	.....	.....75	.....	.....5,533	.....	.....	.....0	138	08/25/2037.	1.D FM.....
40432B	AZ	2		06/01/2021.	Paydown.....		18,407	18,407	10,566	18,610	.....	.....(203)	.....	.....(203)	.....	.....18,407	.....	.....	.....0	467	09/25/2037.	1.D FM.....
46617F	AA	2		06/01/2021.	Paydown.....		5,551	5,551	5,548	5,548	.....	.....3	.....	.....3	.....	.....5,551	.....	.....	.....0	77	04/15/2067.	1.A FE.....
85208N	AD	2		06/20/2021.	Paydown.....		125,000	125,000	125,000	125,000	.....	.....	.....	.....0	.....	.....125,000	.....	.....	.....0	2,961	09/20/2029.	2.A FE.....
3899999.	Total - Bonds - Industrial and Miscellaneous.....						240,990	241,374	231,611	236,985	3,506	498	0	4,005	0	240,990	0	0	0	5,553	XXX	XXX
8399997.	Total - Bonds - Part 4.....						423,651	424,035	413,835	419,982	3,506	163	0	3,669	0	423,651	0	0	0	9,923	XXX	XXX
8399999.	Total - Bonds.....						423,651	424,035	413,835	419,982	3,506	163	0	3,669	0	423,651	0	0	0	9,923	XXX	XXX
9999999.	Total - Bonds, Preferred and Common Stocks.....						423,651	XXX	413,835	419,982	3,506	163	0	3,669	0	423,651	0	0	0	9,923	XXX	XXX

QE05

Sch. DB - Pt. A - Sn. 1
NONE

Sch. DB - Pt. B - Sn. 1
NONE

Sch. DB - Pt. D - Sn. 1
NONE

Sch. DB - Pt. D - Sn. 2
NONE

Sch. DB - Pt. E
NONE

Sch. DL - Pt. 1
NONE

Sch. DL - Pt. 2
NONE

Statement as of June 30, 2021 of the

MANHATTAN NATIONAL LIFE INSURANCE COMPANY

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	
Depository	Code	Rate of Interest	Amount of Interest Received During Current Quarter	Amount or interest Accrued at Current Statement Date	First Month	Second Month	Third Month	*
Open Depositories								
Bank of New York Mellon..... New York, NY.....		0.010			9,958	101,030	1,000,000	XXX
PNC Bank..... Pittsburgh, PA.....					(848,042)	(314,692)	(354,948)	XXX
Wells Fargo..... Winston Salem, NC.....					139,222	134,892	124,715	XXX
0199999. Total Open Depositories.....	XXX	XXX	0	0	(698,863)	(78,770)	769,767	XXX
0399999. Total Cash on Deposit.....	XXX	XXX	0	0	(698,863)	(78,770)	769,767	XXX
0599999. Total Cash.....	XXX	XXX	0	0	(698,863)	(78,770)	769,767	XXX

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 & Accrued	Amount Received During Year
Exempt Money Market Mutual Funds as Identified by the SVO														
09248U	71	8	BLKRR LQ:T-FUND INSTL.....					SD.....	06/30/2021.....	0.010	.....	.....14,487,958	54	.....
09248U	71	8	BLKRR LQ:T-FUND INSTL.....					.....	06/25/2021.....	0.010	.....	.....9,638,373	36	.....
8599999. Total - Exempt Money Market Mutual Funds as Identified by the SVO.....												24,126,331	90	0
All Other Money Market Mutual Funds														
711991	00	0	TD BANK DEPOSIT SWEEP.....					SD.....	06/30/2021.....	.....	.....	.....34,000	0	4
SA0000	56	0	BB&T TRUST DEPOSIT.....					SD.....	06/02/2021.....	0.450	.....	.....1,041	.....	.....2
8699999. Total - All Other Money Market Mutual Funds.....												35,041	0	6
9999999. Total - Cash Equivalents.....												24,161,372	90	6