



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

QUARTERLY STATEMENT

AS OF SEPTEMBER 30, 2024

OF THE CONDITION AND AFFAIRS OF THE

Massachusetts Mutual Life Insurance Company

NAIC Group Code 0435 0435 NAIC Company Code 65935 Employer's ID Number 04-1590850
(Current) (Prior)

Organized under the Laws of Massachusetts, State of Domicile or Port of Entry MA

Country of Domicile United States of America

Licensed as business type: Life, Accident and Health [X] Fraternal Benefit Societies []

Incorporated/Organized 05/15/1851 Commenced Business 08/01/1851

Statutory Home Office 1295 State Street, Springfield, MA, US 01111
(Street and Number) (City or Town, State, Country and Zip Code)

Main Administrative Office 1295 State Street
(Street and Number)
Springfield, MA, US 01111 413-788-8411
(City or Town, State, Country and Zip Code) (Area Code) (Telephone Number)

Mail Address 1295 State Street, Springfield, MA, US 01111
(Street and Number or P.O. Box) (City or Town, State, Country and Zip Code)

Primary Location of Books and Records 1295 State Street
(Street and Number)
Springfield, MA, US 01111 413-788-8411
(City or Town, State, Country and Zip Code) (Area Code) (Telephone Number)

Internet Website Address www.massmutual.com

Statutory Statement Contact Trevor Wade Gordon, 617-695-4321
(Name) (Area Code) (Telephone Number)
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(E-mail Address) (FAX Number)

OFFICERS

President and Chief Executive Officer Roger William Crandall Treasurer Julieta Giselle Sinisgalli
Secretary Akintokunbo Akinbajo Appointed Actuary Vy Quoc Ho

OTHER

Elizabeth Ward Chicares, Chief Financial Officer Eric William Partlan, Chief Investment Officer Geoffrey James Craddock, Chief Risk Officer
Susan Marie Cicco, Chief of Staff to the Chairman & CEO, HR & Employee Experience Michael James O'Connor, General Counsel Sears Andrew Merritt, Head of Technology & Experience
Dominic Lusean Blue, Head of Third-Party Distribution and New Markets Paul Anthony LaPiana, Head of Brand, Product and Affiliated Distribution Peter John Rugel, Head of Operations

DIRECTORS OR TRUSTEES

Roger William Crandall - Chairman Kathleen Ann Corbet James Henry DeGraffenreidt, Jr.
Isabella Davidov Goren Jeffrey Marc Leiden - Lead Director Laura Jeanne Sen
William Taylor Spitz Howard Todd Stitzer Michelle Kwok Lee
Bernard Anthony Harris, Jr.

State of Massachusetts SS:
County of Hampden

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.

Roger William Crandall
President and Chief Executive Officer

Akintokunbo Akinbajo
Secretary

Julieta Giselle Sinisgalli
Treasurer

Subscribed and sworn to before me this _____ day of _____

- 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 SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

ASSETS

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
1. Bonds	163,444,016,823		163,444,016,823	144,433,159,667
2. Stocks:				
2.1 Preferred stocks	584,868,150		584,868,150	446,025,402
2.2 Common stocks	28,301,130,727		28,301,130,727	27,118,688,202
3. Mortgage loans on real estate:				
3.1 First liens	24,108,516,679		24,108,516,679	24,020,648,754
3.2 Other than first liens.....				
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)	340,025,202		340,025,202	351,331,874
4.2 Properties held for the production of income (less \$282,340,000 encumbrances)	(32,159,388)		(32,159,388)	(23,858,115)
4.3 Properties held for sale (less \$ encumbrances)	1,954,867		1,954,867	1,954,867
5. Cash (\$824,333,481), cash equivalents (\$5,187,893,467) and short-term investments (\$952,748,975)	6,964,975,923		6,964,975,923	11,134,092,248
6. Contract loans (including \$ premium notes)	17,298,241,250	151,961	17,298,089,289	15,897,270,556
7. Derivatives	20,094,291,926		20,094,291,926	20,739,767,594
8. Other invested assets	14,351,399,688	43,261,685	14,308,138,003	12,907,368,797
9. Receivables for securities	2,710,103,850		2,710,103,850	2,400,967,375
10. Securities lending reinvested collateral assets				
11. Aggregate write-ins for invested assets				
12. Subtotals, cash and invested assets (Lines 1 to 11)	278,167,365,698	43,413,647	278,123,952,051	259,427,417,222
13. Title plants less \$ charged off (for Title insurers only)				
14. Investment income due and accrued	4,716,177,213	4,719,828	4,711,457,385	5,236,485,893
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	144,305,350		144,305,350	204,175,733
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	1,008,527,345		1,008,527,345	1,140,428,115
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	101,025,486	2,695,335	98,330,151	92,038,010
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	48,621,601		48,621,601	52,250,187
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon	528,399,704		528,399,704	280,008,382
18.2 Net deferred tax asset	1,761,018,509		1,761,018,509	1,659,507,058
19. Guaranty funds receivable or on deposit	85,907,266		85,907,266	6,955,326
20. Electronic data processing equipment and software	249,004,995	242,088,978	6,916,017	9,897,105
21. Furniture and equipment, including health care delivery assets (\$)	32,981,506	32,981,506		
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	108,084,704		108,084,704	132,270,480
24. Health care (\$) and other amounts receivable				
25. Aggregate write-ins for other than invested assets	5,551,895,021	1,140,454,070	4,411,440,951	4,032,031,189
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	292,503,314,398	1,466,353,364	291,036,961,034	272,273,464,700
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	51,648,551,958		51,648,551,958	52,592,632,278
28. Total (Lines 26 and 27)	344,151,866,356	1,466,353,364	342,685,512,992	324,866,096,978
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page				
1199. Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)				
2501. Corporate owned life insurance	3,005,002,941		3,005,002,941	2,828,205,253
2502. Admitted disallowed interest maintenance reserve	1,266,855,959		1,266,855,959	1,111,554,018
2503. Fully refundable deposits, prepayments and miscellaneous assets	105,089,724	22,784,884	82,304,840	19,265,947
2598. Summary of remaining write-ins for Line 25 from overflow page	1,174,946,397	1,117,669,186	57,277,211	73,005,971
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	5,551,895,021	1,140,454,070	4,411,440,951	4,032,031,189

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$ 172,403,137,885 less \$ included in Line 6.3 (including \$ 156,496,233 Modco Reserve)	172,403,137,885	163,889,051,584
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	3,461,283,369	3,360,552,794
3. Liability for deposit-type contracts (including \$ Modco Reserve).....	21,427,490,458	19,645,255,949
4. Contract claims:		
4.1 Life	535,389,050	633,182,086
4.2 Accident and health	29,113,336	33,564,125
5. Policyholders' dividends/refunds to members \$ 10,002,314 and coupons \$ due and unpaid	10,002,314	9,254,468
6. Provision for policyholders' dividends, refunds to members and coupons payable in following calendar year - estimated amounts:		
6.1 Policyholders' dividends and refunds to members apportioned for payment (including \$ Modco)	2,240,322,294	2,141,066,555
6.2 Policyholders' dividends and refunds to members not yet apportioned (including \$ Modco)		
6.3 Coupons and similar benefits (including \$ Modco)		
7. Amount provisionally held for deferred dividend policies not included in Line 6		
8. Premiums and annuity considerations for life and accident and health contracts received in advance less \$ discount; including \$ 8,853,150 accident and health premiums	51,416,367	38,215,715
9. Contract liabilities not included elsewhere:		
9.1 Surrender values on canceled contracts		
9.2 Provision for experience rating refunds, including the liability of \$ accident and health experience rating refunds of which \$ is for medical loss ratio rebate per the Public Health Service Act	14,142,437	9,106,171
9.3 Other amounts payable on reinsurance, including \$ (19,257,843) assumed and \$ 1,428,853 ceded	(17,828,990)	(103,090,801)
9.4 Interest Maintenance Reserve		
10. Commissions to agents due or accrued-life and annuity contracts \$ 17,656,397 , accident and health \$ 99,824 and deposit-type contract funds \$	17,756,221	9,625,510
11. Commissions and expense allowances payable on reinsurance assumed	3,109,174	3,320,775
12. General expenses due or accrued	984,416,883	1,048,795,743
13. Transfers to Separate Accounts due or accrued (net) (including \$ (55,826,166) accrued for expense allowances recognized in reserves, net of reinsured allowances)	(73,340,450)	(65,765,348)
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	178,503,920	84,906,665
15.1 Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 Net deferred tax liability		
16. Unearned investment income	206,655,142	135,905,616
17. Amounts withheld or retained by reporting entity as agent or trustee	9,161,702	12,835,742
18. Amounts held for agents' account, including \$ agents' credit balances	462,288,966	426,661,742
19. Remittances and items not allocated	2,224,331,972	1,705,616,370
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above	265,680,875	246,654,418
22. Borrowed money \$ 484,461,933 and interest thereon \$ 14,460,925	498,922,858	49,925,247
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	6,719,814,790	5,989,190,148
24.02 Reinsurance in unauthorized and certified (\$) companies	116,067	27,834
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers	2,063,601,615	2,529,465,283
24.04 Payable to parent, subsidiaries and affiliates	64,765,463	50,720,306
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance	26,032,277,031	19,990,769,251
24.08 Derivatives	13,659,843,117	13,734,130,858
24.09 Payable for securities	889,559,878	117,816,919
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	8,397,239,916	7,807,955,363
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	262,759,173,660	243,534,717,089
27. From Separate Accounts Statement	51,503,053,747	52,454,718,896
28. Total liabilities (Lines 26 and 27)	314,262,227,407	295,989,435,985
29. Common capital stock		
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds		
32. Surplus notes	4,824,204,012	4,876,802,621
33. Gross paid in and contributed surplus		
34. Aggregate write-ins for special surplus funds	1,270,105,959	1,114,804,018
35. Unassigned funds (surplus)	22,328,975,614	22,885,054,353
36. Less treasury stock, at cost:		
36.1 shares common (value included in Line 29 \$)		
36.2 shares preferred (value included in Line 30 \$)		
37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ 145,498,211 in Separate Accounts Statement)	28,423,285,585	28,876,660,992
38. Totals of Lines 29, 30 and 37	28,423,285,585	28,876,660,992
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	342,685,512,992	324,866,096,978
DETAILS OF WRITE-INS		
2501. Repurchase agreements	3,675,267,309	3,227,108,863
2502. Derivative accrued interest	3,046,298,458	2,386,752,991
2503. Derivative collateral	1,513,972,345	2,072,571,263
2598. Summary of remaining write-ins for Line 25 from overflow page	161,701,804	121,522,246
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	8,397,239,916	7,807,955,363
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page		
3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)		
3401. Admitted disallowed interest maintenance reserve	1,266,855,959	1,111,554,018
3402. Designated surplus for group annuities	2,500,000	2,500,000
3403. Designated surplus for separate account business	750,000	750,000
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)	1,270,105,959	1,114,804,018

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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	16,494,211,846	16,312,104,197	25,461,467,176
2. Considerations for supplementary contracts with life contingencies	21,067,453	17,144,852	28,424,802
3. Net investment income	8,064,320,997	7,745,471,476	11,091,015,806
4. Amortization of Interest Maintenance Reserve (IMR)	(87,035,457)	(36,489,941)	(50,968,196)
5. Separate Accounts net gain from operations excluding unrealized gains or losses	1,931,388	1,843,470	3,015,196
6. Commissions and expense allowances on reinsurance ceded	481,270,297	333,467,749	488,791,083
7. Reserve adjustments on reinsurance ceded	4,210,102	(3,422,879)	(13,490,977)
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	180,123,121	178,419,217	220,739,651
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	289,322,321	221,901,528	331,833,055
9. Totals (Lines 1 to 8.3)	25,449,422,069	24,770,439,669	37,560,827,597
10. Death benefits	1,807,549,625	1,980,611,145	2,526,241,831
11. Matured endowments (excluding guaranteed annual pure endowments)	9,531,211	6,004,617	8,982,646
12. Annuity benefits	2,278,263,450	1,962,674,554	2,695,482,871
13. Disability benefits and benefits under accident and health contracts	281,530,581	275,612,046	371,189,947
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	7,925,782,593	9,155,488,647	11,142,698,595
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	555,943,878	424,698,712	569,644,551
18. Payments on supplementary contracts with life contingencies	19,087,593	19,264,410	25,575,546
19. Increase in aggregate reserves for life and accident and health contracts	8,595,381,584	6,669,717,256	13,871,643,209
20. Totals (Lines 10 to 19)	21,473,070,516	20,494,071,388	31,211,459,196
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	1,051,821,341	966,914,418	1,374,686,112
22. Commissions and expense allowances on reinsurance assumed	34,708,573	36,535,402	48,294,050
23. General insurance expenses and fraternal expenses	1,733,131,919	1,702,623,439	2,360,845,734
24. Insurance taxes, licenses and fees, excluding federal income taxes	263,895,598	246,721,473	329,009,616
25. Increase in loading on deferred and uncollected premiums	(27,044,580)	(16,759,735)	29,347,609
26. Net transfers to or (from) Separate Accounts net of reinsurance	(1,477,940,845)	(1,085,715,117)	(1,598,760,115)
27. Aggregate write-ins for deductions	701,930,465	898,766,844	1,094,400,862
28. Totals (Lines 20 to 27)	23,753,572,987	23,243,158,112	34,849,283,063
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	1,695,849,082	1,527,281,557	2,711,544,533
30. Dividends to policyholders and refunds to members	1,553,631,619	1,408,263,141	2,131,090,746
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	142,217,464	119,018,416	580,453,788
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	(26,253,276)	132,925,991	115,966,921
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)	168,470,740	(13,907,575)	464,486,867
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ (105,546,263) (excluding taxes of \$ (41,202,802) transferred to the IMR)	(635,894,695)	(387,231,342)	(489,729,328)
35. Net income (Line 33 plus Line 34)	(467,423,955)	(401,138,917)	(25,242,461)
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	28,876,660,992	27,941,058,515	27,941,058,515
37. Net income (Line 35)	(467,423,955)	(401,138,917)	(25,242,461)
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ 48,758,675	659,576,816	374,131,198	8,465,308
39. Change in net unrealized foreign exchange capital gain (loss)	299,456,844	(27,489,383)	375,952,061
40. Change in net deferred income tax	147,915,603	284,580,660	462,403,744
41. Change in nonadmitted assets	137,170,576	532,658,270	364,943,115
42. Change in liability for reinsurance in unauthorized and certified companies	(88,233)	35,342	82,068
43. Change in reserve on account of change in valuation basis, (increase) or decrease	(186,900)		
44. Change in asset valuation reserve	(730,624,642)	181,128,515	(314,845,291)
45. Change in treasury stock			
46. Surplus (contributed to) withdrawn from Separate Accounts during period			
47. Other changes in surplus in Separate Accounts Statement	5,653,442	(802,946)	4,600,052
48. Change in surplus notes	(52,598,609)	(25,000,000)	(149,159,227)
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			
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	(452,226,350)	169,846,992	208,403,108
54. Net change in capital and surplus for the year (Lines 37 through 53)	(453,375,407)	1,087,949,730	935,602,477
55. Capital and surplus, as of statement date (Lines 36 + 54)	28,423,285,585	29,029,008,245	28,876,660,992
DETAILS OF WRITE-INS			
08.301. Change in corporate owned life insurance asset	179,273,319	123,364,472	216,660,794
08.302. Experience refunds on reinsurance contracts	72,082,351	65,016,484	86,980,575
08.303. Management and administrative fees	67,511,341	46,731,380	59,835,188
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	(29,544,691)	(13,210,808)	(31,643,502)
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	289,322,321	221,901,528	331,833,055
2701. Ceded income on funds withheld	818,597,211	800,071,538	985,400,386
2702. Change in liability for employee/agent benefit plans	73,819,541	41,521,626	88,714,201
2703. Reinsurance ceded adjustment	(168,743,311)	88,570,511	44,856,953
2798. Summary of remaining write-ins for Line 27 from overflow page	(21,742,976)	(31,396,830)	(24,570,678)
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	701,930,465	898,766,844	1,094,400,862
5301. Other changes in surplus	(288,010,080)	81,276,481	170,832,314
5302. Deferred gain on reinsurance ceded	(168,743,311)	88,570,511	44,856,953
5303. Change in minimum pension liability	4,527,041		(7,286,158)
5398. Summary of remaining write-ins for Line 53 from overflow page			
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	(452,226,350)	169,846,992	208,403,108

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual 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	17,379,274,857	16,635,022,385	25,363,484,358
2. Net investment income	7,957,877,072	8,916,746,126	12,269,139,053
3. Miscellaneous income	898,658,334	712,640,337	1,054,601,777
4. Total (Lines 1 to 3)	26,235,810,263	26,264,408,848	38,687,225,188
5. Benefit and loss related payments	12,703,691,245	13,663,004,372	17,076,611,316
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(1,470,365,742)	(1,096,085,891)	(1,610,775,196)
7. Commissions, expenses paid and aggregate write-ins for deductions	3,561,944,310	3,743,969,158	5,208,228,387
8. Dividends paid to policyholders	1,461,198,320	1,315,073,193	1,907,965,269
9. Federal and foreign income taxes paid (recovered) net of \$ 13,170,479 tax on capital gains (losses)	(3,222,812)	(36,338,723)	(57,654,551)
10. Total (Lines 5 through 9)	16,253,245,321	17,589,622,109	22,524,375,225
11. Net cash from operations (Line 4 minus Line 10)	9,982,564,942	8,674,786,739	16,162,849,963
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	29,047,085,498	17,485,032,897	23,801,327,958
12.2 Stocks	278,220,413	203,109,383	395,298,083
12.3 Mortgage loans	2,588,414,731	2,446,042,290	3,621,286,255
12.4 Real estate	(2,459,999)	5,288,624	4,988,624
12.5 Other invested assets	953,358,381	1,214,017,971	1,830,189,125
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	2,172,978	(260,845,314)	(388,147,108)
12.7 Miscellaneous proceeds	(853,930,156)	(993,363,454)	(344,426,899)
12.8 Total investment proceeds (Lines 12.1 to 12.7)	32,012,861,846	20,099,282,397	28,920,516,038
13. Cost of investments acquired (long-term only):			
13.1 Bonds	46,471,400,269	22,373,872,350	32,278,452,167
13.2 Stocks	846,871,964	513,585,750	572,212,803
13.3 Mortgage loans	2,860,840,865	1,743,958,752	2,895,795,779
13.4 Real estate	1,407,076	5,517,374	8,066,745
13.5 Other invested assets	2,206,619,010	2,047,985,897	2,988,354,735
13.6 Miscellaneous applications	(1,055,480,906)	(115,684,370)	(154,474,332)
13.7 Total investments acquired (Lines 13.1 to 13.6)	51,331,658,278	26,569,235,753	38,588,407,897
14. Net increase (or decrease) in contract loans and premium notes	1,401,989,135	(1,632,226,693)	(1,157,907,322)
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(20,720,785,567)	(4,837,726,663)	(8,509,984,537)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	(50,000,000)	(25,000,000)	(150,000,000)
16.2 Capital and paid in surplus, less treasury stock			
16.3 Borrowed funds	448,140,794	(199,294,917)	(199,308,011)
16.4 Net deposits on deposit-type contracts and other insurance liabilities	1,377,228,439	837,192,209	1,237,555,120
16.5 Dividends to stockholders			
16.6 Other cash provided (applied)	4,793,735,067	(3,111,497,959)	(2,975,083,742)
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	6,569,104,300	(2,498,600,667)	(2,086,836,633)
RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18. Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)	(4,169,116,325)	1,338,459,409	5,566,028,793
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	11,134,092,248	5,568,063,455	5,568,063,455
19.2 End of period (Line 18 plus Line 19.1)	6,964,975,923	6,906,522,864	11,134,092,248

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

20.0001. Stock conversions	4,081,806,721	182,662,118	202,079,934
20.0002. Bond conversions and refinancing	1,353,994,009	472,334,943	1,460,001,947
20.0003. Change in market value of corporate owned life insurance asset	179,838,514	123,880,840	217,357,562
20.0004. Transfer of mortgage loans to partnerships and limited liability companies	135,000,035	51,000	51,000
20.0005. Transfer of affiliated common stocks to partnerships and limited liability companies	76,775,683		
20.0006. Transfer of mortgage loans to bonds	63,411,612	2,801,548	132,143,002
20.0007. Net investment income payment-in-kind bonds	27,615,675	11,344,206	14,051,555
20.0008. Transfer of mortgage loans to mortgage loans	17,018,141		
20.0009. Transfer of partnerships and limited liability companies to stocks	88,108	524,136	2,569,232

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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

20.0010. Short-term investments transferred to bonds	44,704		
20.0011. Transfer of partnerships and limited liability companies to partnerships and limited liability companies		80,856,035	277,380,541
20.0012. Bonds transferred to partnerships and limited liability companies			121,797,363
20.0013. Transfer of partnerships and limited liability companies to bonds			99,952,756
20.0014. Transfer of mortgage loans to short-term investments			59,966,220
20.0015. Accrued discount on mortgage loans			9,652,778
20.0016. Transfer of stocks to partnerships and limited liability companies			37,671,997
20.0017. Transfer of bonds to partnerships and limited liability companies		121,797,363	

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. Individual life	7,321,817,103	7,203,367,654	10,603,566,024
2. Group life	159,375,587	175,691,687	227,192,193
3. Individual annuities	12,103,532,546	9,053,872,145	15,537,144,158
4. Group annuities	5,928,240,626	4,776,420,021	7,049,547,820
5. Accident & health	589,500,549	580,944,835	777,260,267
6. Fraternal			
7. Other lines of business			
8. Subtotal (Lines 1 through 7)	26,102,466,411	21,790,296,342	34,194,710,461
9. Deposit-type contracts	5,298,036,271	4,583,161,802	5,547,846,885
10. Total (Lines 8 and 9)	31,400,502,681	26,373,458,144	39,742,557,346

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NOTES TO FINANCIAL STATEMENTS

Note 1 – Summary of Significant Accounting Policies and Going Concern

a. Accounting practices:

The accompanying financial statements of Massachusetts Mutual Life Insurance Company (the Company) have been prepared in conformity with the Statutory Accounting Practices (SAP) of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the Commonwealth of Massachusetts Division of Insurance (the Division).

A reconciliation of the Company's net income and capital and surplus between NAIC SAP and practices prescribed and permitted by the Commonwealth of Massachusetts is shown below:

	SSAP #	F/S Page	F/S Line #	2024	2023
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 3)	XXX	XXX	XXX	\$ (467,423,955)	\$ (25,242,461)
State prescribed practices that increase/(decrease) NAIC					
(2) SAP:	N/A	N/A	N/A	-	-
State permitted practices that increase/(decrease) NAIC					
(3) SAP:	N/A	N/A	N/A	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$ <u>(467,423,955)</u>	\$ <u>(25,242,461)</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 28,423,285,585	\$ 28,876,660,992
State prescribed practices that increase/(decrease) NAIC					
(6) SAP:	N/A	N/A	N/A	-	-
State permitted practices that increase/(decrease) NAIC					
(7) SAP:	N/A	N/A	N/A	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$ <u>28,423,285,585</u>	\$ <u>28,876,660,992</u>

b. Use of estimates in the preparation of the financial statements - No change

c. Accounting policy:

(1) No change

- (2) Bonds are generally valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds, which are in or near default, and certain residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers, which are carried at the lower of amortized cost or fair value. NAIC ratings are applied to bonds and other securities. Categories 1 and 2 are considered investment grade, while Categories 3 through 6 are considered below investment grade. Bond transactions are recorded on a trade date basis, except for private placement bonds, which are recorded on the funding date.

The fair value of bonds is based on quoted market prices when available. If quoted market prices are not available, values provided by other third-party organizations are used. If values provided by other third-party organizations are unavailable, fair value is estimated using internal models by discounting expected future cash flows using observable current market rates applicable to yield, credit quality and maturity of the investment or using quoted market values for comparable investments. Internal inputs used in the determination of fair value include estimated prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and cash flow priority are also considered. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants.

(3-5) No change

- (6) For loan-backed and structured securities, such as asset-backed securities, mortgage-backed securities, including RMBS and CMBS, and structured securities, including collateralized debt obligations, amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies.

Certain fixed income securities with the highest ratings from a rating agency follow the retrospective method of accounting. Under the retrospective method, the recalculated effective yield equates the present value of the actual and anticipated cash flows, including new prepayment assumptions, to the original cost of the investment. Prepayment assumptions are based on borrower constraints and economic incentives such as the original term, age and coupon of the loan as affected by the interest rate environment. The current carrying value is then increased or decreased to the amount that would have resulted had the revised yield been applied since inception, and investment income is correspondingly decreased or increased.

All other fixed income securities, such as floating rate bonds and interest only securities, including those that have been impaired, follow the prospective method of accounting. Under the prospective method, the recalculated future effective yield equates the carrying value of the investment to the present value of the anticipated future cash flows.

(7-14) No change

d. Going concern:

There is not substantial doubt regarding the Company's ability to continue as a going concern.

NOTES TO FINANCIAL STATEMENTS

Note 2 – Accounting Changes and Corrections of Errors

- a. For the nine months ended September 30, 2024, corrections of prior years' errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		
	Prior Years' Net Income	Current Year Surplus	Asset or Liability Balances
Investment income due and accrued	\$ (122,557,096)	\$ (122,557,096)	\$ (122,557,096)
Other Liabilities	(84,438,293)	(84,438,293)	84,438,293
Bonds	(77,858,263)	(77,858,263)	(77,858,263)
Common stocks	(789,348)	(789,348)	(789,348)
Cash, cash equivalents and short-term investments	15,639,645	15,639,645	15,639,645
Policyholders' reserves	(15,206,010)	(15,206,010)	(15,206,010)
Partnerships and limited liability companies	(2,803,108)	(2,803,108)	(2,803,108)
Mortgage loans	316,572	316,572	316,572
Total	<u>\$ (287,695,901)</u>	<u>\$ (287,695,901)</u>	

Of the \$287,695,901 decrease to surplus for prior years' errors, \$287,695,901 was recorded as prior period adjustments, net of taxes.

For the nine months ended September 30, 2023, corrections of prior years' errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		
	Prior Years' Net Income	Current Year Surplus	Asset or Liability Balances
Common stocks	\$ 18,807,902	\$ 18,807,902	\$ 18,807,902
Partnerships and LLCs	14,367,337	14,367,337	14,367,337
Derivative assets		(124,676,448)	(124,676,448)
Investment income due and accrued	229,821,618	229,821,618	229,821,618
Policyholders' reserves	(142,463,040)	(142,463,040)	142,463,040
Derivative liabilities		7,106,192	(7,106,192)
Other Liabilities	(2,165,017)	(2,165,017)	2,165,017
Total	<u>\$ 118,368,800</u>	<u>\$ 798,544</u>	

Of the \$798,544 increase to surplus for prior years' errors, \$118,368,800 was recorded as prior period adjustments and \$117,570,256 was recorded as a change in net unrealized capital gains (losses), net of taxes.

b. Adoption of new accounting standards

In August 2023, the NAIC adopted INT 23-01T — Disallowed IMR (“INT 23-01T”). INT 23-01T provides optional, limited-term guidance for the assessment of disallowed IMR for up to 10% of adjusted general account capital and surplus. An insurer's capital and surplus must first be adjusted to exclude certain “soft assets” including net positive goodwill, electronic data processing equipment and operating system software, net deferred tax assets and admitted disallowed IMR. An insurer will only be able to admit the negative IMR if the insurer's risk-based capital is over 300% authorized control level after adjusting to remove the assets described above.

As adopted, negative IMR may be admitted first in the insurer's general account and then, if all disallowed IMR in the general account is admitted and the percentage limit is not reached, to the separate account proportionately between insulated and noninsulated accounts. If the insurer can demonstrate historical practice in which acquired gains from derivatives were also reversed to IMR (as liabilities) and amortized, there is no exclusion for derivatives losses. INT 23-01T was adopted by the Company as of September 30, 2023 and will be effective through December 31, 2025. To the extent the Company's IMR balance is a net negative, the effects of INT 23-01T will be reflected in the Company's financial position, results of operations, and financial statement disclosures. The Company has adopted this guidance and the adoption resulted in an admitted disallowed IMR of \$1,111,554,018 for the Company.

In March 2023, the NAIC adopted modifications to SSAP No. 34 – Investment Income Due and Accrued, effective December 31, 2023. The modifications require additional disclosures and data capture related to gross, non-admitted and admitted amounts for interest income due and accrued, deferred interest, and paid-in-kind (PIK) interest. In August 2023, the NAIC adopted revisions to further clarify the PIK interest disclosure in SSAP No. 34, effective December 31, 2023. The revisions clarify that decreasing amounts to principal balances are first applied to any PIK interest included in the principal balance. The original principal would not be reduced until the PIK interest had been fully eliminated from the balance. The revisions also provide a practical expedient for determining the PIK interest in the cumulative balance by subtracting the original principal/ par value from the current principal/ par value, with the resulting PIK interest not to go less than zero. The modifications did not have a material effect on the Company's financial statements.

In December 2023, the NAIC adopted revisions, effective January 1, 2024, to avoid allocating realized gains or losses from bond sales to IMR when sold before a rating downgrade. Revisions were also made to avoid allocating realized gains or losses from mortgage loan sales when there is a credit loss allowance, but payments are not 90 days past due. Revisions were also made to update guidance on changes in credit ratings used to allocate credit or interest rate related gains or losses, requiring identification of realized losses from acute credit events to be allocated to AVR. The modifications did not have a material effect on the Company's impact of PIK in relation to the financial statements.

In March 2024, the NAIC adopted revisions to the requirements of audit and admissibility in SSAP No. 97 – Investments in Subsidiary, Controlled and Affiliated Entities, effective March 16, 2024, to better align with the guidance on the look-through methodology. The revisions allow for admitting audited investments in entities owned by unaudited downstream noninsurance holding company SCA entity. The modifications did not have a material effect on the Company's financial statements.

In August 2023, the NAIC adopted revisions to clarify and incorporate a new bond definition within disclosures SSAP No. 26 – Bonds, SSAP No. 43 – Asset-Backed Securities, and other related SSAPs, which will become effective January 1, 2025. The revisions were issued in connection with its principle-based bond definition project, “the Bond Project”.

The Bond Project began in October 2020 through the development of a principle-based bond definition to be used for all securities in determining whether they qualify for reporting on the statutory annual statement Schedule D. Within the new bond definition, bonds are classified as an “issuer credit obligation” or an “asset-backed security.”

NOTES TO FINANCIAL STATEMENTS

An “issuer credit obligation” is defined as a bond where repayment is supported by the general creditworthiness of an operating entity, and an “asset-backed security” is defined as a bond issued by an entity created for the primary purpose of raising capital through debt backed by financial assets. The revisions to SSAP No. 26 reflect the principle-based bond definition, and SSAP No. 43 provides accounting and reporting guidance for investments that qualify as asset-backed securities under the new bond definition. Upon adoption, investments that do not qualify as bonds will not be permitted to be reported as bonds on Schedule D, Part 1 thereafter as there will be no grandfathering for existing investments that do not qualify under the revised SSAPs. The Company is currently assessing the impacts of the adopted SSAP No. 26, SSAP No. 43 and other related SSAPs in relation to the financial statements.

In March 2024, the NAIC adopted revisions to SSAP No. 21R - Other Admitted Assets, effective January 1, 2025, clarifying that residuals follow the effective yield approach with a cap and providing an election for the cost recovery method. The modifications are not expected to have a material effect on the Company’s financial statements.

Effective January 1, 2025, revisions will be made to short-term investments, which include excluding additional investment types from being reported as cash equivalents or short-term investments regardless of maturity date of the investment at the date of acquisition. Investments will be eliminated from being reported as cash equivalents or short-term investments unless they would qualify under SSAP No. 26R—Bonds as an issuer credit obligation. Such investments will then only qualify as a cash equivalent or short-term investment if they have a maturity date within 3-months (cash equivalents) or 12-months (short-term) from the date of acquisition or meet the specifics requirements for money market mutual funds or cash pooling arrangement.

The NAIC adopted revisions to various SSAPs at the Spring National Meeting for investments in tax credits and acquired tax credits in response to the comments received, as well as updated annual statement reporting categories for tax credit investment risk-based capital. These revisions are in addition to the previous ones, which include broad criteria to scope in various tax credit programs, including solar programs and state specific programs. Proportional amortization will be the measurement approach as with existing LIHTC, which means recording amortization of the investment in the partnership through net investment income and use of the tax credits in the appropriate tax line. The adopted revisions will be effective on January 1, 2025. The Company is assessing the potential impact on the Company’s financial statements.

Note 3 – Business Combinations and Goodwill - No change

Note 4 – Discontinued Operations - No change

Note 5 – Investments

a. Mortgage loans, including mezzanine real estate loans

- (1) No change
- (2) No change
- (3) No change
- (4) No change
- (5) Investment in impaired loans with or without allowance for credit losses and impaired loans subject to a participant or co-lender mortgage loan agreement for which the reporting entity is restricted from unilaterally foreclosing on the mortgage loan:

	Residential			Commercial		Mezzanine	Total
	Farm	Insured	All Other	Insured	All Other		
a. 2024							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	53,012,095	\$ -	53,012,095
2. No allowance for credit losses	-	-	-	-	477,000,322	-	477,000,322
3. Total (1+2)	-	-	-	-	530,012,417	-	530,012,417
4. Subject to a participant or co-lender mortgage loan agreement for which the reporting entity is restricted from unilaterally foreclosing on the mortgage loan	-	-	-	-	-	-	-
b. 2023							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
2. No allowance for credit losses	-	-	-	-	-	-	-
3. Total (1+2)	-	-	-	-	-	-	-
4. Subject to a participant or co-lender mortgage loan agreement for which the reporting entity is restricted from unilaterally foreclosing on the mortgage loan	-	-	-	-	-	-	-

NOTES TO FINANCIAL STATEMENTS

- (6) Investment in impaired loans - average recorded investment, interest income recognized, recorded investment on nonaccrual status and amount of interest income recognized using a cash-basis method of accounting:

	Residential			Commercial		Mezzanine	Total
	Farm	Insured	All Other	Insured	All Other		
a. 2024							
1. Average recorded investment	\$ -	\$ -	\$ -	\$ -	\$ 562,083,758	\$ -	\$ 562,083,758
2. Interest income recognized	-	-	-	-	1,570,727	-	1,570,727
3. Recorded investment on nonaccrual status	-	-	-	-	136,360,066	-	136,360,066
4. Amount of interest income recognized using a cash-basis method of accounting	-	-	-	-	-	-	-
b. 2023							
1. Average recorded investment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Interest income recognized	-	-	-	-	-	-	-
3. Recorded investment on nonaccrual status	-	-	-	-	-	-	-
4. Amount of interest income recognized using a cash-basis method of accounting	-	-	-	-	-	-	-

	September 30, 2024	December 31, 2023
(7) Allowance for credit losses:		
a. Balance at beginning of period	\$ (157,357,251)	\$ -
b. Additions charged to operations	(74,968,622)	(170,932,775)
c. Direct write-downs charged against the allowances	(215,981,580)	789,452
d. Recoveries of amounts previously charged off	215,981,580	12,786,072
e. Balance at end of period	<u>\$ (232,325,873)</u>	<u>\$ (157,357,251)</u>

- (8) As of September 30, 2024, the Company did not have any mortgage loans derecognized as a result of foreclosure.

b. Debt restructuring - No change

c. Reverse mortgages - No change

d. Loan-backed securities:

- (1) Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.

- (2) The following contains loan-backed and structured securities that recognized other-than-temporary impairments (OTTI) classified on the following bases for recognizing OTTI:

NOTES TO FINANCIAL STATEMENTS

	(1)	(2)		(3)
	Amortized Cost Basis Before OTTI	OTTI Recognized in Loss		Fair Value 1-(2a+2b)
		(2a)	(2b)	
		Interest	Non-interest	
OTTI recognized in the first quarter				
a. Intent to sell	\$	-	\$	-
b. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>36,924,401</u>	<u>-</u>	<u>2,945,206</u>	<u>33,979,195</u>
c. Total first quarter	<u>\$ 36,924,401</u>	<u>\$ -</u>	<u>\$ 2,945,206</u>	<u>\$ 33,979,195</u>
OTTI recognized in the second quarter				
d. Intent to sell	\$	-	\$	-
e. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>54,957,279</u>	<u>-</u>	<u>5,923,757</u>	<u>49,033,522</u>
f. Total second quarter	<u>\$ 54,957,279</u>	<u>\$ -</u>	<u>\$ 5,923,757</u>	<u>\$ 49,033,522</u>
OTTI recognized in the third quarter				
g. Intent to sell	\$	-	\$	-
h. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>9,854,964</u>	<u>-</u>	<u>1,221,655</u>	<u>8,633,309</u>
i. Total third quarter	<u>\$ 9,854,964</u>	<u>\$ -</u>	<u>\$ 1,221,655</u>	<u>\$ 8,633,309</u>
OTTI recognized in the fourth quarter				
j. Intent to sell	\$	-	\$	-
k. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
l. Total fourth quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
m. Annual aggregate total		<u>\$ -</u>	<u>\$ 10,090,618</u>	

All impairments were taken due to the present value of cash flows expected to be collected being less than the amortized cost basis.

NOTES TO FINANCIAL STATEMENTS

- (3) The following is a CUSIP detail list of impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis:

CUSIP	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
12624SAE9	\$ 2,480,393	\$ 56,686	\$ (2,423,708)	\$ 56,686	\$ 241,500	March 31, 2024
040104RV5	1,372,644	1,353,068	(19,576)	1,353,068	1,287,522	March 31, 2024
040104TF8	40,362	39,469	(893)	39,469	32,106	March 31, 2024
040104TG6	408,732	408,732	-	408,732	415,551	March 31, 2024
04012XAC9	124,521	124,515	(6)	124,515	106,576	March 31, 2024
12479DAC2	1,571,594	1,571,482	(112)	1,571,482	1,282,896	March 31, 2024
1248MGAJ3	39,783	39,439	(344)	39,439	33,515	March 31, 2024
17311YAC7	1,170,871	1,116,200	(54,671)	1,116,200	1,101,339	March 31, 2024
30247DAD3	510,622	505,931	(4,691)	505,931	473,455	March 31, 2024
35729RAE6	3,439,174	3,413,826	(25,349)	3,413,826	3,125,685	March 31, 2024
46629NAC7	31,443	31,252	(191)	31,252	25,667	March 31, 2024
46630KAA4	144,821	144,182	(639)	144,182	141,222	March 31, 2024
617463AA2	8,108	7,554	(554)	7,554	6,470	March 31, 2024
61749BAB9	58,393	58,386	(7)	58,386	62,224	March 31, 2024
61750FAE0	377,655	367,352	(10,303)	367,352	338,847	March 31, 2024
61750MAB1	3,228	2,932	(296)	2,932	2,831	March 31, 2024
617526AE8	161,089	160,981	(108)	160,981	184,441	March 31, 2024
61757MAB4	2,216,577	2,159,573	(57,003)	2,159,573	1,598,436	March 31, 2024
86359DXD4	149,656	142,761	(6,896)	142,761	149,311	March 31, 2024
93934XAB9	117,534	116,301	(1,233)	116,301	115,601	March 31, 2024
05535DAN4	508,829	467,091	(41,737)	467,091	482,546	March 31, 2024
07387AFX8	46,064	46,059	(5)	46,059	48,686	March 31, 2024
12667GKG7	41,516	40,855	(661)	40,855	41,704	March 31, 2024
12669E6K7	203,472	170,046	(33,427)	170,046	211,716	March 31, 2024
17025RAA3	216,726	186,092	(30,634)	186,092	236,121	March 31, 2024
18974BAA7	125,342	120,261	(5,081)	120,261	120,791	March 31, 2024
18974BAN9	63,192	59,615	(3,577)	59,615	63,277	March 31, 2024
22540VG71	33,573	33,122	(450)	33,122	33,174	March 31, 2024
22943HAD8	3,148,442	3,060,640	(87,802)	3,060,640	1,848,458	March 31, 2024
23321P6A1	1,123,431	1,114,640	(8,791)	1,114,640	1,207,067	March 31, 2024
251513AQ0	38,189	38,155	(35)	38,155	36,248	March 31, 2024
32053LAA0	17,947	17,219	(728)	17,219	15,858	March 31, 2024
45254TRX4	54,912	53,392	(1,520)	53,392	52,178	March 31, 2024
466247XE8	516,447	508,389	(8,059)	508,389	461,123	March 31, 2024
589929X29	311,818	309,770	(2,049)	309,770	315,074	March 31, 2024
61915RBZ8	160,029	160,028	(1)	160,028	139,745	March 31, 2024
65535VRK6	438,977	425,951	(13,026)	425,951	439,052	March 31, 2024
761118RJ9	72,483	70,209	(2,274)	70,209	59,726	March 31, 2024
86358HHX0	148,713	94,224	(54,489)	94,224	73,108	March 31, 2024
92978EAA2	73,009	73,005	(5)	73,005	69,366	March 31, 2024
23332UCM4	18,388	18,314	(74)	18,314	17,838	March 31, 2024
86360UAF3	894,861	894,830	(31)	894,830	697,974	March 31, 2024
92922FWU8	342,798	338,495	(4,303)	338,495	331,458	March 31, 2024
05949CCB0	27,131	27,127	(5)	27,127	28,180	March 31, 2024
12669GTE1	4,186	3,956	(230)	3,956	3,825	March 31, 2024
32051DCJ9	26,983	26,968	(15)	26,968	26,248	March 31, 2024
362341VU0	1,271,263	1,269,383	(1,881)	1,269,383	1,176,122	March 31, 2024
576433NH5	286,355	253,071	(33,284)	253,071	199,571	March 31, 2024
57645LAA2	9,040,600	9,037,867	(2,733)	9,037,867	10,546,925	March 31, 2024
86359DMC8	3,241,522	3,239,802	(1,720)	3,239,802	3,536,527	March 31, 2024
00256DAB8	2,293,480	1,123,558	(1,169,923)	1,123,558	1,133,931	June 30, 2024
62878HAA9	22,229,665	19,330,143	(2,899,522)	19,330,143	10,631,579	June 30, 2024
46639YAX5	4,840,606	4,356,606	(484,000)	4,356,606	2,182,538	June 30, 2024
040104RV5	1,374,485	1,317,092	(57,393)	1,317,092	1,289,098	June 30, 2024
040104TF8	40,063	38,577	(1,486)	38,577	31,948	June 30, 2024
04012XAC9	125,717	121,053	(4,664)	121,053	109,385	June 30, 2024
12479DAC2	1,568,478	1,507,516	(60,962)	1,507,516	1,260,108	June 30, 2024
1248MGAJ3	39,339	36,493	(2,846)	36,493	31,938	June 30, 2024
17311YAC7	1,130,510	1,068,361	(62,149)	1,068,361	1,058,184	June 30, 2024
24763LFY1	79,137	56,898	(22,239)	56,898	80,148	June 30, 2024

NOTES TO FINANCIAL STATEMENTS

30247DAD3	503,737	488,694	(15,043)	488,694	456,193	June 30, 2024
40431KAE0	1,951,281	1,905,908	(45,373)	1,905,908	1,943,159	June 30, 2024
46629NAC7	31,407	30,431	(976)	30,431	25,499	June 30, 2024
46630KAA4	143,450	141,586	(1,864)	141,586	140,735	June 30, 2024
617463AA2	7,597	7,322	(275)	7,322	6,323	June 30, 2024
61750FAE0	369,653	350,312	(19,340)	350,312	329,593	June 30, 2024
61750MAB1	2,958	2,835	(123)	2,835	2,781	June 30, 2024
61755AAB2	2,454	2,359	(94)	2,359	2,428	June 30, 2024
86359DXD4	142,667	137,350	(5,317)	137,350	145,141	June 30, 2024
86363HAB8	32,111	31,169	(942)	31,169	26,424	June 30, 2024
92926SAB2	392	351	(41)	351	364	June 30, 2024
93934XAB9	115,953	101,026	(14,926)	101,026	112,047	June 30, 2024
05535DAN4	445,322	440,021	(5,302)	440,021	485,938	June 30, 2024
18974BAA7	118,366	118,173	(192)	118,173	118,788	June 30, 2024
22540VG71	32,306	32,221	(85)	32,221	32,311	June 30, 2024
22541NUB3	121,803	119,790	(2,012)	119,790	55,976	June 30, 2024
22943HAD8	3,037,380	2,969,818	(67,562)	2,969,818	1,824,526	June 30, 2024
251510FB4	991,980	977,715	(14,265)	977,715	949,619	June 30, 2024
251513AQ0	38,093	37,966	(127)	37,966	35,832	June 30, 2024
32053LAA0	16,926	16,894	(32)	16,894	15,685	June 30, 2024
45254TRX4	52,515	52,231	(284)	52,231	50,916	June 30, 2024
45660LW96	660,160	653,133	(7,027)	653,133	545,339	June 30, 2024
45660LYW3	681,953	671,658	(10,294)	671,658	610,731	June 30, 2024
75115DAH8	3,134	2,919	(215)	2,919	2,655	June 30, 2024
761118FM5	1,360,921	1,317,414	(43,507)	1,317,414	1,331,404	June 30, 2024
761118RJ9	68,124	66,151	(1,974)	66,151	57,214	June 30, 2024
86358HHX0	135,467	88,953	(46,513)	88,953	71,879	June 30, 2024
86359BLQ2	646,438	619,933	(26,504)	619,933	466,829	June 30, 2024
92925VAM2	129,124	81,086	(48,038)	81,086	122,377	June 30, 2024
45660N5H4	1,036,870	974,290	(62,580)	974,290	1,002,198	June 30, 2024
61915RBB1	1,435,288	1,426,876	(8,411)	1,426,876	1,296,802	June 30, 2024
92922FWU8	335,190	333,498	(1,691)	333,498	328,225	June 30, 2024
17309FAE8	60,256	53,623	(6,633)	53,623	69,177	June 30, 2024
32051DCJ9	24,293	24,274	(19)	24,274	23,660	June 30, 2024
362334CN2	7,052	7,052	-	7,052	6,749	June 30, 2024
362341VU0	1,258,267	1,249,922	(8,345)	1,249,922	1,118,645	June 30, 2024
36298XAB8	4,703,619	4,033,800	(669,819)	4,033,800	4,079,741	June 30, 2024
466247UG6	103,056	101,640	(1,415)	101,640	101,176	June 30, 2024
59024WAB3	106,858	90,598	(16,259)	90,598	112,505	June 30, 2024
86359DME4	321,381	316,230	(5,151)	316,230	314,754	June 30, 2024
12624SAE9	283,581	107,645	(175,936)	107,645	124,189	September 30, 2024
040104RV5	1,316,794	1,183,932	(132,862)	1,183,932	1,356,076	September 30, 2024
040104TF8	38,801	34,441	(4,360)	34,441	32,572	September 30, 2024
040104TG6	427,234	339,199	(88,035)	339,199	421,680	September 30, 2024
04012XAC9	122,612	118,150	(4,462)	118,150	113,225	September 30, 2024
05535DCF9	1,602,815	1,326,621	(276,194)	1,326,621	1,789,110	September 30, 2024
17311YAC7	1,083,765	1,024,522	(59,243)	1,024,522	1,075,634	September 30, 2024
30247DAD3	485,685	469,281	(16,404)	469,281	463,552	September 30, 2024
61750FAE0	350,661	324,286	(26,375)	324,286	337,048	September 30, 2024
86359DXD4	137,432	130,525	(6,907)	130,525	143,263	September 30, 2024
86363HAB8	31,160	30,449	(712)	30,449	26,908	September 30, 2024
22540VG71	30,645	29,526	(1,119)	29,526	31,167	September 30, 2024
22541NUB3	113,852	80,381	(33,472)	80,381	68,940	September 30, 2024
22943HAD8	2,950,342	2,566,001	(384,341)	2,566,001	1,826,541	September 30, 2024
32053LAA0	16,437	15,758	(679)	15,758	15,625	September 30, 2024
45660LW96	648,430	648,386	(44)	648,386	562,907	September 30, 2024
761118RJ9	65,906	59,640	(6,266)	59,640	57,523	September 30, 2024
85554NAG5	47,438	44,025	(3,413)	44,025	41,374	September 30, 2024
466247UG6	101,373	100,540	(833)	100,540	102,039	September 30, 2024
Totals	\$ 101,736,643	\$ 91,646,025	\$ (10,090,618)	\$ 91,646,025	\$ 78,065,449	

NOTES TO FINANCIAL STATEMENTS

- (4) As of the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:
- a. The aggregate amount of unrealized losses:
 1. Less than 12 months \$ (78,365,596)
 2. 12 months or longer \$ (8,521,109,514)
 - b. The aggregate related fair value of securities with unrealized losses:
 1. Less than 12 months \$ 5,293,221,075
 2. 12 months or longer \$ 66,478,260,746

(5) No change

e. Dollar repurchase agreements and/or securities lending transactions: The Company did not have any dollar repurchase agreements and/or securities lending transactions as of September 30, 2024.

f. Repurchase agreements transactions accounted for as secured borrowing:

- (1) The Company has entered into repurchase agreements whereby the Company sells securities and simultaneously agrees to repurchase the same or substantially the same securities. These repurchase agreements are accounted for as collateralized borrowings with the proceeds from the sale of the securities recorded as a liability and the underlying securities continue to be recorded as an investment by the Company. Earnings on these investments are recorded as investment income and the difference between the proceeds and the amount at which the securities will be subsequently reacquired is amortized as interest expense. Repurchase agreements are used as a tool for overall portfolio management to help ensure the Company maintains adequate assets in order to provide yield, spread and duration to support liabilities and other corporate needs.

The Company provides collateral, as dictated by the repurchase agreements, to the counterparty in exchange for a loan. If the fair value of the securities sold becomes less than the loan, the counterparty may require additional collateral.

The carrying value, which is at cost, reported in the Company's liabilities as repurchase agreements approximates the fair value.

(2) Type of Repo Trades Used

	1 FIRST QUARTER	2 SECOND QUARTER	3 THIRD QUARTER	4 FOURTH QUARTER
a. Bilateral (YES/NO)	YES	YES	YES	-
b. Tri-Party (YES/NO)	NO	NO	NO	-

(3) Original (Flow) & Residual Maturity

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Open – No Maturity	-	-	-	-
2. Overnight	-	-	-	-
3. 2 Days to 1 Week	-	-	-	-
4. > 1 Week to 1 Month	\$ -	\$ 178,446,691	\$ 2,096,005,418	\$ -
5. > 1 Month to 3 Months	\$ 2,382,988,153	\$ 2,710,746,039	\$ 3,561,791,424	\$ -
6. > 3 Months to 1 Year	\$ 2,325,343,052	\$ 2,712,188,652	\$ 721,723,051	\$ -
7. > 1 Year	-	-	358,606,706	-

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
b. Ending Balance				
1. Open – No Maturity	-	-	-	-
2. Overnight	-	-	-	-
3. 2 Days to 1 Week	-	-	-	-
4. > 1 Week to 1 Month	\$ -	\$ 178,446,691	\$ 1,358,802,358	\$ -
5. > 1 Month to 3 Months	\$ 1,140,986,312	\$ 2,537,435,882	\$ 2,311,338,769	\$ -
6. > 3 Months to 1 Year	\$ 2,325,343,052	\$ 721,723,051	\$ -	\$ -
7. > 1 Year	-	-	-	-

(4) The company did not have any repurchase agreements where securities sold and/or acquired resulted in default as of September 30, 2024.

(5) Securities "Sold" Under Repo – Secured Borrowing

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. BACV	XXX	XXX	XXX	-
2. Nonadmitted - Subset of BACV	XXX	XXX	XXX	-
3. Fair Value	\$ 4,472,923,705	\$ 3,531,842,401	\$ 3,710,093,474	\$ -

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
b. Ending Balance				
1. BACV	\$ 3,466,329,364	\$ 3,798,934,779	\$ 3,816,489,640	\$ -
2. Nonadmitted - Subset of BACV	-	-	-	-
3. Fair Value	\$ 3,466,329,364	\$ 3,448,720,967	\$ 3,671,474,329	\$ -

NOTES TO FINANCIAL STATEMENTS

(6) Securities Sold Under Repo – Secured Borrowing by NAIC Designation

ENDING BALANCE		1	2	3	4
		NONE	NAIC 1	NAIC 2	NAIC 3
a.	Bonds - BACV	\$ -	\$ 3,798,934,779	\$ 3,816,489,640	\$ -
b.	Bonds - FV	-	3,448,720,967	3,671,474,329	-
c.	LB & SS - BACV	-	-	-	-
d.	LB & SS - FV	-	-	-	-
e.	Preferred Stock - BACV	-	-	-	-
f.	Preferred Stock - FV	-	-	-	-
g.	Common Stock	-	-	-	-
h.	Mortgage Loans - BACV	-	-	-	-
i.	Mortgage Loans - FV	-	-	-	-
j.	Real Estate - BACV	-	-	-	-
k.	Real Estate - FV	-	-	-	-
l.	Derivatives - BACV	-	-	-	-
m.	Derivatives - FV	-	-	-	-
n.	Other Invested Assets - BACV	-	-	-	-
o.	Other Invested Assets - FV	-	-	-	-
p.	Total Assets - BACV	-	3,798,934,779	3,816,489,640	-
q.	Total Assets - FV	\$ -	\$ 3,448,720,967	\$ 3,671,474,329	\$ -

ENDING BALANCE		5	6	7	8
		NAIC 4	NAIC 5	NAIC 6	NON-ADMITTED
a.	Bonds - BACV	\$ -	\$ -	\$ -	\$ -
b.	Bonds - FV	-	-	-	-
c.	LB & SS - BACV	-	-	-	-
d.	LB & SS - FV	-	-	-	-
e.	Preferred Stock - BACV	-	-	-	-
f.	Preferred Stock - FV	-	-	-	-
g.	Common Stock	-	-	-	-
h.	Mortgage Loans - BACV	-	-	-	-
i.	Mortgage Loans - FV	-	-	-	-
j.	Real Estate - BACV	-	-	-	-
k.	Real Estate - FV	-	-	-	-
l.	Derivatives - BACV	-	-	-	-
m.	Derivatives - FV	-	-	-	-
n.	Other Invested Assets - BACV	-	-	-	-
o.	Other Invested Assets - FV	-	-	-	-
p.	Total Assets - BACV	-	-	-	-
q.	Total Assets - FV	\$ -	\$ -	\$ -	\$ -

$$p = a + c + e + g + h + j + l + n$$

$$q = b + d + f + g + i + k + m + o$$

(7) Collateral Received - Secured Borrowing

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Cash	\$ 96,364,243	\$ 3,741,407,591	\$ 5,657,612,842	\$ -
2. Securities (FV)	\$ 3,530,096,326	\$ 13,994,825	\$ 13,005,109	\$ -
b. Ending Balance				
1. Cash	\$ 15,773,000	\$ 3,431,143,624	\$ 3,622,499,959	\$ -
2. Securities (FV)	\$ 3,486,745,172	\$ -	\$ -	\$ -

(8) Cash & Non-Cash Collateral Received – Secured Borrowing by NAIC Designation

ENDING BALANCE		1	2	3	4
		NONE	NAIC 1	NAIC 2	NAIC 3
a.	Cash	\$ 3,622,499,959	\$ -	\$ -	\$ -
b.	Bonds - FV	-	-	-	-
c.	LB & SS - FV	-	-	-	-
d.	Preferred Stock - FV	-	-	-	-
e.	Common Stock	-	-	-	-
f.	Mortgage Loans - FV	-	-	-	-
g.	Real Estate - FV	-	-	-	-
h.	Derivatives - FV	-	-	-	-
i.	Other Invested Assets - FV	-	-	-	-
j.	Total Collateral Assets - FV (Sum of a through i)	\$ 3,622,499,959	\$ -	\$ -	\$ -

ENDING BALANCE		5	6	7	8
		NAIC 4	NAIC 5	NAIC 6	DOES NOT QUALIFY AS ADMITTED
a.	Cash	\$ -	\$ -	\$ -	\$ -
b.	Bonds - FV	-	-	-	-
c.	LB & SS - FV	-	-	-	-
d.	Preferred Stock - FV	-	-	-	-
e.	Common Stock	-	-	-	-
f.	Mortgage Loans - FV	-	-	-	-
g.	Real Estate - FV	-	-	-	-
h.	Derivatives - FV	-	-	-	-
i.	Other Invested Assets - FV	-	-	-	-
j.	Total Collateral Assets - FV (Sum of a through i)	\$ -	\$ -	\$ -	\$ -

(9) Allocation of Aggregate Collateral by Remaining Contractual Maturity

	FAIR VALUE
a. Overnight and Continuous	\$ -
b. 30 Days or Less	\$ 789,231,747
c. 31 to 90 Days	\$ 2,164,200,933
d. > 90 Days	\$ 213,437,180

NOTES TO FINANCIAL STATEMENTS

(10) Allocation of Aggregate Collateral Reinvested by Remaining Contractual Maturity

	Amortized Cost	Fair Value
a. 30 Days or Less	\$ -	\$ -
b. 31 to 60 Days	\$ -	\$ -
c. 61 to 90 Days	\$ -	\$ -
d. 91 to 120 Days	\$ -	\$ -
e. 121 to 180 Days	\$ -	\$ -
f. 181 to 365 Days	\$ -	\$ -
g. 1 to 2 Years	\$ -	\$ -
h. 2 to 3 Years	\$ 1,142,133,621	\$ 1,182,586,168
i. > 3 Years	\$ 2,674,356,019	\$ 2,467,167,739

To help manage the mismatch of maturity dates between the security lending transactions and the related reinvestment of the collateral received, the Company invests in highly liquid assets.

(11) Liability to Return Collateral – Secured Borrowing (Total)

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Cash (Collateral – All)	\$ 96,364,243	\$ 3,741,407,591	\$ 5,657,612,842	\$ -
2. Securities Collateral (FV)	\$ 3,530,096,326	\$ 13,994,825	\$ 13,005,109	\$ -
b. Ending Balance				
1. Cash (Collateral – All)	\$ 15,773,000	\$ 3,431,143,624	\$ 3,622,499,959	\$ -
2. Securities Collateral (FV)	\$ 3,486,745,172	\$ -	\$ -	\$ -

- g. Reverse repurchase agreements transactions accounted for as secured borrowing: The Company did not have any reverse repurchase agreements transactions accounted for as secured borrowing as of September 30, 2024.
- h. Repurchase agreements transactions accounted for as a sale: The Company did not have any repurchase agreements transactions accounted for as a sale as of September 30, 2024.
- i. Reverse repurchase agreements transactions accounted for as a sale: The Company did not have any reverse repurchase agreements transactions accounted for as a sale as of September 30, 2024.
- j. Real estate - No change
- k. Low-income housing tax credit - No change
- l. Restricted assets - No change
- m. Working capital finance investments: The Company did not invest in working capital finance investments as of September 30, 2024.
- n. Offsetting and netting of assets and liabilities: The Company reports derivative and repurchase agreement assets and liabilities as gross in the financial statements without offsetting as of September 30, 2024.
- o. 5GI Securities:

Investment	Number of 5* Securities		Aggregate BACV		Aggregate Fair Value	
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
(1) Bonds - AC	252	245	\$1,382,443,920	\$1,458,100,411	\$1,383,818,286	\$1,430,083,571
(2) LB&SS - AC	-	-	-	-	-	-
(3) Preferred Stock - AC	-	3	-	515,696	-	9,465,952
(4) Preferred Stock - FV	2	1	588,783	10,833	588,783	10,833
(5) Total (1+2+3+4)	254	249	\$1,383,032,703	\$1,458,626,940	\$1,384,407,069	\$1,439,560,356

AC - Amortized Cost FV - Fair Value

- p. Short sales - The Company does not engage in short sale transactions.
- q. Prepayment penalty and acceleration fees:

	Nine Months Ended September 30, 2024	
	General Account	Separate Account
1. Number of CUSIPS	32	2
2. Aggregate amount of investment income	\$ 11,759,302	\$ 18,952

- r. Reporting entity's share of cash pool by asset type - The Company does not have cash in a qualified cash pool.

Note 6 – Joint Ventures, Partnerships and Limited Liability Companies - No change

Note 7 – Investment Income – No change

Note 8 – Derivative Instruments

- a. The Company did not have any deferred derivative premium payments under SSAP No. 86.
- b. The Company did not account for any derivatives under SSAP No. 108.

Note 9 – Income Taxes – No change

NOTES TO FINANCIAL STATEMENTS

Note 10 – Information Concerning Parent, Subsidiaries and Affiliates

a-c. MassMutual Holding LLC (MMHLLC) paid \$784,500,000 in dividends to MassMutual for the nine months ended September 30, 2024, \$630,000,000 which were declared in 2023, and paid \$730,000,000 in dividends to MassMutual for the nine months ended September 30, 2023, \$450,000,000 which were declared in 2022.

MassMutual contributed capital of \$9,175,168 to MMHLLC for the nine months ended September 30, 2024, and \$104,163,527 for the nine months ended September 30, 2023.

d-f. No change

g. Subsidiaries of MMHLLC are involved in litigation and investigations arising in the ordinary course of their business, which seek compensatory damages, punitive damages and equitable remedies. Although the Company is not aware of any actions or allegations that reasonably could give rise to a material adverse impact to the Company's financial position or liquidity, the outcome of litigation cannot be foreseen with certainty. It is the opinion of management that the ultimate resolution of these matters will not materially impact the Company's financial position or liquidity. However, the outcome of a particular proceeding may be material to the Company's surplus for a particular period depending upon, among other factors, the size of the loss and the level of the Company's changes in surplus for the period.

The Company has no parent.

h-o. No change

Note 11 – Debt

a. No change

b. Federal Home Loan Bank agreements:

(1) The Company is a member of the Federal Home Loan Bank of Boston (FHLB Boston). Through its membership, the Company has conducted business activity (borrowings) with the FHLB Boston. The Company uses these funding agreements with the FHLB Boston in an investment spread strategy, consistent with its other investment spread operations. MassMutual's borrowing capacity with FHLB Boston is subject to the lower of the limitation on the pledge of collateral for a loan set forth by law or by MassMutual's internal limit. The Company's unused capacity was \$3,891,774,236 as of September 30, 2024.

(2) FHLB Boston capital stock

a. Aggregate totals:

		September 30, 2024		
		1 Total 2+3	2 General Account	3 Separate Account
1. Current Year:				
(a) Membership stock - Class A	\$	-	\$	-
(b) Membership stock - Class B		5,000,000	5,000,000	-
(c) Activity Stock		84,000,000	84,000,000	-
(d) Excess Stock		2,670,000	2,670,000	-
(e) Aggregate Total		\$ 91,670,000	\$ 91,670,000	\$ -
(f) Actual or Estimated Borrowing Capacity as Determined by the Insurer	\$	6,000,000,000	\$ 6,000,000,000	\$ -
2. Prior Year-end:				
(a) Membership stock - Class A	\$	-	\$	-
(b) Membership stock - Class B		5,000,000	5,000,000	-
(c) Activity Stock		84,000,000	84,000,000	-
(d) Excess Stock		2,670,000	2,670,000	-
(e) Aggregate Total		\$ 91,670,000	\$ 91,670,000	\$ -
(f) Actual or Estimated Borrowing Capacity as determined by the Insurer	\$	6,000,000,000	\$ 6,000,000,000	\$ -

b. Membership Stock (Class A and B) Eligible and Not Eligible for Redemption:

		Nine Months Ended September 30, 2024				
Membership Stock	1 Current Year Total	2 Not Eligible for Redemption	Eligible for Redemption			
			3 Less Than 6 Months	4 6 Months to Less Than 1 Year	5 1 to Less Than 3 Years	6 3 to 5 Years
1. Class A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Class B	5,000,000	5,000,000	-	-	-	-

NOTES TO FINANCIAL STATEMENTS

(3) Collateral pledged to FHLB:

a. Amount pledged as of September 30, 2024:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 5,491,147,299	\$ 3,687,468,562	\$ 2,108,225,764

2. Current year general account:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 5,491,147,299	\$ 3,687,468,562	\$ 2,108,225,764

3. Current year separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ -	\$ -	\$ -

4. Prior year-end total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 4,059,897,795	\$ 2,944,246,829	\$ 2,110,775,244

b. Maximum amount pledged for the nine months ended September 30, 2024:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 5,491,147,299	\$ 3,687,468,562	\$ 2,108,225,764

2. Current year general account:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 5,491,147,299	\$ 3,687,468,562	\$ 2,108,225,764

3. Current year separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ -	\$ -	\$ -

4. Prior year-end total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 4,059,897,795	\$ 2,944,246,829	\$ 2,110,775,244

NOTES TO FINANCIAL STATEMENTS

(4) Borrowing from FHLB:

a. Amount:

1. Current year:

	September 30, 2024			
	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	2,108,225,764	2,108,225,764	-	2,108,225,764
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 2,108,225,764</u>	<u>\$ 2,108,225,764</u>	<u>\$ -</u>	<u>\$ 2,108,225,764</u>

2. Prior Year-end:

	December 31, 2023			
	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	2,110,775,244	2,110,775,244	-	2,110,775,244
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 2,110,775,244</u>	<u>\$ 2,110,775,244</u>	<u>\$ -</u>	<u>\$ 2,110,775,244</u>

b. Maximum Amount:

	Nine Months Ended September 30, 2024		
	1 Total 2+3	2 General Account	3 Separate Account
1. Debt	\$ -	\$ -	\$ -
2. Funding	2,114,002,744	2,114,002,744	-
3. Other	-	-	-
4. Aggregate	<u>\$ 2,114,002,744</u>	<u>\$ 2,114,002,744</u>	<u>\$ -</u>

c. FHLB - Prepayment Obligations:

	Does the company have prepayment obligations under the following arrangements (YES/NO)?
1. Debt	N/A
2. Funding agreements	NO
3. Other	N/A

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

a. Defined Benefit Plan:

(1) The Company sponsors multiple employee benefit plans, providing retirement, life, health and other benefits to employees, certain employees of unconsolidated subsidiaries, agents, general agents and retirees who meet plan eligibility requirements.

(2-3) No change

(4) Components of net periodic benefit cost/(benefit)

	Nine Months Ended September 30,					
	2024	2023	2024	2023	2024	2023
			Pension Benefits	Postretirement Benefits	Special or Contractual Benefits per SSAP No 11	
a. Service cost	\$ 73,880,636	\$ 64,869,194	\$ 5,550,000	\$ 5,850,000	\$ -	\$ -
b. Interest cost	92,233,289	93,658,036	11,100,000	11,625,000	-	-
c. Expected return on plan assets	(128,186,045)	(126,407,339)	(75,000)	-	-	-
d. Transition asset or obligation	-	-	-	-	-	-
e. Gains and losses	14,328,717	19,988,924	(5,700,000)	(6,525,000)	-	-
f. Prior service cost or (benefit)	-	-	(4,125,000)	(4,125,000)	-	-
g. Settlement and Curtailment	-	-	-	-	-	-
h. Total net periodic benefit cost/(benefit)	<u>\$ 52,256,597</u>	<u>\$ 52,108,815</u>	<u>\$ 6,750,000</u>	<u>\$ 6,825,000</u>	<u>\$ -</u>	<u>\$ -</u>

(5-21) No change

b-i. No change

NOTES TO FINANCIAL STATEMENTS

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

(a-c) No change

d. The Company is a mutual company, and as such does not pay stockholders' dividends.

(e-m) No change

Note 14 – Liabilities, Contingencies and Assessments

a. Contingent commitments - No change

b. Assessments - No change

c. Gain contingencies - No change

d. Claims related to extra contractual obligations - No change

e. Joint and several liabilities - No change

f. All other contingencies:

In the normal course of business, the Company is involved in disputes, litigation and governmental or regulatory inquiries, administrative proceedings, examinations and investigations, both pending and threatened. These matters, if resolved adversely against the Company or settled, may result in monetary damages, fines and penalties or require changes in the Company's business practices. The resolution or settlement of these matters is inherently difficult to predict. Based upon the Company's assessment of these pending matters, the Company does not believe that the amount of any judgment, settlement or other action arising from any pending matter is likely to have a material adverse effect on the statement of financial position. However, an adverse outcome in certain matters could have a material adverse effect on the results of operations for the period in which such matter is resolved, or an accrual is determined to be required, on the financial statement financial position, or on our reputation.

The Company evaluates the need for accruals of loss contingencies for each matter. When a liability for a matter is probable and can be estimated, the Company accrues an estimate of the loss and any related insurance recoveries, if any. An accrual is subject to subsequent adjustment as a result of additional information and other developments. The resolution of matters are inherently difficult to predict, especially in the early stages of matter. Even if a loss is probable, due to many complex factors, such as speed of discovery and the timing of court decisions or rulings, a loss or range of loss may not be reasonably estimated until the later stages of the matter. For matters where a loss is material and it is either probable or reasonably possible then it is disclosed. For matters where a loss may be reasonably possible, but not probable, or is probable but not reasonably estimated, no accrual is established, but the matter, if material, is disclosed.

Note 15 – Leases - No change

Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With Concentrations of Credit Risk - No change

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

a. Transfers of receivables reported as sales - No change

b. Transfer and servicing of financial assets:

(1) No change

(2) The Company did not have any servicing assets or liabilities in 2024 or 2023.

(3) No change

(4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2024 or 2023.

(5-7) No change

c. Wash sales:

(1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio.

(2) The Company did not sell any securities with the NAIC Designation 3 or below, or unrated, through the nine months ended September 30, 2024 that were reacquired within 30 days of the sale date.

Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans - No change

Note 19 – Direct Premium Written/Produced by Managing General Agents/Third Party Administrators - No change

Note 20 – Fair Value Measurements

a. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The authoritative guidance around fair value establishes a measurement framework that includes a hierarchy used to classify the inputs used in measuring fair value. The hierarchy prioritizes the inputs to valuation techniques into three levels. Each level reflects a unique description of the inputs that are significant to the fair value measurements. The levels of the fair value hierarchy are as follows:

Level 1 – Observable inputs in the form of quoted prices for identical instruments in active markets.

Level 2 – Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be derived from observable market data for substantially the full term of the assets or liabilities.

Level 3 – One or more unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using internal models, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

When available, the Company generally uses unadjusted quoted market prices from independent sources to determine the fair value of investments, and classifies such items within Level 1 of the fair value hierarchy. If quoted prices are not available, prices are derived from observable market data for similar assets in an active market or obtained directly from brokers for identical assets traded

NOTES TO FINANCIAL STATEMENTS

in inactive markets. Investments that are priced using these inputs are classified within Level 2 of the fair value hierarchy. When some of the necessary observable inputs are unavailable, fair value is based upon internally developed models. These models use inputs not directly observable or correlated with observable market data. Typical inputs, which are integrated in the Company's internal discounted cash flow models and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings and benchmark yields such as the LIBOR, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

The Company has established and maintains policies and guidelines that govern its valuation methodologies and their consistent application. These policies and guidelines address the use of inputs, price source hierarchies and provide controls around the valuation processes. These controls include appropriate review and analysis of prices against market activity or indicators for reasonableness, approval of price source changes, price overrides, methodology changes and classification of fair value hierarchy levels. The valuation policies and guidelines are reviewed and updated as appropriate.

Annually, the Company reviews the primary pricing vendor to validate that the inputs used in that vendor's pricing process are deemed to be market observable as defined above. While the Company was not provided access to proprietary models of the vendor, the reviews have included on-site walk-throughs of the pricing process, methodologies and control procedures for each asset class and level for which prices are provided. The review also included an examination of the underlying inputs and assumptions for a sample of individual securities across asset classes. In addition, the Company and its pricing vendors have an established challenge process in place for all security valuations, which facilitates identification and resolution of prices that fall outside expected ranges. The Company believes that the prices received from the pricing vendors are representative of prices that would be received to sell the assets at the applicable measurement date (exit prices) and are classified appropriately in the hierarchy.

The fair value of group annuity contracts and other deposits is determined by multiplying the book value of the contract by an average market value adjustment factor. The market value adjustment factor is directly related to the difference between the book value of client liabilities and the present value of installment payments discounted at current market value yields. The market value yield is measured by the Bloomberg Barclays Global-Aggregate Total Return Index, subject to certain adjustments, and the installment period is equivalent to the duration of the Company's invested asset portfolio.

The fair value of individual annuity and supplementary contracts is determined using one of several methods based on the specific contract type. For short-term contracts, generally less than 30 days, the fair value is assumed to be the book value. For contracts with longer durations, guaranteed interest contracts and investment-type contracts, the fair value is determined by calculating the present value of future cash flows discounted at current market interest rates, the risk-free rate or a current pricing yield curve based on pricing assumptions using assets of a comparable corporate bond quality. Annuities receiving dividends are accumulated at the average minimum guaranteed rate and discounted at the risk-free rate. All others are valued using cash flow projections from the Company's asset-liability management analysis.

- (1) The following presents the Company's fair value hierarchy for assets and liabilities that are carried at fair value:

	September 30, 2024				
	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Financial assets:					
Bonds:					
Special revenue	\$ -	\$ 1,356,500	\$ -	\$ -	\$ 1,356,500
Industrial and miscellaneous	725,827,797	97,236,280	278,905,582	-	1,101,969,659
Parent, subsidiaries and affiliates	-	64,665,306	-	-	64,665,306
Preferred stocks	38,821,298	-	53,321,595	-	92,142,893
Common stock - subsidiaries and affiliates	360,909,369	-	278,477,577	-	639,386,946
Common stock - unaffiliated	850,304,955	86,320	1,348,652,869	-	2,199,044,144
Derivatives:					
Interest rate swaps	-	16,768,672,691	-	-	16,768,672,691
Options	72,992,220	486,484,471	-	-	559,476,691
Currency swaps	-	2,734,272,357	-	-	2,734,272,357
Forward contracts	-	24,287,283	-	-	24,287,283
Credit default swaps	-	237,199	-	-	237,199
Financial futures	156,098	-	-	-	156,098
Separate account assets	34,538,787,322	15,198,353,481	1,911,411,165	-	51,648,551,968
Total financial assets carried at fair value	\$ 36,587,799,059	\$ 35,375,651,888	\$ 3,870,768,788	\$ -	\$ 75,834,219,735
Financial liabilities:					
Derivatives:					
Interest rate swaps	\$ -	\$ 11,437,868,524	\$ -	\$ -	\$ 11,437,868,524
Options	40,923,600	-	-	-	40,923,600
Currency swaps	-	277,396,535	-	-	277,396,535
Forward contracts	-	314,347,011	-	-	314,347,011
Credit default swaps	-	176,090,088	-	-	176,090,088
Financial futures	12,082,331	-	-	-	12,082,331
Total financial liabilities carried at fair value	\$ 53,005,931	\$ 12,205,702,158	\$ -	\$ -	\$ 12,258,708,089

The Company reviews the fair value hierarchy classifications each reporting period. Changes in the observability of the valuation attributes and the level of market activity may result in a reclassification of certain financial assets or liabilities between fair value hierarchy classifications. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. For the period ended September 30, 2024, there were derivative transfers between Level 2 and Level 1 for options and futures are priced using quoted marks. The Company does not have any financial instruments that were carried at NAV as a practical expedient.

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December 31, 2023

	Net Asset Value				
	Level 1	Level 2	Level 3	(NAV)	Total
Financial assets:					
Bonds:					
Special revenue	\$ -	\$ 1,625,000	\$ -	\$ -	\$ 1,625,000
Industrial and miscellaneous	65,619,796	106,530,638	172,798,693	-	344,949,127
Preferred stocks	23,636,537	-	63,220,969	-	86,857,506
Common stock - subsidiaries and affiliates	253,126,070	-	176,712,760	-	429,838,830
Common stock - unaffiliated	665,751,670	172,640	957,222,112	-	1,623,146,422
Derivatives:					
Interest rate swaps	-	17,286,618,451	-	-	17,286,618,451
Options	68,242,170	478,755,608	-	-	546,997,778
Currency swaps	-	2,830,582,548	-	-	2,830,582,548
Forward contracts	-	13,364,595	-	-	13,364,595
Financial futures	56,233,659	-	-	-	56,233,659
Separate account assets	35,001,336,084	15,677,052,707	1,914,243,493	-	52,592,632,284
Total financial assets carried at fair value	\$ 36,133,945,986	\$ 36,394,702,187	\$ 3,284,198,027	\$ -	\$ 75,812,846,200
Financial liabilities:					
Derivatives:					
Interest rate swaps	\$ -	\$ 11,922,119,773	\$ -	\$ -	\$ 11,922,119,773
Options	34,677,920	-	-	-	34,677,920
Currency swaps	-	192,207,043	-	-	192,207,043
Forward contracts	-	301,363,142	-	-	301,363,142
Credit default swaps	-	152,553,361	-	-	152,553,361
Financial futures	28,907,894	-	-	-	28,907,894
Total financial liabilities carried at fair value	\$ 63,585,814	\$ 12,568,243,319	\$ -	\$ -	\$ 12,631,829,133

(2) The following presents changes in the Company's Level 3 financial instruments that are carried at fair value:

	Balance as of	Transfers ⁽¹⁾		Gains (Losses) in	Gains (Losses) in	Purchases	Issuances	Sales	Settlements	Balance as of
	01/01/2024	In	Out	Net Income	Surplus					09/30/2024
Financial assets:										
Bonds:										
Industrial and miscellaneous	\$ 172,798,693	\$ 170,926,948	\$ -	\$ (47,927,230)	\$ (18,292,526)	\$ 2,468,671	\$ 3,359,411	\$ -	\$ (4,428,385)	\$ 278,905,582
Preferred stock	63,220,969	-	(16,439,950)	-	6,153,579	386,997	-	-	-	53,321,595
Common stock - subsidiaries and affiliates	176,712,760	277,479,258	(155,598,031)	-	12,804,072	-	33,121,994	-	(66,042,476)	278,477,577
Common stock - unaffiliated	957,222,112	17,336,501	-	9,650,469	107,802,131	256,414,627	27,900,101	(12,171,141)	(15,501,931)	1,348,652,869
Derivatives:										
Separate account assets	1,914,243,493	-	-	102,263,209	-	21,637,789	-	(123,555,576)	(3,177,750)	1,911,411,165
Total financial assets	\$ 3,284,198,027	\$ 465,742,707	\$ (172,037,981)	\$ 63,986,448	\$ 108,467,256	\$ 280,908,084	\$ 64,381,506	\$ (135,726,717)	\$ (89,150,542)	\$ 3,870,768,788

⁽¹⁾ Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis. Industrial and miscellaneous bonds in other transfers are assets that are no longer carried at fair value.

	Balance as of	Transfers ⁽¹⁾		Gains (Losses) in	Gains (Losses) in	Purchases	Issuances	Sales	Settlements	Balance as of
	01/1/2023	In	Out	Net Income	Surplus					12/31/2023
Financial assets:										
Bonds:										
Industrial and miscellaneous	\$ 219,761,776	\$ (56,000,000)	\$ (121,103)	\$ (3,729,207)	\$ (9,956,830)	\$ 36,482,618	\$ 1,347,806	\$ (1,819,171)	\$ (13,167,196)	\$ 172,798,693
Preferred Stock	47,089,392	-	2,054,843	-	10,906,421	3,170,313	-	-	-	63,220,969
Common stock - subsidiaries and affiliates	349,974,519	41,989,788	-	7,380,701	(216,078,636)	20,878,489	19,909,460	(47,341,561)	-	176,712,760
Common stock - unaffiliated	970,144,486	(2,951,710)	(263,306)	23,691,674	(52,678,881)	60,314,806	25,557,065	(28,418,953)	(38,173,069)	957,222,112
Separate account assets	1,693,225,223	-	-	271,216,596	-	133,567,480	-	(181,768,565)	(1,997,241)	1,914,243,493
Total financial assets	\$ 3,280,195,396	\$ (16,961,922)	\$ 1,670,434	\$ 298,559,764	\$ (267,807,926)	\$ 254,413,706	\$ 46,814,331	\$ (259,348,250)	\$ (53,337,506)	\$ 3,284,198,027

⁽¹⁾ Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis. The common stock unaffiliated assets were transferred from Level 2 to Level 3 due to a change in the observability of pricing inputs.

(3) The Company reviews the fair value hierarchy classifications at each reporting period. Overall, reclassifications between levels occur when there are changes in the observability of inputs and market activity used in the valuation of a financial asset or liability. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. Given the types of assets classified as Level 1 (primarily equity securities and mutual fund investments), transfers between Level 1 and Level 2 measurement categories are expected to be infrequent. Transfers into and out of Level 3 are summarized in the schedule of changes in Level 3 assets and liabilities.

(4) Valuation Techniques and Inputs

The Company determines the fair value of its investments using primarily the market approach or the income approach. The use of quoted prices for identical assets and matrix pricing or other similar techniques are examples of market approaches, while the use of discounted cash flow methodologies is an example of the income approach. The Company attempts to maximize the use of observable inputs and minimize the use of unobservable inputs in selecting whether the market or the

NOTES TO FINANCIAL STATEMENTS

income approach is used.

A description of the significant valuation techniques and inputs to the determination of estimated fair value for the more significant asset and liability classes measured at fair value on a recurring basis and categorized within Level 2 and Level 3 of the fair value hierarchy is as follows:

Separate account assets - These assets primarily include bonds (industrial and miscellaneous; U.S. government and agencies) and derivatives. Their fair values are determined as follows:

Bonds (Industrial and miscellaneous) - These securities are principally valued using the market or the income approaches. Level 2 valuations are based primarily on quoted prices in markets that are not active, broker quotes, matrix pricing or other similar techniques that use standard market observable inputs such as benchmark yields, spreads versus benchmark yields, new issuances, issuer ratings, duration, and trades of identical or comparable securities. Privately placed securities are valued using discounted cash flow models using standard market observable inputs, and inputs derived from, or corroborated by, market observable data including market yield curve, duration, call provisions, observable prices and spreads for similar publicly traded or privately traded issuances that incorporate the credit quality and industry sector of the issuer. This level also includes securities priced by independent pricing services that use observable inputs. Valuations based on matrix pricing or other similar techniques that utilize significant unobservable inputs or inputs that cannot be derived principally from, or corroborated by, observable market data, including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit-related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

Bonds (U.S. government and agencies) - These securities are principally valued using the market approach. Level 2 valuations are based primarily on quoted prices in markets that are not active, or using matrix pricing or other similar techniques using standard market observable inputs such as the benchmark U.S. Treasury yield curve, the spreads versus the U.S. Treasury yield curve for the identical security and comparable securities that are actively traded.

Derivative assets and liabilities - These financial instruments are primarily valued using the market approach. The estimated fair value of derivatives is based primarily on quotations obtained from counterparties and independent sources, such as quoted market values received from brokers. These quotations are compared to internally derived prices and a price challenge is lodged with the counterparties and an independent source when a significant difference cannot be explained by appropriate adjustments to the internal model. When quoted market values are not reliable or available, the value is based upon an internal valuation process using market observable inputs that other market participants would use. Significant inputs to the valuation of derivative financial instruments include overnight index swaps and LIBOR basis curves, interest rate volatility, swap yield curve, currency spot rates, cross currency basis curves and dividend yields. Due to the observability of the significant inputs to these fair value measurements, they are classified as Level 2.

The use of different assumptions or valuation methodologies may have a material impact on the estimated fair value amounts. For the periods presented, there were no significant changes to the Company's valuation techniques.

- (5) Derivative assets and liabilities fair value disclosures on a gross basis are included in paragraph 1 above. Since there are no derivative assets or liabilities classified in Level 3, the reconciliation disclosures required under paragraphs 2 through 4 are not applicable.

- b. The Company provides additional fair value information in Note 21, "Other Items".

NOTES TO FINANCIAL STATEMENTS

c. The following presents a summary of the carrying values and fair values of the Company's financial instruments:

	September 30, 2024					Net	Not
	Aggregate	Admitted				Asset	Practicable
	Fair Value	Assets	Level 1	Level 2	Level 3	Value	(Carrying
						(NAV)	Value)
Financial assets:							
Bonds:							
U. S. government and agencies	\$ 5,032,244,294	\$ 5,342,375,145	-	\$ 5,032,244,294	-	-	-
All other governments	870,727,809	996,940,409	-	862,338,409	8,389,400	-	-
States, territories and possessions	160,246,133	163,517,691	-	160,246,133	-	-	-
Political subdivisions	320,409,562	317,558,340	-	320,409,562	-	-	-
Special revenue	3,900,906,265	3,849,030,538	-	3,862,781,432	38,124,833	-	-
Industrial and miscellaneous	134,091,873,074	140,092,439,623	726,693,555	68,116,400,215	65,248,779,304	-	-
Parent, subsidiaries and affiliates	12,487,736,854	12,682,155,078	-	3,115,640,672	9,372,096,182	-	-
Preferred stocks	613,748,125	584,868,150	182,971,856	93,441,635	337,334,634	-	-
Common stocks - subsidiaries and affiliates ⁽¹⁾	639,386,946	639,386,946	360,909,369	-	278,477,577	-	-
Common stocks - unaffiliated	2,199,044,144	2,199,044,144	850,304,955	86,320	1,348,652,869	-	-
Mortgage loans - commercial	16,798,419,581	18,008,626,945	-	-	16,798,419,581	-	-
Mortgage loans - residential	6,017,418,126	6,100,020,464	-	-	6,017,418,126	-	-
Cash, cash equivalents and short-term investments	6,964,975,923	6,964,975,923	824,333,481	6,140,642,442	-	-	-
Derivatives:							
Interest rate swaps	11,807,906,778	16,773,573,089	-	11,807,906,778	-	-	-
Options	559,476,691	559,476,691	72,992,220	486,484,471	-	-	-
Currency swaps	2,735,673,247	2,736,081,740	-	2,735,673,247	-	-	-
Forward contracts	24,287,283	23,612,512	-	24,287,283	-	-	-
Credit default swaps	825,442	717,120	-	825,442	-	-	-
Financial futures	156,098	156,098	156,098	-	-	-	-
Separate account assets	51,648,551,959	51,648,551,959	34,538,787,322	15,198,353,481	1,911,411,165	-	-
Financial liabilities:							
Repurchase agreements	3,670,141,127	3,670,141,127	-	3,670,141,127	-	-	-
Debt	498,922,859	498,922,859	-	498,922,859	-	-	-
Guaranteed interest contracts	17,667,828,621	18,068,969,148	-	-	17,667,828,621	-	-
Group annuity contracts and other deposits	1,712,136,915	1,816,841,598	-	-	1,712,136,915	-	-
Individual annuity contracts	30,410,172,770	29,384,685,349	-	-	30,410,172,770	-	-
Supplementary contracts	860,092,671	859,320,274	-	-	860,092,671	-	-
Derivatives:							
Interest rate swaps	11,704,265,904	11,437,868,524	-	11,704,265,904	-	-	-
Options	40,923,600	40,923,600	40,923,600	-	-	-	-
Currency swaps	1,358,395,784	1,678,531,563	-	1,358,395,784	-	-	-
Forward contracts	315,757,781	314,318,164	-	315,757,781	-	-	-
Credit default swaps	176,090,088	176,090,088	-	176,090,088	-	-	-
Financial futures	12,082,331	12,082,331	12,082,331	-	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had a statutory carrying value of \$25,462,699,637.

NOTES TO FINANCIAL STATEMENTS

December 31, 2023

	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 agencies	\$ 4,744,453,337	\$ 5,059,507,417	\$ -	\$ 4,744,441,172	\$ 12,165	\$ -	\$ -
All other governments	1,092,169,095	1,242,122,978	-	1,062,095,867	30,073,228	-	-
States, territories and possessions	228,520,706	230,671,453	-	228,520,706	-	-	-
Political subdivisions	353,206,002	363,337,158	-	353,206,002	-	-	-
Special revenue	4,974,649,699	4,986,163,198	-	4,937,786,020	36,863,680	-	-
Industrial and miscellaneous	114,597,913,862	122,721,386,811	65,883,796	50,893,052,527	63,638,977,539	-	-
Parent, subsidiaries and affiliates	9,410,464,510	9,829,970,652	-	1,406,366,586	8,004,097,924	-	-
Preferred stocks	469,567,523	446,025,402	96,000,000	-	374,000,000	-	-
Common stock - subsidiaries and affiliates ⁽¹⁾	429,838,830	429,838,830	253,126,070	-	115,109,209	-	-
Common stock - unaffiliated	1,623,146,423	1,623,146,423	665,751,670	172,640	957,222,113	-	-
Mortgage loans - commercial	17,884,805,403	19,299,089,634	-	-	17,884,805,403	-	-
Mortgage loans - residential	4,449,107,050	4,721,559,120	-	-	4,449,107,050	-	-
Cash, cash equivalents and short-term investments	11,134,091,819	11,134,091,819	781,842,463	10,352,249,356	-	-	-
Derivatives:							
Interest rate swaps	12,276,536,038	17,291,673,875	-	12,276,536,038	-	-	-
Options	546,997,778	546,997,779	68,242,170	478,755,608	-	-	-
Currency swaps	2,831,026,739	2,830,989,026	-	2,831,026,739	-	-	-
Forward contracts	13,364,595	13,364,589	-	13,364,595	-	-	-
Credit default swaps	828,281	508,760	-	828,281	-	-	-
Financial futures	56,233,659	56,233,659	56,233,659	-	-	-	-
Separate account assets	52,592,632,278	52,592,632,278	35,002,336,084	15,677,052,707	1,914,243,493	-	-
Financial liabilities:							
Repurchase agreements	3,218,943,002	3,218,943,002	-	3,218,943,002	-	-	-
Debt	49,925,247	49,925,247	-	49,925,247	-	-	-
Guaranteed investment contracts	15,549,879,560	16,206,695,519	-	-	15,549,879,560	-	-
Group annuity contracts and other deposits	1,841,126,406	2,052,598,709	-	-	1,841,126,406	-	-
Individual annuity contracts	24,495,226,559	25,861,224,546	-	-	24,495,226,559	-	-
Supplementary contracts	942,818,733	941,934,595	-	-	942,818,733	-	-
Derivatives:							
Interest rate swaps	12,289,377,893	11,922,119,773	-	12,289,377,893	-	-	-
Options	34,677,920	34,677,920	34,677,920	-	-	-	-
Currency swaps	1,309,337,434	1,294,378,119	-	1,309,337,434	-	-	-
Forward contracts	303,122,833	301,363,142	-	303,122,833	-	-	-
Credit default swaps	152,317,303	152,684,010	-	152,317,303	-	-	-
Financial futures	28,907,894	28,907,894	28,907,894	-	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had statutory carrying values of \$24,157,532,067.

- d. As of September 30, 2024 and December 31, 2023, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

- a. Unusual or infrequent items - No change
- b. Troubled debt restructuring - No change
- c. Other disclosures and unusual items:

Business risks

The Company operates in a business environment subject to various risks and uncertainties. The principal risks include insurance and underwriting risks, investment and interest rate risks, currency exchange risk and credit risk. The combined impact of these risks could have a material, adverse effect on the Company's financial statements or result in operating losses in future periods. The Company employs the use of reinsurance, portfolio diversification, asset/liability management processes and other risk management techniques to mitigate the impact of these risks. This condensed risks and uncertainties disclosure should be read in conjunction with the disclosure in the Company's 2023 Annual Statement.

Insurance and underwriting risks

NOTES TO FINANCIAL STATEMENTS

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, morbidity, longevity, persistency, interest rates and other factors. If actual policy experience emerges that is significantly and adversely different from assumptions used in product pricing, the effect could be material to the profitability of the Company. For participating whole life products, the Company's dividends to policyholders primarily reflect the difference between actual investment, mortality, expense and persistency experience and the experience embedded in the whole life premiums and guaranteed elements. The Company also reinsures certain life insurance and other long-term care insurance policies to mitigate the impact of its underwriting risk.

Investment and interest rate risks

The fair value, cash flows and earnings of investments can be influenced by a variety of factors including changes in interest rates, credit spreads, equity markets, portfolio asset allocation and general economic conditions. The Company employs a rigorous asset/liability management process to help mitigate the economic impacts of various investment risks, in particular interest rate risk. By effectively matching the market sensitivity of assets with the liabilities they support, the impact of interest rate changes is addressed, on an economic basis, as the change in the value of the asset is offset by a corresponding change in the value of the supported liability. The Company uses derivatives, such as interest rate swaps and swaptions, as well as synthetic assets to reduce interest rate and duration imbalances determined in asset/liability analyses.

The levels of U.S. interest rates are influenced by U.S. monetary policies and by the relative attractiveness of U.S. markets to investors versus other global markets. As interest rates increase, certain debt securities may experience amortization or prepayment speeds that are slower than those assumed at purchase, impacting the expected maturity of these securities and the ability to reinvest the proceeds at the higher yields. Rising interest rates may also result in a decrease in the fair value of the investment portfolio. As interest rates decline, certain debt securities may experience accelerated amortization and prepayment speeds than what was assumed at purchase. During such periods, the Company is at risk of lower net investment income as it may not be able to reinvest the proceeds at comparable yields. Declining interest rates may also increase the fair value of the investment portfolio.

Interest rates also have an impact on the Company's products with guaranteed minimum payouts and on interest credited to account holders. As interest rates decrease, investment spreads may contract as crediting rates approach minimum guarantees, resulting in an increased liability.

In periods of increasing interest rates, policy loans, surrenders and withdrawals may increase as policyholders seek investments with higher perceived returns. This could result in cash outflows requiring the Company to sell invested assets at a time when the prices of those assets are adversely affected by the increase in market interest rates, which could cause the Company to realize investment losses.

Currency exchange risk

The Company has currency risk due to its non-U.S. dollar denominated investments and medium-term notes along with its indirect international operations. The Company mitigates a portion of its currency risk through the use of cross-currency swaps and forward contracts. Cross-currency swaps are used to minimize currency risk for certain non-U.S. dollar assets and liabilities through a pre-specified exchange of interest and principal. Forward contracts are used to hedge movements in exchange rates.

Credit and other market risks

The Company manages its investments to limit credit and other market risks by diversifying its portfolio among various security types and industry sectors as well as purchasing credit default swaps to transfer some of the risk.

Stressed conditions, volatility and disruptions in global capital markets or in particular markets or financial asset classes can have an adverse effect on the Company, in part because the Company has a large investment portfolio and assets supporting the Company's insurance liabilities are sensitive to changing market factors. Global market factors, including interest rates, credit spread, equity prices, real estate markets, foreign currency exchange rates, consumer spending, business investment, government spending, the volatility and strength of the capital markets, deflation and inflation, all affect the business and economic environment and, ultimately, the profitability of the Company's business. Disruptions in one market or asset class can also spread to other markets or asset classes. Upheavals in the financial markets can also affect the Company's business through their effects on general levels of economic activity, employment and customer behavior.

Asset-based fees calculated as a percentage of the separate account assets are a source of revenue to the Company. Gains and losses in the investment markets may result in corresponding increases and decreases in the Company's separate account assets and related revenue.

Political Uncertainties

Political events, domestically or internationally, may directly or indirectly trigger or exacerbate risks related to product offerings, profitability, or any of the risk factors described above. Whether those underlying risk factors are driven by geopolitics or not, the Company's dynamic approach to managing risks enables management to identify risks, internally and externally, develop mitigation plans, and respond to risks in an attempt to proactively reduce the potential impact of each underlying risk factor on the Company.

- d. Business interruption insurance recoveries - No change
- e. State transferrable tax credits - No change
- f. Subprime mortgage related risk exposure:
 - (1) No change
 - (2) No change

NOTES TO FINANCIAL STATEMENTS

(3) Direct exposure through other investments:

Alt-A:	Nine Months Ended September 30, 2024			
	Actual Cost	Carrying Value	Fair Value	OTTI
a. Residential mortgage-backed securities	\$ 73,117,153	\$ 92,266,229	\$ 101,195,152	\$ 1,003,955
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	\$ 5,206,705	\$ 6,537,030	\$ 6,616,419	\$ 19,406
f. Other assets	-	-	-	-
g. Total	<u>\$ 78,323,858</u>	<u>\$ 98,803,259</u>	<u>\$ 107,811,571</u>	<u>\$ 1,023,361</u>

*The Company's SCA, C.M. Life, has investments in Alt-A and subprime mortgages, as does C.M. Life's SCA, MML Bay State. These investments comprise less than 1% of the Company's invested assets.

Alt-A:	Year Ended December 31, 2023			
	Actual Cost	Carrying Value	Fair Value	OTTI
a. Residential mortgage-backed securities	\$ 124,685,493	\$ 165,493,538	\$ 153,262,325	\$ 2,050,194
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	5,758,531	8,079,500	7,126,314	100,658
f. Other assets	-	-	-	-
g. Total	<u>\$ 130,444,024</u>	<u>\$ 173,573,038</u>	<u>\$ 160,388,639</u>	<u>\$ 2,150,852</u>

*The Company's SCA, C.M. Life, has investments in Alt-A and subprime mortgages, as does C.M. Life's SCA, MML Bay State. These investments comprise less than 1% of the Company's invested assets.

(4) The Company has no underwriting exposure to subprime mortgage risk through Mortgage Guaranty or Financial Guaranty insurance coverage.

g. Retained asset accounts - No change

h. Insurance-linked securities – No change

i. As of September 30, 2024, the Company had \$1,266,855,959 of net negative (disallowed) IMR in aggregate and in the general account.

As of September 30, 2024, the Company had \$1,266,855,959 of negative IMR admitted in the general account.

As of September 30, 2024, the calculated adjusted general capital and surplus was \$24,594,730,551.

As of September 30, 2024, the percentage of adjusted general capital and surplus for which the admitted disallowed IMR represents was 5%.

The following represents allocated gains (losses) to IMR from derivatives:

	September 30, 2024
Unamortized fair value derivative gains	\$ 2,848,158,609
Unamortized fair value derivative losses	(3,866,814,691)
Total unamortized fair value derivative net losses realized to IMR	<u>\$ (1,018,656,082)</u>

When the Company sells bonds and recognizes losses due to interest-rate related factors, and the realized losses are transferred to the IMR, the sales proceeds are generally used for reinvestment as governed by prudent asset liability management (ALM) policies and procedures. Such sales of bonds are intermittently used to meet liquidity needs and managed within the ALM framework.

IMR losses for fixed income related derivatives were in accordance with documented risk management procedures, as well as the Company's derivative use plans, and reflect the same historical treatment of derivative gains reversed to IMR and amortized rather than immediately recognized as realized gain upon termination.

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through November 13, 2024, the date the financial statements were available to be issued to state regulators and subsequently on the Company's website. No events have occurred subsequent to the date of the financial statements, except for:

On October 24, 2024, MassMutual issued a \$500,000,000 funding agreement with a 4.3% fixed rate and a 3-year maturity.

On October 25, 2024, the Company executed a certain coinsurance treaty amendment to increase quota share reinsurance of certain long-term care business from 50% to 75%. The Company transferred approximately \$357,000,000 of premium to the reinsurer in exchange for ceding \$337,000,000 in statutory reserves.

Note 23 – Reinsurance - No change

NOTES TO FINANCIAL STATEMENTS

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

a – d. No change

e. The Company does not write any accident and health insurance premium that is subject to the Affordable Care Act risk-sharing provisions.

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2024 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which considered corrections of prior year errors.

Note 26 – Intercompany Pooling Arrangements - No change

Note 27 – Structured Settlements - No change

Note 28 – Health Care Receivables - No change

Note 29 – Participating Policies - No change

Note 30 – Premium Deficiency Reserves

(1) Liability carried for premium deficiency reserves	\$ 260,000,000
(2) Date of the most recent evaluation of this liability	9/30/2024
(3) Was anticipated investment income utilized in the calculation?	Yes

Note 31 – Reserves for Life Contracts and Annuity Contracts - No change

Note 32 – Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics - No change

Note 33 – Analysis of Life Actuarial Reserves by Withdrawal Characteristics - No change

Note 34 – Premium and Annuity Considerations Deferred and Uncollected - No change

Note 35 – Separate Accounts - No change

Note 36 – Loss/Claim Adjustment Expenses - No change

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? Yes [X] No []
If yes, complete Schedule Y, Parts 1 and 1A.
- 3.2 Have there been any substantial changes in the organizational chart since the prior quarter end? Yes [] No [X]
- 3.3 If the response to 3.2 is yes, provide a brief description of those changes.
.....
- 3.4 Is the reporting entity publicly traded or a member of a publicly traded group? Yes [] No [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? Yes [] No [X]
- 4.2 If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation.

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

5. If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved? Yes [] No [X] N/A []
If yes, attach an explanation.
.....
- 6.1 State as of what date the latest financial examination of the reporting entity was made or is being made. 12/31/2019
- 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. 12/31/2019
- 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). 06/25/2021
- 6.4 By what department or departments?
Commonwealth of Massachusetts Division 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 [X] No [] N/A []
- 7.1 Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period? Yes [] No [X]
- 7.2 If yes, give full information:
.....
- 8.1 Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board? Yes [] No [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 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 .....	.....	.....	.....	YES.....
Baring International Investment Limited	London, UK .....	.....	.....	.....	YES.....
Barings Securities LLC	Charlotte, NC .....	.....	.....	.....	YES.....
MML Distributors, LLC	Springfield, MA .....	.....	.....	.....	YES.....
MML Investment Advisers, LLC	Springfield, MA .....	.....	.....	.....	YES.....
MML Investors Services, LLC	Springfield, MA .....	.....	.....	.....	YES.....
MML Strategic Distributors, LLC	Springfield, MA .....	.....	.....	.....	YES.....
The MassMutual Trust Company, FSB	Windsor, CT .....	.....	YES.....	.....	.....
Flourish Financial, LLC	New York, NY .....	.....	.....	.....	YES.....

GENERAL INTERROGATORIES

- 9.1 Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards? Yes [X] No []
 - (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.
- 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).

Code has been updated to reflect policy name changes and removed policy links from the document.
- 9.3 Have any provisions of the code of ethics been waived for any of the specified officers? Yes [] No [X]
- 9.31 If the response to 9.3 is Yes, provide the nature of any waiver(s).

.....

FINANCIAL

- 10.1 Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement? Yes [X] No []
- 10.2 If yes, indicate any amounts receivable from parent included in the Page 2 amount: \$

INVESTMENT

- 11.1 Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.) Yes [X] No []
- 11.2 If yes, give full and complete information relating thereto:

Repurchase agreements, Letter stock or securities restricted as to sale - excluding FHLB Capital Stock, FHLB Capital Stock, On deposit with states, pledged as collateral - excluding collateral pledged to an FHLB and Pledged as collateral to FHLB - including assets backing funding agreements.
- 12. Amount of real estate and mortgages held in other invested assets in Schedule BA: \$ 5,638,029,347
- 13. Amount of real estate and mortgages held in short-term investments: \$
- 14.1 Does the reporting entity have any investments in parent, subsidiaries and affiliates? Yes [X] No []
- 14.2 If yes, please complete the following:

	1 Prior Year-End Book/Adjusted Carrying Value	2 Current Quarter Book/Adjusted Carrying Value
14.21 Bonds	\$ 9,826,793,733	\$ 12,681,950,783
14.22 Preferred Stock	\$	\$
14.23 Common Stock	\$ 25,089,291,906	\$ 26,102,086,545
14.24 Short-Term Investments	\$	\$
14.25 Mortgage Loans on Real Estate	\$	\$
14.26 All Other	\$ 6,128,419,163	\$ 7,083,510,598
14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)	\$ 41,044,504,802	\$ 45,867,547,926
14.28 Total Investment in Parent included in Lines 14.21 to 14.26 above	\$	\$
- 15.1 Has the reporting entity entered into any hedging transactions reported on Schedule DB? Yes [X] No []
- 15.2 If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes [X] No [] N/A []

If no, attach a description with this statement.

.....
- 16. For the reporting entity's security lending program, state the amount of the following as of the current statement date:
 - 16.1 Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2 \$
 - 16.2 Total book/adjusted carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2 \$
 - 16.3 Total payable for securities lending reported on the liability page. \$

GENERAL INTERROGATORIES

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

1 Name of Custodian(s)	2 Custodian Address
Citibank, N.A.	333 West 34th Street, New York, NY 10001
State Street Bank and Trust Company	JAB2NWN, Quincy, MA 02171
Citibank, N.A.	2 Park Street Sydney, NSW 2000
Citibank, N.A.	London Canada SQ Service CTR Citigroup CTR 25 Canada Sq London E14 5LB UK

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

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

- 17.3 Have there been any changes, including name changes, in the custodian(s) identified in 17.1 during the current quarter? Yes [] No [X]

- 17.4 If yes, give full information relating thereto:

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

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

1 Name of Firm or Individual	2 Affiliation
20 Gates Management, LLC	U.....
Angelo, Gordon & Co., L.P.	U.....
Apollo Capital Management, L.P.	U.....
Apollo Insurance Solutions Group LP	U.....
Ares Management LLC	U.....
Barings LLC	A.....
Carlyle Aviation Group Capital Markets LLC	U.....
Centerbridge Martello Advisors, LLC	U.....
Fractal Investments LLC	U.....
Franklin Advisers, Inc.	U.....
Great-West Capital Management LLC	U.....
IFM Investors Pty Ltd	U.....
Invesco Investment Management Company	U.....
Jefferies Finance LLC	A.....
Pacific Investment Management Company LLC	U.....
Western Asset Management Company	U.....

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

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

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

1	2	3	4	5
Central Registration Depository Number	Name of Firm or Individual	Legal Entity Identifier (LEI)	Registered With	Investment Management Agreement (IMA) Filed
155480	20 Gates Management, LLC	549300P9T431XY751068	SEC	NO.....
131940	Angelo, Gordon & Co., L.P.	XXJ808RONB9FETPCB63	SEC	NO.....
143161	Apollo Capital Management, L.P.	549300C43L0TF7UALB02	SEC	NO.....
143161	Apollo Insurance Solutions Group LP	549300C43L0TF7UALB02	SEC	NO.....
130074	Ares Management LLC	549300JA9GMPFTSVQQ05	SEC	NO.....
106006	Barings LLC	ANDKRHQKPRRG4Q2KLR05	SEC	DS.....
168456	Carlyle Aviation Group Capital Markets LLC	54930010815L9BP71G93	SEC	NO.....
311767	Fractal Investments LLC	984500D14JFD006CBC96	SEC	NO.....
104517	Franklin Advisers, Inc.	B1CG1NRZIDDJDDQEXB52	SEC	NO.....
107272	Great-West Capital Management LLC	549300S3EPOXXVYMD485	SEC	NO.....
162754	IFM Investors Pty Ltd	5493002BVK0Q17K17H93	SEC	NO.....
110363	Invesco Investment Management Company	037NHJVF7S22110N0U83	SEC	NO.....
162264	Jefferies Finance LLC	549300SKVB18YSSIDT75	SEC	NO.....
104559	Pacific Investment Management Company LLC	549300GPHYQZGMYYN38	SEC	NO.....
110441	Western Asset Management Company	549300C5A561UXU1CN46	SEC	NO.....
157359	Centerbridge Martello Advisors, LLC	549300F5X7LPP05D3544	SEC	NO.....

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

- 18.1 Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Investment Analysis Office been followed? Yes [] No [X]
- 18.2 If no, list exceptions:
 At 9/30/2024, 161 issues for 122 issuers did not meet the filing requirements of the Purposes and Procedures Manual. The majority of these issues currently lack one or more of the following: Valid cusip/PPN, audited financials and/or executed legal documentation.
 Exceptions totaled \$798,487,218 or 0.41% of all assets.
19. By self-designating 5GI securities, the reporting entity is certifying the following elements for each self-designated 5GI security:
 a. Documentation necessary to permit a full credit analysis of the security does not exist or an NAIC CRP credit rating for an FE or PL security is not available.
 b. Issuer or obligor is current on all contracted interest and principal payments.
 c. The insurer has an actual expectation of ultimate payment of all contracted interest and principal.
 Has the reporting entity self-designated 5GI securities? Yes [X] No []
20. By self-designating PLGI securities, the reporting entity is certifying the following elements of each self-designated PLGI security:
 a. The security was purchased prior to January 1, 2018.
 b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
 c. The NAIC Designation was derived from the credit rating assigned by an NAIC CRP in its legal capacity as a NRSRO which is shown on a current private letter rating held by the insurer and available for examination by state insurance regulators.
 d. The reporting entity is not permitted to share this credit rating of the PL security with the SVO.
 Has the reporting entity self-designated PLGI securities? Yes [] No [X]
21. By assigning FE to a Schedule BA non-registered private fund, the reporting entity is certifying the following elements of each self-designated FE fund:
 a. The shares were purchased prior to January 1, 2019.
 b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
 c. The security had a public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO prior to January 1, 2019.
 d. The fund only or predominantly holds bonds in its portfolio.
 e. The current reported NAIC Designation was derived from the public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO.
 f. The public credit rating(s) with annual surveillance assigned by an NAIC CRP has not lapsed.
 Has the reporting entity assigned FE to Schedule BA non-registered private funds that complied with the above criteria? Yes [] No [X]

GENERAL INTERROGATORIES

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

Life and Accident Health Companies/Fraternal Benefit Societies:

1. Report the statement value of mortgage loans at the end of this reporting period for the following categories: 1
Amount
- 1.1 Long-Term Mortgages In Good Standing
- 1.11 Farm Mortgages \$.....
- 1.12 Residential Mortgages \$..... 6,100,328,531
- 1.13 Commercial Mortgages \$..... 17,527,359,778
- 1.14 Total Mortgages in Good Standing \$..... 23,627,688,309
- 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 \$..... 480,828,370
- 1.44 Total Mortgages in Process of Foreclosure \$..... 480,828,370
- 1.5 Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2) \$..... 24,108,516,679
- 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? Yes [] No [X]
- 3.2 If yes, please provide the amount of custodial funds held as of the reporting date \$.....
- 3.3 Do you act as an administrator for health savings accounts? Yes [] No [X]
- 3.4 If yes, please provide the balance of the funds administered as of the reporting date \$.....
4. Is the reporting entity licensed or chartered, registered, qualified, eligible or writing business in at least two states? Yes [X] No []
- 4.1 If no, does the reporting entity assume reinsurance business that covers risks residing in at least one state other than the state of domicile of the reporting entity? Yes [] No []

Fraternal Benefit Societies Only:

- 5.1 In all cases where the reporting entity has assumed accident and health risks from another company, provisions should be made in this statement on account of such reinsurances for reserve equal to that which the original company would have been required to establish had it retained the risks. Has this been done? Yes [] No [] N/A []
- 5.2 If no, explain:
- 6.1 Does the reporting entity have outstanding assessments in the form of liens against policy benefits that have increased surplus? Yes [] No []
- 6.2 If yes, what is the date(s) of the original lien and the total outstanding balance of liens that remain in surplus?

Date	Outstanding Lien Amount
.....

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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
.00000	AA-3191494	07/15/2024	MARTELLO RE LIMITED (MR24)	BMJ	.CO/I	.IA	Reciprocal Jurisdiction Reinsurer		
88340	59-2859797	01/01/2023	HANNOVER LIFE REASSURANCE COMPANY OF AMERICA (HAH6)	FL	.YRT/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY2)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY3)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY4)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY5)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY6)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY8)	CT	.CO/I	.OL	Authorized		
.86258	13-2572994	09/07/2024	GENERAL RE LIFE CORPORATION (GRY9)	CT	.CO/I	.OL	Authorized		
88340	59-2859797	01/01/2023	HANNOVER LIFE REASSURANCE COMPANY OF AMERICA (HAH5)	FL	.YRT/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY2)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY3)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY4)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY5)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY6)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY8)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/07/2024	MUNICH AMERICAN REASSURANCE COMPANY (MUY9)	GA	.CO/I	.OL	Authorized		
66346	58-0828824	09/01/2023	MUNICH AMERICAN REASSURANCE COMPANY (MUUH)	GA	.YRT/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY2)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY3)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY4)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY5)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY6)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY8)	AR	.CO/I	.OL	Authorized		
74900	63-0483783	09/07/2024	PARTNERRE LIFE REINSURANCE COMPANY OF AMERICA (PRY9)	AR	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY2)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY3)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY4)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY5)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY6)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY8)	MO	.CO/I	.OL	Authorized		
93572	43-1235868	09/07/2024	RGA REINSURANCE COMPANY (GAY9)	MO	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY1)	DE	.YRT/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY2)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY3)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY4)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY5)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY6)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY8)	DE	.CO/I	.OL	Authorized		
97071	13-3126819	09/07/2024	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUY9)	DE	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY2)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY3)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY4)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY5)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY6)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY8)	MO	.CO/I	.OL	Authorized		
.82627	06-0839705	09/07/2024	SWISS RE LIFE & HEALTH AMERICA INC. (SRY9)	MO	.CO/I	.OL	Authorized		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company
SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

	1	Life Contracts		Direct Business Only				
		2	3	4	5	6	7	
States, Etc.	Active Status (a)	Life Insurance Premiums	Annuity Considerations	Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 Through 5	Deposit-Type Contracts	
1. Alabama	AL	L	40,710,596	112,532,547	6,006,378	17,567,177	176,816,698	20,349,961
2. Alaska	AK	L	2,047,742	35,622,685	460,156	756,649	38,887,232	10,327,702
3. Arizona	AZ	L	77,276,523	493,873,665	9,493,271	1,765,568	582,409,027	16,474,445
4. Arkansas	AR	L	25,306,686	65,998,946	2,346,920	2,301,589	95,954,141	6,100,811
5. California	CA	L	640,604,174	1,467,909,720	53,023,600	294,078,556	2,455,616,050	212,564,326
6. Colorado	CO	L	93,284,305	321,225,488	9,495,986	17,646,228	441,652,007	10,828,380
7. Connecticut	CT	L	161,523,845	240,923,112	13,828,872	67,176,182	483,452,011	15,881,207
8. Delaware	DE	L	27,919,553	121,892,469	1,749,125	18,135,476	169,696,623	3,684,956,656
9. District of Columbia	DC	L	17,568,447	13,422,805	3,010,366	9,748,371	43,749,989	5,213,173
10. Florida	FL	L	452,438,790	1,035,381,010	30,780,634	72,491,541	1,591,091,975	131,625,587
11. Georgia	GA	L	177,181,621	319,864,597	19,625,505	46,067,130	562,738,853	35,889,166
12. Hawaii	HI	L	19,039,036	39,326,581	2,467,761	2,923,460	63,756,838	3,569,735
13. Idaho	ID	L	23,426,131	121,986,705	1,595,611	6,051,412	153,059,859	4,474,880
14. Illinois	IL	L	241,728,186	506,343,664	18,658,615	159,912,503	926,642,968	124,912,419
15. Indiana	IN	L	94,097,172	213,564,025	7,643,501	22,247,407	337,552,105	22,301,534
16. Iowa	IA	L	30,640,988	83,606,539	2,991,345	11,932,073	129,170,945	17,079,501
17. Kansas	KS	L	42,824,765	87,891,062	4,164,856	15,580,866	150,461,549	4,764,421
18. Kentucky	KY	L	27,177,981	109,286,728	4,179,048	(219,136)	140,424,621	7,490,841
19. Louisiana	LA	L	48,508,968	137,883,801	5,510,344	952,290	192,855,403	18,633,078
20. Maine	ME	L	15,533,204	79,031,730	1,944,044	3,310,811	99,819,789	1,852,678
21. Maryland	MD	L	111,869,190	180,055,600	19,729,716	44,515,714	356,170,220	27,504,308
22. Massachusetts	MA	L	193,457,975	1,133,939,498	23,655,002	1,024,944,207	2,375,996,682	56,143,781
23. Michigan	MI	L	99,441,501	393,655,917	10,859,450	82,133,193	586,090,061	72,116,339
24. Minnesota	MN	L	60,222,832	231,690,026	6,833,360	56,305,912	355,052,130	52,362,662
25. Mississippi	MS	L	36,261,831	59,379,959	7,604,736	1,114,490	104,361,016	6,255,271
26. Missouri	MO	L	58,058,391	199,022,087	7,950,791	28,896,604	293,927,873	24,701,583
27. Montana	MT	L	9,158,569	51,172,996	1,405,609	117,648	61,854,822	3,237,002
28. Nebraska	NE	L	23,837,611	41,475,958	4,203,111	10,067,956	79,584,636	7,714,390
29. Nevada	NV	L	37,347,397	101,352,587	2,971,720	10,586,078	152,257,782	4,660,439
30. New Hampshire	NH	L	30,414,517	175,496,847	3,340,653	8,104,225	217,356,242	6,782,092
31. New Jersey	NJ	L	387,818,554	514,294,014	27,782,914	98,582,525	1,028,478,007	65,150,179
32. New Mexico	NM	L	26,605,482	64,875,256	2,188,231	407,175	94,076,144	3,425,386
33. New York	NY	L	1,167,164,819	1,548,012,242	61,983,973	204,917,468	2,982,078,502	103,045,461
34. North Carolina	NC	L	133,954,717	391,444,013	23,067,667	10,842,658	559,309,055	50,316,006
35. North Dakota	ND	L	16,332,218	27,190,415	674,502	520,753	44,717,888	4,655,790
36. Ohio	OH	L	109,070,323	518,041,968	13,687,066	76,937,322	717,736,679	77,120,243
37. Oklahoma	OK	L	66,247,538	95,095,424	6,140,825	17,520,636	185,004,423	10,229,744
38. Oregon	OR	L	30,556,087	237,973,300	4,629,177	7,062,725	280,221,289	12,451,022
39. Pennsylvania	PA	L	293,909,861	564,723,697	31,379,443	126,606,620	1,016,619,621	13,134,029
40. Rhode Island	RI	L	18,396,759	93,081,632	2,379,542	9,725,385	123,583,318	2,438,849
41. South Carolina	SC	L	79,473,612	190,910,825	12,652,950	7,988,218	291,025,605	25,770,026
42. South Dakota	SD	L	8,872,857	28,097,766	578,601	225,830	37,775,054	3,004,567
43. Tennessee	TN	L	115,564,016	239,919,238	15,554,203	121,870,879	492,908,336	26,206,796
44. Texas	TX	L	376,909,498	1,058,536,460	38,129,694	287,350,774	1,760,926,426	111,350,474
45. Utah	UT	L	48,635,985	128,242,327	3,290,044	3,912,801	184,081,157	16,222,799
46. Vermont	VT	L	18,349,954	72,646,070	1,185,755	5,463,349	97,645,128	767,583
47. Virginia	VA	L	158,338,088	304,431,333	23,613,446	69,164,479	555,547,346	119,315,710
48. Washington	WA	L	73,755,431	341,731,294	9,620,559	27,369,435	452,476,719	7,179,243
49. West Virginia	WV	L	9,996,675	49,306,218	1,238,309	5,578,896	66,120,098	19,340,585
50. Wisconsin	WI	L	58,982,307	174,099,541	5,234,822	19,854,003	258,170,673	7,573,884
51. Wyoming	WY	L	7,986,724	29,105,776	551,568	23,255	37,667,323	2,264,588
52. American Samoa	AS	N						
53. Guam	GU	N	861		15,282		16,143	
54. Puerto Rico	PR	L	67,051,186	14,950,994	8,025,161	2,337,887	92,365,228	210,494
55. U.S. Virgin Islands	VI	N	35,615		(132,925)		(97,310)	
56. Northern Mariana Islands	MP	N						
57. Canada	CAN	N	1,402,755	415,866	61,349		1,879,970	16,713
58. Aggregate Other Aliens	OT	XXX	13,510,921	65,750	447,519	27,848,700	41,872,890	77,732
59. Subtotal	XXX		6,207,831,370	14,862,000,773	581,509,763	3,169,323,953	24,820,665,859	5,298,036,271
90. Reporting entity contributions for employee benefits plans	XXX							
91. Dividends or refunds applied to purchase paid-up additions and annuities	XXX		1,287,886,410	448,446			1,288,334,856	
92. Dividends or refunds applied to shorten endowment or premium paying period	XXX							
93. Premium or annuity considerations waived under disability or other contract provisions	XXX		22,464,851		7,942,088		30,406,939	
94. Aggregate or other amounts not allocable by State	XXX		224,466,520				224,466,520	
95. Totals (Direct Business)	XXX		7,742,649,151	14,862,449,219	589,451,851	3,169,323,953	26,363,874,174	5,298,036,271
96. Plus Reinsurance Assumed	XXX		30,201,196	345,870,954		421,600,713	797,672,863	567,344,094
97. Totals (All Business)	XXX		7,772,850,347	15,208,320,173	589,451,851	3,590,924,666	27,161,547,037	5,865,380,365
98. Less Reinsurance Ceded	XXX		906,556,858	6,409,753,215	120,555,990	2,255,406,111	9,782,272,174	
99. Totals (All Business) less Reinsurance Ceded	XXX		6,776,293,489	8,798,566,958	468,895,861	1,335,518,555	17,379,274,863	5,865,380,365
DETAILS OF WRITE-INS								
58001. HKG Hong Kong	XXX		120,113				120,113	
58002. ZZZ Other Alien	XXX		13,390,808	65,750	447,519	27,848,700	41,752,777	77,732
58003.	XXX							
58998. Summary of remaining write-ins for Line 58 from overflow page	XXX							
58999. Totals (Lines 58001 through 58003 plus 58998)(Line 58 above)	XXX		13,510,921	65,750	447,519	27,848,700	41,872,890	77,732
9401. Reinvested Net Non-Forfeiture Option Proceeds	XXX		224,466,520				224,466,520	
9402.	XXX							
9403.	XXX							
9498. Summary of remaining write-ins for Line 94 from overflow page	XXX							
9499. Totals (Lines 9401 through 9403 plus 9498)(Line 94 above)	XXX		224,466,520				224,466,520	

(a) Active Status Counts:

- 1. L - Licensed or Chartered - Licensed insurance carrier or domiciled RRG..... 52
- 2. R - Registered - Non-domiciled RRGs.....
- 3. E - Eligible - Reporting entities eligible or approved to write surplus lines in the state.....
- 4. Q - Qualified - Qualified or accredited reinsurer.....
- 5. N - None of the above - Not allowed to write business in the state..... 5

SCHEDULE Y – INFORMATION CONCERNING ACTIVITIES OF INSURER MEMBERS OF A HOLDING COMPANY GROUP

PART 1 – ORGANIZATIONAL CHART

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Special Situations Investor LLC	None		Delaware
CM Life Mortgage Lending LLC	None		Delaware
CML Mezzanine Investor III, LLC	None		Delaware
CML Global Capabilities LLC	None		Delaware
MM Global Capabilities I LLC	None		Delaware
MassMutual Global Business Services India LLP	None		India
MM Global Capabilities (Netherlands) B.V.	None		Netherlands
MassMutual Global Business Services Romania S.R.L.	None		Romania
MM Global Capabilities II LLC	None		Delaware
MM Global Capabilities III LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
Lyme Adirondack Timber Sales, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
ITPS Holding LLC	None		Delaware
HITPS LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
MassMutual Ventures US IV GP, LLC*	None		Delaware
MassMutual Ventures US IV, L.P.	None		Delaware
MassMutual Ventures US IV, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, L.P.	None		Cayman Islands
MassMutual Ventures Europe/APAC I L.P.	None		Cayman Islands
MassMutual Ventures Southeast Asia III LLC	None		Delaware
MMV Digital I LLC	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>
Counterpointe Sustainable Advisors LLC	None		Delaware
CSA Intermediate Holdco LLC	None		Delaware
Counterpointe Trust Services LLC	None		Delaware
CP PACE LLC	None		Delaware
Counterpointe Titling Trust	None		Delaware
CSA Employee Services Company LLC	None		Delaware
Counterpointe Sustainable Real Estate II LLC	None		Delaware
Counterpointe Energy Solutions II LLC	None		Delaware
Counterpointe Energy Solutions (CA) II LLC	27-0105644		Delaware
Counterpointe Energy Solutions (FL) II LLC	None		Delaware
Counterpointe Energy Solutions (IL) LLC	None		Delaware
Loop-Counterpointe PACE LLC	None		Delaware
Counterpointe Energy Services LLC	None		Delaware
CSA Incentive Holdco LLC	None		Delaware
Jefferies Finance LLC	27-0105644		Delaware
JFIN GP Adviser LLC	None		Delaware
Jefferies MM Lending LLC	None		Delaware
Green SPE LLC	None		Delaware
Apex Credit Partners LLC	None		Delaware
Apex GP I LLC	None		Delaware
Apex Securitized Income Fund LP	None		Delaware
Jefferies Credit Partners LLC	None		Delaware
Jefferies Credit Management LLC	None		Delaware
JCM GP I LLC	None		Delaware
JCM H-2 Credit Fund GP LLC	None		Delaware
JCP Direct Lending CLO 2022 LLC	None		Delaware
Jefferies Direct Lending Europe SCSp SICAV-RAIF	None		Luxembourg
Jefferies Credit Management Holdings LLC	None		Delaware
JDLF GP (Europe) S.a.r.l	None		Luxembourg
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
Jefferies Direct Lending Fund C LP	None		Delaware
Jefferies DLF C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund C SPE LLC	None		Delaware
JDLF II GP LLC	None		Delaware
JDLF II GP LP	None		Delaware
Jefferies Direct Lending Fund II C LP	None		Delaware
Jefferies DLF 2 C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund II C SPE LLC	None		Delaware
JDLF III GP LLC*	None		Delaware
JDLF III GP LP*	None		Delaware
Jefferies Direct Lending Fund III C LP	None		Delaware
JCP Direct Lending CLO 2023-1 LLC	None		Delaware

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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>
JCP Direct Lending CLO 2023 Ltd.	None		Jersey Channel Islands
JCP GP I LLC	None		Delaware
Jefferies M Super Private Credit Fund GP LLC	None		Delaware
Jefferies Private Credit BDC Inc.	None		Maryland
JCP Funding 2024 LLC	None		Delaware
Jefferies Senior Lending 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 Funding 2021 LLC	None		Delaware
JSPCS MM LLC	None		Delaware
JFIN LC Fund LLC	None		Delaware
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2018 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2020 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-V Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-IV Ltd.	None		Cayman Islands
JFIN Revolver CLO 2024-I Ltd.	None		Delaware
JFIN Revolver CLO 2022-IV LLC	None		Cayman Islands
JFIN Revolver Fund, L.P.	None		Delaware
JFIN Revolver Funding 2021 Ltd.	None		Delaware
JFIN Revolver Funding 2021-III Ltd.	None		Delaware
JFIN Revolver Funding 2021-IV Ltd.	None		Delaware
JFIN Revolver Funding 2022-I Ltd.	None		Bermuda
JFIN Revolver SPE1 2022 LLC	None		Delaware
JFIN Revolver SPE3 2022 LLC	None		Delaware
JFIN Revolver SPE4 2022 LLC	None		Delaware
JFIN Revolver SPE4 2022 Ltd.	None		Delaware
JCP Private Loan Management GP LLC	None		Delaware
JCP Private Loan Management LP	None		Delaware
Apex Credit Holdings LLC	None		Delaware

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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>
JFIN CLO 2012 Ltd.	None		Cayman Islands
JFIN CLO 2013 Ltd.	None		Cayman Islands
JFIN CLO 2014 Ltd.	None		Cayman Islands
JFIN CLO 2014-II Ltd.	None		Cayman Islands
JFIN CLO 2015 Ltd.	None		Cayman Islands
JFIN CLO 2015-II Ltd.	None		Cayman Islands
JFIN CLO 2016 Ltd.	None		Cayman Islands
JFIN CLO 2017 Ltd.	None		Cayman Islands
JFIN CLO 2017 II Ltd.	None		Cayman Islands
Tomorrow Parent, LLC	None		Delaware
Custom Ecology Holdco, LLC	None		Delaware
Glidepath Holdings Inc.	86-2294635		Delaware
MassMutual Ascend Life Insurance Company	13-1935920	63312	Ohio
AAG Insurance Agency, LLC	31-1422717		Kentucky
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
MM Ascend Life Investor Services, LLC	31-1395344		Ohio
MM Ascend Mortgage Lending LLC	None		Ohio
Manhattan National Holding, LLC	26-3260520		Ohio
Manhattan National Life Insurance Company	45-0252531	67083	Ohio
MassMutual Mortgage Lending LLC	None		Delaware
MM Copper Hill Road LLC	04-1590850		Delaware
MMV CTF I GP LLC	None		Delaware
MassMutual Ventures Climate Technology Fund I LP	None		Delaware
MM Direct Private Investments Holding LLC	None		Delaware
MM Direct Private Investments UK Limited	None		England & Wales
DPI-ACRES Capital LLC	None		Delaware
DPI-ARES Mortgage Lending LLC	None		Delaware
MM Investment Holding	None		Cayman Islands
MMIH Bond Holdings LLC	None		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2017-B	32-0546197		Delaware
MMAF Equipment Finance LLC 2019-A	83-3722640		Delaware
MMAF Equipment Finance LLC 2019-B	None		Delaware
MMAF Equipment Finance LLC 2020-A	None		Delaware
MMAF Equipment Finance LLC 2020-B	None		Delaware
MMAF Equipment Finance LLC 2021-A	None		Delaware
MMAF Equipment Finance LLC 2022-A	None		Delaware
MMAF Equipment Finance LLC 2022-B	None		Delaware
MMAF Equipment Finance LLC 2023-A	None		Delaware
MMAF Equipment Finance LLC 2024-A	None		Delaware
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MML CM LLC	None		Delaware
Blueprint Income LLC	None		New York
Flourish Holding Company LLC	None		Delaware
Flourish Insurance Agency LLC	None		Delaware
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
Low Carbon Energy Holding	None		United Kingdom
Sleeper Street LLC	None		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
GASL Holdings LLC	None		Delaware
Barings Asset-Based Income Fund (US) LP*	None		Delaware
Barings Perpetual European Direct Lending Fund	None		Luxembourg
Barings Emerging Generation Fund II	88-0916548		Delaware
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Barings Global Real Assets Fund LP*	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Luxembourg
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
Marco Hotel LLC	46-4255307		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
RB Apartments LLC	82-4411267		Delaware
Intermodal Holding II LLC	None		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MMV UK/SEA Limited	None		England & Wales
MassMutual Ventures India Private Limited	None		India
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures Southeast Asia II LLC	None		Delaware
MassMutual Ventures UK LLC	None		Delaware

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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 Ventures US I LLC	47-1296410		Delaware
MassMutual Ventures US II LLC	None		Delaware
MassMutual Ventures US III LLC	None		Delaware
MM Catalyst Fund LLC	None		Delaware
MM Catalyst Fund II LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
Rothesay Limited	None		United Kingdom
Rothesay Mortgages Limited	None		United Kingdom
Rothesay Life Plc	None		United Kingdom
Rothesay MA No.1 Limited	None		United Kingdom
Rothesay MA No.3 Limited	None		United Kingdom
Rothesay MA No.4 Limited	None		United Kingdom
LT Mortgage Financing Limited	None		United Kingdom
Rothesay Property Partnership 1 LLP	None		United Kingdom
Rothesay Foundation	None		United Kingdom
Rothesay Pensions Management Limited	None		United Kingdom
Rothesay Asset Management UK Limited	None		United Kingdom
Rothesay Asset Management Australia Pty Ltd	None		Australia
Rothesay Asset Management North America LLC	None		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
LifeScore Labs, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda
Baring Asset Management (Asia) Limited	98-0457463		Hong Kong, Special Administrative Region of China
Baring Asset Management Korea Limited	None		Korea
Barings Investment Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Barings Overseas Investment Fund Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC
Barings Singapore Pte. Ltd.	None		Singapore
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	None		Australia
Barings Australia Real Estate Holdings Pty Ltd	None		Australia
Barings Australia Real Estate Pty Ltd	14-0045656		Australia
Barings Australia Property Partners Holdings Pty Ltd	98-0457456		Australia
Barings Australia Asset Management Pty Ltd	None		Australia
Barings Australia Property Partners Pty Ltd	None		Australia
Barings Australia Structured Finance Holdings Pty Ltd	None		Australia
Barings Australia Structured Finance Pty Ltd	None		Australia

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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>
Gryphon Capital Partners Pty Ltd	None		Australia
Gryphon Capital Management Pty Ltd	None		Australia
Gryphon Capital Investments Pty Ltd	None		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Real Estate Acquisitions LLC	None		Delaware
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings Asset Management Spain SL	None		Spain
Baring France SAS	None		France
Baring International Fund Managers (Ireland) Limited	None		Ireland
Barings GmbH	None		Germany
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Netherlands B.V.	None		Netherlands
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Switzerland Sàrl	None		Switzerland
Baring Asset Management Limited	98-0241935		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring Fund Managers Limited	98-0457586		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Core Fund Feeder I GP S.à.r.l.	None		Luxembourg
Barings Investment Fund (LUX) GP S.à r.l.	None		Luxembourg
Barings BME GP S.à.r.l.	None		United Kingdom
Barings GPC GP S.à.r.l.	None		Luxembourg
Barings European Core Property Fund GP S.à.r.l	None		United Kingdom
Barings Umbrella Fund (LUX) GP S.à.r.l.	None		Luxembourg
GPLF4(S) GP S.à r. l	None		Luxembourg
PREIF Holdings Limited Partnership	None		United Kingdom
BMC Holdings DE LLC	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		Delaware
Remington L & W Holdings LLC	81-4065378		Delaware
Aland Royalty GP, LLC	None		Delaware
Alaska Future Fund GP, LLC	None		Delaware
BAI Funds SLP, LLC	None		Delaware
BAI GP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings CMS Fund GP, LLC	None		Delaware

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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>
Barings Infiniti Fund Management LLC	None		Delaware
Barings New Jersey Emerging Manager Program GP, LLC	None		Delaware
Barings Hotel Opportunity Venture I GP, LLC	None		Delaware
Baring Investment Series LLC	None		Delaware
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings Emerging Generation Fund GP II, LLC	None		Delaware
Barings EPLF4 Rated Feeder, L.P.	None		Delaware
Barings ERS PE Emerging Manager III GP, LLC	None		Delaware
Barings FC III LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Core Property Fund GP LLC	None		Delaware
Barings DAPPLF1 Rated Feeder, G.P.	None		Delaware
Barings DAPPLF1 Rated Feeder, L.P.	None		Delaware
Barings Direct Lending GP Ltd.	None		Cayman Islands
Barings Diversified Residential Fund GP LLC	None		Delaware
Barings Diversified Residential Fund LP	None		Delaware
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings Capital Solutions Perpetual Fund GP LLC	None		Delaware
Barings Centre Street CLO Equity Partnership GP, LLC	None		Delaware
Barings Centre Street CLO Equity Partnership LP	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings GPSF LLC	None		Delaware
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund II Management, LLC	None		Delaware
Barings North American Private Loan Fund III Management, LLC	None		Delaware
Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	None		Delaware
Barings - MM Revolver Fund GP LLC	None		Delaware
Barings Real Estate European Value Add Fund II Feeder LLC	None		Cayman Islands
Barings SEM GP LLC	None		Delaware
BMT RE Debt Fund GP LLC	None		Delaware
Barings Small Business Fund LLC	84-5063008		Delaware
Barings TYIDF2 Rated Feeder GP LLC	None		Delaware
Barings TYIDF2 Rated Feeder, L.P.	None		Delaware
Barings Active Passive Equity Direct EAFE LLC	None		Delaware
BCLF GP LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BHOVI Incentive LLC	None		Delaware
BIG Real Estate Fund GP LLC	None		Delaware
BIG Real Estate Incentive I LLC	None		Delaware
BIG Real Estate Incentive II LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
BREDIF GP LLC	None		Delaware

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

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	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
CPF Springing Member, LLC	None		Delaware
CREA-MA Reorganization Trust	None		Delaware
CREF X GP LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Barings Emerging Markets Blended Fund I GP, LLC	None		Delaware
Barings EPLF4 Rated Feeder GP LLC	None		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia II LLC	None		Delaware
RECSA-NY GP LLC	None		Delaware
Barings CLO 2022-I	98-1624360		Cayman Island
Barings CLO 2022-II	None		Cayman Island
Amherst Long Term Holdings, LLC	None		Delaware
Enroll Confidently, Inc.	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 External Benefits Group LLC	27-3576835		Delaware
MM Vine Street LLC	None		Delaware
Stillings Street LLC	None		Delaware
5301 Wisconsin Avenue Associates, LLC	None		District of Columbia
5301 Wisconsin Avenue GP, LLC	None		Delaware
Other Affiliates & Funds:			
100 w. 3rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		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 Construction Lending Fund LP	None		Delaware
Barings Emerging Generation Fund II LP	None		Delaware
Barings Emerging Generation Fund, LP	84-3784245		Delaware
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Barings Hotel Opportunity Venture I LP	None		Delaware
Barings Miller Investment Trust	04-1590850		Australia
Barings Real Estate Debt Income Fund LP	85-3449260		Delaware
Barings Real Estate European Value Add I SCSp	None		Luxembourg
Barings Small Business Fund, L.P.	None		Delaware
Barings-MM Revolver Fund LP*	None		Delaware
Barings U.S. High Yield Fund	None		Delaware

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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>
Beauty Brands Acquisition LLC	None		Delaware
Beauty Brands Acquisition Intermediate LLC	None		Delaware
Forma Brands, LLC	None		Delaware
Cornerstone Permanent Mortgage Fund LLC	45-2632610		Massachusetts
CREA Ridge Apartments, LLC	None		Delaware
Euro Real Estate Holdings Herleshausen LLC	None		Delaware
London Office JV Holdings LLC	None		Delaware
Riverwalk MM Member, LLC	None		Delaware
Aland Royalty Holdings LP	None		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC	81-4258759		Delaware
EIP Holdings I, LLC	None		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Validus Holding Company LLC	46-0687392		Delaware
SBNP SIA II LLC	04-1590850		Delaware
SBNP SIA III LLC	None		Delaware
MM Speedway El Paso Member LLC	None		Delaware
Barings European Real Estate Debt Income Fund	None		Luxembourg
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund	None		Ireland
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-II	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-III	None		Cayman Islands
Barings CLO 2020-IV	None		Cayman Islands
Barings CLO 2021-I	None		Cayman Islands
Barings CLO 2021-II	None		Cayman Islands
Barings CLO 2021-III	None		Cayman Islands
Barings CLO 2024-II	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Barings Euro CLO 2019-I	3603726OH		Ireland
Barings Euro CLO 2019-II	None		Ireland
Barings Euro CLO 2020-I DAC	None		Ireland
Barings Euro CLO 2021-I DAC	3715576VH		Ireland
Barings Euro CLO 2021-II DAC	3750378QH		Ireland
Barings Euro CLO 2021-III DAC	None		Ireland

*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 Euro CLO 2023-II DAC	None		Ireland
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Special Situations Credit 4 Delaware*	85-1465973		Delaware
Barings Global Special Situations Credit 4 LUX*	98-1570693		Luxembourg
Barings Europe Select Fund	None		Ireland
Barings Hotel Opportunity Venture	87-0977058		Connecticut
Barings Innovations & Growth Real Estate Fund*	86-3661023		Delaware
Barings Middle Market CLO 2017-I Ltd & LLC	None		Cayman Islands
Barings Middle Market CLO 2018-I	None		Cayman Islands
Barings Middle Market CLO 2019-I	None		Cayman Islands
Barings Middle Market CLO Ltd 2021-I	98-1612604		Cayman Islands
Barings Middle Market CLO Ltd 2023-I	None		Bermuda
Barings Middle Market CLO Ltd 2023-II	None		Bermuda
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Barings Target Yield Infrastructure Debt Fund	98-1567942		Luxembourg
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Euro Value Add II (BREEVA II)*	None		Luxembourg
Barings Transportation Fund LP*	87-1262754		Delaware
Braemar Energy Ventures I, L.P.*	None		Delaware
Barings European Core Property Fund SCSp*	None		Luxembourg
Barings European Private Loan Fund III A	46-5001122		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Benchmark 2018-B8	38-4096530		New York
Barings Core Property Fund LP	20-5578089		Delaware
DPI Acres Capital SPV LLC	04-1590850		Delaware
DPI-ARES Mortgage Lending SPV, LLC	04-1590850		Delaware
E2E Affordable Housing Debt Fund LLC	None		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
GIA EU Holdings - Emerson JV Sarl	98-1607033		Luxembourg
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Martello Re Feeder LP	None		Delaware
Martello Re LP	None		Delaware
Martello Re Holding Limited LLC	None		Delaware
Martello Re Limited	None		Bermuda
Martello Re Services Company	None		Delaware
Miami Douglas Three MM, LLC	04-1590850		Delaware
MM BIG Peninsula Co-Invest Member LLC*	87-4021641		Delaware
MM Direct Private Investment Holding	04-1590850		Delaware
MM CM Holding LLC	None		Delaware
MM Debt Participations LLC	81-3000420		Delaware

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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>
MM MD1 Station Member LLC*	04-1590850		Delaware
MM MD2 Station Member LLC*	04-1590850		Delaware
MMV Climate Technology Fund GP*	04-1590850		Delaware
MM REED District Landco Member LLC	None		Delaware
MM Subline Borrower LLC	04-1590850		Delaware
SBNP SIA IV LLC	None		Delaware
Washington Pine 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
Trailside MM Member LLC*	04-1590850		Delaware
Washington Gateway Three LLC	32-0574045		Delaware
Washington Gateway Two LLC*	83-1325764		Delaware
MALIC Debt Participations LLC	None		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 Global High Yield Fund	47-3790192		Massachusetts
Great Lakes II LLC*	71-1018134		Delaware
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
Barings California Mortgage Fund IV	None		California
Barings Umbrella Fund LUX SCSp SICAV RAIF*	None		Luxembourg
Calgary Railway Holding LLC	82-2285211		Delaware
Cornbrook PRS Holdings LLC	82-3307907		Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II LLC	95-4207717		California
Cornerstone California Mortgage Fund III LLC	95-4207717		California
Cornerstone Fort Pierce Development, LLC*	56-2630592		Delaware
Cornerstone Permanent Mortgage Fund II LLC	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III LLC	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV LLC	61-1793735		Massachusetts
CREA/PPC Venture, LLC	20-0348173		Delaware
Danville Riverwalk Venture, LLC	82-2783393		Delaware
Euro Real Estate Holdings LLC	04-1590850		Delaware
Fan Pier Development LLC*	20-3347091		Delaware
GIA EU Holdings LLC - Avalon Spain	04-1590850		Delaware
GIA EU Holdings LLC	04-1590850		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
MMLIC Debt Participations LLC	13-1935920		Delaware
MM Brookhaven Member LLC	04-1590850		Delaware
MM Ascend Mtg. Lending LLC	04-1590850		Delaware
MM Kannapolis Industrial Member LLC*	04-1590850		Delaware

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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>
MM East South Crossing Member LLC	04-1590850		Delaware
MM Horizon Savannah Member LLC*	04-1590850		Delaware
MM Horizon Savannah Member II LLC*	04-1590850		Delaware
MM Ironhead Commerce Center	04-1590850		Delaware
MM National Self-Storage Program Member LLC	04-1590850		Delaware
MM 1400 E 4th Street Member LLC	04-1590850		Delaware
MM 1370 AVE OF AM LLC	04-1590850		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
Paco France Logistics LLC	04-1590850		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Trailside MM Member II LLC	04-1590850		Delaware
Unna, Dortmund Holding LLC	82-3250684		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
West 37th Street Hotel LLC*	88-3861481		Delaware
MassMutual Premier Funds:			
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Select Funds:			
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts
MassMutual Select T. Rowe Price Retirement 2005 Fund	82-3347422		Massachusetts
MassMutual Select T. Rowe Price Retirement 2010 Fund	82-3355639		Massachusetts
MassMutual Select T. Rowe Price Retirement 2015 Fund	82-3382389		Massachusetts
MassMutual Select T. Rowe Price Retirement 2020 Fund	82-3396442		Massachusetts
MassMutual Select T. Rowe Price Retirement 2025 Fund	82-3417420		Massachusetts
MassMutual Select T. Rowe Price Retirement 2030 Fund	82-3430358		Massachusetts
MassMutual Select T. Rowe Price Retirement 2035 Fund	82-3439837		Massachusetts
MassMutual Select T. Rowe Price Retirement 2040 Fund	82-3451779		Massachusetts
MassMutual Select T. Rowe Price Retirement 2045 Fund	82-3472295		Massachusetts
MassMutual Select T. Rowe Price Retirement 2050 Fund	82-3481715		Massachusetts
MassMutual Select T. Rowe Price Retirement 2055 Fund	82-3502011		Massachusetts
MassMutual Select T. Rowe Price Retirement 2060 Fund	82-3525148		Massachusetts
MassMutual Select T. Rowe Price Retirement Balanced Fund	82-3533944		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2035 Fund	27-1933380		Massachusetts
MassMutual RetireSMART 2045 Fund	27-1932769		Massachusetts
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts

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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 RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual 20/80 Allocation Fund	45-1618155		Massachusetts
MML SER INVT FD II ISHARES 80/20 ALLOCATION FD	45-1618222		Massachusetts
MassMutual RetireSMART In Retirement Fund	03-0532464		Massachusetts
MassMutual 40/60 Allocation Fund	45-1618262		Massachusetts
MassMutual 60/40 Allocation Fund	45-1618046		Massachusetts
MassMutual ishares 60/40 Allocation Fund	45-1618046		Massachusetts
MassMutual Balanced Fund	04-3212054		Massachusetts
MassMutual Blue Chip Growth Fund	04-3556992		Massachusetts
MassMutual Core Bond Fund	04-3277549		Massachusetts
MassMutual Disciplined Growth Fund	04-3539084		Massachusetts
MassMutual Disciplined Value Fund	04-3539083		Massachusetts
MassMutual Diversified Value Fund	01-0821120		Massachusetts
MassMutual Equity Opportunities Fund	04-3512590		Massachusetts
MassMutual Inflation-Protected and Income Fund	03-0532475		Massachusetts
MassMutual Mid Cap Growth Fund	04-3512596		Massachusetts
MassMutual Premier Diversified Bond Fund	04-3464165		Massachusetts
MassMutual RetireSMART by JPMorgan 2065 Fund	92-1441036		Massachusetts
MassMutual Select 80/20 Allocation Fund	45-1618222		Massachusetts
MassMutual Select Overseas Fund	04-3557000		Massachusetts
MassMutual Select T Rowe Price Retirement 2065 Fund	92-1427882		Massachusetts
MassMutual Small Cap Growth Equity Fund	04-3464205		Massachusetts
MassMutual Small Cap Opportunities Fund	04-3424705		Massachusetts
MassMutual Small Cap Value Equity Fund	02-0769954		Massachusetts
MassMutual Clinton Municipal Credit Opportunities Fund	93-4168848		Massachusetts
MassMutual Clinton Municipal Fund	93-4190918		Massachusetts
MassMutual Clinton Short-Term Municipal Fund	93-4193313		Massachusetts

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*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.

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388			Massachusetts Mutual Life Insurance Company (MMLIC)	MA	RE	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	DS	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	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CML Special Situations Investor LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CM Life Mortgage Lending LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CML Mezzanine Investor III, LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CML Global Capabilities LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Global Capabilities I LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Global Business Services India LLP	IND	DS	MM Global Capabilities I LLC	Ownership	100.000	MMLIC		
.0000							MM Global Capabilities (Netherlands) B.V.	NLD	DS	MM Global Capabilities I LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Global Business Services Romania S.R.L.	ROU	DS	MM Global Capabilities (Netherlands) B.V.	Ownership	100.000	MMLIC		
.0000							MM Global Capabilities II LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Global Capabilities III LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM/Barings Multifamily TEBS 2020 LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Berkshire Way LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MML Special Situations Investor LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	C.M. Life Insurance Company	Influence		MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	Wood Creek Capital Management LLC	Management		MMLIC		
.0000							Lyme Adirondack Forest Company, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands I, LLC	DE	DS	Lyme Adirondack Forest Company, LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands II, LLC	DE	DS	Lyme Adirondack Forest Company, LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timber Sales, LLC	DE	DS	Lyme Adirondack Forest Company, LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MSP-SC, LLC	DE	DS	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 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							EM Opportunities LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual MCAM Insurance Company, Inc.	VT	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV GP, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000							MassMutual Ventures US IV GP, LLC	DE	NIA	Massachusetts Mutual Ascend	Ownership	1.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							MassMutual Ventures US IV, L.P.	DE	NIA	MassMutual Ventures US IV GP, LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV LLC	DE	DS	MassMutual Ventures US IV, L.P.	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Europe/APAC I GP, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Europe/APAC I GP, L.P.	CYM	DS	MassMutual Ventures Europe/APAC I GP, LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Europe/APAC I L.P.	CYM	DS	MassMutual Ventures Europe/APAC I GP, L.P.	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia III LLC	DE	DS	MassMutual Ventures Europe/APAC I L.P.	Ownership	100.000	MMLIC		
.0000							MMV Digital I LLC	CYM	DS	MassMutual Ventures Southeast Asia III LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Sustainable Advisors LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CSA Intermediate Holdco LLC	DE	DS	Counterpointe Sustainable Advisors LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Trust Services LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							CP PACE LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Titling Trust	DE	DS	CP PACE LLC	Ownership	100.000	MMLIC		
.0000							CSA Employee Services Company LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Sustainable Real Estate II LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Energy Solutions II LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Energy Solutions (CA) II LLC	DE	DS	Counterpointe Energy Solutions II LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Energy Solutions (FL) II LLC	DE	DS	Counterpointe Energy Solutions II LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Energy Solutions (IL) LLC	DE	DS	Counterpointe Energy Solutions II LLC	Ownership	100.000	MMLIC		
.0000							Loop-Counterpointe PACE LLC	DE	DS	Counterpointe Energy Solutions (IL) LLC	Ownership	100.000	MMLIC		
.0000							Counterpointe Energy Services LLC	DE	DS	CSA Intermediate Holdco LLC	Ownership	100.000	MMLIC		
.0000							CSA Incentive Holdco LLC	DE	DS	Counterpointe Sustainable Advisors LLC	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		1
.0000							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies MM Lending LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Green SPE LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit Partners LLC	DE	NIA	Green SPE LLC	Ownership	100.000	MMLIC		
.0000							Apex GP I LLC	DE	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Apex Securitized Income Fund LP	DE	NIA	Apex GP I 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							JCM GP I LLC	DE	NIA	Jefferies Credit Management LLC	Ownership	100.000	MMLIC		
.0000							JCM H-2 Credit Fund GP LLC	DE	NIA	Jefferies Credit Management LLC	Ownership	100.000	MMLIC		
.0000							JCP Direct Lending CLO 2022 LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Direct Lending Europe SCSp SICAV-RAIF	LUX	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Credit Management Holdings LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							JDLF GP (Europe) S.a.r.l	LUX	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LP	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C LP	DE	NIA	JFAM GP LP	Ownership	100.000	MMLIC		
.0000							Jefferies DLF C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund C LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C SPE LLC	DE	NIA	Jefferies DLF C Holdings LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LP	DE	NIA	JDLF II GP LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							Jefferies Direct Lending Fund II C LP	DE	NIA	JDLF II GP LP	Ownership	100.000	MLLIC		
.0000							Jefferies DLF 2 C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund II C LP	Ownership	100.000	MLLIC		
.0000							Jefferies Direct Lending Fund II C SPE LLC	DE	NIA	Jefferies DLF 2 C Holdings LLC	Ownership	100.000	MLLIC		
.0000							JDLF III GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MLLIC		
.0000							JDLF III GP LP	DE	NIA	JDLF III GP LLC	Ownership	100.000	MLLIC		
.0000							Jefferies Direct Lending Fund III C LP	DE	NIA	JDLF III GP LP	Ownership	100.000	MLLIC		
.0000							JCP Direct Lending CLO 2023-1 LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MLLIC		
.0000							JCP Direct Lending CLO 2023 Ltd.	JEY	NIA	JCP Direct Lending CLO 2023 Ltd.	Ownership	100.000	MLLIC		
.0000							JCP GP I LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MLLIC		
.0000							Jefferies M Super Private Credit Fund GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MLLIC		
.0000							Jefferies Private Credit BDC Inc.	MD	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JCP Funding 2024 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							Jefferies Senior Lending LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Holdings II LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Europe GP, S.a.r.l.	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							Jefferies Finance Europe, S.L.P.	LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MLLIC		
.0000							Jefferies Finance Europe, SCSp	LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MLLIC		
.0000							Jefferies Finance Business Credit LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Business Credit Fund I LLC	DE	NIA	Jefferies Finance Business Credit LLC	Ownership	100.000	MLLIC		
.0000							JFIN Funding 2021 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JSPCS MM LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2017-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2018 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2019 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2019-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2020 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2021-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2021-V Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2022-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2022-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2022-IV Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2024-I Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver CLO 2022-IV LLC	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Fund, L.P.	DE	NIA	Jefferies Finance LLC	Ownership	90.000	MLLIC		
.0000							JFIN Revolver Funding 2021 Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Funding 2021 III Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Funding 2021 IV Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver Funding 2022-I Ltd.	BMJ	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver SPE1 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver SPE3 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver SPE4 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN Revolver SPE4 2022 Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JCP Private Loan Management GP LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000							JCP Private Loan Management LP	DE	NIA	JCP Private Loan Management GP LLC	Ownership	100.000	MLLIC		
.0000							Apex Credit Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2012 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2013 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2014 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2014-II Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2015-II Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	85.000	MLLIC		
.0000							JFIN CLO 2016 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2017 Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							JFIN CLO 2017-II Ltd.	CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MLLIC		
.0000							Tomorrow Parent, LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							Custom Ecology Holdco, LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLLIC		
.0000							Massachusetts Mutual Life Insurance Company								
.0000							Glidepath Holdings Inc.	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0435	Massachusetts Mut Life Ins Co	63312	86-2294635 13-1935920				MassMutual Ascend Life Insurance Company	OH	DS	Glidepath Holdings Inc.	Ownership	100.000	MLLIC		
.0000							AAG Insurance Agency, LLC	KY	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MLLIC		
.0435	Massachusetts Mut Life Ins Co	93661	31-1021738 31-1395344				Annuity Investors Life Insurance Company	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MM Ascend Life Investor Services, LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MM Ascend Mortgage Lending LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Manhattan National Holding, LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MLLIC		
.0435	Massachusetts Mut Life Ins Co	67083	26-3260520 45-0252531				Manhattan National Life Insurance Company	OH	DS	Manhattan National Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Mortgage Lending LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MM Copper Hill Road LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MMV CTF I GP LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures Climate Technology Fund I LP	DE	DS	MMV CTF I GP LLC	Ownership	100.000	MLLIC		
.0000							MM Direct Private Investments Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MM Direct Private Investments UK Limited	GBR	DS	MM Direct Private Investments Holding LLC	Ownership	100.000	MLLIC		
.0000							DPI-ACRES Capital LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							DPI-ARES Mortgage Lending LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MM Investment Holding	CYM	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							MMIH Bond Holdings LLC	DE	DS	MM Investment Holding	Ownership	99.610	MLLIC		
.0000							MassMutual Asset Finance LLC	DE	DS	C.M. Life Insurance Company	Ownership	0.400	MLLIC		
.0000							MassMutual Asset Finance LLC	DE	DS	MM Investment Holding	Ownership	99.600	MLLIC		
.0000							MMAF Equipment Finance LLC 2017-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2019-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2019-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2020-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2020-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2021-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2022-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000							MMAF Equipment Finance LLC 2022-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							MMAF Equipment Finance LLC 2023-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2024-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			04-2443240				MML Management Corporation	MA	DS	MM Investment Holding	Ownership	100.000	MMLIC	YES	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MML CM LLC	DE	DS	MML CM LLC	Ownership	100.000	MMLIC		
.0000							Blueprint Income LLC	NY	DS	MML CM LLC	Ownership	100.000	MMLIC		
.0000							Flourish Holding Company LLC	DE	DS	MML CM LLC	Ownership	100.000	MMLIC		
.0000							Flourish Insurance Agency LLC	DE	DS	Flourish Holding Company LLC	Ownership	100.000	MMLIC		
.0000							Flourish Digital Assets LLC	DE	DS	Flourish Holding Company LLC	Ownership	100.000	MMLIC		
.0000							Flourish Financial LLC	DE	DS	Flourish Holding Company LLC	Ownership	100.000	MMLIC		
.0000							Flourish Technologies LLC	DE	DS	Flourish Holding Company LLC	Ownership	100.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	MassMutual Holding LLC	Ownership	1.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	CT	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	YES	
.0000							MML Private Placement Investment Company I, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			04-1590850				MM Private Equity Intercontinental LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-2738137				Pioneers Gate LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	YES	
.0000			37-1732913				Fern Street LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Low Carbon Energy Holding	GBR	DS	MassMutual Holding LLC	Ownership	49.000	MMLIC		
.0000							Sleeper Street LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			82-2932156				GASL Holdings LLC	DE	NIA	MassMutual Holding LLC	Ownership	11.300	MMLIC		
.0000			82-2932156				GASL Holdings LLC	DE	NIA	Barings LLC	Board		MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	11.500	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	C.M. Life Insurance Company	Ownership/Influence	1.110	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Perpetual European Direct Lending Fund	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	82.130	MMLIC		
.0000							Barings Perpetual European Direct Lending Fund	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MMLIC		
.0000			88-0916548				Barings Emerging Generation Fund II	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	39.700	MMLIC		
.0000			88-0916548				Barings Emerging Generation Fund II	DE	NIA	Barings LLC	Influence		MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	MassMutual Holding LLC	Ownership/Influence	23.700	MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	Barings LLC	Management		MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	26.140	MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	C.M. Life Insurance Company	Ownership	5.100	MLLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Global Special Situations Credit Fund 3	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	19.680	MLLIC		
.0000							Barings Global Special Situations Credit Fund 3	LUX	NIA	Barings LLC	Management		MLLIC		
.0000			06-1597528				MassMutual Assignment Company	NC	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				MassMutual Capital Partners LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000			46-4255307				Marco Hotel LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000			45-3623262				HB Naples Golf Owner LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000			82-4411267				RB Apartments LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000							Intermodal Holding II LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures Holding LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000							Crane Venture Partners LLP	GBR	DS	MassMutual Ventures Holding LLC	Ownership	33.000	MLLIC		
.0000							MassMutual Ventures Management LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures SEA Management Private Limited	DE	DS	MassMutual Ventures Management LLC	Ownership	100.000	MLLIC		
.0000							MMV UK/SEA Limited	GBR	DS	MassMutual Ventures SEA Management Private Limited	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures India Private Limited	IND	DS	MassMutual Ventures SEA Management Private Limited	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures Southeast Asia II LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures UK LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000			47-1296410				MassMutual Ventures US I LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures US II LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MassMutual Ventures US III LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MLLIC		
.0000							MM Catalyst Fund LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000							MM Catalyst Fund II LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MLLIC		
.0000							Rothesay Limited	GBR	DS	MM Rothesay Holdco US LLC	Ownership	47.600	MLLIC		
.0000							Rothesay Mortgages Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MLLIC		
.0000							Rothesay Life Plc	GBR	DS	Rothesay Limited	Ownership	100.000	MLLIC		
.0000							Rothesay MA No.1 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MLLIC		
.0000							Rothesay MA No.3 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MLLIC		
.0000							Rothesay MA No.4 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MLLIC		
.0000							LT Mortgage Financing Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MLLIC		
.0000							Rothesay Property Partnership 1 LLP	GBR	DS	Rothesay Life PLC	Ownership	100.000	MLLIC		
.0000							Rothesay Foundation	GBR	DS	Rothesay Limited	Ownership	100.000	MLLIC		
.0000							Rothesay Pensions Management Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MLLIC		
.0000							Rothesay Asset Management UK Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MLLIC		
.0000							Rothesay Asset Management Australia Pty Ltd	AUS	DS	Rothesay Asset Management UK Limited	Ownership	100.000	MLLIC		
.0000							Rothesay Asset Management North America LLC	DE	DS	Rothesay Asset Management UK Limited	Ownership	100.000	MLLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Barings Europe Limited	.GBR	.DS	Barings Guernsey Limited	Ownership	100.000	MLLIC		
.0000							Barings Asset Management Spain SL	.ESP	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Baring France SAS	.FRA	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Baring International Fund Managers (Ireland) Limited	.IRL	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings GmbH	.DEU	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings Italy S.r.l.	.ITA	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings Sweden AB	.SWE	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings Netherlands B.V.	.NLD	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings Switzerland Sarl	.CHE	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR	.DS	Barings Europe Limited	Ownership	100.000	MLLIC		
.0000							Barings European Direct Lending 1 GP LLP	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							BCGSS 2 GP LLP	.GBR	.DS	Baring Fund Managers Limited	Ownership	100.000	MLLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings Core Fund Feeder I GP S.a.r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings Investment Fund (LUX) GP S.a.r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings BME GP S.a.r.l.	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings GPC GP S.a.r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings European Core Property Fund GP Sarl	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							Barings Umbrella Fund (LUX) GP S.a.r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							GPLF4(S) GP S.a.r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							PREIF Holdings Limited Partnership	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MLLIC		
.0000							BMC Holdings DE LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Massachusetts Mutual Life Insurance Company								
.0000			81-4065378				Remington L & W Holdings LLC	.DE	.NIA	Company	Ownership/Influence	65.370	MLLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	.NIA	Barings LLC	Influence		MLLIC		
.0000							Aland Royalty GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Alaska Future Fund GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							BAI Funds SLP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							BAI GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Baring Asset-Based Income Fund (US) GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings CMS Fund GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings Infiniti Fund Management LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings New Jersey Emerging Manager Program GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Massachusetts Mutual Life Insurance Company								
.0000							Barings Hotel Opportunity Venture I GP, LLC	.DE	.DS	Company	Ownership	100.000	MLLIC		
.0000							Baring Investment Series LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings Emerging Generation Fund GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings Emerging Generation Fund GP II, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings EPLF4 Rated Feeder, L.P.	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings ERS PE Emerging Manager III GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings FC III LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							Barings Global Investment Funds (U.S.) Management LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				Barings CLO Investment Partners GP, LLC	.DE	.DS	Barings LLC	Ownership	100.000	MLLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							Barings Core Property Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings DAPPLF1 Rated Feeder, G.P.	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings DAPPLF1 Rated Feeder, L.P.	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Direct Lending GP Ltd.	CYM	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Diversified Residential Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Diversified Residential Fund LP	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Capital Solutions Perpetual Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Centre Street CLO Equity Partnership GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			88-3792609				Barings Centre Street CLO Equity Partnership LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	27.890	MLL IC		
.0000			88-3792609				Barings Centre Street CLO Equity Partnership LP	DE	NIA	Barings LLC	Management		MLL IC		
.0000							Barings Global Real Assets Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings GPSF LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings North American Private Loan Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings North American Private Loan Fund II Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings North American Private Loan Fund III Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings - MM Revolver Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Real Estate European Value Add Fund II Feeder LLC	CYM	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings SEM GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BMT RE Debt Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			84-5063008				Barings Small Business Fund LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	33.600	MLL IC		
.0000			84-5063008				Barings Small Business Fund LLC	DE	DS	Barings LLC	Management		MLL IC		
.0000							Barings TYIDF2 Rated Feeder GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings TYIDF2 Rated Feeder, L.P.	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BCLF GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			98-0536233				Benton Street Advisors, Inc.	CYM	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Active Passive Equity Direct EAFE LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BHOVI Incentive LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BIG Real Estate Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BIG Real Estate Incentive I LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BIG Real Estate Incentive II LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BRECS VII GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							BREDIF GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							CPF Springing Member, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							CREA-MA Reorganization Trust	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							CREF X GP LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			04-1590850				Great Lakes III GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MLL IC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							Lake Jackson LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Markets Blended Fund I GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings EPLF4 Rated Feeder GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			41-2280126				Mezzco III LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000			80-0920285				Mezzco IV LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000							Mezzco Australia II LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							RECSA-NY GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-1624360				Barings QLO 2022-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings QLO 2022-II	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Amherst Long Term Holdings, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	24.500	MMLIC		
.0000							Enroll Confidently, Inc.	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	25.000	MMLIC		
.0000			04-3313782				MassMutual International LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	YES	
.0000							MassMutual Solutions LLC	DE	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							Haven Technologies Asia Limited	HKG	DS	MassMutual Solutions LLC	Ownership	100.000	MMLIC		
.0000							Yunfeng Financial Group Limited	HKG	DS	MassMutual International LLC	Ownership	24.900	MMLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Vine Street LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Stillings Street LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							5301 Wisconsin Avenue Associates, LLC	DC	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000							5301 Wisconsin Avenue GP, LLC	DE	DS	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			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							Barings Construction Lending Fund LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	85.710	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Barings Emerging Generation Fund II LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	39.700	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund, LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	67.740	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund, LP	DE	DS	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Barings LLC	Ownership	57.600	MMLIC		
.0000							Barings Hotel Opportunity Venture I LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	65.000	MMLIC		
.0000							Barings Hotel Opportunity Venture I LP	DE	DS	Barings LLC	Management		MMLIC		
.0000							Barings Miller Investment Trust	AUS	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	57.330	MMLIC		
.0000							Barings Miller Investment Trust	AUS	NIA	MassMutual Ascend Life Insurance Company	Influence	9.330	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	Influence		MMLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	49.990	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	C.M. Life Insurance Company	Ownership	4.900	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Small Business Fund, L.P.	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	33.600	MMLIC		
.0000							Barings U.S. High Yield Fund	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	30.090	MMLIC		
.0000							Barings-MM Revolver Fund LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	86.000	MMLIC		
.0000							Barings-MM Revolver Fund LP	DE	DS	MM Ascend	Ownership/Influence	14.000	MMLIC		
.0000							Beauty Brands Acquisition LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	32.630	MMLIC		
.0000							Beauty Brands Acquisition Intermediate LLC	DE	NIA	Beauty Brands Acquisition LLC	Ownership	100.000	MMLIC		
.0000							Beauty Brands Acquisition Intermediate LLC	DE	NIA	Beauty Brands Acquisition Intermediate LLC	Ownership	100.000	MMLIC		
.0000							Forma Brands, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund LLC	MA	NIA	Barings LLC	Management		MMLIC		
.0000							CREA Ridge Apartments, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Euro Real Estate Holdings Herleshhausen LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	47.500	MMLIC		
.0000							London Office JV Holdings LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Riverwalk MM Member, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	DE	DS	MassMutual Holding LLC	Ownership/Influence	26.690	MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	DE	DS	Barings LLC	Management		MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			81-2244465				Chassis Acquisition Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MLLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MLLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	DE	DS	Barings LLC	Influence		MLLIC		
.0000							EIP Holdings I, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	29.000	MLLIC		
.0000			46-5460309				Red Lake Ventures, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.520	MLLIC		
.0000			46-5460309				Red Lake Ventures, LLC	DE	DS	Barings LLC	Influence		MLLIC		
.0000			46-0687392				Validus Holding Company LLC	DE	DS	Barings LLC	Ownership	40.440	MLLIC		
.0000			04-1590850				SBNP SIA II LLC	DE	DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							SBNP SIA III LLC	DE	DS	Barings LLC	Ownership	100.000	MLLIC		
.0000							MM Speedway El Paso Member LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Barings European Real Estate Debt Income Fund	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	54.720	MLLIC		
.0000							Barings European Real Estate Debt Income Fund	LUX	NIA	Barings LLC	Influence		MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	76.630	MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	3.800	MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MLLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Management		MLLIC		
.0000							Babson CLO Ltd. 2015-I	CYM	NIA	Barings LLC	Influence		MLLIC		2
.0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MLLIC		3
.0000							Babson CLO Ltd. 2016-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2018-III	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2018-IV	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000			98-1473665				Barings CLO 2019-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2019-III	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2019-IV	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2020-I	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2020-III	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2020-IV	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2021-I	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2021-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2021-III	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2021-III	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2024-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MLLIC		
.0000			36-037260H				Barings Euro CLO 2019-I BV	IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2019-II BV	IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2020-I DAC	IRL	NIA	Barings LLC	Influence		MLLIC		
.0000			37-15576VH				Barings Euro CLO 2021-I DAC	IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2021-II DAC	IRL	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Euro CLO 2021-III DAC	IRL	NIA	Barings LLC	Influence		MLLIC		

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							Barings Euro CLO 2023-II DAC	.IRL	NIA	Barings LLC	Influence				
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.230	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	67.000	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	C.M. Life Insurance Company	Ownership	3.500	MLLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.600	MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	C.M. Life Insurance Company	Ownership	0.700	MLLIC		
.0000							Barings Global Special Situations Credit 4 LUX	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Europe Select Fund	.IRL	NIA	Barings LLC	Management		MLLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	.CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	50.000	MLLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	.CT	NIA	Barings LLC	Management		MLLIC		
.0000			86-3661023				Barings Innovations & Growth Real Estate Fund	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	29.700	MLLIC		
.0000							Barings Innovations & Growth Real Estate Fund	.DE	NIA	C.M. Life Insurance Company	Ownership	0.400	MLLIC		
.0000							Barings Middle Market CLO 2017-I Ltd & LLC	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Middle Market CLO 2018-I	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Middle Market CLO 2019-I	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000			98-1612604				Barings Middle Market CLO Ltd 2021-I	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Middle Market CLO Ltd 2023-I	.BMJ	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings Middle Market CLO Ltd 2023-II	.BMJ	NIA	Barings LLC	Influence		MLLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.690	MLLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.870	MLLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	.LUX	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	27.500	MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	C.M. Life Insurance Company	Ownership	2.400	MLLIC		
.0000							Barings Euro Value Add II (BREEVA II)	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000			87-1262754				Barings Transportation Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	13.310	MLLIC		
.0000			87-1262754				Barings Transportation Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	8.200	MLLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.500	MLLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MLLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	MassMutual Holding LLC	Ownership/Influence	12.860	MLLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	C.M. Life Insurance Company	Ownership	0.800	MLLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management		MLLIC		
.0000			46-5001122				Barings European Private Loan Fund III A	.LUX	NIA	Company	Ownership	44.980	MLLIC		
.0000			38-4059932				Benchmark 2018-B2 Mortgage Trust	.NY	NIA	Barings LLC	Influence		MLLIC		
.0000							Benchmark 2018-B4	.NY	NIA	Barings LLC	Influence		MLLIC		
.0000			38-4096530				Benchmark 2018-B8	.NY	NIA	Barings LLC	Influence		MLLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	25.900	MLLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management		MLLIC		
.0000			04-1590850				DPI Acres Capital SPV LLC	.DE	NIA	Company	Ownership	100.000	MLLIC		
.0000			04-1590850				DPI-ARES Mortgage Lending SPV, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							E2E Affordable Housing Debt Fund LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			37-1708623				Great Lakes III, L.P.	.DE	NIA	Company	Ownership/Influence	40.450	MLLIC		
.0000			37-1708623				Great Lakes III, L.P.	.DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Management		MLLIC		
.0000			98-1607033				GIA EU Holdings - Emerson JV Sarl	.LUX	NIA	Company	Ownership/Influence	100.000	MLLIC		
.0000			98-1607033				GIA EU Holdings - Emerson JV Sarl	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000			38-4041011				JPMCC Commercial Mortgage Securities Trust 2017-JP7	.NY	NIA	Barings LLC	Influence		MLLIC		
.0000			38-4032059				JPMDB Commercial Mortgage Securities Trust 2017-C5	.NY	NIA	Barings LLC	Influence		MLLIC		
.0000							Martello Re Feeder LP	.DE	NIA	MassMutual Holding LLC	Ownership	44.000	MLLIC		
.0000							Martello Re LP	.DE	NIA	Martello Re Feeder LP	Ownership	54.000	MLLIC		
.0000							Martello Re Holding Limited LLC	.DE	NIA	Martello Re LP	Ownership	100.000	MLLIC		
.0000							Martello Re Limited	.BMJ	NIA	Martello Re Holding Limited LLC	Ownership	100.000	MLLIC		
.0000							Martello Re Services Company	.DE	NIA	Martello Re Holding Limited LLC Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				Miami Douglas Three MM, LLC	.DE	NIA	Company	Ownership	100.000	MLLIC		
.0000			87-4021641				MM BIG Peninsula Co-Invest Member LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	27.000	MLLIC		
.0000			87-4021641				MM BIG Peninsula Co-Invest Member LLC	.DE	NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership	0.800	MLLIC		
.0000			04-1590850				MM Direct Private Investment Holding	.DE	NIA	Company	Ownership	100.000	MLLIC		
.0000							MM CM Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			81-3000420				MM Debt Participations LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			81-3000420				MM Debt Participations LLC	.DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Management		MLLIC		
.0000			04-1590850				MM MD1 Station Member LLC	.DE	NIA	Company	Ownership	47.000	MLLIC		
.0000			04-1590850				MM MD1 Station Member LLC	.DE	NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership	3.100	MLLIC		
.0000			04-1590850				MM MD2 Station Member LLC	.DE	NIA	Company	Ownership	47.000	MLLIC		
.0000			04-1590850				MM MD2 Station Member LLC	.DE	NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership	3.100	MLLIC		
.0000			04-1590850				MMV Climate Technology Fund GP	.DE	NIA	Company	Ownership	99.000	MLLIC		
.0000			04-1590850				MMV Climate Technology Fund GP	.DE	NIA	Massachusetts Mutual Ascend	Ownership	1.000	MLLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000							MM REED District Landco Member LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Subline Borrower LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							SBNP SIA IV LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-1590850				Washington Pine LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	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	17.290	MMLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	97.170	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	66.970	MMLIC		
.0000			04-1590850				Trailside MM Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.380	MMLIC		
.0000			83-1325764				Washington Gateway Two LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.800	MMLIC		
.0000			83-1325764				Washington Gateway Two LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.720	MMLIC		
.0000							Washington Gateway Three LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.230	MMLIC		
.0000							MALIC Debt Participations LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.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			47-3790192				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.750	MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.320	MMLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.000	MMLIC		
.0000							Barings California Mortgage Fund IV	CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC		
.0000							Barings California Mortgage Fund IV	CA	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.960	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			82-3307907				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		

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

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

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.0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	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							Cornerstone Permanent Mortgage Fund III LLC	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	28.520	MMLIC		
.0000			82-2783393				Danville Riverwalk Venture, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.400	MMLIC		
.0000			04-1590850				Euro Real Estate Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	65.000	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.850	MMLIC		
.0000			04-1590850				GIA EU Holdings LLC - Avalon Spain	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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			13-1935920				MMLIC Debt Participations LLC	DE	NIA	Massachusetts Mutual Ascend	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Brookhaven Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Ascend Mtg. Lending LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Kannapolis Industrial Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	82.720	MMLIC		
.0000			04-1590850				MM Kannapolis Industrial Member LLC	DE	NIA	Massachusetts Mutual Ascend	Ownership	12.280	MMLIC		
.0000			04-1590850				MM East South Crossing Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.700	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.430	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member II LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.180	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member II LLC	DE	NIA	Massachusetts Mutual Ascend	Ownership	0.380	MMLIC		
.0000			04-1590850				MM Ironhead Commerce Center	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	75.250	MMLIC		
.0000			04-1590850				MM Ironhead Commerce Center	DE	NIA	Massachusetts Mutual Ascend	Ownership	19.800	MMLIC		
.0000			04-1590850				MM National Self-Storage Program Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	98.000	MMLIC		
.0000			04-1590850				MM 1370 AVE OF AM LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			04-1590850				MM 1370 AVE OF AM LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.330	MMLIC		
.0000			04-1590850				MM 1400 E 4th Street Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	96.000	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.990	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.030	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			04-1590850				Paco France Logistics LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC		
.0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.100	MMLIC		
.0000			04-1590850				Trailside MM Member II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	47.100	MMLIC		
.0000			82-3250684				Unna, Dortmund Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.440	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.770	MMLIC		
.0000			88-3861481				West 37th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	93.800	MMLIC		
.0000			88-3861481				West 37th Street Hotel LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.200	MMLIC		
.0000			26-3229251		0000927972	OQ	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	57.940	MMLIC		
.0000			42-1710935		0000916053	OQ	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	38.710	MMLIC		
.0000			02-0769954		0000916053	OQ	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			04-3584140		0000916053	OQ	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	43.500	MMLIC		
.0000			82-3347422		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2005 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.510	MMLIC		
.0000			82-3355639		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2010 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3382389		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3396442		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2020 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3417420		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2025 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3430358		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2030 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3439837		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2035 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3451779		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2040 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3472295		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2045 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3481715		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2050 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3502011		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3525148		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			82-3533944		0000916053	OQ	MassMutual Select T. Rowe Price Retirement Balanced Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			46-4257056				MML Series International Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	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? (Yes/No)	*
.0000			47-3529636				MML Series II Dynamic Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			47-3544629				MML Series II Equity Rotation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.230	MMLIC		
.0000			27-1933389		0000916053	OQ	MassMutual RetireSMART 2035 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	3.220	MMLIC		
.0000			27-1932769		0000916053	OQ	MassMutual RetireSMART 2045 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	6.440	MMLIC		
.0000			46-3289207		0000916053	OQ	MassMutual RetireSMART 2055 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	20.410	MMLIC		
.0000			47-5326235		0000916053	OQ	MassMutual RetireSMART 2060 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	38.170	MMLIC		
.0000			45-1618155		0000916053	OQ	MassMutual 20/80 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		
.0000			45-1618222		0000916053	OQ	MML SER INVT FD II ISHAPES 80/20 ALLOCATION FD	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	34.200	MMLIC		
.0000			03-0532464		0000916053	OQ	MassMutual RetireSMART In Retirement Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	7.180	MMLIC		
.0000			45-1618262		0000916053	OQ	MassMutual 40/60 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		
.0000			45-1618046		0000916053	OQ	MassMutual 60/40 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-1618046		0000916053	OQ	MassMutual ishares 60/40 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	58.190	MMLIC		
.0000			04-3212054		0000916053	OQ	MassMutual Balanced Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3556992		0000916053	OQ	MassMutual Blue Chip Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3277549		0000916053	OQ	MassMutual Core Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.800	MMLIC		
.0000			04-3539084		0000916053	OQ	MassMutual Disciplined Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3539083		0000916053	OQ	MassMutual Disciplined Value Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			01-0821120		0000916053	OQ	MassMutual Diversified Value Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3512590		0000916053	OQ	MassMutual Equity Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			03-0532475		0000916053	OQ	MassMutual Inflation-Protected and Income Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.790	MMLIC		
.0000			04-3512596		0000916053	OQ	MassMutual Mid Cap Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3464165		0000916053	OQ	MassMutual Premier Diversified Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			92-1441036		0000916053	OQ	MassMutual RetireSMART by JPMorgan 2065 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.930	MMLIC		
.0000			45-1618222		0000916053	OQ	MassMutual Select 80/20 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3557000		0000916053	OQ	MassMutual Select Overseas Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			92-1427882		0000916053	OQ	MassMutual Select T Rowe Price Retirement 2065 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	30.050	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000			04-3464205		0000916053	QO	MassMutual Small Cap Growth Equity Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	61.390	MMLIC		
.0000			04-3424705		0000916053	QO	MassMutual Small Cap Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	9.920	MMLIC		
.0000			02-0769954		0000916053	QO	MassMutual Small Cap Value Equity Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			93-4168848		0000916053	QO	MassMutual Clinton Municipal Credit Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.600	MMLIC		
.0000			93-4190918		0000916053	QO	MassMutual Clinton Municipal Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.860	MMLIC		
.0000			93-4193313		0000916053	QO	MassMutual Clinton Short-Term Municipal Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		

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

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 Quarter Only) The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter. In the case of an ongoing statement of exemption, enter "SEE EXPLANATION" and provide as an explanation that the company is utilizing an ongoing statement of exemption.	N/A

AUGUST FILING

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

1. Not required
2. This line of business is not written by the company
3. Not required
4. Not required
5. Not required
6. Not required
7. Not required

Bar Code:

1. Trusteed Surplus Statement [Document Identifier 490]
2. Medicare Part D Coverage Supplement [Document Identifier 365]
3. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
4. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]
5. Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
6. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
7. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]



STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Assets Line 25

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
2504. Employee insurance plan advances	41,474,384	245	41,474,139	41,030,235
2505. Investment in trust	15,803,071		15,803,071	18,032,856
2506. Pension plan asset	636,156,264	636,156,264		
2507. Cash advances to agents	328,610,097	328,610,097		
2508. Receivable for commissions and expenses on long-term lease	130,548,369	130,548,369		
2509. Intangible assets	22,303,428	22,303,428		
2510. Bills receivable	50,783	50,783		
2511. Real estate notes receivable				13,942,880
2597. Summary of remaining write-ins for Line 25 from overflow page	1,174,946,397	1,117,669,186	57,277,211	73,005,971

Additional Write-ins for Liabilities Line 25

	1 Current Statement Date	2 December 31 Prior Year
2504. Funds awaiting escheat and other miscellaneous	138,107,549	97,415,150
2505. Deferred income liability	23,594,255	24,107,096
2597. Summary of remaining write-ins for Line 25 from overflow page	161,701,804	121,522,246

Additional Write-ins for Summary of Operations Line 8.3

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
08.304. Miscellaneous income	(29,114,650)	(30,524,905)	(44,794,986)
08.305. Revenue sharing	(430,040)	17,314,097	13,151,484
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	(29,544,691)	(13,210,808)	(31,643,502)

Additional Write-ins for Summary of Operations Line 27

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
2704. Miscellaneous charges to operations	(21,742,976)	(31,396,830)	(24,570,678)
2797. Summary of remaining write-ins for Line 27 from overflow page	(21,742,976)	(31,396,830)	(24,570,678)

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE A - VERIFICATION

Real Estate

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	329,428,627	354,748,274
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition	1,407,076	8,066,745
3. Current year change in encumbrances	2,160,000	500,000
4. Total gain (loss) on disposals	(300,000)	2,896,140
5. Deduct amounts received on disposals	(299,999)	5,488,624
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	23,175,022	31,293,907
9. Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	309,820,680	329,428,627
10. Deduct total nonadmitted amounts		
11. Statement value at end of current period (Line 9 minus Line 10)	309,820,680	329,428,627

SCHEDULE B - VERIFICATION

Mortgage Loans

	1 Year to Date	2 Prior Year Ended December 31
1. Book value/recorded investment excluding accrued interest, December 31 of prior year	24,178,006,005	24,971,963,928
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	2,475,023,035	2,495,345,390
2.2 Additional investment made after acquisition	402,835,971	400,450,389
3. Capitalized deferred interest and other	34,712,065	29,385,406
4. Accrual of discount	(222,611)	11,578,646
5. Unrealized valuation increase/(decrease)		
6. Total gain (loss) on disposals	(45,972,113)	(60,142,091)
7. Deduct amounts received on disposals	2,803,860,708	3,813,446,547
8. Deduct amortization of premium and mortgage interest points and commitment fees	15,207,374	728,320
9. Total foreign exchange change in book value/recorded investment excluding accrued interest	115,528,283	156,385,276
10. Deduct current year's other than temporary impairment recognized	215,981,580	12,786,072
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	24,124,860,973	24,178,006,005
12. Total valuation allowance	(16,344,294)	(157,357,251)
13. Subtotal (Line 11 plus Line 12)	24,108,516,679	24,020,648,754
14. Deduct total nonadmitted amounts		
15. Statement value at end of current period (Line 13 minus Line 14)	24,108,516,679	24,020,648,754

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	12,954,768,745	12,340,402,460
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	615,812,309	789,247,712
2.2 Additional investment made after acquisition	1,802,582,419	2,636,007,925
3. Capitalized deferred interest and other		
4. Accrual of discount	10,168,160	40,577,707
5. Unrealized valuation increase/(decrease)	639,541,603	663,698,044
6. Total gain (loss) on disposals	(4,441,507)	38,415,281
7. Deduct amounts received on disposals	1,584,259,591	3,243,774,880
8. Deduct amortization of premium and depreciation	(4,788,918)	36,477,673
9. Total foreign exchange change in book/adjusted carrying value	19,738,794	79,530,117
10. Deduct current year's other than temporary impairment recognized	107,300,161	352,857,947
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	14,351,399,688	12,954,768,745
12. Deduct total nonadmitted amounts	43,261,685	47,399,948
13. Statement value at end of current period (Line 11 minus Line 12)	14,308,138,003	12,907,368,797

SCHEDULE D - VERIFICATION

Bonds and Stocks

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value of bonds and stocks, December 31 of prior year	171,997,873,272	163,056,331,820
2. Cost of bonds and stocks acquired	52,891,470,410	34,039,047,366
3. Accrual of discount	315,843,069	296,445,916
4. Unrealized valuation increase/(decrease)	700,967,065	679,502,590
5. Total gain (loss) on disposals	(165,178,414)	(502,564,865)
6. Deduct consideration for bonds and stocks disposed of	33,726,710,165	26,048,157,876
7. Deduct amortization of premium	75,589,505	155,833,363
8. Total foreign exchange change in book/adjusted carrying value	564,438,925	810,384,429
9. Deduct current year's other than temporary impairment recognized	184,858,259	178,667,445
10. Total investment income recognized as a result of prepayment penalties and/or acceleration fees	11,759,302	1,384,700
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	192,330,015,700	171,997,873,272
12. Deduct total nonadmitted amounts		
13. Statement value at end of current period (Line 11 minus Line 12)	192,330,015,700	171,997,873,272

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - PART 1B

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

NAIC Designation	1 Book/Adjusted Carrying Value Beginning of Current Quarter	2 Acquisitions During Current Quarter	3 Dispositions During Current Quarter	4 Non-Trading Activity During Current Quarter	5 Book/Adjusted Carrying Value End of First Quarter	6 Book/Adjusted Carrying Value End of Second Quarter	7 Book/Adjusted Carrying Value End of Third Quarter	8 Book/Adjusted Carrying Value December 31 Prior Year
BONDS								
1. NAIC 1 (a)	92,468,734,936	48,859,704,074	47,808,983,289	2,107,285,980	87,932,401,106	92,468,734,936	95,626,741,701	84,527,362,887
2. NAIC 2 (a)	58,754,642,705	95,574,165,196	96,344,180,863	5,624,438,015	59,055,218,799	58,754,642,705	63,609,065,054	60,171,684,095
3. NAIC 3 (a)	3,720,314,028	283,689,340	244,765,759	258,584,369	3,730,150,074	3,720,314,028	4,017,821,978	3,623,999,423
4. NAIC 4 (a)	3,169,322,182	1,929,856,895	1,759,198,964	(600,960,837)	3,043,287,655	3,169,322,182	2,739,019,276	2,859,470,709
5. NAIC 5 (a)	2,179,282,284	67,523,531	280,622,818	322,127,696	2,358,922,405	2,179,282,284	2,288,310,693	2,513,596,496
6. NAIC 6 (a)	501,020,346	96,370,693	58,053,627	54,814,190	361,753,354	501,020,346	594,151,602	399,926,882
7. Total Bonds	160,793,316,481	146,811,309,728	146,495,805,319	7,766,289,413	156,481,733,392	160,793,316,481	168,875,110,304	154,096,040,492
PREFERRED STOCK								
8. NAIC 1	202,992,154		89,300,000		198,539,149	202,992,154	113,692,154	198,539,149
9. NAIC 2	214,211,873	30,754,240		4,201,095	265,807,266	214,211,873	249,167,208	151,822,207
10. NAIC 3	18,021,927	6,750,000		27,000,000	26,546,647	18,021,927	51,771,927	25,913,847
11. NAIC 4	12,555,770			(4,046,254)	8,293,773	12,555,770	8,509,516	7,912,253
12. NAIC 5	17,826,042		767,164	4,313,448	21,210,615	17,826,042	21,372,326	18,708,181
13. NAIC 6	82,828,741	90,574,957	8,532,101	(24,516,578)	48,271,604	82,828,741	140,355,019	43,129,765
14. Total Preferred Stock	548,436,507	128,079,197	98,599,265	6,951,712	568,669,054	548,436,507	584,868,150	446,025,402
15. Total Bonds and Preferred Stock	161,341,752,988	146,939,388,925	146,594,404,584	7,773,241,125	157,050,402,446	161,341,752,988	169,459,978,454	154,542,065,894

(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 \$ 2,172,215,935 ; NAIC 2 \$ 3,245,474,538 ; NAIC 3 \$ 2,566,137 ; NAIC 4 \$ 10,836,871 ; NAIC 5 \$; NAIC 6 \$

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SCHEDULE DA - PART 1

Short-Term Investments

	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Actual Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
7709999999 Totals	952,748,975	xxx	949,762,235	14,037,558	609,310

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	2,212,955,592	525,180,990
2. Cost of short-term investments acquired	2,294,308,307	4,213,816,446
3. Accrual of discount	40,507,250	36,135,134
4. Unrealized valuation increase/(decrease)		
5. Total gain (loss) on disposals	344,247	(317,146)
6. Deduct consideration received on disposals	3,595,366,420	2,561,859,833
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)	952,748,975	2,212,955,592
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	952,748,975	2,212,955,592

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1. Book/Adjusted Carrying Value, December 31, prior year (Line 10, prior year)	6,978,311,064
2. Cost Paid/(Consideration Received) on additions	(283,737,947)
3. Unrealized Valuation increase/(decrease)	(152,067,847)
4. SSAP No. 108 adjustments	
5. Total gain (loss) on termination recognized	(295,567,089)
6. Considerations received/(paid) on terminations	(497,225,701)
7. Amortization	(227,638)
8. Adjustment to the Book/Adjusted Carrying Value of hedged item	
9. Total foreign exchange change in Book/Adjusted Carrying Value	(297,561,109)
10. Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4+5-6+7+8+9)	6,446,375,135
11. Deduct nonadmitted assets	
12. Statement value at end of current period (Line 10 minus Line 11)	6,446,375,135

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1. Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year).....	27,325,766
2. Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cumulative Cash Change column)	
3.1 Add:	
Change in variation margin on open contracts - Highly Effective Hedges	
3.11 Section 1, Column 15, current year to date minus	
3.12 Section 1, Column 15, prior year	
Change in variation margin on open contracts - All Other	
3.13 Section 1, Column 18, current year to date minus	(11,926,233)
3.14 Section 1, Column 18, prior year	27,325,765
	(39,251,998)
	(39,251,998)
3.2 Add:	
Change in adjustment to basis of hedged item	
3.21 Section 1, Column 17, current year to date minus	
3.22 Section 1, Column 17, prior year	
Change in amount recognized	
3.23 Section 1, Column 19, current year to date minus	(11,926,233)
3.24 Section 1, Column 19, prior year plus	27,325,765
3.25 SSAP No. 108 adjustments	(39,251,998)
	(39,251,998)
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year	(13,013,422)
4.2 Less:	
4.21 Amount used to adjust basis of hedged item	
4.22 Amount recognized	(40,339,188)
4.23 SSAP No. 108 adjustments	(40,339,188)
4.3 Subtotal (Line 4.1 minus Line 4.2)	27,325,766
5. Dispositions gains (losses) on contracts terminated in prior year:	
5.1 Total gain (loss) recognized for terminations in prior year	
5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	11,926,233
6. Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	(11,926,233)
7. Deduct total nonadmitted amounts	
8. Statement value at end of current period (Line 6 minus Line 7)	(11,926,233)

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	50,000,000	20,018,572	6,338,372	09/05/2023	06/03/2051	SOFR Replacement Swap - CME cleared	18,572	(13,838,568)	171937-AA-3	CIFC-LBC MIDDLE MKT CLO 2023-1 LLC - CLBC 2023-1A C	1	20,000,000	20,176,940
57629*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	40,000,000	40,000,000	40,000,000	09/05/2023	06/03/2051	SOFR Replacement Swap - CME cleared			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	40,000,000	40,000,000
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	264,000,000	2,421,488	(39,185,226)	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR		(41,512,628)	83149F-AD-6	SLM Student Loan Trust 2006-6	1	2,421,488	2,327,402
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	66,044,865	66,044,865	66,044,865	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	66,044,865	66,044,865
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	10,018,430	10,018,430	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			56845N-AE-0	Signal Peak CLO 8 Ltd-SPEAK 2020-8A C	1	10,000,000	10,018,430
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	10,006,390	10,006,390	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			33833V-AE-5	522 Funding CLO 2019-5 L-MORGN 2021-7A B	1	10,000,000	10,006,390
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,000,000	15,015,525	15,015,525	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			38137M-AK-3	Goldentree Loan Opportun-GLD12 2016-12A AJR	1	15,000,000	15,015,525
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,500,000	4,513,208	4,513,208	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			03767M-AJ-7	Apidos CLO-APID 2018-29A B	1	4,500,000	4,513,208
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	17,814,100	17,832,253	17,832,253	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			17181T-AA-9	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	17,814,100	17,832,253
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,000,000	12,014,700	12,014,700	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			04017J-AE-1	ARES CLO Ltd-ARES 2018-49A B	1	12,000,000	12,014,700
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,220,000	1,225,535	1,225,535	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			056162-AU-4	Babson CLO Ltd 2015-I-SERIES 2015-IA CLASS DR	2	1,220,000	1,225,535
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	196,970	197,164	197,164	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			06759F-AE-6	BABSON CLO LTD 2015-II-SERIES 15-2A CLASS C1R	1	196,970	197,164
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	126,125,000	126,125,000	126,125,000	05/30/2023	11/29/2042	Interest Rate Swap - OTC SOFR			515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	126,125,000	126,125,000
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	12,000,000	(1,260,921)	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR		(13,286,433)	67112K-AC-3	OCF CLO Ltd-SEREIS 18-15A CLASS A3	1	12,000,000	12,025,512
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,156,063	7,162,389	7,162,389	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			056162-AN-0	Babson CLO Ltd 2015-I-BABSON 2015-IA AR	1	7,156,063	7,162,389
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,000,000	20,000,000	20,000,000	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	20,000,000	20,000,000
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,900,000	5,905,475	5,905,475	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			87250R-AB-0	TICOP CLO XV Ltd-TICOP 2020-15A B	1	5,900,000	5,905,475
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,800,101	1,826,550	1,826,550	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			429827-AR-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B1	1	1,800,101	1,826,550
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,210,942	8,119,927	8,119,927	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			46647P-AR-7	JPMorgan Chase & Co-SENIOR UNSECURED	1	8,210,942	8,119,927
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	50,267,250	50,267,250	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			75000K-AN-7	RR 25 Ltd-RRAM 2023-25A A1R	1	50,000,000	50,267,250
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	4,147,744	(9,045,416)	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR		(13,286,433)	92977H-AG-3	WACHOVIA STUDENT LOAN TR-WSLT 2005-1 B	1	4,147,744	4,241,017
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	55,016,280	55,016,280	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			06764A-AC-4	Barings Loan Partners CL-BABSON LP-4A A	1	55,000,000	55,016,280
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	16,030,850	16,031,828	16,031,828	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			06760P-AE-1	Babson CLO Ltd/Cayman Is-BABSON 2018-3A A2	1	16,030,850	16,031,828
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,500,000	9,518,288	9,518,288	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			55821A-AE-8	Madison Park Funding Ltd-SERIES 18-28A CLASS B	1	9,500,000	9,518,288
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,250,000	3,252,610	3,252,610	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			087598-AE-8	BETHPAGE PARK CLO LTD-BETHP 2021-1A C	1	3,250,000	3,252,610
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	722,601	699,183	699,183	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			784424-AE-3	SLC STUDENT LOAN TRUST 2-SERIES 07-1 CLASS B	1	722,601	699,183
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,468,396	5,384,620	5,384,620	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			62983P-AB-1	Nakilat Inc-SECURED 144A	1	5,468,396	5,384,620
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,000,000	15,000,000	15,000,000	06/27/2023	12/27/2042	Interest Rate Swap - OTC SOFR			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	15,000,000	15,000,000
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	6,000,000	(7,178,713)	06/28/2023	12/28/2042	Interest Rate Swap - OTC		(13,188,535)	38138B-AG-5	Goldentree Loan Managem-GLM 2018-3A B1	1	6,000,000	6,009,822
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,000,000	20,019,800	20,019,800	06/28/2023	12/28/2042	Interest Rate Swap - OTC			56845N-AC-4	Signal Peak CLO 8 Ltd-SPEAK 2020-8A B	1	20,000,000	20,019,800

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,750,000	13,771,986	06/28/2023	12/28/2042	Interest Rate Swap - OTC			55954K-AN-5	Magnetite XIX Ltd-SERIES 2017-19A CLASS B1R	1	13,750,000	13,771,986
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,745,000	34,779,432	06/28/2023	12/28/2042	Interest Rate Swap - OTC			13876N-AL-7	Canyon CLO 2020-2 Ltd-CANVC 2020-2A AR	1	34,745,000	34,779,432
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,365,462	7,544,358	06/28/2023	12/28/2042	Interest Rate Swap - OTC			92917N-AJ-7	Voya CLO 2019-1 Ltd-VOYA 2019-1A AR	1	7,365,462	7,544,358
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,028,060	1,967,057	06/28/2023	12/28/2042	Interest Rate Swap - OTC			64033T-AB-9	NELNET STUDENT LOAN TRUS-SERIES 2015-3A CLASS B	1	2,028,060	1,967,057
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	1,000,728	06/28/2023	12/28/2042	Interest Rate Swap - OTC			94950J-AA-9	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	1,000,000	1,000,728
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,060,000	5,032,939	06/28/2023	12/28/2042	Interest Rate Swap - OTC			92917A-AE-6	Voya CLO Ltd-SERIES 18-1A CLASS B Symphony CLO XXIX Ltd-SYMP 2021-29A C	1	5,060,000	5,032,939
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,150,000	3,153,815	06/28/2023	12/28/2042	Interest Rate Swap - OTC			87168G-AG-4	ASSURANT CLO I LTD-MORGN 2017-1A CR	1	3,150,000	3,153,815
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	3,204,317	06/28/2023	12/28/2042	Interest Rate Swap - OTC			33836J-AG-4	Morgan Stanley Eaton Van-MISEV 2022-18A B	1	3,200,000	3,204,317
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,033,620	06/28/2023	12/28/2042	Interest Rate Swap - OTC			617924-AE-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	10,000,000	10,033,620
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	9,510,476	(3,671,136)	06/28/2023	12/28/2042	Interest Rate Swap - OTC	(13,188,535)		94950J-AA-9	TIOP CLO VI 2016-2 Ltd-TIOP 2016-6A CR2	1	9,510,476	9,517,400
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,725,501	6,733,276	06/28/2023	12/28/2042	Interest Rate Swap - OTC			06759F-AB-2	BARSON CLO LTD 2015-1I-SERIES 15-2A CLASS AR	1	6,725,501	6,733,276
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,600,000	1,600,819	06/28/2023	12/28/2042	Interest Rate Swap - OTC			87246M-AW-2	CenterPoint Properties T Senior Note Ser	1	1,600,000	1,600,819
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,200,000	4,201,852	06/28/2023	12/28/2042	Interest Rate Swap - OTC			12551R-AE-8	Alllegro CLO XI Ltd-ALLEG 2019-2A AIAR	1	4,200,000	4,201,852
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,575,000	8,332,816	06/28/2023	12/28/2042	Interest Rate Swap - OTC			15189S-D8-5	BluelMountain CLO 2015-4 -SERIES 15-4A CLASS A2R	1	8,575,000	8,332,816
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		82,000,000	82,062,566	06/28/2023	12/28/2042	Interest Rate Swap - OTC			01750H-AQ-5	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	82,000,000	82,062,566
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	20,000,000	6,819,705	06/28/2023	12/28/2042	Interest Rate Swap - OTC	(13,188,535)		09628N-AQ-5	Rockford Tower CLO 2017--SERIES 17-3A CLASS B	1	20,000,000	20,008,240
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,050,000	11,672,484	06/28/2023	12/28/2042	Interest Rate Swap - OTC			64031D-AB-6	TIOP CLO X LTD-SERIES 18-10A CLASS C	1	12,050,000	11,672,484
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,912,132	1,700,035	06/28/2023	12/28/2042	Interest Rate Swap - OTC			63939F-AC-4	Atlas Securitized Products Funding 3 LP - Class A	1	1,912,132	1,700,035
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,754,840	06/28/2023	12/28/2042	Interest Rate Swap - OTC			77341D-AE-7	Barings CLO Ltd 2020-I-BABSN 2020-1A AR	1	6,750,000	6,754,840
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,600,000	3,606,422	06/28/2023	12/28/2042	Interest Rate Swap - OTC			87249C-AE-1	NSLT 2019-2A B	1	3,600,000	3,606,422
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	3,204,275	06/28/2023	12/28/2042	Interest Rate Swap - OTC			48250R-BN-5	NAVIENT STUDENT LOAN TRU-SERIES 17-4A CLASS B	1	3,200,000	3,204,275
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,000,000	06/28/2023	12/28/2042	Interest Rate Swap - OTC			04940F-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	10,000,000	10,000,000
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		38,600,000	38,634,894	06/28/2023	12/28/2042	Interest Rate Swap - OTC			06762L-AM-0	Barings CLO Ltd 2020-I-BABSN 2020-1A AR	1	38,600,000	38,634,894
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,097,042	7,243,614	06/28/2023	12/28/2042	Interest Rate Swap - OTC			03209S-AH-4	Amphenol Corp-SENIOR UNSECURED	1	7,097,042	7,243,614
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	18,741,800	06/28/2023	12/28/2042	Interest Rate Swap - OTC	(6,594,267)		66704J-CB-2	NORTHSTAR EDUCATION FINA-SERIES 07-1 CLASS B	1	18,741,800	15,632,625
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,409,187	06/28/2023	12/28/2042	Interest Rate Swap - OTC			64034N-AB-1	Rockford Tower CLO 2017--SERIES 17-3A CLASS B	1	5,600,000	5,409,187
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,100,000	2,963,517	06/28/2023	12/28/2042	Interest Rate Swap - OTC			63940A-AD-0	Atlas Securitized Products Funding 3 LP - Class A	1	3,100,000	2,963,517
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,000,000	6,005,730	06/28/2023	12/28/2042	Interest Rate Swap - OTC			06762L-AN-8	Barings CLO Ltd 2020-I-BABSN 2020-1A BR	1	6,000,000	6,005,730
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,500,000	2,500,553	06/28/2023	12/28/2042	Interest Rate Swap - OTC			13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	2,500,000	2,500,553
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,407,891	06/28/2023	12/28/2042	Interest Rate Swap - OTC			77342K-AC-4	Rockford Tower CLO 2018-2 Ltd	1	6,400,000	6,407,891

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,050,000	8,055,788	06/28/2023	12/28/2042	Interest Rate Swap - OTC				06760G-AC-5	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS B	1	8,050,000	8,055,788
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	40,000,000	33,417,573	06/28/2023	12/28/2042	Interest Rate Swap - OTC		(6,594,267)		06764A-AC-4	Barings Loan Partners CL-BABSN LP-4A A	1	40,000,000	40,011,840
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,000,000	06/28/2023	12/28/2042	Interest Rate Swap - OTC				04940F-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	10,000,000	10,000,000
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,400,000	3,403,145	06/28/2023	12/28/2042	Interest Rate Swap - OTC				75009P-AE-7	Rad CLO 12 Ltd-RAD 2021-12A C	1	3,400,000	3,403,145
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,056,726	6,307,176	06/28/2023	12/28/2042	Interest Rate Swap - OTC				46149M-AA-4	Invesco CLO Ltd-INVCO 2021-2A A	1	6,056,726	6,307,176
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	24,500,000	17,933,124	06/28/2023	12/28/2042	Interest Rate Swap - OTC		(6,594,267)		06760W-AG-1	Barings Middle Market CL-BMM 2021-1A B	1	24,500,000	24,527,391
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,750,000	9,766,175	06/28/2023	12/28/2042	Interest Rate Swap - OTC				92918Q-AE-0	Voya CLO Ltd-VOYA 2021-1A B	1	9,750,000	9,766,175
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,005,920	06/28/2023	12/28/2042	Interest Rate Swap - OTC				06764A-AC-4	Barings Loan Partners CL-BABSN LP-4A A	1	20,000,000	20,005,920
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,600,000	4,606,509	06/28/2023	12/28/2042	Interest Rate Swap - OTC				05875H-AE-3	Ballyrock CLO 2018-1 Ltd-SERIES 2018-1A CLASS B	1	4,600,000	4,606,509
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	11,900,000	5,317,145	06/28/2023	12/28/2042	Interest Rate Swap - OTC		(6,594,267)		74988L-AC-8	ALM XIV Ltd-SERIES 14-14A CLASS A2R2	1	11,900,000	11,911,412
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,050,000	5,003,375	06/28/2023	12/28/2042	Interest Rate Swap - OTC				66704J-AJ-7	Northstar Education Fina-REVENUE BONDS	1	5,050,000	5,003,375
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,005,760	06/28/2023	12/28/2042	Interest Rate Swap - OTC				39808P-AN-6	Greywolf CLO V Ltd-GWOLF 2015-1A A2R	1	8,000,000	8,005,760
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,200,000	11,223,117	06/28/2023	12/28/2042	Interest Rate Swap - OTC				08181B-AS-8	Benefit Street Partners -SERIES 16-9A CLASS BR	1	11,200,000	11,223,117
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,005,968	06/28/2023	12/28/2042	Interest Rate Swap - OTC				94951D-AC-7	Wellfleet CLO 2018-3 Ltd-SERIES 18-3A CLASS A1B	1	8,000,000	8,005,968
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,850,655	6,641,477	06/28/2023	12/28/2042	Interest Rate Swap - OTC				05389L-AB-9	Avolon Aerospace Leasing Secured Note B7	1	6,850,655	6,641,477
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	21,805,000	(81,572,721)	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared		121,920	(103,270,199)	36248M-AJ-6	GT Loan Financing I Ltd -SERIES 2013-1A CLASS AR	1	21,683,080	21,697,478
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		290,610,944	290,610,944	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				49232F-MM-2	KREOCS LENDING I LLC - Senior Secured Term Facility	1	290,610,944	290,610,944
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,750,892	20,753,383	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				04941Y-AC-3	Atlas Senior Loan Fund X-SERIES 18-11A CLASS A1L	1	20,750,892	20,753,383
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,984,894	23,702,184	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				67332F-AG-8	RRPF Engine Leasing Ltd Senior Secured	2	23,984,894	23,702,184
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,377,183	2,288,247	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				78443G-AJ-4	SLM STUDENT LOAN TRUST 2-SERIES 06-7 CLASS B	1	2,377,183	2,288,247
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,103,374	14,803,815	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				25763F-AF-7	Donaldson Co Inc Senior Unsecured Notes	1	15,103,374	14,803,815
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,846,400	11,472,883	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				392709-AF-8	Green Brick Partners, In Senior Unsecured Notes	1	11,846,400	11,472,883
57629*GG0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	225,000,000	270,078,417	202,729,867	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared		78,417	(67,270,133)	88167F-AA-8	Tetragon Financial Group (Delaware) LLC - Revolver	1	270,000,000	270,000,000
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		122,464,946	122,464,946	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				32008Z-MM-6	FIRST EAGLE DIRECT LENDING V-B, LLC - Secured Revolving Loan Facility	1	122,464,946	122,464,946
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,897,279	16,897,279	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				96269F-MM-9	YPC ASSET BACKED OPPORTUNISTIC CREDIT Holdings Fund, L.P - Secured Revolving Loan Facility	1	16,897,279	16,897,279
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	25,023,150	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				67104L-AF-4	QHA Loan Funding 2013-2 -QHAF 2013-2A BR	1	25,000,000	25,023,150
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,800,000	3,804,750	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				74988L-AJ-3	ALM XIV Ltd-SERIES 14-14A CLASS BR2	1	3,800,000	3,804,750
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	15,104,474	(72,863,833)	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared		104,474	(87,890,008)	48250W-AJ-4	KKR CLO 14 Ltd-KKR 14 BR	1	15,000,000	15,026,175

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,006,385	894,755	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				63939F-AC-4	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	1,006,385	894,755
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,127,340	11,133,182	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				06760G-AA-9	Barings CLO Ltd 2018-1-SERIES 18-1A CLASS A1	1	11,127,340	11,133,182
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,977,226	16,515,395	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				13877P-AA-5	Canyon CLO 2021-4 Ltd-CANYC 2021-4A	1	15,977,226	16,515,395
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		120,000,000	120,000,000	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				18685E-MO-7	Cliffwater Corporate Lending Fund - Fourth Amendment Revolver	1	120,000,000	120,000,000
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,003,680	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				13876L-AL-1	Canyon CLO 2020-1 Ltd-CANYC 2020-1A BR	1	10,000,000	10,003,680
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,845,310	25,043,750	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				14317V-AQ-3	CARLYLE US CLO 2019-4 LT-CGMS 2019-4A A1R	1	23,845,310	25,043,750
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,004,365	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				97988P-BA-3	Woodmont 2017-1 Trust-WDMINT 2017-1A1RR	1	15,000,000	15,004,365
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,116,751	15,110,231	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				28166G-AB-1	EDvestinU Private Educat-SERIES 19-A CLASS B	1	16,116,751	15,110,231
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,609,198	14,154,938	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				039937-AA-5	Ares LXIII CLO Ltd-ARES 2022-63A A1A	1	13,609,198	14,154,938
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,153,700	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				000842-AA-2	ABPCI DIRECT LENDING FUN-ABPCI 2023-15A A1	1	20,000,000	20,153,700
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,682,513	11,006,303	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				67113G-AC-1	CHA Credit Funding 5 Ltd-OAKC 2020-5A A1	1	10,682,513	11,006,303
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,165,530	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				827925-AE-8	Silver Point Clo 3 Ltd-SPCLO 2023-3A B	1	10,000,000	10,165,530
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,187,557	10,341,360	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				63943B-AA-1	Navigator Aircraft ABS L-NAVTR 2021-1 A	1	11,187,557	10,341,360
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,149,570	09/11/2023	06/10/2051	SOFR Replacement Swap - CME cleared				69121M-AC-4	OR 2023-14A B-OR 2023-14A B	1	10,000,000	10,149,570
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	30,079,053	(44,771,661)	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared	79,053	(74,771,661)		18685E-MO-7	Cliffwater Corporate Lending Fund - Fourth Amendment Revolver	1	30,000,000	30,000,000
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,000,000	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				96269F-MM-9	X WH REDF2-TSE SELLER, LLC - Term Loan Facility	1	20,000,000	20,000,000
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,500,000	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				55819T-AU-5	Madison Park Funding XX -SERIES 2016-20A CLASS OR	1	7,500,000	7,500,000
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,450,000	6,992,150	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				64034C-AB-5	Nelnet Student Loan Trus-NSLT 2019-1A B	1	7,450,000	6,992,150
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		65,000,000	65,019,240	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06764A-AC-4	Barings Loan Partners CL-BABSN LP-4A A	1	65,000,000	65,019,240
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,350,000	5,350,000	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				36320T-AX-1	Galaxy XXI CLO Ltd-GALXY 2016-22A BRR	1	5,350,000	5,350,000
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,020,000	60,112,431	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				03768M-AJ-6	Apidos CLO XXXIII-APID 2020-33A AR	1	60,020,000	60,112,431
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,429,238	22,492,091	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				282523-AH-2	1828 CLO Ltd-GUGG4 2016-1A A1S1	1	22,429,238	22,492,091
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,460,500	12,462,992	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06760Q-AJ-3	Barings Middle Market CL-BMM 2017-1A CR	2	12,460,500	12,462,992
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,800,000	12,728,486	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06762T-AG-6	Babson CLO Ltd/Cayman Islands VCP RRL ABS II Ltd-VCRRL 2022-1A B	2	12,800,000	12,728,486
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,328,321	2,264,431	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				91824X-AE-0	Bain Capital Credit CLO -BCC 2020-2A CR	2	2,328,321	2,264,431
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,409,350	2,409,350	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				05683E-AU-6	CIFC Funding 2019-IV Ltd-CIFC 2019-4A A1R	1	2,409,350	2,409,350
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,582,237	15,022,365	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				17182X-AL-5	Sound Point CLO II Ltd-SNDPT 2013-1A A2R	1	14,582,237	15,022,365
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		325,000,000	8,102,821	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared	102,821	(98,291,621)		83608G-AQ-9		1	8,000,000	8,004,144

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,000,000	32,009,472	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06764A-AC-4	Barings Loan Partners CL-BABS LP-4A A	1	32,000,000	32,009,472
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		90,000,000	89,995,860	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-1IA A	1	90,000,000	89,995,860
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		65,599,443	65,599,443	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				69324F-MM-7	PCRED LENDING III LLC, PCRED LENDING III SPE I LLC and PCRED LENDING III OFFSHORE LTD.-Term Loan 2020-2	1	65,599,443	65,599,443
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,800,000	5,807,859	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				01749B-AC-3	Allegro CLO VI Ltd-ALLEG 2017-2A C	1	5,800,000	5,807,859
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	3,204,166	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06762J-AE-3	Babson CLO Ltd/Cayman Is-BABS 2021-2A C	1	3,200,000	3,204,166
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,865,259	28,013,092	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				341081-FR-3	Florida Power & Light Co-SECURED	1	32,865,259	28,013,092
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,510,552	23,583,540	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06761M-AC-1	Barings Middle Market CL-BMM 2018-1A B	1	22,510,552	23,583,540
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,604,810	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				13887W-AN-0	Canyon Capital CLO 2019-CANVC 2019-2A CR	1	5,600,000	5,604,810
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,330,000	5,331,652	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				42086N-AJ-7	Hayfin Kingsland XI Ltd-HAYFN 2019-2A BR	1	5,330,000	5,331,652
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,765,497	4,950,064	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				05684C-AL-9	Bain Capital Credit CLO -BCC 2020-3A A1R	1	4,765,497	4,950,064
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,100,000	5,104,294	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				67098D-AW-3	OHA Credit Funding 4 Ltd-OAKC 2019-4A CR	1	5,100,000	5,104,294
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,944,055	6,010,224	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				82670Q-AG-4	Signal Peak CLO 9 Ltd-SPEAK 2021-9A C	1	5,944,055	6,010,224
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,306,089	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				67707L-AJ-7	Oak Hill Credit Partners	1	4,300,000	4,306,089
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,304,597	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				05682E-AG-8	Bain Capital Credit CLO -BCC 2021-5A C	1	4,300,000	4,304,597
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,525,000	3,530,848	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				64130T-BC-8	Neuberger Berman CLO XX -NEUB 2015-20A BRR	1	3,525,000	3,530,848
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,000,000	40,000,000	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	40,000,000	40,000,000
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	325,000,000	5,902,875	(93,600,883)	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared	102,875	(99,404,433)		67570Q-AP-6	OCP CLO 2019-16 Ltd-SERIES 19-16A CLASS CR	1	5,800,000	5,803,550
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,000,000	12,009,720	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				92917J-AE-7	Yoya CLO 2018-2 Ltd-VOYA 2018-2A B1	1	12,000,000	12,009,720
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,671,240	61,671,240	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				69324F-MM-9	PCRED LENDING III LLC, PCRED LENDING III SPE I LLC and PCRED LENDING III OFFSHORE LTD.-Term Loan Series 2019-1	1	61,671,240	61,671,240
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	60,063,540	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				83614X-AQ-4	Sound Point CLO XXVI Ltd-SNDPT 2020-1A AR	1	60,000,000	60,063,540
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,000,000	39,998,160	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-1IA A	1	40,000,000	39,998,160
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,702,771	44,774,966	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				67104L-AE-7	OHA Loan Funding 2013-2 -OHALF 2013-2A AR	1	44,702,771	44,774,966
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,970,530	44,688,700	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				17275G-AA-4	CIRUS-2018-1A A	1	44,970,530	44,688,700
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	49,592,400	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				25255A-AA-4	DCF 2019-1A A	1	50,000,000	49,592,400
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	13,123,004	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				67098D-AU-7	OHA Credit Funding 4 Ltd-OAKC 2019-4A BR	1	13,100,000	13,123,004
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	23,500,000	16,305,670	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,213,929)		92558V-AC-8	Vibrant CLO Ltd-SERIES 18-9A CLASS A2	1	23,500,000	23,519,599

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,088,091	4,838,383	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				78442G-PL-4	SLM STUDENT LOAN TRUST-SERIES 2005-4 CLASS B	1	5,088,091	4,838,383
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,408,134	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				01749B-AB-5	Alllegro CLO VI Ltd-ALLEG 2017-2A B	1	6,400,000	6,408,134
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,525,275	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				77342J-AC-7	Rockford Tower CLO 2018--SERIES 18-1A CLASS B	1	7,500,000	7,525,275
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,900,000	6,904,740	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				65023T-AK-8	Newark BSL CLO 1 Ltd-NBCLO 2016-1A A2R	1	6,900,000	6,904,740
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		496,718	497,699	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				06759F-AD-8	BABSON CLO LTD 2015-11-SERIES 15-2A CLASS B2R	1	496,718	497,699
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,000,000	17,233,121	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				381742-AC-9	GoLub Capital Partners C-GOCAP 2019-42RA A2R	1	17,000,000	17,233,121
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	60,000,000	18,500,000	10,631,665	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,869,741)		50188G-AX-1	LGM XVIII LP-LGM 18A A2R	1	18,500,000	18,501,406
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,700,000	4,703,177	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				67707C-AU-2	Oak Hill Credit Partners-OAKC 2014-10RA CR	1	4,700,000	4,703,177
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,000,000	2,001,804	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				62848F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	2,000,000	2,001,804
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,967,949	5,108,542	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				25654F-AA-0	Dodger Tickets LLC Senior Secured	1	4,967,949	5,108,542
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,026,896	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				75009J-AB-7	Rad CLO 17 Ltd-RAD 2022-17A B1	1	8,000,000	8,026,896
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,194,608	40,445,824	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				38179N-AB-0	GoLub Capital Partners C-GOCAP 2024-71A A	1	40,194,608	40,445,824
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	20,601,583	13,409,905	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,200,681)		83609Y-AC-0	Sounds Point CLO IV-R LT-SERIES 13-3RA CLASS A	1	20,601,583	20,610,586
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,030,755	1,965,836	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				78442G-QA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	2,030,755	1,965,836
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,295,395	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				000849-AC-3	ABPCI Direct Lending Fun-ABPCI 2023-16A B	1	15,000,000	15,295,395
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,019,455	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				29001L-AN-1	Elmwood CLO II Ltd-ELMW2 2019-2A BR	1	15,000,000	15,019,455
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,900,000	5,907,959	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				40436X-AG-2	HIGHBRIDGE LOAN MANAGEMEN-SERIES 2014 CLASS BR	1	5,900,000	5,907,959
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	25,900,000	18,712,269	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,200,681)		04016V-AC-9	ARES XLVII CLO Ltd-SERIES 18-47A CLASS A2	1	25,900,000	25,912,950
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,000,000	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				18685E-MO-7	Cliffwater Corporate Lending Fund - Fourth Amendment Revolver	1	10,000,000	10,000,000
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,999,310	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-11A A	1	15,000,000	14,999,310
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,003,380	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				29001L-AQ-4	Elmwood CLO II Ltd-ELMW2 2019-2A CR	1	5,000,000	5,003,380
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	1,000,221	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	1,000,000	1,000,221
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,534,259	3,547,038	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				512807-AU-2	Lam Research Corp--SENIOR UNSECURED	1	3,534,259	3,547,038
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	20,812,500	13,651,497	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,161,003)		06763H-AC-0	Babson CLO Ltd/Cayman Is-BABSN 2022-4A B	1	20,812,500	20,812,500
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,999,310	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-11A A	1	15,000,000	14,999,310
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,750,998	13,900,000	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				05875H-AC-7	BALLYROCK CLO 2018-1 LTD-SERIES 2018-1A CLASS A2	1	13,750,998	13,900,000
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	1,000,902	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				62848F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	1,000,000	1,000,902
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,510,291	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				48661N-AE-8	KAYNE CLO-SERIES 19-6A CLASS B1	1	5,500,000	5,510,291
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,846,670	6,151,240	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				25654F-AB-8	Dodger Tickets LLC Senior Secured	1	5,846,670	6,151,240
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	60,000,000	8,834,100	1,026,513	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR		(7,812,004)		56807F-AA-3	Marble Point CLO XI Ltd-MP11 2017-2A A	1	8,834,100	8,838,517

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,562,931	3,895,440	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				66704J-BD-9	NORTHSTAR EDUCATION FINA-SERIES 04-2 CLASS B	1	4,562,931	3,895,440
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,032,639	3,408,510	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				66704J-BK-3	NORTHSTAR EDUCATION FINA-SERIES 05-1 CLASS B	1	4,032,639	3,408,510
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,500,000	3,501,407	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				94950J-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	3,500,000	3,501,407
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,000,000	2,001,804	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				62848F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	2,000,000	2,001,804
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,917,279	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				44330G-AE-3	Highbridge Loan Manage-SERIES 4A-2014 CLASS A2R	1	11,900,000	11,917,279
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,406,250	6,265,915	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				40425Q-AA-3	H.H.I. HULL NO. S856 L.L. Guaranteed Notes	1	6,406,250	6,265,915
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,441,625	4,472,952	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				46655H-AF-0	JCP Direct Lending CLO 2-JCPDL 2022-11 C	1	4,441,625	4,472,952
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		85,000,000	85,475,150	04/11/2023	04/09/2043	Interest Rate Swap - OTC SOFR				481952-AA-7	KKR CLO 50 Ltd-KKR 2024-50A A	1	85,000,000	85,475,150
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	225,000,000	100,071,192	31,777,486	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared	71,192	(68,222,514)		18685E-MO-7	Cliffwater Corporate Lending Fund - Fourth Amendment Revolver	1	100,000,000	100,000,000
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		152,702	152,778	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				48250W-AG-0	KKR CLO 14 Ltd-KKR 14 AR	1	152,702	152,778
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,004,550	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				14314L-AE-5	Carlyle Global Market S1-CGMS 2014-2RA A2	1	5,000,000	5,004,550
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,500,000	2,503,170	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				64032V-AB-5	Netnet Student Loan Trus-NSLT 2020-5A B	1	2,500,000	2,503,170
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,195,090	32,195,090	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				91831Z-MM-5	VPC SPECIALTY LENDING INVESTMENTS INTERMEDIATE, L.P. - Secured Revolving Loan Facility	1	32,195,090	32,195,090
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,999,540	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-1IA A	1	10,000,000	9,999,540
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,100,000	7,104,686	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				25255D-AE-0	Diameter Capital CLO 1 L-DOLO 2021-1A A2	1	7,100,000	7,104,686
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,866,897	17,084,038	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				59048E-AA-6	Mesa Air Group, Inc. Class A Notes	2	17,866,897	17,084,038
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		56,000,000	56,000,000	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	56,000,000	56,000,000
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	40,079,084	(35,419,876)	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared	79,084	(75,419,876)		04940H-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	40,000,000	40,000,000
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,433,106	19,435,593	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				26251L-AC-8	DRYDEN 64 CLO LTD-DRSLF 2018-64A A	1	19,433,106	19,435,593
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,700,000	4,711,750	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				04942J-AE-1	Atlas Senior Loan Fund X-ATCLO 2018-10A B	1	4,700,000	4,711,750
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	7,017,500	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				94950C-AG-1	Wellfleet CLO Ltd-WELF 2021-1A C	1	7,000,000	7,017,500
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		82,890,103	82,890,103	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				46143H-MM-6	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2020-1	2	82,890,103	82,890,103
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,600,000	31,621,425	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06760W-AE-6	Barings Middle Market CL-BMM 2021-1A A2	1	31,600,000	31,621,425
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,400,493	24,477,741	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				62983P-AA-3	Nakilat Inc-SECURED BOND	1	24,400,493	24,477,741
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	49,997,350	09/11/2023	06/11/2051	SOFR Replacement Swap - CME cleared				06764E-AC-6	Barings Middle Market Lo-BMMLP 2024-1A A	1	50,000,000	49,997,350
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	65,012,225	63,699,795	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared	12,225	(1,621,630)		03665Y-AN-5	Antares CLO 2019-2 LTD-ANTR 2019-2A A1R	1	65,000,000	65,321,425
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,082,002	16,858,425	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				14316Y-AA-3	Carlyle US CLO 2021-10 L-CGMS 2021-10A A	1	16,082,002	16,858,425

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,050,000	8,067,122	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				48252R-AQ-7	KKR Clo 24 Ltd-KKR 24 BR	1	8,050,000	8,067,122
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,351,088	3,352,764	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				48250W-AG-0	KKR Clo 14 Ltd-KKR 14 AR	1	3,351,088	3,352,764
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	25,216,900	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				69121M-AA-8	OWL ROCK CLO LTD-OR 2023-14A A	1	25,000,000	25,216,900
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,193,110	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				05685J-AS-8	Bain Capital Credit CLO -BCC 2022-5A DR	2	10,000,000	10,193,110
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	3,003,000	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				096300-AN-1	BlueMountain CLO XXX Ltd-BLUEM 2020-30A BR	1	3,000,000	3,003,000
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,650,000	1,637,778	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				06760G-AD-3	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS C	2	1,650,000	1,637,778
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	17,942,339	15,513,631	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared	12,222	(1,605,566)		346845-AC-4	Fort Benning Family Comm-UNSECURED	1	17,930,117	17,119,197
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,820,000	21,820,000	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	21,820,000	21,820,000
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,300,000	18,330,104	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				830120-AA-2	Sixth Street CLO-SIXST 2021-20A A1	1	18,300,000	18,330,104
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,999,770	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-11A A	1	5,000,000	4,999,770
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,700,000	3,703,700	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				096300-AN-1	BlueMountain CLO XXX Ltd-BLUEM 2020-30A BR	1	3,700,000	3,703,700
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,625,000	13,630,913	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				04017E-AE-2	ARES XXX IIR CLO LTD-SERIES 14-32RA CLASS A1B	1	13,625,000	13,630,913
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,526,808	1,521,358	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				00435T-AB-7	ACCESS GROUP INC-SERIES 2015-1 CLASS B	1	1,526,808	1,521,358
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,000,000	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	10,000,000	10,000,000
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,195,655	4,189,918	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				91159H-HR-4	'US Bancorp-SENIOR UNSECURED	1	4,195,655	4,189,918
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,900,000	6,922,149	09/05/2023	03/05/2034	SOFR Replacement Swap - CME cleared				06762V-AC-0	Barings Loan Partners CL-BABSN 2022-3A B	1	6,900,000	6,922,149
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	32,994,510	28,550,662	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared	37,212	(4,509,088)		77342J-AA-1	Rockford Tower CLO 2018--SERIES 18-1A CLASS A	1	32,957,297	33,059,750
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,013,470	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				13877E-AE-2	Canyon Capital CLO Ltd-CANYC 2021-1A B	1	15,000,000	15,013,470
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,885,743	7,039,029	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				64132J-AN-5	Neuberger Berman Loan Ad-NEUB 2019-31A AR	1	6,885,743	7,039,029
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,000,000	40,000,000	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	40,000,000	40,000,000
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,760,213	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				087598-AC-2	BETHPAGE PARK CLO LTD-BETHP 2021-1A B	1	6,750,000	6,760,213
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,833,089	8,786,495	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				559222-AR-5	Magna International Inc-SR UNSECURED	1	8,833,089	8,786,495
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,922,166	5,982,779	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				46655H-AH-6	JCP Direct Lending CLO 2-JCPDL 2022-11 D	2	5,922,166	5,982,779
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,509,419	14,756,432	08/21/2023	05/19/2034	SOFR Replacement Swap - CME cleared				64033A-AB-0	NetNet Student Loan Trus-NSLT 2012-4A B	1	14,509,419	14,756,432
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	85,000,000	16,003,666	13,703,006	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared	17,373	(2,297,019)		12551R-AA-6	CIFC Funding 2018-I Ltd-CIFC 2018-1A A	1	15,986,293	16,000,025
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,655,413	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared				50184N-AN-2	LOM LTD PARTNERSHIP-SERIES 15A CLASS BR	1	5,650,000	5,655,413
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,588,767	5,667,811	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared				04009G-AE-7	ARES L CLO Ltd-SERIES 19-53A CLASS B	1	5,588,767	5,667,811
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,403,469	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared				97314D-AE-8	KVK CLO 2016-1 Ltd-KVK 2016-1A BR2	1	6,400,000	6,403,469

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,105,715	14,192,482	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared				77342K-AA-8	ROCKFORD TOWER CLO 2018--ROCKT 2018-2A A	1	14,105,715	14,192,482
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,837,500	45,837,500	08/09/2023	05/09/2034	SOFR Replacement Swap - CME cleared				14308E-MM-7	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	45,837,500	45,837,500
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		55,000,000	7,215,191	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared	15,787	(2,801,009)		55819B-AN-0	Madison Park Funding XVI-MDPK 2015-18A BR	1	10,000,000	10,016,200
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,100,000	20,060,303	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared				06760G-AB-7	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS A2	1	20,100,000	20,060,303
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,596,940	11,631,938	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared				77341D-AA-5	Rockford Tower CLO 2017--ROCKT 2017-3A A	1	11,596,940	11,631,938
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,100,000	3,109,269	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared				04943A-AG-4	ATLAS SENIOR LOAN FUND L-SERIES 17-8A CLASS C	1	3,100,000	3,109,269
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,559,353	5,545,469	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared				172967-LIV-9	Citigroup Inc-SENIOR UNSECURED	1	5,559,353	5,545,469
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,000,000	07/06/2023	10/06/2034	SOFR Replacement Swap - CME cleared				04940F-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	10,000,000	10,000,000
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		100,000,000	78,035,824	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared	35,824	(31,139,912)		59803T-AQ-4	MidOcean Credit CLO XII -MIDO 2023-12A A1R	1	78,000,000	78,051,714
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,949,242	2,145,937	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	1,949,242	2,145,937
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,200,000	10,217,207	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				00889B-AB-7	Aimco CDO-AIMCO 2021-15A B	1	10,200,000	10,217,207
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,299,030	14,438,389	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				55818Y-BN-0	Madison Park Funding XVI-MDPK 2015-17A AR2	1	14,299,030	14,438,389
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,500,000	20,527,327	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				449272-AA-1	ICG US CLO Ltd-ICG 2021-4A A1	1	20,500,000	20,527,327
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,028,440	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				67707C-AS-7	Oak Hill Credit Partners-OAKC 2014-10RA BR	1	20,000,000	20,028,440
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,700,000	8,711,545	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				33836J-AE-9	ASSURANT CLO I LTD-MORGN 2017-1A BR	1	8,700,000	8,711,545
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		250,000,000	60,089,471	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared	89,471	(76,411,848)		04940F-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	60,000,000	60,000,000
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		46,000,000	45,997,562	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				06764E-AC-6	Barings Middle Market Lo-BMMLP 2024-1A A	1	46,000,000	45,997,562
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,657,554	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				78108Y-AQ-5	FR 1 LLC-RRAM 2017-1A A2B	1	5,650,000	5,657,554
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,508,295	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				14315L-AC-8	Carlyle Global Market St-SERIES 14-3RA CLASS A1B	1	10,500,000	10,508,295
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,518,953	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				12564D-AC-8	CIFC Funding Ltd-CIFC 2021-3A B	1	10,500,000	10,518,953
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,022,830	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				69701X-AC-8	Palmer Square CLO Ltd-SERIES 2021-2A CLASS B	1	10,000,000	10,022,830
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,012,800	31,048,713	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				06760Q-AQ-2	Barings Middle Market CL-BMM 2017-1A A2R	1	31,012,800	31,048,713
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,059,918	24,003,336	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				01750W-AC-3	Allegro CLO XIII Ltd-ALLEG 2021-1A A	1	23,059,918	24,003,336
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,998,000	24,015,159	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				06760Q-AS-8	Barings Middle Market CL-BMM 2017-1A BR	1	23,998,000	24,015,159
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,520,930	9,422,607	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				30259A-AA-0	FDI Ltd-SERIES 17-3A CLASS A1	1	9,520,930	9,422,607
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,200,000	8,209,266	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				08186P-AN-3	Benefit Street Partners -BSP 2019-18A BR	1	8,200,000	8,209,266
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,014,560	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				94950J-AA-9	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	20,000,000	20,014,560
57629*GHB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,723,031	3,730,178	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared				15674E-AA-0	Cerberus Loan Funding XX-CERB 2021-1A A FLOATING COUPO	1	3,723,031	3,730,178

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	60,989,470	(15,490,061)	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared	89,470	(76,390,061)	46143#-MO-2	Invesco CMI Investments MM, LLC - TERM LN SER 2021-3	2	60,900,000	60,900,000
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	80,000,000	80,000,000	80,000,000	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	80,000,000	80,000,000
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,500,000	7,503,263	7,503,263	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			64132D-AL-2	Neuberger Berman Loan Advisers CLO 32 Ltd	1	7,500,000	7,503,263
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,009,014	9,012,987	9,012,987	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			55955A-AA-4	Magnetite XX Ltd	1	9,009,014	9,012,987
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,244,824	9,254,660	9,254,660	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			85816L-AA-6	Steele Creek Clo 2018-2 Ltd	1	9,244,824	9,254,660
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,498,163	4,497,713	4,497,713	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			87289B-AA-2	TOP DLF VIII 2018 CLO, LLC	1	4,498,163	4,497,713
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	29,925,000	29,805,958	29,805,958	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			Q3958#-AJ-5	GAIF Bond Issuer Pty Ltd.	1	29,925,000	29,805,958
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	55,000,000	55,000,000	09/18/2023	06/16/2051	SOFR Replacement Swap - CME cleared			515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	55,000,000	55,000,000
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	16,686,103	(58,464,613)	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared	86,103	(75,073,593)	92915P-AK-1	Voya CLO 2014-1 Ltd-INGIM 2014-1A ABR2	1	16,600,000	16,608,981
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,000,000	5,006,340	5,006,340	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			64032V-AB-5	Nelnet Student Loan Trus-NSLT 2020-5A B	1	5,000,000	5,006,340
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,967,887	13,654,046	13,654,046	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			67332#-AH-6	RRPF Engine Leasing Ltd Senior Secured	2	13,967,887	13,654,046
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	10,012,040	10,012,040	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			04941Y-AJ-8	Atlas Senior Loan Fund X-ATCLO 2018-11A B	1	10,000,000	10,012,040
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	26,815,000	26,861,926	26,861,926	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			55954Y-AJ-4	Magnetite XXVI Ltd-MAGNE 2020-26A A1R	1	26,815,000	26,861,926
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,900,000	11,913,792	11,913,792	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			40256G-AC-5	Gulf Stream Meridian-GSM 2021-6A A2	1	11,900,000	11,913,792
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	59,280,186	59,280,186	59,280,186	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			59576#-MM-5	Middle Market Credit Fund II SPV, LLC-Class A-1 Senior Secured Notes (Carlyle BDC Direct Lending)	1	59,280,186	59,280,186
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,500,000	7,504,868	7,504,868	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			94951D-AJ-2	Wellfleet CLO 2018-3 Ltd-SERIES 18-3A CLASS A2	1	7,500,000	7,504,868
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	16,716,133	16,716,133	16,716,133	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			70163#-AA-0	Parliament Funding I LLC-Variable Funding Notes	1	16,716,133	16,716,133
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	42,337,382	41,942,250	41,942,250	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			82340*-AB-3	Shepherds Flat Funding T Trust A-1-G Cer	1	42,337,382	41,942,250
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	50,336,400	50,336,400	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			171512-AQ-9	Churchill Middle Market -CHMML 2019-1A AR	1	50,000,000	50,336,400
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	25,044,797	13,371,447	08/04/2023	11/04/2044	SOFR Replacement Swap - CME cleared	44,797	(11,658,453)	48253H-AN-5	KKR CLO 26 Ltd-KKR 26 AR	1	25,000,000	25,029,900
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	80,000,000	79,995,760	79,995,760	08/04/2023	11/04/2044	SOFR Replacement Swap - CME cleared			06764E-AC-6	Barings Middle Market Lo-BMMLP 2024-1A A	1	80,000,000	79,995,760
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,437,216	11,443,106	11,443,106	08/04/2023	11/04/2044	SOFR Replacement Swap - CME cleared			24824T-AQ-3	Denali Capital Clo XII L-DEN12 2016-1A A1R	1	11,437,216	11,443,106
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	10,000,000	10,000,000	08/04/2023	11/04/2044	SOFR Replacement Swap - CME cleared			04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	10,000,000	10,000,000
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,200,000	8,740,000	8,740,000	08/04/2023	11/04/2044	SOFR Replacement Swap - CME cleared			06422T-AC-5	Bank of NT Butterfield &-SUBORDINATED	2	9,200,000	8,740,000
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	35,086,105	(40,095,385)	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared	86,105	(75,095,385)	92212Z-MM-2	VARAGON STRUCTURED NOTES ISSUER I, LLC - Senior Secured Class A Loan	1	35,000,000	35,000,000
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	25,900,000	25,932,220	25,932,220	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			14307P-AE-5	Carlyle Global Market St-SERIES C17A CLASS A1BR	1	25,900,000	25,932,220
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,500,000	10,334,743	10,334,743	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared			64034W-AD-7	Navient Student Loan Tru-NSLT 2019-7A B	1	10,500,000	10,334,743

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,150,526	14,159,341	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				92917A-AA-4	VOYA 2018-1A A1	1	14,150,526	14,159,341
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,624,999	11,417,540	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				64034B-AB-7	NetNet Student Loan Trus-NSLT 2018-5A B	1	11,624,999	11,417,540
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		29,311,787	29,327,087	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				94949J-AA-3	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A1	1	29,311,787	29,327,087
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,125,000	6,129,759	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				94950C-AE-6	Wellfleet CLO Ltd-WELF 2021-1A B	1	6,125,000	6,129,759
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,100,000	11,108,813	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				12481Q-AE-5	Obam 2018-5 Ltd-SERIES 18-5A CLASS B1	1	11,100,000	11,108,813
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,700,000	2,702,957	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				14316W-AE-9	Carlyle Global Market St-CGMS 2021-7A B	1	2,700,000	2,702,957
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,141,655	34,291,734	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				Q3534@-AB-5	Australian Gas Networks Senior Note Ser	1	34,141,655	34,291,734
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,109,918	11,115,914	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				61744Y-AP-3	Morgan Stanley-SENIOR UNSECURED Landmark Equity Partners XVI-D, LLC	1	11,109,918	11,115,914
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		70,000,000	70,000,000	09/18/2023	06/17/2051	SOFR Replacement Swap - CME cleared				515095-MM-6	MM Investment Holding Revolver	1	70,000,000	70,000,000
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	141,924,008	60,771,773	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared	78,536	(75,901,227)		57542Z-A7-2	Floating Line	2	141,845,472	136,673,000
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		3,600,000	3,602,142	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				61773K-AE-2	Morgan Stanley Eaton Van-NSEV 2021-1A C	1	3,600,000	3,602,142
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,000,000	7,999,632	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				067925-AC-1	Barings Middle Market Lo-BMMLP 2024-11A A	1	8,000,000	7,999,632
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	25,015,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				236057-AA-3	Danby Park CLO Ltd-DANBY 2022-1A A1A	1	25,000,000	25,015,000
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	25,064,025	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				69700X-AA-3	Palmer Square CLO 2022-4-PLMRS 2022-4A A1A	1	25,000,000	25,064,025
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	25,429,425	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				06763R-AD-6	Barings Loan Partners CL-BABSN LP-1A D	2	25,000,000	25,429,425
57629*GPO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,530,957	25,025,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				06763B-AA-7	Barings Clo Ltd 2023-1-BABSN LP-2A A	1	24,530,957	25,025,000
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	199,371,025	92,877,310	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared	109,962	(106,383,753)		67098#-MM-7	GHA Credit Solutions Master Fund I SPV, L.P. - Fund I Revolver	1	199,261,063	199,261,063
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,002,010	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				94950J-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	5,000,000	5,002,010
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,150,000	10,151,979	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				48662N-AC-1	KAYNE CLO-KAYNE 2021-11A B	1	10,150,000	10,151,979
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,670,820	19,674,971	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				26245R-AA-8	Dryden 5B Clo Ltd-DRSLF 2018-5BA A1	1	19,670,820	19,674,971
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		77,000,000	77,000,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				92212Z-MM-2	VARAGON STRUCTURED NOTES ISSUER I, LLC - Senior Secured Class A Loan	1	77,000,000	77,000,000
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		48,000,000	48,000,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVII-D, LLC	1	48,000,000	48,000,000
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	400,000,000	156,098,672	34,461,310	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared	125,664	(121,511,698)		46143#-MM-4	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2020-2	2	155,973,008	155,973,008
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,822,058	14,822,058	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				901399-MR-3	Twinbrook Capital Funding VIII DSPV, LLC - Term Loan	1	14,822,058	14,822,058
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,054,986	1,973,690	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				50190D-AL-0	LCCM 2017-LC26-LCCM 2017-LC26 XA	1	2,054,986	1,973,690
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,600,000	9,387,456	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				63941R-AC-4	NAVSL 2019-2A B	1	9,600,000	9,387,456
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,700,000	12,713,881	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				40436X-AE-7	HIGHBRIDGE LOAN MANAGEMIE-SERIES 2014 CLAS A2R	1	12,700,000	12,713,881

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,000	13,851,823	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				09628J-AN-1	BlueMountain CLO 2015-3 -BLUEM 2015-3A A2R	1	13,900,000	13,851,823
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,204,575	44,204,575	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				92212Z-MM-2	VARAGON STRUCTURED NOTES ISSUER I, LLC - Senior Secured Class A Loan	1	44,204,575	44,204,575
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		567,698	562,081	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				12669G-JB-8	CHL Mortgage Pass-Through-CIHL 2004-29 2A1	1	567,698	562,081
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,824,000	17,564,256	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				95002Y-AC-7	Wells Fargo & Co-WIFC 6.85 PERP Landmark Equity Partners XVI-D, LLC	2	16,824,000	17,564,256
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		65,000,000	65,000,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				51509S-MM-6	Pioneers Gate 2024-5 BLVN Issuance Confirmation	1	65,000,000	65,000,000
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,023,512	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				72403Z-OY-5	Babson CLO Ltd/Cayman Is-BABSN LP-2A B	1	20,000,000	20,023,512
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,400,000	17,418,809	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				06763B-AC-3	Babson CLO Ltd/Cayman Islands	1	17,400,000	17,418,809
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,400,000	17,413,050	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				06762T-AC-5	VCP RRL ABS II Ltd-VCPRL 2022-1A A	1	17,400,000	17,413,050
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,036,153	14,986,620	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				91824X-AC-4	Halsey Point CLO Ltd-SERIES 2021-4A CLASS B	1	15,036,153	14,986,620
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,302,795	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				40637L-AC-4	Pioneers Gate 2024-5 BLVN Issuance Confirmation	1	4,300,000	4,302,795
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	20,062,826	(40,662,602)	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared	62,826	(60,686,115)		72403Z-OY-5	Pioneers Gate 2024-5 BLVN Issuance Confirmation	1	20,000,000	20,023,512
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,350,000	9,361,089	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				87166R-DG-9	SYMP 2019-21A BR	1	9,350,000	9,361,089
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,216,900	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				65357L-AL-9	Niagara Park CLO Ltd-NIAPK 2019-1A BR	1	9,200,000	9,216,900
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,100,000	9,113,559	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				12551J-AQ-9	CIFC Funding 2017-IV Ltd-CIFC 2017-4A BR	1	9,100,000	9,113,559
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,100,000	9,110,920	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				42087D-AC-3	Hayfin US XII Ltd-HAYFN 2020-12A B1	1	9,100,000	9,110,920
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,000,000	9,024,129	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				38138L-AN-8	Golentree Loan Managem-SERIES 2020-7A CLASS BR	1	9,000,000	9,024,129
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		74,354,919	75,000,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				31650Z-AA-1	Fidus Re Ltd-UNSECURED	1	74,354,919	75,000,000
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,874,055	14,928,978	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				66704J-AY-4	NORTHSTAR EDUCATION FINA-SERIES 2004-1 CLASS B1	1	16,874,055	14,928,978
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,923,466	5,924,947	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				44925B-AA-0	ICG US CLO 2018-1 LTD-SERIES 2018-1A CLASS A1	1	5,923,466	5,924,947
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,107,613	3,021,725	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				63942N-AC-2	Navient Student Loan Tru-NAVSL 2021-1A B	1	3,107,613	3,021,725
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,200,000	11,218,211	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				17181T-AC-5	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A2	1	11,200,000	11,218,211
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,200,000	16,209,380	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				16409T-AC-3	CHENANGO PARK CLO LTD-SERIES 18-1A CLASS A1B	1	16,200,000	16,209,380
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,920,779	1,946,000	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				05890M-AA-1	BANCO DE CREDITO E INVER-SENIOR UNSECURED	1	1,920,779	1,946,000
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,830,000	13,545,102	09/18/2023	06/18/2051	SOFR Replacement Swap - CME cleared				53636C-AA-2	LiquiGlide Inc-SECURED	1	13,830,000	13,545,102
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	60,036,247	33,778,247	08/07/2023	02/05/2045	SOFR Replacement Swap - CME cleared	36,247	(26,221,753)		04940H-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	60,000,000	60,000,000
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		62,142,023	62,160,441	08/07/2023	02/05/2045	SOFR Replacement Swap - CME cleared				00119V-AN-9	AGL CLO 6 LTD-AGL 2020-6A AR	1	62,142,023	62,160,441
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,352,064	6,357,162	08/07/2023	02/05/2045	SOFR Replacement Swap - CME cleared				74340X-BL-4	Prologis LP-SENIOR UNSECURED	1	6,352,064	6,357,162
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	151,890	(95,312,720)	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared	91,813	(95,372,795)		78449F-AC-5	SMB PRIVATE ED LN TR 201-SMB PRIVATE ED LN TR 2016-A NT	1	60,076	60,075

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		256,155,309	256,155,309	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				143088-IM-7	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	256,155,309	256,155,309
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,000,000	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	20,000,000	20,000,000
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,200,000	4,201,823	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				08180X-AU-6	Benefit Street Partners -BSP 2015-8A BR	1	4,200,000	4,201,823
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,423,207	7,003,206	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G5383*-AA-7	Last Mile Infrastructure Senior Secured Notes (Delayed Tranche)	2	8,423,207	7,003,206
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,652,022	6,981,399	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				X7T60Y-AB-6	Sisu Industrial Energy Solutions Oy	2	6,652,022	6,981,399
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,973,396	5,994,994	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				512807-AU-2	Lam Research Corp--SENIOR UNSECURED	1	5,973,396	5,994,994
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,588,387	1,584,420	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				172967-LW-9	Citigroup Inc--SENIOR UNSECURED	1	1,588,387	1,584,420
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,041,969	1,048,241	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared					DP World Ltd--SENIOR UNSECURED	2	1,041,969	1,048,241
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,038,688	836,076	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G6954#-AD-4	Peabody Trust Senior Secured Notes	1	1,038,688	836,076
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,108,849	690,141	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G81608-AB-4	UK Power Networks Servis Senior Unsecured Notes	1	1,108,849	690,141
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		944,817	919,714	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G36012-AB-5	National Express Group P Senior Note Series A	2	944,817	919,714
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		923,950	927,570	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				14316W-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	1	923,950	927,570
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		870,330	621,303	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G2564*-AA-5	Cross London Trains Limi Senior Secured Notes	2	870,330	621,303
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		157,468	160,447	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A1R	1	157,468	160,447
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		838,527	456,657	09/21/2023	06/21/2051	SOFR Replacement Swap - CME cleared				G0892#-AB-6	Bazalgette Tunnel Limite Senior Secured Notes	2	838,527	456,657
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	43,063,967	(22,504,692)	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared	63,967	(65,555,243)		72403Z-OY-5	Pioneers Gate 2024-5 BLVN Issuance Confirmation	1	43,000,000	43,050,551
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,014,680	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				87250A-AL-5	TICP CLO XIII Ltd-TICP 2019-13A BR	1	8,000,000	8,014,680
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,005,680	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				09628F-AE-9	BlueMountain Fuji US Clo--SERIES 2017-3A CLASS B	1	8,000,000	8,005,680
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,433,059	4,441,092	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				858102-AX-4	Steele Creek CLO 2016-1 -SERIES 2016-1A CLASS AR	1	4,433,059	4,441,092
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,005,350	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				87232A-AN-4	TCI-Flatiron Clo 2018-1 -TFLAT 2018-1A BR	1	10,000,000	10,005,350
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,008,690	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				77342M-AQ-9	Rockford Tower CLO 2019--SERIES 2019-1A CLASS B1R	1	10,000,000	10,008,690
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,517,392	1,704,991	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				429827-AK-4	HIGHER EDUCATION FUNDING--SERIES 2004-1 CLASS A10	1	1,517,392	1,704,991
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,231,163	1,160,900	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				429827-AP-3	HIGHER EDUCATION FUNDING--SERIES 2004-1 CLASS A14	1	1,231,163	1,160,900
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,195,000	1,195,157	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				429827-AB-4	HIGHER EDUCATION FUNDING--SERIES 2004-1 CLASS A2	1	1,195,000	1,195,157
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		391,622	392,018	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				83715A-AJ-8	SOUTH CAROLINA STUDENT L-SR UNSECURED	1	391,622	392,018
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,756,500	1,814,074	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				640330-AC-3	MELNET STUDENT LOAN TRUS--SERIES 2015-2A CLASS B	1	1,756,500	1,814,074
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		814,902	768,473	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				17284L-AB-0	CIT EDUCATION LOAN TRUST--SERIES 2007-1 CLASS B	1	814,902	768,473
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,275,000	8,278,608	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				056162-AS-9	Babson CLO Ltd 2015-I-BABSN 2015-IA CR	1	8,275,000	8,278,608

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		896,905	858,000	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				230000-AB-7	CULLEN/FROST CAP TR II-SUBORDINATED NOTE	2	896,905	858,000
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,000,000	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	15,000,000	15,000,000
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,864,139	7,279,436	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				73052V-AC-9	Point Au Roche Park CLO -PARPK 2021-1A B1	1	6,864,139	7,279,436
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,717,293	14,004,200	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				27829P-AL-0	Eaton Vance CLO 2020-2 L-EATON 2020-2A AR	1	13,717,293	14,004,200
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	7,009,142	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				13887W-AL-4	Canyon Capital CLO 2019-CANVC 2019-2A BR	1	7,000,000	7,009,142
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,000,000	6,007,176	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				92919D-AE-8	Voya CLO Ltd-VOYA 2021-3A C	1	6,000,000	6,007,176
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,111,673	5,201,503	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				64132D-AJ-7	Neuberger Berman Loan Ad-NEUB 2019-32A AR	1	5,111,673	5,201,503
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,800,000	5,801,288	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				06762T-AE-1	Babson CLO Ltd/Cayman Islands	1	5,800,000	5,801,288
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,602,234	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				40437W-AS-7	HPS Loan Management 14-2-HLM 14A-19 BR	1	5,600,000	5,602,234
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,460,000	3,463,284	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				55822A-AQ-0	Madison Park Funding XLV-MDPK 2020-46A CR	1	3,460,000	3,463,284
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		37,000,000	37,000,000	09/22/2023	06/22/2051	SOFR Replacement Swap - CME cleared				51509S-MM-6	Landmark Equity Partners XVI-D, LLC	1	37,000,000	37,000,000
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	1,510,338	(93,808,452)	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared	113,819	(95,215,524)		008065-B*-4	AEROVIAS DE MEXICO SA USD TERM LN ACCESS GROUP INC-SERIES 2005-B	1	1,396,519	1,407,072
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		486,923	482,447	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				00432C-CW-9	CLASS A3	1	486,923	482,447
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		305,000,000	305,000,000	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				03113#-MM-3	AMF Levered II, LLC - Revolver	1	305,000,000	305,000,000
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,694,758	1,654,598	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				38021F-AB-7	GOAL CAPITAL FUNDING TRU-SERIES 2015-1 CLASS B	3	1,694,758	1,654,598
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		954,722	911,480	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				78442G-GM-2	SLM STUDENT LOAN TRUST 2003-4 LN BKD CTF CL B	3	954,722	911,480
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,418,091	1,307,126	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				28090A-AB-5	EDUCATIONAL SERVICES OF -2014-4 SERIES B	1	1,418,091	1,307,126
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,200,000	7,206,646	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				03767M-AE-8	Apidos CLO-SERIES 18-29A CLASS A1B	1	7,200,000	7,206,646
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,800,000	8,805,597	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				39729R-AC-2	Greenwood Park CLO Ltd-SERIES 18-1A CLASS B	1	8,800,000	8,805,597
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,502,321	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	10,500,000	10,502,321
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,760,109	24,209,554	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A1R	1	23,760,109	24,209,554
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	7,725,878	(56,201,031)	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared	75,878	(63,459,572)		281397-AP-4	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A1	1	7,650,000	7,258,541
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,350,000	4,127,406	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				281397-AB-5	EDUCATION LOAN ASSET-BAC-SERIES 2003-1 CLASS A2	1	4,350,000	4,127,406
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,900,000	2,676,888	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64031Q-CX-5	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R1	3	2,900,000	2,676,888
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,950,000	2,799,045	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				281397-AQ-2	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A2	1	2,950,000	2,799,045
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,000,000	40,000,000	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				186858-MO-7	Cliffwater Corporate Lending Fund - Fourth Amendment Revolver	1	40,000,000	40,000,000
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,471,496	3,416,294	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64031Q-CM-1	Nelnet Student Loan Trus-SERIES 2005-4 CLASS A4R2	3	3,471,496	3,416,294
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,113,286	3,918,512	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B	1	4,113,286	3,918,512

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,000	13,904,073	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				26251L-AE-4	Dryden 64 CLO Ltd-DRSLF 2018-64A B	1	13,900,000	13,904,073
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,000,000	27,088,998	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64033E-AB-2	NSLT 2013-2A B	1	28,000,000	27,088,998
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,084,933	7,884,193	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				78442G-KP-0	SLM Student Loan Trust 2-SLMA 2003-14 B	1	8,084,933	7,884,193
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,600,000	12,126,513	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64034X-AB-9	Nelnet Student Loan Trus-NSLT 2021-1A B	1	13,600,000	12,126,513
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,100,000	9,193,970	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64034G-AB-6	Nelnet Student Loan Trus-NSLT 2020-1A B	1	10,100,000	9,193,970
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,508,677	6,394,990	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				64031C-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2012-2A CLASS B	1	6,508,677	6,394,990
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,658,954	1,587,704	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS B	2	1,658,954	1,587,704
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,821,079	6,827,968	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				04623T-AA-3	ASSURANT CLO I LTD-ASRNT 2018-1A A	1	6,821,079	6,827,968
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,350,000	7,353,058	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				12551R-AC-2	CIFC Funding 2018-I Ltd-SERIES 18-1A CLASS B	1	7,350,000	7,353,058
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	13,005,317	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				21623P-AC-1	COOK PARK CLO LTD-COOK 2018-1A A2	1	13,000,000	13,005,317
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,884,516	3,777,156	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				63942N-AC-2	Navient Student Loan Tru-NAVSL 2021-1A B	1	3,884,516	3,777,156
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,948,000	26,948,000	09/28/2023	06/28/2051	SOFR Replacement Swap - CME cleared				67098H-MM-7	CHA Credit Solutions Master Fund I SPV, L.P. - Fund I Revolver	1	26,948,000	26,948,000
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	23,911,660	2,007,135	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared	31,291	(21,873,234)		901399-MY-8	Twin Brook Capital Funding XIII WSPV, LLC	1	23,880,369	23,880,369
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,550,000	10,487,019	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				83715R-AG-7	SOUTH CAROLINA STUDENT L-SERIES 2014-1 CLASS B	1	10,550,000	10,487,019
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,516,170	2,459,449	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				78442G-AE-1	SLC STUDENT LOAN TRUST-SERIES 2005-1 CLASS B	1	2,516,170	2,459,449
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,186,236	2,162,050	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				78442G-OT-6	SLM STUDENT LOAN TRUST-SERIES 2005-8 CLASS B	1	2,186,236	2,162,050
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,052,632	10,064,450	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				72403Z-OY-5	Pioneers Gate 2024-5 BLVN Issuance Confirmation	1	10,052,632	10,064,450
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,645,000	2,329,440	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				63938E-AE-4	NAVIENT STUDENT LOAN TRU-SERIES 2014-1 CLASS B	1	2,645,000	2,329,440
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,601,220	2,494,270	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64031A-AJ-5	NELNET STUDENT LOAN TRUS-SERIES 2006-3 CLASS B	1	2,601,220	2,494,270
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,369,759	4,562,260	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				63939L-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 2015-3 CLASS B	1	4,369,759	4,562,260
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,881,313	9,661,441	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64033J-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2014-1A CLASS B	1	9,881,313	9,661,441
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,190,138	3,221,424	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64033N-AB-2	NELNET STUDENT LOAN TRUS-SERIES 2014-5A CLASS B	1	3,190,138	3,221,424
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,066,344	1,055,828	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				78442G-LJ-3	SLM STUDENT LOAN TRUST-SERIES 2004-3 CLASS B	1	1,066,344	1,055,828
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,250,000	3,157,611	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64032A-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2012-1A CLASS B	1	3,250,000	3,157,611
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,827,624	1,790,576	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	1,827,624	1,790,576
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,240,000	3,145,657	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				64033K-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2014-3A CLASS B	1	3,240,000	3,145,657
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,750,000	14,769,795	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				03767M-AG-3	Apidos CLO-SERIES 18-29A CLASS A2	1	14,750,000	14,769,795
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,025,382	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				72403Z-OX-7	Pioneers Gate 2024-7 RCS Issuance Confirmation	1	8,000,000	8,025,382

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	3,004,008	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2	1	3,000,000	3,004,008
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,250,000	14,257,610	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				67112K-AB-5	OOP CLO Ltd-SERIES 18-15A CLASS A2	1	14,250,000	14,257,610
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,170,350	6,032,632	09/06/2023	12/06/2046	SOFR Replacement Swap - CME cleared				G92898-AB-1	University of East Angli Senior Unsecured Notes	1	9,170,350	6,032,632
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	90,058,117	40,836,501	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared	58,117	(49,163,499)		63001Z-MM-8	NSPC-L HOLDINGS II LP, - Revolver	1	90,000,000	90,000,000
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,815,000	9,825,001	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				05684L-AG-0	Bain Capital Credit CLO-BCC 2021-1A C	1	9,815,000	9,825,001
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,180,562	19,133,442	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				75972Y-AA-9	RENAISSANCE FINANCE-SR UNSECURED	1	19,180,562	19,133,442
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,000,000	44,139,603	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				72403Z-OX-7	Pioneers Gate 2024-7 RCS Issuance Confirmation	1	44,000,000	44,139,603
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,008,944	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				67104L-AG-2	OHA Loan Funding 2013-2 -OHALF 2013-2A CR	1	8,000,000	8,008,944
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,600,000	23,609,629	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				542798-AC-7	Long Point Park CLO Ltd-LINGPT 2017-1A A1B	1	23,600,000	23,609,629
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,493,792	6,323,808	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				64130H-AQ-4	Neuberger Berman Loan Ad-SERIES 2017-24A CLASS CR	1		
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,935,060	9,684,200	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				29365T-AF-1	Entergy Texas Inc-SECURED	1	6,493,792	6,323,808
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,661,025	25,951,256	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				90933J-AA-9	United Airlines 2016-2 C-UNTD AIR 16-2 B	3	9,935,060	9,684,200
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,600,681	19,087,381	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				64135D-AA-3	Neuberger Berman Loan Ad-NEUB 2022-47A A	1	24,661,025	25,951,256
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,400,000	5,417,334	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				96467K-AA-7	Whitebox CLO Ltd-WBOX 2023-4A A1	1	18,600,681	19,087,381
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	1,604,612	(47,334,606)	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared	58,054	(48,866,999)		06762V-AC-0	Barings Loan Partners CL-BABSN 2022-3A B	1	5,400,000	5,417,334
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,805,392	40,054,176	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				03116Z-CJ-7	AMGEN INC-SENIOR UNSECURED	2	1,546,558	1,532,394
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,549,928	2,718,281	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				38179N-AB-0	Golub Capital Partners C-GOCAP 2024-71A A	1	39,805,392	40,054,176
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		75,000,000	75,037,650	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				456866-AM-4	INGERSOLL-RAND CO-DEBENTURE	2	2,549,928	2,718,281
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,405,382	10,704,313	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				74989H-AL-6	RR 12 Ltd-RRAM 2020-12A AAR3	1	75,000,000	75,037,650
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		3,000,000	3,002,490	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				042735-AK-6	Arrow Electronics Inc-DEBENTURE	2	10,405,382	10,704,313
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,833,317	12,534,015	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				83012Q-AE-4	Sixth Street CLO-SIXST 2021-20A C	1	3,000,000	3,002,490
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,588,718	15,708,557	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				06761M-AD-9	Barings Middle Market CL-BMM 2018-1A C	2	11,833,317	12,534,015
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		1,725,000	1,728,781	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				06760W-AJ-5	Barings Middle Market CL-BMM 2021-1A C	2	15,588,718	15,708,557
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,000,000	60,000,000	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				04018X-AJ-8	ARES CLO-ARES 2021-ALFA D	2	1,725,000	1,728,781
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,000,000	38,000,000	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				63001Z-MM-8	NSPC-L HOLDINGS II LP, - Revolver	1	60,000,000	60,000,000
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	1,075,370	(47,778,908)	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared	58,020	(48,708,866)		05566Z-MN-4	BR DSCO II Investco, LLC & BR SCO II-A Investco, LLC - Term Loan	1	38,000,000	38,000,000
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,185,965	10,216,296	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				04352E-AA-3	Ascension Health-SENIOR UNSECURED	1	1,017,351	929,958
												195869-AP-7	COLONIAL PIPELINE CO-SR UNSECURED	1	10,185,965	10,216,296

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,662,943	13,614,048	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED	2	13,662,943	13,614,048
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,000,000	20,063,456	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				72403Z-OX-7	Pioneers Gate 2024-7 RCS Issuance Confirmation	1	20,000,000	20,063,456
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,000,000	60,000,000	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				63001Z-MM-8	NSPC-L HOLDINGS II LP, - Revolver Steele Creek CLO 2016-1 -SERIES 2016-1A CLASS AR	1	60,000,000	60,000,000
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		73,500,000	73,633,182	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				858102-AX-4	FLORIDA POWER & LIGHT CO-SECURED BOND	1	73,500,000	73,633,182
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		47,929,679	42,760,178	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				341081-FG-7	COX COMMUNICATIONS INC-SENIOR UNSECURED	2	47,929,679	42,760,178
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,212,644	8,055,012	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				224044-CG-0	Penske Truck Leasing Co -SENIOR UNSECURED	2	8,212,644	8,055,012
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,065,882	10,047,015	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				709589-AZ-7	Xcel Energy Inc-SENIOR UNSECURED	2	10,065,882	10,047,015
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,254,979	15,118,199	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				98389B-AV-2	AERCAP IRELAND CAPITAL D-SENIOR UNSECURED	2	15,254,979	15,118,199
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	16,980,097	(32,439,309)	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared	58,096	(49,064,666)		00774M-AB-1	GLENORE FUNDING LLC-SR UNSECURED	2	16,922,001	16,625,357
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,842,372	6,815,663	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				378272-AL-2	Coca-Cola Co/The-SENIOR UNSECURED	1	6,842,372	6,815,663
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,253,546	33,061,194	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				191216-CY-4	Bon Secours Mercy Health-SECURED	1	50,253,546	33,061,194
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,081,131	22,445,970	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				09778P-AA-3	O'REILLY AUTOMOTIVE INC-SENIOR UNSECURED	2	23,081,131	22,445,970
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,895,162	8,761,529	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				67103H-AF-4	SCHLUMBERGER HLDGS CORP-SR UNSECURED	1	8,895,162	8,761,529
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,114,753	9,119,808	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				806851-AG-6	DTE Electric Co-SECURED	1	9,114,753	9,119,808
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,105,707	12,068,868	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				23338V-AE-6	INTEL CORP-SENIOR UNSECURED NOTE	2	14,105,707	12,068,868
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		70,518,277	60,249,657	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				458140-AK-6	Brookfield Finance Inc-SENIOR UNSECURED	1	70,518,277	60,249,657
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		22,343,311	22,546,328	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				11271L-AC-6	HAMILTON COLLEGE-UNSECURED	1	22,343,311	22,546,328
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,785,271	18,301,718	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				40728T-AA-1	Reckitt Benckiser Treasu-SENIOR UNSECURED	1	18,785,271	18,301,718
57629*DNB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		115,697,071	116,911,683	09/15/2023	09/15/2047	SOFR Replacement Swap - CME cleared				75625Q-AE-9	Landmark Equity Partners XVI-D, LLC	1	115,697,071	116,911,683
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	150,000,000	9,924,166	(17,317,748)	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared	24,166	(27,224,123)		515095-MM-6	Palmer Square CLO 2014-1-SERIES 2014-1A CLASS A2RR	1	9,900,000	9,906,376
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,202,728	2,197,085	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				281378-AB-5	EDUCATIONAL SERVICES OF -SERIES 2015-1 CLASS B	1	2,202,728	2,197,085
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,899,282	2,927,901	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				28137T-AB-9	EDUCATIONAL SERVICES OF -SERIES 2014-2 CLASS B	1	2,899,282	2,927,901
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		766,947	707,952	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				19458L-BD-1	COLLEGIATE FUNDING SERVI-SERIES 2005-A CLASS B	1	766,947	707,952
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,777,566	15,827,625	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				72403Z-OX-7	Pioneers Gate 2024-7 RCS Issuance Confirmation	1	15,777,566	15,827,625
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,986,992	8,814,561	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				708696-BY-4	Pennsylvania Electric Co-SENIOR UNSECURED	1	8,986,992	8,814,561
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,685,954	17,770,857	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				806851-AK-7	Schlumberger Holdings Co-SENIOR UNSECURED	1	17,685,954	17,770,857
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,229,497	18,241,295	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				10510K-AC-1	BRAMBLES USA INC-SR UNSECURED	2	18,229,497	18,241,295

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,079,081	29,377,831	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				438516-BB-1	HONEYWELL INTERNATIONAL - SENIOR UNSECURED NOTE	1	32,079,081	29,377,831
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,437,005	23,026,972	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				438516-AT-3	HONEYWELL INTERNATIONAL - SENIOR NOTE	1	24,437,005	23,026,972
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,000,000	20,077,740	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				067936-AA-2	BABSON 2024-2A A1-BABSON 2024-2A A1 C1FC Funding 2020-I Ltd-C1FC 2020-1A DR	1	20,000,000	20,077,740
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,700,000	2,704,647	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				12555Q-AW-6	Babson CLO Ltd/Cayman Is-BABSON 2021-2A D	2	2,700,000	2,704,647
57629*ERB	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,700,000	2,702,433	08/30/2023	08/30/2034	SOFR Replacement Swap - CME cleared				06762J-AG-8	Babson CLO Ltd/Cayman Is-BABSON 2021-2A D	2	2,700,000	2,702,433
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	19,772,329	(37,757,202)	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared	38,454	(51,248,381)		693304-AY-3	PECO Energy Co-SECURED	1	19,733,875	13,491,179
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,358,072	27,829,739	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				579780-AN-7	MCCORMICK & CO INC/MID-SENIOR UNSECURED	2	27,358,072	27,829,739
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,097,231	11,322,205	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				90932K-AA-7	United Airlines 2019-2 C-UNTD AIR 19-2 B FIXED	3	12,097,231	11,322,205
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		42,500,415	43,292,019	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				22822V-AE-1	CROWN CASTLE INTL CORP-SENIOR UNSECURED	2	42,500,415	43,292,019
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,371,552	19,199,858	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				05369A-AA-9	Aviation Capital Group L-SENIOR UNSECURED	2	19,371,552	19,199,858
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,350,000	44,981,531	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				592688-BB-3	Mettler-Toledo Internati Senior Note Ser	2	45,350,000	44,981,531
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		7,850,000	7,857,929	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				48661Q-AE-1	Kayne CLO 9 Ltd-SERIES 20-9A CLASS B1	1	7,850,000	7,857,929
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,000,000	15,020,595	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				04019L-AL-8	ARES LI CLO Ltd-ARES 2019-51A A1R C1FC Funding 2018-II Ltd-C1FC 2018-2A A2	1	15,000,000	15,020,595
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,000,000	15,012,555	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				17180W-AC-9	Madison Park Funding Ltd-SERIES 18-28A CLASS A2	1	15,000,000	15,012,555
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,750,000	11,757,144	08/30/2023	08/30/2039	SOFR Replacement Swap - CME cleared				55821A-AC-2	Yara International ASA-SENIOR UNSECURED	1	11,750,000	11,757,144
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	976,493	(70,362,983)	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared	51,302	(71,285,529)		984851-AF-2	Edwards Lifesciences Cor-SENIOR UNSECURED	2	925,191	922,545
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,491,777	11,478,025	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURED	2	11,491,777	11,478,025
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,171,915	26,237,923	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				36144B-BC-6	GATX Corp-SENIOR UNSECURED	2	26,171,915	26,237,923
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,213,392	10,230,246	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				120568-AX-8	BUNGE LTD FINANCE CORP-SENIOR UNSECURED	2	10,213,392	10,230,246
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,129,340	23,713,540	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				00908P-AC-1	Air Canada 2017-1 Class -SECURED	2	24,129,340	23,713,540
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,260,518	5,278,476	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				171340-AN-2	CHURCH & DWIGHT CO INC-SENIOR UNSECURED	2	5,260,518	5,278,476
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,251,929	38,717,629	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				23338V-AE-6	DTE Electric Co-SECURED	1	45,251,929	38,717,629
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		48,000,000	46,249,654	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	48,000,000	46,249,654
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		40,000,000	40,155,480	08/30/2023	08/30/2049	SOFR Replacement Swap - CME cleared				067936-AA-2	BABSON 2024-2A A1-BABSON 2024-2A A1 FS Global Credit Opportu-FS GLOBAL CREDIT	1	40,000,000	40,155,480
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	306,000,000	75,098,640	(32,299,485)	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared	98,640	(107,062,185)		30290Y-AC-5	Sanofi-SENIOR UNSECURED	1	75,000,000	74,762,700
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,473,601	10,407,440	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				801060-AD-6	Sanofi-SENIOR UNSECURED	1	10,473,601	10,407,440
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,551,906	5,428,078	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				00108W-AH-3	AEP Texas Inc-SENIOR UNSECURED	2	5,551,906	5,428,078
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,500,000	13,400,861	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				892331-AD-1	Toyota Motor Corp-SENIOR UNSECURED	1	13,500,000	13,400,861

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,162,586	27,208,160	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				79466L-AF-1	salesforce.com Inc-SENIOR UNSECURED	1	27,162,586	27,208,160
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,015,999	7,938,184	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				369550-BC-1	General Dynamics Corp-SENIOR UNSECURED	1	8,015,999	7,938,184
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,893,642	23,390,921	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				892330-AC-5	Toyota Industries Corp-SENIOR UNSECURED	1	23,893,642	23,390,921
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,462,190	13,474,306	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				501886-AT-0	LCM XVIII LP-LCM 18A A1R	1	13,462,190	13,474,306
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		33,253,134	33,272,154	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				13876J-AC-6	Canyon Capital CLO Ltd-CANYC 2012-1RA A	1	33,253,134	33,272,154
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,934,277	30,769,776	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	31,934,277	30,769,776
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,500,000	12,752,300	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				38179U-AH-1	Golub Capital Partners C-GOCAP 2023-69A D	2	12,500,000	12,752,300
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,001,677	12,226,428	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				44328H-AM-7	Highbridge Loan Managem-HLM 2023-17A D	2	12,001,677	12,226,428
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,000,000	12,195,612	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				936919-AC-3	Warwick Capital CLO 1 Lt-WWICK 2023-1A B	1	12,000,000	12,195,612
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,500,000	12,782,513	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				48255U-AS-3	KKR CLO 43 Ltd-KKR 2022-43A DR	2	12,500,000	12,782,513
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,500,000	11,527,704	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				037989-AJ-9	Apidos CLO XLIV Ltd-APID 2023-44A D	2	11,500,000	11,527,704
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,000,000	12,414,180	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				689917-AL-4	PARK BLUE CLO LTD-PKBLU 2023-4A D1	2	12,000,000	12,414,180
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	255,000,000	182,588,884	87,560,071	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared	81,996	(88,291,605)		57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	182,588,884	175,851,676
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,973,102	7,841,229	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				06406R-AF-4	Bank of New York Mellon -SENIOR UNSECURED	1	7,973,102	7,841,229
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,669,334	10,872,798	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				90932P-AA-6	United Airlines 2014-1 C-SECURED NOTE	1	10,669,334	10,872,798
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,860,911	12,831,963	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURED	1	12,860,911	12,831,963
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,400,000	3,360,208	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				631005-BH-7	Narragansett Electric Co-SENIOR UNSECURED	1	3,400,000	3,360,208
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,295,456	2,285,829	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED	1	2,295,456	2,285,829
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,155,370	8,105,188	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				09062X-AF-0	BIOGEN INC-SR UNSECURED	2	8,155,370	8,105,188
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,746,730	2,734,963	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED	1	2,746,730	2,734,963
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,377,512	6,204,321	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				313747-AY-3	Federal Realty Investmen-SENIOR UNSECURED	2	6,377,512	6,204,321
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,608,323	19,266,612	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				477143-AJ-0	JetBlue 2019-1 Class A P-JETBLUE 19-1 A	3	19,608,323	19,266,612
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,697,381	4,687,840	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				670346-AP-0	Nucor Corp-SENIOR UNSECURED	1	4,697,381	4,687,840
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,643,382	1,576,973	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				78442G-RY-4	SLM STUDENT LOAN TRUST-SERIES 2006-2 CLASS B	1	1,643,382	1,576,973
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	1,003,887	09/05/2023	09/03/2049	SOFR Replacement Swap - CME cleared				067936-AA-2	BABSN 2024-2A A1-BABSN 2024-2A A1 Steele Creek CLO 2014-1 -SERIES 14-1RA CLASS A	1	1,000,000	1,003,887
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	30,471,058	2,190,889	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared	59,534	(28,232,921)		85816W-AC-8	CIFC Funding 2020-I Ltd-CIFC 2020-1A A1R	1	30,471,058	30,423,810
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		96,168,582	97,305,590	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				12555Q-AN-6	ALM XIV Ltd-SERIES 14-14A CLASS A1R2	1	96,168,582	97,305,590
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,450,725	6,458,569	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				74988L-AA-2		1	6,450,725	6,458,569

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,500,000	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				05566Z-MN-4	BR DSCO II Investco, LLC & BR SCO II-A Investco, LLC - Term Loan	1	5,500,000	5,500,000
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,003,390	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				88432U-AC-0	Wind River CLO Ltd-SERIES 18-3A CLASS A2	1	15,000,000	15,003,390
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,919,587	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				00190Y-BF-1	Ares XXVII CLO Ltd-ARES 2013-2A BR2	1	11,900,000	11,919,587
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,259,006	11,362,744	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				05875H-AA-1	Ballyrock CLO 2018-1 Ltd	1	11,259,006	11,362,744
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		75,000,000	75,291,525	07/10/2023	01/08/2032	SOFR Replacement Swap - CME cleared				067936-AA-2	BABSN 2024-2A A1-BABSN 2024-2A A1	1	75,000,000	75,291,525
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	75,049,355	44,587,768	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared	49,355	(30,434,732)	67112C-BE-6	OZLM XIX Ltd-OzLM 2017-19A A1RR	1	75,000,000	75,022,500	
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,058,587	18,526,893	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				61744Y-AK-4	Morgan Stanley-SENIOR UNSECURED	1	19,058,587	18,526,893
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		86,000,000	82,863,964	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	86,000,000	82,863,964
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,734,248	15,012,960	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A1R	1	14,734,248	15,012,960
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,525,404	11,589,525	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				877409-AA-9	Taylor Wimpey PLC Senior Unsecured Notes	2	10,525,404	11,589,525
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,039,371	1,983,007	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				63942N-AC-2	Naviest Student Loan Tru-NAVSL 2021-1A B	1	2,039,371	1,983,007
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,719,634	1,471,322	07/10/2023	01/08/2035	SOFR Replacement Swap - CME cleared				23338V-AE-6	DTE Electric Co-SECURED	1	1,719,634	1,471,322
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	400,000,000	10,129,422	(118,366,271)	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared	129,422	(128,001,615)	57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	10,000,000	9,635,345	
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		83,935,269	82,306,820	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				87278*-AD-4	TPF Equity REIT Operatin Gtd Senior Note	2	83,935,269	82,306,820
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		55,000,000	55,165,110	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				87248T-AU-9	TICOP CLO VII Ltd-TICOP 2017-7A ASR2	1	55,000,000	55,165,110
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		66,767,567	64,602,900	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				G5147*-AD-8	Johnson Matthey PLC Senior Note Ser	1	66,767,567	64,602,900
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		68,440,526	68,428,774	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				Q0832*-AD-8	Australia Pacific Airpor Gtd Senior Note	2	68,440,526	68,428,774
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,500,000	12,506,838	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				00119Y-AC-7	AGL CLO Ltd-AGL 2021-10A B	1	12,500,000	12,506,838
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,025,000	12,036,484	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				06762J-AC-7	Babson CLO Ltd/Cayman Is-BABSN 2021-2A B	1	12,025,000	12,036,484
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,913,221	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				64133V-AC-1	Neuberger Berman CLO Ltd-NEUB 2021-44A B	1	11,900,000	11,913,221
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,100,000	6,105,795	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				05682E-AE-3	Bain Capital Credit CLO -BCC 2021-5A B	1	6,100,000	6,105,795
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,498,300	15,007,395	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				00119Y-AA-1	AGL CLO 10 Ltd-AGL 2021-10A A	1	14,498,300	15,007,395
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,965,088	11,898,610	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				03330P-AA-7	ANCHORAGE CREDIT FUNDING-SERIES 18-5A CLASS A	1	11,965,088	11,898,610
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	13,113,991	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				75009P-AC-1	Rad CLO 12 Ltd-RAD 2021-12A B	1	13,100,000	13,113,991
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		43,000,000	43,000,000	08/11/2023	02/11/2050	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	43,000,000	43,000,000
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	185,000,000	24,264,921	(36,464,494)	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared	54,791	(61,541,343)	06761M-AB-3	Barings Middle Market CL-BMM 2018-1A A2	1	24,210,131	25,076,848	
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,510,093	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				55820B-AL-1	Madison Park Funding XLV-MDPK 2020-45A BR	1	5,500,000	5,510,093
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,008,655	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				38137Y-AS-0	Goldentree Loan Managem-GLM 2019-4A BR	1	15,000,000	15,008,655

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,500,000	11,505,601	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				282523-AM-1	1828 CLO Ltd-GUG64 2016-1A A1JR	1	11,505,000	11,505,601
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,006,960	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				14317R-AC-3	CARLYLE US CLO 2018-3 LT-CGMS 2018-3A A1B	1	8,000,000	8,006,960
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,700,000	7,702,703	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				67113G-AG-2	Oak Hill Credit Partners-OAKC 2020-5A B	1	7,700,000	7,702,703
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,215,070	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				64129J-BG-4	Neuberger Berman CLO XIV-NEUB 2013-14A BR2	1	9,200,000	9,215,070
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		46,000,000	44,322,585	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	46,000,000	44,322,585
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,672,444	4,671,510	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				553205-AC-9	MP CLO III LTD-MP3 2013-1A AR	1	4,672,444	4,671,510
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,508,807	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				88432U-AE-6	Wind River CLO Ltd-SERIES 18-3A CLASS B	1	9,500,000	9,508,807
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,165,697	3,200,000	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				05875H-AC-7	BALLYROCK CLO 2018-1 LTD-SERIES 2018-1A CLASS A2	1	3,165,697	3,200,000
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	20,010,940	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				74980P-AC-7	ALM Ltd/KY-SERIES 21-14A CLASS A2 GT Loan Financing I Ltd -SERIES 2013-1A CLASS BR	1	20,000,000	20,010,940
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	7,007,371	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				36248M-AL-1	Sound Point Clo XXXI Ltd-SNDPT 2021-3A B	1	7,000,000	7,007,371
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,100,000	10,101,020	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				83615P-AC-1	RREEF America REIT II, I Senior Unsecured Notes	1	10,100,000	10,101,020
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	13,708,050	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				749868-BB-6	KREF Lending VII LLC - Term Loan Series 2019-7	1	15,000,000	13,708,050
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	215,000,000	47,801,269	(24,001,233)	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared	63,722	(71,738,780)		500798-MS-5	Peace Park CLO Ltd-PCEPK 2021-1A A	1	47,737,547	47,737,547
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,300,000	24,313,827	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				70470M-AC-9	THL Credit Wind River 20-WINDR 2017-1A BR	1	24,300,000	24,313,827
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	22,013,134	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				97315T-AE-2	TICP CLO VI 2016-2 Ltd-TICP 2016-6A AR2	1	22,000,000	22,013,134
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		35,902,918	36,494,724	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				87246M-AS-1	Atrium IX-ATRM 9A BR2	1	35,902,918	36,494,724
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,000,000	21,006,552	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				55821C-AC-8	CIFC Funding Ltd-CIFC 2024-2A A1 Flatiron CLO 18 Ltd-FLAT 2018-1A A	1	21,000,000	21,006,552
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,274,250	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				17181U-AA-6	Millennium Pipeline Comp Senior Secured	1	50,000,000	50,274,250
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,183,929	12,193,481	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				33883G-AA-5	Manchester United Football Club, Ltd Senior Secu	1	12,183,929	12,193,481
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,332,480	20,385,654	08/21/2023	02/20/2050	SOFR Replacement Swap - CME cleared				60040F-AB-8	MM Investment Holding Revolver Floating Line	2	19,332,480	20,385,654
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	54,898,640	(34,524,837)	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared	89,642	(88,322,482)		65791F-AA-9	Victoria Power Networks Gtd Senior Note	1	54,808,998	53,797,645
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		65,000,000	62,629,740	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				57542Z-A7-2	Ascension Health-UNSECURED BOND	1	65,000,000	62,629,740
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,500,000	38,101,779	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				Q3936F-AK-7	Rad CLO 7 Ltd-RAD 2020-7A A1R	1	39,500,000	38,101,779
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,235,501	23,928,310	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				04351L-AA-8	Fonterra Co-operative Gr Senior Unsecured Notes	1	24,235,501	23,928,310
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		69,955,388	69,974,276	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				74936G-AA-6	Envestra Victoria Pty Lt Senior Secured	1	69,955,388	69,974,276
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	37,989,532	(50,706,125)	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared	89,532	(87,815,948)		Q3920F-AL-3	RREEF AMERICA REIT II INC SR UNSECD NT SER D	1	37,900,000	37,109,823
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		42,591,839	44,569,750	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				Q3535F-AD-8	Envestra Victoria Pty Lt Senior Secured	1	42,591,839	44,569,750
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,898,590	41,134,758	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				749868-AV-3	RREEF AMERICA REIT II INC SR UNSECD NT SER D	1	41,898,590	41,134,758

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,726,474	39,846,111	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				Q3920F-AG-4	Fonterra Co-operative Gr Senior Note	1	40,726,474	39,846,111
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,926,762	28,381,053	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				873050-01-1	TTX CO-SENIOR UNSECURED	1	31,926,762	28,381,053
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		539,880	523,576	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				493268-BW-5	KEYCORP STUDENT LOAN TRU-SERIES 2004-A CLASS 1B	1	539,880	523,576
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,050,000	7,058,946	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				04016P-AN-8	Ares XLIII CLO Ltd-SERIES 2017-43A CLASS CR	1	7,050,000	7,058,946
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,500,000	44,585,405	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				27889*-AM-1	ECOM Atlantic Inc - Guaranteed Series A Senior Note	1	45,500,000	44,585,405
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		112,500,000	112,556,250	08/25/2023	02/25/2050	SOFR Replacement Swap - CME cleared				04015G-AX-7	Ares XXXIV CLO Ltd-ARES 2015-2A AR3	1	112,500,000	112,556,250
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	41,605,136	(53,367,734)	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared	93,406	(92,810,632)		06235F-AN-2	Mirvac Group Finance Ltd Senior Note	1	41,511,730	39,442,898
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		55,000,000	55,165,110	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				87248T-AU-9	TICP CLO VII Ltd-TICP 2017-7A ASR2	1	55,000,000	55,165,110
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,921,777	40,206,446	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				Q3189*-AC-3	DEXUS Funds Management L Senior Note Ser	1	41,921,777	40,206,446
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	60,000,000	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	60,000,000	60,000,000
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,100,000	30,337,739	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				74264*-AC-0	PRISA LHC Senior Note Ser	1	31,100,000	30,337,739
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	16,018,400	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				65023P-AQ-3	Newark BSL CLO 2 Ltd-NBCLO 2017-1A A2R	1	16,000,000	16,018,400
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		42,496,946	42,464,470	08/29/2023	02/26/2050	SOFR Replacement Swap - CME cleared				G2037*-AA-4	Chanel Limited Senior Note Series A	1	42,496,946	42,464,470
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	50,079,029	(64,576,683)	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared	79,029	(114,623,333)		143133-AA-4	CGMS 2021-6A A1	1	50,000,000	50,046,650
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		58,700,000	58,704,579	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				826700-AA-7	Signal Peak CLO 9 Ltd-SPEAK 2021-9A A1	1	58,700,000	58,704,579
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	13,103,996	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				03766G-AQ-5	Apidos CLO XXVI-APID 2017-26A A2R	1	13,100,000	13,103,996
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,430,638	60,919,195	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				25255D-AA-8	Diameter Capital CLO 1 L-DCL0 2021-1A A1A	1	60,430,638	60,919,195
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,600,000	13,616,946	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				97316L-AC-2	THL Credit Wind River 20-WINDR 2017-3A BR	1	13,600,000	13,616,946
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,525,000	11,547,140	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				48252U-AJ-6	KKR CLO 25 Ltd-SERIES 25 CLASS BR	1	11,525,000	11,547,140
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	11,015,334	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				06759J-AS-7	Barings CLO Ltd 2019-I-SERIES 2019-1A CLASS BR	1	11,000,000	11,015,334
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,205,925	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				39809G-AC-9	GREYWOLF CLO VI Ltd-GWOLF 2018-1A A2	1	9,200,000	9,205,925
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	11,015,334	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				13875M-AC-0	Canyon CLO 2021-3 Ltd-CANYC 2021-3A B	1	11,000,000	11,015,334
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,711,805	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				87249C-AC-5	TICP CLO X LTD-SERIES 18-10A CLASS B	1	6,700,000	6,711,805
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,031,260	6,212,474	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				87250R-AA-2	TICP CLO XV Ltd-TICP 2020-15A A	1	6,031,260	6,212,474
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,750,000	5,755,169	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				77340G-AL-5	Rockford Tower CLO 2017-2 Ltd	1	5,750,000	5,755,169
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,656,272	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				50200F-AG-4	LCM 26 Ltd-SERIES 26A CLASS C	1	5,650,000	5,656,272
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,236,842	14,262,468	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				87241F-AA-0	TCM Direct Lending Structured Solutions 2019 LLC - Class A Note	1	14,236,842	14,262,468
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,500,000	20,682,162	09/15/2023	06/15/2050	SOFR Replacement Swap - CME cleared				74264*-AE-6	PRISA LHC, LLC Senior Note Series C	1	21,500,000	20,682,162

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	56,536,353	(96,309,483)	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared	96,685	(139,210,172)	149123-CJ-8	Caterpillar Inc-SENIOR UNSECURED	1	56,439,668	42,900,689
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,504,087	34,152,380	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			91324P-EA-6	UnitedHealth Group Inc-SENIOR UNSECURED	1	50,504,087	34,152,380
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		46,539,458	35,690,647	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			143499-AB-7	Carnegie Institution of -UNSECURED	1	46,539,458	35,690,647
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,537,899	38,075,277	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			355611-AA-2	Fred Hutchinson Cancer R-UNSECURED	1	44,537,899	38,075,277
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,895,233	11,609,124	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			29157T-AD-8	Emory University-UNSECURED	1	12,895,233	11,609,124
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		86,000,000	86,000,000	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	86,000,000	86,000,000
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,701,896	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			14315D-AC-6	Carlyle Global Market St-CGMS 2021-3SA A2	1	6,700,000	6,701,896
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,703,076	17,932,694	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			26442T-AH-0	Duke University-UNSECURED	1	25,703,076	17,932,694
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,440,245	19,098,873	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			06654D-AC-1	Banner Health-UNSECURED	1	25,440,245	19,098,873
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,750,000	11,758,072	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			50200F-AE-9	LCM 26 Ltd-SERIES 26A CLASS B	1	11,750,000	11,758,072
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,747,840	38,150,857	09/29/2023	06/29/2050	SOFR Replacement Swap - CME cleared			44919*-AC-2	1 585 Express, LLC Senior Secured	1	39,747,840	38,150,857
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	23,071,199	(64,220,380)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	71,199	(86,405,214)	41242*-AY-8	Hardwood Funding LLC Senior Secured	1	23,000,000	22,184,834
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,165,188	22,422,487	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			Q7795F-AA-0	QIC Finance (Shopping Ce Gtd Senior Note	1	23,165,188	22,422,487
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,678,985	6,441,654	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			02376*-AA-0	American Airlines Group Senior Secured	1	6,678,985	6,441,654
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,214,066	20,009,369	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			G2044@-BA-2	Compass Group PLC Senior Note Ser	1	20,214,066	20,009,369
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,274,117	11,059,390	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			G9706*-AA-5	WINGS Aviation 62696 USD Tranche A-1 Ln	1	11,274,117	11,059,390
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,400,000	19,682,348	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			12656*-AK-8	CSLB Holdings, Inc. Gtd Senior Note	1	20,400,000	19,682,348
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,950,000	8,955,710	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			50184N-AP-7	LCM LTD PARTNERSHIP-SERIES 15A CLASS CR	1	8,950,000	8,955,710
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,025,682	23,876,031	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			141781-BJ-2	Cargill Inc-SENIOR UNSECURED	1	28,025,682	23,876,031
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,500,000	8,512,359	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			38136F-BJ-1	Goldentree Loan Managem-GLM 2017-1A B1R2	1	8,500,000	8,512,359
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,850,000	13,850,000	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			05684R-AE-2	Bain Capital Credit CLO-BCC 2021-2A B	1	13,850,000	13,850,000
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,715,084	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			48255A-AC-2	KKR CLO 36 Ltd-KKR 36A B	1	13,700,000	13,715,084
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,500,000	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			08182B-AN-8	Benefit Street Partners -BSP 2019-17A BR	1	5,500,000	5,500,000
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,334,580	20,355,532	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			74170*-AW-9	Prime Property Fund LLC Senior Note Series U	2	21,334,580	20,355,532
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	22,000,000	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	22,000,000	22,000,000
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	18,821,173	(67,716,948)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	71,173	(86,285,485)	74170*-AC-3	Prime Property Fund LLC Senior Note Ser	2	18,750,000	18,568,538
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,081,141	22,984,893	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			56081#-CA-6	Major League Baseball Tr Series 44 Term Note	1	23,081,141	22,984,893
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,700,000	18,165,143	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared			41242*-AU-6	Hardwood Funding LLC Senior Note Ser	1	18,700,000	18,165,143

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,315,000	19,269,359	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				36198*-AA-4	GI Manager L.P. Senior Secured Notes	1	19,315,000	19,269,359
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,700,000	17,445,173	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				41242*-AX-0	Hardwood Funding LLC Senior Secured	1	17,700,000	17,445,173
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,263,444	17,085,601	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				68233J-A8-3	Oncor Electric Delivery SR SECD NT SER B	1	17,263,444	17,085,601
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		78,216,099	85,060,037	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				931142-CS-0	WAL-MART STORES INC-SENIOR NOTE	1	78,216,099	85,060,037
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,700,000	27,727,645	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				38176D-AJ-8	Golub Capital Partners C-GOCAP 2015-26A A2R	1	27,700,000	27,727,645
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	26,038,330	(60,761,677)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	71,222	(86,507,839)		00114*-AR-4	AEP Transmission Company Senior Note Ser	1	25,967,108	25,746,162
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,700,000	25,583,605	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				G4622#-AB-5	Howard De Walden Estates Gtd Senior Note	1	25,700,000	25,583,605
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,900,000	23,390,285	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				57169*-AU-1	Mars, Inc. Senior Note Ser	1	23,900,000	23,390,285
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,750,000	21,677,268	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				06235#-AF-9	Mirvac Group Finance Ltd Gtd Senior Note	1	21,750,000	21,677,268
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		136,000,000	131,040,687	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	136,000,000	131,040,687
57629*FM8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,032,325	12,038,341	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				48250W-AG-0	KKR CLO 14 Ltd-KKR 14 AR	1	12,032,325	12,038,341
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	8,553,354	(56,507,120)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	53,354	(64,598,661)		74170*-AR-0	Prime Property Fund LLC Senior Note Ser	2	8,500,000	8,091,541
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,500,000	8,259,450	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				41242*-BF-8	Hardwood Funding LLC Senior Secured	1	8,500,000	8,259,450
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,285,312	9,220,522	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				479142-E8-6	Johnson Matthey PLC Series A Senior Notes	1	9,285,312	9,220,522
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,386,855	7,294,925	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				18469Z-B#-7	Clearbridge Energy MLP Fd Inc-Senior Secured	1	7,386,855	7,294,925
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,000,673	3,859,873	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05389L-AK-9	Avolon Aerospace Leasing Secured Note B7	1	4,000,673	3,859,873
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,944,514	7,931,564	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				92203#-AR-9	Vanguard Group, Inc. Senior Notes Series D	1	7,944,514	7,931,564
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,450,000	4,453,475	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				04018E-AE-1	Ares LIX CLO Ltd-ARES 2021-59A C1	1	4,450,000	4,453,475
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,724,936	3,602,516	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05389L-AH-6	Avolon Aerospace Leasing Secured Note B7	1	3,724,936	3,602,516
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		92,706,616	81,877,874	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				055451-AV-0	BHP Billiton Finance USA-SR UNSECURED	1	92,706,616	81,877,874
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,865,732	24,612,312	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				90226#-AA-3	2014 REPLACEMENT PWR STATUTORY TR SR SECD NT	1	24,865,732	24,612,312
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	29,955,012	(34,753,676)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	53,278	(64,252,303)		78403D-AR-1	SBA Tower Trust-ASSET BACKED	1	29,901,734	29,498,627
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,601,951	3,483,296	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05389L-AA-1	Avolon Aerospace Leasing Secured Note A3	1	3,601,951	3,483,296
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,598,380	3,480,206	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05389L-AD-5	Avolon Aerospace Leasing Secured Note A3	1	3,598,380	3,480,206
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,626,553	4,541,892	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05400F-AE-1	Avolon Aerospace Funding Senior Secured	1	4,626,553	4,541,892
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,614,862	4,540,235	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05400F-AG-6	Avolon Aerospace Funding Senior Secured	1	4,614,862	4,540,235
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,310,471	4,233,258	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05400F-AC-5	Avolon Aerospace Funding Senior Secured	1	4,310,471	4,233,258
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,200,000	5,604,212	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				393154-L8-6	Green Mountain Power Cor First Mtg Bond	1	5,200,000	5,604,212

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,576,259	30,916,567	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				45866F-AH-7	Intercontinental Exchange-SENIOR UNSECURED	1	36,576,259	30,916,567
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		107,000,000	103,098,187	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	107,000,000	103,098,187
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		150,000,000	8,386,121	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	53,286	(64,290,787)		90312*-AC-8	UNS Gas, Inc. Gtd Senior Note	1	8,382,835	8,453,198
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,352,975	6,294,042	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				47914Z-E#-4	Johnson Matthey PLC Series B Senior Notes	1	6,352,975	6,294,042
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,562,891	3,488,448	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05400F-AA-9	Avolon Aerospace Funding Senior Secured	1	3,562,891	3,488,448
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		139,924	139,870	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05577#-AN-0	BTMU Capital Corp. Equipment Note	1	139,924	139,870
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	21,197,758	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	22,000,000	21,197,758
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,646,490	1,733,937	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				589331-AD-9	MERCK SHARP & DOHME CORP-DEBENTURE	1	1,646,490	1,733,937
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		929,578	922,701	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05348E-AW-9	AVALONBAY COMMUNITIES IN-SR UNSECURED	1	929,578	922,701
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,304,763	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				74264*-AD-8	PRISA LHC LLC-SENIOR NOTE SER B	1	4,500,000	4,304,763
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,095,279	4,920,075	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				89236T-DR-3	Toyota Motor Credit Corp-SENIOR UNSECURED	1	5,095,279	4,920,075
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,870,527	3,844,409	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				18469P-A#-7	Clearbridge Energy MLP Op Fd Inc-Senior Secured	1	3,870,527	3,844,409
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,882,737	10,967,138	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				74980X-AC-0	ALM Ltd/KY-RRAM 2021-15A A2	1	10,882,737	10,967,138
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,767,648	3,736,505	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				18469Q-A#-5	Clearbridge Energy MLP Fd Inc-Senior Secured	1	3,767,648	3,736,505
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,250,000	9,260,425	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				64131T-AS-3	Neuberger Berman CLO XVI-SERIES 2017 CALSS 16SA	1	9,250,000	9,260,425
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,077,600	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				03329F-AN-4	Anchorage Capital CLO 15-ANCHC 2020-15A AR	1	50,000,000	50,077,600
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,000,000	21,013,230	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				97316D-AA-4	Wind River CLO Ltd-WINDR 2021-3A A	1	21,000,000	21,013,230
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,425,000	6,431,412	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				08180X-AQ-5	Benefit Street Partners -BSP 2015-8A A1BR	1	6,425,000	6,431,412
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,450,000	2,454,699	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				04018X-AG-4	ARES CLO-ARES 2021-ALFA C	1	2,450,000	2,454,699
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		300,000,000	3,108,480	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared	110,871	(145,633,712)		244199-AW-5	Deere & Co-BOND	1	2,997,609	3,266,418
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,790,230	43,372,043	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				873050-CB-5	TTX CO-UNSECURED NOTE	1	41,790,230	43,372,043
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,094,492	35,477,145	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				584918-CB-8	MICROSOFT CORP-SENIOR UNSECURED	1	36,094,492	35,477,145
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		137,343,949	137,343,949	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				50079#-MW-6	KREF Lending VII LLC - Term Loan Series 2022-11	1	137,343,949	137,343,949
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		69,519,000	70,115,334	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				46655H-AB-9	JCP Direct Lending CLO 2-JCPDL 2022-11 A	1	69,519,000	70,115,334
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		64,000,000	62,043,840	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				18685#-AA-0	Cliffwater Corporate Len Senior Secured Notes	1	64,000,000	62,043,840
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	11,000,000	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVII-D, LLC	1	11,000,000	11,000,000
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		150,000,000	13,917,617	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared	55,546	(73,315,490)		662325-B#-7	North Shore Gas Co. First Mtg Bond	1	13,862,071	13,630,400
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,466,262	14,410,825	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				G1108#-AG-3	British Land Company PLC Senior Note Ser	1	14,466,262	14,410,825

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,352	13,603,870	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				720186-FX-1	Piedmont Natural Gas Co. Senior Note Ser	2	13,900,352	13,603,870
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,600,000	11,463,746	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				41242*-AT-9	Hardwood Funding LLC Senior Note Ser	1	11,600,000	11,463,746
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,250,000	11,073,983	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				151515-XX-6	Bridge Investment Group Senior Secured Notes	1	11,250,000	11,073,983
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,689,594	10,470,517	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				74170*-AE-9	Prime Property Fund LLC Senior Note Ser	2	10,689,594	10,470,517
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,992,820	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				57169*-AT-4	Mars, Inc. Senior Note Ser	1	10,000,000	9,992,820
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		80,000,000	80,000,000	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				04940#-AA-9	Atlas Securitized Products Funding 3 LP - Class A	1	80,000,000	80,000,000
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,044,612	1,044,894	07/14/2023	07/14/2050	SOFR Replacement Swap - CME cleared				749366-AA-6	Rad CLO 7 Ltd-RAD 2020-7A A1R	1	1,044,612	1,044,894
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	93,119,011	(17,373,435)	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared	88,961	(107,835,476)		117028-AA-4	Brunswick Asset Financing LLC - Term A Loan	1	93,030,049	90,462,042
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,000,000	61,000,000	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	61,000,000	61,000,000
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,000,000	28,664,430	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				576292-YY-6	Barings Corporate Invest Convertible Not	1	30,000,000	28,664,430
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,842,160	28,559,847	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				68233J-A*-5	Oncor Electric Delivery & Senior Secured	1	28,842,160	28,559,847
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,200,000	12,666,377	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				Q1297#-AK-4	CSL Finance Pty Ltd Gtd Senior Note	1	13,200,000	12,666,377
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,243,493	43,189,899	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				20030N-AM-3	Comcast Corp-NOTE	1	41,243,493	43,189,899
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,045,000	2,047,348	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				056162-AQ-3	Babson CLO Ltd 2015-I-BABSN 2015-IA BR	1	2,045,000	2,047,348
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,900,000	18,182,896	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				03464A-A*-1	Angel Oak Financial Stra Senior Note Series A	1	18,900,000	18,182,896
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,604,246	19,467,435	09/05/2023	09/02/2050	SOFR Replacement Swap - CME cleared				05707#-AA-9	Baird Financial Corporat Senior Secured Notes	1	19,604,246	19,467,435
57629*HL8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	201,368,997	128,249,016	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared	68,997	(65,710,470)		57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	201,300,000	193,959,487
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	6,701,859	(43,144,020)	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared	51,859	(49,806,555)		55954Y-AL-9	Magnetite XXVI Ltd-MAGNE 2020-26A BR	1	6,650,000	6,662,535
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,550,000	6,564,607	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				00190Y-BH-7	Ares XXVII CLO Ltd-ARES 2013-2A CR2	1	6,550,000	6,564,607
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,407,008	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				143133-AG-1	CGMS 2021-6A C	1	6,400,000	6,407,008
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,407,834	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				87168B-AG-5	SYMP 2021-28A C-SYMP 2021-28A C	1	6,400,000	6,407,834
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,406,074	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				12565E-AE-1	CIFC Funding Ltd-CIFC 2021-5A C	1	6,400,000	6,406,074
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,408,058	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				05685A-AJ-7	Bain Capital Credit CLO-BCC 2021-4A C	1	6,400,000	6,408,058
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,408,256	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				38136N-AU-0	Goldentree Loan Managem-GLM 2020-8A CR	1	6,400,000	6,408,256
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,050,000	6,055,578	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				05685A-AG-3	Bain Capital Credit CLO-BCC 2021-4A B	1	6,050,000	6,055,578
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,050,000	6,056,915	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				00119V-AQ-2	AGL CLO 6 LTD-AGL 2020-6A BR	1	6,050,000	6,056,915
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,655,763	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				670881-AP-6	OCP CLO 2020-19 Ltd-OCP 2020-19A BR	1	5,650,000	5,655,763
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,625,000	5,628,668	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared				037666-AS-1	Apidos CLO XXVI-APID 2017-26A BR	1	5,625,000	5,628,668

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,300,000	5,303,498	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			48253U-AC-0	KKR-SERIES 34A CLASS B	1	5,300,000	5,303,498
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,300,000	5,305,300	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			09627F-AQ-3	BlueMountain CLO XXV Ltd-BLUEM 2019-25A BR	1	5,300,000	5,305,300
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,150,000	5,157,174	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			95023A-AC-4	Wellfleet CLO Ltd-WELF 2021-2A B	1	5,150,000	5,157,174
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,125,000	5,130,048	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			14317Y-AQ-9	Carlyle Global Market St-SERIES 21-5A CLASS C	1	5,125,000	5,130,048
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,502,363	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			73052V-AQ-0	Point Au Roche Park CLO -PARPK 2021-1A C	1	4,500,000	4,502,363
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,505,112	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			33835N-AE-1	ASSURANT CLO LTD-MORGN 2018-3A CR	1	4,500,000	4,505,112
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,504,410	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			97316D-AG-1	Wind River CLO Ltd-WINDR 2021-3A C	1	4,500,000	4,504,410
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,400,000	4,406,362	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			48255A-AE-8	KKR CLO 36 Ltd-KKR 36A C	1	4,400,000	4,406,362
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,307,112	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			12555Q-AU-0	CIFC Funding 2020-I Ltd-CIFC 2020-1A CR	1	4,300,000	4,307,112
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,002,010	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			94950J-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	5,000,000	5,002,010
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	21,281,025	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			886758-AB-3	Tiger Global Management Senior Note Series B	1	25,000,000	21,281,025
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,794,439	11,794,439	07/10/2023	07/08/2051	SOFR Replacement Swap - CME cleared			186858-MN-9	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	11,794,439	11,794,439
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	9,156,562	(110,071,771)	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared	103,813	(119,159,990)	14316W-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	1	9,052,749	9,088,220
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		48,500,000	48,542,341	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			12547L-AL-2	CIFC Funding 2020-II Ltd-CIFC 2020-2A AR	1	48,500,000	48,542,341
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,100,000	45,164,493	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			05876L-AA-1	Ballyrock CDO Ltd-BALLY 2021-17A ATA	1	45,100,000	45,164,493
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,711,714	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			87168B-AE-0	SYMP-SYMP 2021-28A B	1	13,700,000	13,711,714
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,714,810	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			97316D-AC-0	Wind River CLO Ltd-WINDR 2021-3A B1	1	13,700,000	13,714,810
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,211,491	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			13876G-AL-2	Canyon Capital CLO 2017-CANVC 2017-1A BR	1	9,200,000	9,211,491
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	24,088,361	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	25,000,000	24,088,361
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,215,539	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			14316W-AC-3	Carlyle Global Market St-CGMS 2021-7A A2	1	9,200,000	9,215,539
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,214,490	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			12547L-AQ-1	CIFC Funding 2020-II Ltd-CIFC 2020-2A BR	1	9,200,000	9,214,490
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,213,644	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			04018X-AE-9	ARES CLO-ARES 2021-ALFA B	1	9,200,000	9,213,644
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,204,499	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			25255L-AC-6	Diameter Capital Clo 2 L-DQLO 2021-2A A2	1	9,200,000	9,204,499
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,215,263	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			12555Q-AS-5	CIFC Funding 2020-I Ltd-CIFC 2020-1A BR	1	9,200,000	9,215,263
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,210,396	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			48253H-AQ-8	KKR CLO 26 Ltd-KKR 26 BR	1	9,200,000	9,210,396
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,725,000	8,737,398	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			38136N-AS-5	Goldentree Loan Managem-GLM 2020-8A BR	1	8,725,000	8,737,398
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,868,624	17,422,220	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			13876N-AN-3	Canyon CLO 2020-2 Ltd-CANVC 2020-2A BR	1	16,868,624	17,422,220

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,800,000	7,814,313	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			143133-AE-6	CGMS 2021-6A B-CGMS 2021-6A B	1	7,800,000	7,814,313
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,375,000	7,388,415	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			13877P-AC-1	CANYC-2021-4A B	1	7,375,000	7,388,415
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,300,000	7,307,351	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			13875M-AE-6	Canyon CLO 2021-3 Ltd-CANYC 2021-3A C	1	7,300,000	7,307,351
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,300,000	7,307,928	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			12551J-AN-6	CIFC Funding 2017-IV Ltd-CIFC 2017-4A A2R	1	7,300,000	7,307,928
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,200,000	7,206,682	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			97315V-AE-7	Wind River CLO Ltd-WINDR 2021-2A B	1	7,200,000	7,206,682
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,100,000	7,108,854	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			04019L-AN-4	ARES LI CLO Ltd-ARES 2019-51A BR	1	7,100,000	7,108,854
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	7,005,985	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			61773K-AC-6	Morgan Stanley Eaton Van-MSEV 2021-1A B	1	7,000,000	7,005,985
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,751,499	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			50204A-AE-6	LCM LP-LCM 32A B	1	6,750,000	6,751,499
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,511,163	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			48252W-AC-7	KKR CLO LTD 22-SERIES 22A CLASS B	1	9,500,000	9,511,163
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,860,356	8,394,550	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			86209*-AA-6	Stonehenge OH Rural Fund II LLC Series 2021B-1	1	8,860,356	8,394,550
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,216,407	7,593,782	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			86208*-AA-3	Stonehenge Cap Fund Conn VI Series 2021B-1	1	8,216,407	7,593,782
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,666,667	6,691,334	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			87289B-AB-0	TCP DLF VIII 2018 CLO, LLC - Class A-2 Secured Floating Rate Note	1	6,666,667	6,691,334
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,063,868	6,125,932	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			46655H-AH-6	JCP Direct Lending CLO 2-JCPDL 2022-11 D	2	6,063,868	6,125,932
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,547,901	4,579,977	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			46655H-AF-0	JCP Direct Lending CLO 2-JCPDL 2022-11 C	1	4,547,901	4,579,977
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,390,224	8,434,642	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			46655H-AD-5	JCP Direct Lending CLO 2-JCPDL 2022-11 B	1	8,390,224	8,434,642
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,001,265	976,314	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			86208*-AA-5	Stonehenge Capital Fund South Carolina IV, LLC Senior Structured Notes	1	1,001,265	976,314
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,666,667	2,688,000	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			87289B-AD-6	TCP DLF VIII 2018 CLO, LLC - Class B Secured Floating Rate Note	1	2,666,667	2,688,000
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,222,223	2,250,445	07/10/2023	07/09/2051	SOFR Replacement Swap - CME cleared			87289B-AE-4	TCP DLF VIII 2018 CLO, LLC - Class C Secured Floating Rate Note	1	2,222,223	2,250,445
57629*HM6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	60,051,714	(10,194,605)	07/12/2023	07/12/2051	SOFR Replacement Swap - CME cleared	51,714	(70,517,225)	06763R-AA-2	Barings Loan Partners CL-BABSN LP-1A A	1	60,000,000	60,322,620
57629*HM6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,000,000	50,494,100	07/12/2023	07/12/2051	SOFR Replacement Swap - CME cleared			06763R-AB-0	Barings Loan Partners CL-BABSN LP-1A B	1	50,000,000	50,494,100
57629*HM6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,000,000	50,648,850	07/12/2023	07/12/2051	SOFR Replacement Swap - CME cleared			06763K-AC-3	Barings Middle Market CL-BMM 2023-1A A1	1	50,000,000	50,648,850
57629*HM6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,000,000	50,035,000	07/12/2023	07/12/2051	SOFR Replacement Swap - CME cleared			83004L-AN-5	610 Funding CLO 2 Ltd-SIX10 2016-2RA A1R3	1	50,000,000	50,035,000
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	50,116,057	(76,750,503)	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared	116,057	(126,814,753)	83615P-AA-5	Sound Point Clo XXXI Ltd-SNDPT 2021-3A A	1	50,000,000	50,064,250
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,061,300	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared			95023A-AA-8	Wellfleet CLO Ltd-WELF 2021-2A A1	1	50,000,000	50,061,300
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,117,200	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared			69702E-AA-3	Palmer Square CLO Ltd-PLMRS 2021-4A A	1	50,000,000	50,117,200
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,021,650	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared			03328J-AA-5	Anchorage Capital CLO 19-ANCHC 2021-19A A	1	50,000,000	50,021,650
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,032,950	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared			42088A-AA-2	Hayfin US XII Ltd-HAYFN 2021-14A A1	1	50,000,000	50,032,950

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		59,966,282	60,435,092	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				87168B-AC-4	SYMP-SYMP 2021-28A A	1	59,966,282	60,435,092
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,312,500	14,335,042	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				70470M-AE-5	Peace Park CLO Ltd-PCEPK 2021-1A B1	1	14,312,500	14,335,042
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,090,000	14,124,056	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				55822A-AN-7	Madison Park Funding XLV-HDPK 2020-46A B1R	1	14,090,000	14,124,056
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,014,230	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				13876X-AG-6	Canyon Capital CLO Ltd-CANVC 2021-2A B1	1	10,000,000	10,014,230
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,872,144	4,002,788	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				25255L-AA-0	Diameter Capital Clo 2 L-DOLO 2021-2A A1	1	3,872,144	4,002,788
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,050,000	4,057,877	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				00120B-AE-0	AGL CLO Ltd-AGL 2021-12A B	1	4,050,000	4,057,877
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,885,000	3,888,225	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				83012K-AE-7	SIXST-SERIES 2021-19A CLASS C	1	3,885,000	3,888,225
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,750,000	3,755,674	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				74980Q-AE-1	ALM Ltd/KY-PRAM 2021-17A A2	1	3,750,000	3,755,674
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,600,000	3,603,625	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				92918Q-AG-5	Voya CLO Ltd-VOYA 2021-1A C	1	3,600,000	3,603,625
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,500,000	3,503,500	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				13876N-AS-2	Canyon CLO 2020-2 Ltd-CANVC 2020-2A CR	1	3,500,000	3,503,500
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	3,001,869	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				05684A-AU-3	Bain Capital Credit Clo -BCC 2019-4A CR	1	3,000,000	3,001,869
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,800,000	2,800,000	07/21/2023	07/21/2051	SOFR Replacement Swap - CME cleared				27829P-AS-5	Eaton Vance CLO 2020-2 L-EATON 2020-2A CR	1	2,800,000	2,800,000
57629*H14	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	196,050,936	126,866,657	08/09/2023	08/09/2051	SOFR Replacement Swap - CME cleared		50,936	(70,187,235)	06763R-AA-2	Barings Loan Partners CL-BABSN LP-1A A	1	196,000,000	197,053,892
57629*H14	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,719,165	10,009,330	08/09/2023	08/09/2051	SOFR Replacement Swap - CME cleared				67592X-AC-4	Octagon 57 Ltd-OCT57 2021-1A A	1	9,719,165	10,009,330
57629*HP9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	300,000,000	332,802,818	167,716,495	08/09/2023	08/09/2051	SOFR Replacement Swap - CME cleared		76,376	(105,149,683)	912810-RV-2	US TREASURY N/B-UNSECURED	1	332,726,442	272,866,179
57629*HP9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,470,023	21,470,023	08/09/2023	08/09/2051	SOFR Replacement Swap - CME cleared				67080B-MM-6	NXT Capital Structured Note I, LLC - Class A Secured Float Rate Revolving Loan	1	21,470,023	21,470,023
57629*HP9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,000,000	6,068,994	08/09/2023	08/09/2051	SOFR Replacement Swap - CME cleared				381939-AC-1	GoLub Capital Partners C-GCBSL 2023-70A B	1	6,000,000	6,068,994
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	150,078,244	36,600,230	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared		73,575	(84,808,496)	912810-RU-4	US TREASURY N/B-UNSECURED	1	150,004,669	121,408,726
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,050,000	9,050,000	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				69324Z-MN-3	PORED II HOLDING I LLC, PORED II HOLDING II OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L. -Term Loan Series 2022-3	1	9,050,000	9,050,000
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,907,026	8,907,026	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				67098F-MM-7	QHA Credit Solutions Master Fund I SPV, L.P. - Fund I Revolver	1	8,907,026	8,907,026
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		7,470,034	6,409,687	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				912810-TG-3	United States Treasury N-UNSECURED	1	7,470,034	6,409,687
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,841,086	2,995,860	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				60040F-AB-8	Millennium Pipeline Comp Senior Secured	1	2,841,086	2,995,860
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,077,915	2,077,915	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				89532Z-MN-9	TREZ CAPITAL MANHATTAN BRIDGE LP - Secured Term Loan Facility - Series 2022-3	1	2,077,915	2,077,915
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		70,498,585	70,498,585	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				78466Z-MM-4	SSG CREDIT STRATEGIES VII ICAV - Senior Secured Revolving Loan Facility	1	70,498,585	70,498,585
57629*HG9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,767,087	26,280,000	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared				14316E-AL-3	CARLYLE US CLO 2019-2 LT-CGMS 2019-2A A1R	1	25,767,087	26,280,000
57629*H17	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	50,058,846	(17,398,536)	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared		58,846	(67,776,836)	25255N-AQ-1	Diameter Capital CLO 4 L-DOLO 2022-4A A1R	1	50,000,000	50,378,300

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		29,294,457	30,154,170	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			75009A-AJ-9	Rad CLO 18 Ltd-RAD 2023-18A A1	1	29,294,457	30,154,170
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,600,000	26,741,698	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			00091Y-AA-3	ABPCI Direct Lending Fun-ABPCI 2023-14A A	1	26,600,000	26,741,698
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,946,686	34,231,019	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			29001L-AL-5	Elmwood CLO II Ltd-ELMW2 2019-2A AR	1	32,946,686	34,231,019
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,418,403	24,990,174	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			83406J-AA-2	Sofi Alternative Trust 2-SERIES 19-C CLASS PT	1	25,418,403	24,990,174
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,801,548	25,017,200	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			017154-AL-9	Allagany Park CLO Ltd-ALLPK 2019-1A AR	1	23,801,548	25,017,200
57629*HH7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,675,956	25,004,300	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			83616K-AA-5	Sound Point CLO XXXIII L-SNDPT 2022-1A A	1	23,675,956	25,004,300
57629*HJ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		300,000,000	256,060,858	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared	88,312	(101,875,138)	912810-QK-7	US TREASURY N/B-BOND	1	255,972,545	270,063,387
57629*HJ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,956,072	60,956,072	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			69324Z-MO-1	PCRED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDCO ARGUS S.A R.L.,-Term Loan Series 2022-4	1	60,956,072	60,956,072
57629*HJ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,994,325	4,994,325	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			500798-MM-6	KREF Lending VII LLC - Term Loan Series 2022-11	1	4,994,325	4,994,325
57629*HK0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	100,749,134	16,402,143	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared	73,731	(85,551,838)	53950U-AA-0	Loan Asset Issuer LLC - Series 2023 NG-1A Class A Asset Backed Notes	1	100,675,403	101,953,981
57629*HK0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		64,015,265	68,257,963	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2 Class A Asset Backed Notes	1	64,015,265	68,257,963
57629*HK0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		70,000,000	70,049,000	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			83004L-AN-5	610 Funding CLO 2 Ltd-SIX10 2016-2BA A1R3	1	70,000,000	70,049,000
57629*HK0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	24,088,361	08/10/2023	08/10/2051	SOFR Replacement Swap - CME cleared			57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	25,000,000	24,088,361
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	41,375,326	(30,146,424)	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared	50,326	(71,471,424)	69324Z-MN-3	PCRED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDCO ARGUS S.A R.L.,-Term Loan Series 2022-3	1	41,325,000	41,325,000
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,050,496	41,050,496	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			69324Z-MM-5	PCRED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDCO ARGUS S.A R.L.,-Term Loan Series 2022-1	1	41,050,496	41,050,496
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,728,070	24,053,145	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			87241F-AB-8	TCM Direct Lending Structured Solutions 2019 LLC - Class B Note	2	23,728,070	24,053,145
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,990,789	26,990,789	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			67080B-MM-6	NXT Capital Structured Note I, LLC - Class A Secured Float Rate Revolving Loan	1	26,990,789	26,990,789
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,640,000	34,640,000	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			70212Z-MM-8	PARTNERS GROUP PRIVATE EQUITY II, LLC - Senior Secured Revolving Facility	1	34,640,000	34,640,000
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,403,929	15,000,000	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			00259F-MM-3	ASF VIII SUNTORI, L.P and ASF VIII B SUNTORI, L.P.-Senior Secured European Term Loan	1	14,403,929	15,000,000
57629*LG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,783,647	27,118,775	08/23/2023	08/23/2051	SOFR Replacement Swap - CME cleared			22822R-BH-2	Crown Castle Towers LLC-SECURED CARLYLE SECURED LENDING III SPV, -	1	27,783,647	27,118,775
57629*MR9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	184,450,120	64,640,000	82,522,302	04/25/2024	04/29/2025	TRS Bond Index		17,882,302	14314Z-MM-3	Senior Secured Loan	2	64,640,000	64,640,000
57629*MR9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		130,763,074	130,763,074	04/25/2024	04/29/2025	TRS Bond Index			46143F-MY-0	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2022-10	2	130,763,074	130,763,074
57629*MR9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,463,857	9,671,533	04/25/2024	04/29/2025	TRS Bond Index			00140L-AG-9	Aimco CLO 12 Ltd-AIMCO 2020-12A AR	1	9,463,857	9,671,533

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*MS7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	233,942,308	38,410,477	48,895,542	06/13/2024	06/12/2026	TRS Bond Index		8,895,542	00259#-MM-3	ASF VIII SUNTORI, L.P and ASF VIII B SUNTORI, L.P.-Senior Secured European Term Loan	1	38,410,477	40,000,000
57629*MS7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		115,417,219	115,417,219	06/13/2024	06/12/2026	TRS Bond Index			901399-MY-8	Twin Brook Capital Funding XIII WSPV, LLC	1	115,417,219	115,417,219
57629*MS7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,509,841	10,019,500	06/13/2024	06/12/2026	TRS Bond Index			460988-AA-6	Invesco CLO 2022-1 Ltd-INVCO 2022-1A A	1	9,509,841	10,019,500
57629*MS7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,622,547	19,953,741	06/13/2024	06/12/2026	TRS Bond Index			55819M-AN-6	Madison Park Funding XXX-MDPK 2019-35A A1R	1	19,622,547	19,953,741
57629*MS7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	60,017,760	06/13/2024	06/12/2026	TRS Bond Index			06764A-AC-4	Barings Loan Partners CL-BABSN LP-4A A	1	60,000,000	60,017,760
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	308,812,500	(23,528,950)	(25,304,328)	10/24/2022	11/28/2048	Currency Swap	(58,221,450)	(44,834,191)	G1819#-AB-6	Canal & River Trust Senior Note Ser	1	34,692,500	19,529,863
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,044,000	9,146,932	10/24/2022	11/28/2048	Currency Swap			G9302#-AE-9	University of Stirling Senior Note Ser	1	14,044,000	9,146,932
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		66,111,210	42,505,559	10/24/2022	11/28/2048	Currency Swap			G6892#-AA-5	Paradigm Homes Charitabl Senior Secured	1	66,111,210	42,505,559
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,912,520	29,197,539	10/24/2022	11/28/2048	Currency Swap			G6892#-AB-3	Paradigm Homes Charitabl Senior Secured	1	40,912,520	29,197,539
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,479,970	21,395,005	10/24/2022	11/28/2048	Currency Swap			G9308#-AA-1	University of Lancaster Senior Note Ser	1	36,479,970	21,395,005
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,183,400	8,900,176	10/24/2022	11/28/2048	Currency Swap			G9309#-AA-6	University of Durham Senior Unsecured Notes	1	14,183,400	8,900,176
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		84,664,130	55,695,538	10/24/2022	11/28/2048	Currency Swap			G9288#-AB-1	University of East Angli Senior Unsecured Notes	1	84,664,130	55,695,538
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		38,874,000	29,813,513	10/24/2022	11/28/2048	Currency Swap			G1870#-AB-4	Cambridge Housing Societ Senior Secured Notes Series B	2	38,874,000	29,813,513
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,399,050	21,221,927	10/24/2022	11/28/2048	Currency Swap			G1870#-AA-6	Cambridge Housing Societ Senior Secured Notes Series A	2	28,399,050	21,221,927
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	258,992,600	(41,469,140)	(16,582,316)	10/26/2022	08/15/2052	Currency Swap	(47,738,140)	(20,721,027)	G2269#-AA-9	College of Corpus Christ Senior Notes	1	6,269,000	4,138,712
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,054,720	11,919,490	10/26/2022	08/15/2052	Currency Swap			G5879#-AA-6	The Master, The Fellows Senior Notes	1	18,054,720	11,919,490
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		62,360,000	38,716,167	10/26/2022	08/15/2052	Currency Swap			G642#-AM-2	Network Homes Ltd Senior Secured Note	1	62,360,000	38,716,167
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,174,000	7,730,716	10/26/2022	08/15/2052	Currency Swap			G2034#-AB-1	Duchy of Lancaster Senior Note Series A	2	12,174,000	7,730,716
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		181,230,000	102,262,353	10/26/2022	08/15/2052	Currency Swap			G5649#-AA-7	LORD MAYOR & CITIZENS CITY WESTMINSTER GBP TERM LN ISSUED AUG 2019	1	181,230,000	102,262,353
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	213,608,440	61,004,210	49,979,463	10/26/2022	10/12/2033	Currency Swap	(27,288,040)	(26,629,872)	Q0536E-ZZ-0	Aroundtown SA Senior Unsecured Notes	2	88,292,250	76,609,335
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,825,500	15,092,095	10/26/2022	10/12/2033	Currency Swap			G7996#-AE-0	Segro plc Senior Note Series B	1	17,825,500	15,092,095
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		153,657,000	113,467,887	10/26/2022	10/12/2033	Currency Swap			G1847#-AB-0	Capital Investors Europe PBI Limited - Series B Senior Note	1	153,657,000	113,467,887
57629*HU8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	108,755,400	24,009,090	17,523,136	10/27/2022	11/27/2043	Currency Swap	(18,135,390)	(11,113,171)	G5560#-AB-0	London School Of Economi Senior Note Ser	1	42,144,480	28,636,307
57629*HU8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,395,087	5,810,778	10/27/2022	11/27/2043	Currency Swap			G1819#-AA-8	Canal & River Trust Senior Note Ser	1	9,395,087	5,810,778
57629*HU8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,355,068	17,554,875	10/27/2022	11/27/2043	Currency Swap			G9302#-AD-1	University of Stirling Senior Note Ser	1	25,355,068	17,554,875
57629*HU8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		54,369,150	33,753,078	10/27/2022	11/27/2043	Currency Swap			G4R1JX-AY-7	Heathrow Funding Limited Senior Secured Notes Class A	2	54,369,150	33,753,078
57629*HI4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	61,752,000	59,644,000	41,860,101	10/27/2022	02/22/2050	Currency Swap	(7,266,400)	(5,813,625)	B1401#-AE-7	Brussels Airport Company Senior Secured Notes	2	66,910,400	47,673,726
57629*HI4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	207,703,020	(13,593,220)	(13,327,623)	10/27/2022	12/19/2028	Currency Swap	(24,510,500)	(22,681,432)	G526#-AW-9	Kingspan Securities 2017 Gtd Senior Note	2	10,917,280	9,353,809
57629*HI4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,559,600	27,701,890	10/27/2022	12/19/2028	Currency Swap			N5084#-AB-7	Koole Terminals Subholdt Senior Secured	2	31,559,600	27,701,890

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*H14	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	29,205,000	27,579,595	27,579,595	10/27/2022	12/19/2028	Currency Swap				F4832#-AA-4	Grpoue Holder S.A.S. Bank Loan	2	29,205,000	27,579,595
57629*H14	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	97,344,300	87,675,467	87,675,467	10/27/2022	12/19/2028	Currency Swap				F8494#-AB-2	Sodiaal International S. Senior Unsecured Notes	2	97,344,300	87,675,467
57629*H14	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,900,400	29,434,336	29,434,336	10/27/2022	12/19/2028	Currency Swap				N5946*-AB-7	NSI N V EURO LN FAC	2	31,900,400	29,434,336
57629*H14	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	15,790,400	14,683,636	14,683,636	10/27/2022	12/19/2028	Currency Swap				479142-E*-8	Johnson Matthey PLC Senior Note Series C	1	15,790,400	14,683,636
57629*H14	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	26,807,070	24,985,822	24,985,822	10/27/2022	12/19/2028	Currency Swap				N2319#-AD-7	Corbion N.V. Senior Subordinated Debt	2	26,807,070	24,985,822
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,266,200	(20,224,800)	(20,567,840)	10/27/2022	09/12/2030	Currency Swap	(33,191,460)	(30,676,748)		G1744#-AT-5	Cadogan Estates Ltd Gtd Senior Note	2	12,966,660	10,108,908
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	28,214,560	22,690,654	22,690,654	10/27/2022	09/12/2030	Currency Swap				G5304*-AA-3	Knowsley Housing Trust Senior Secured	2	28,214,560	22,690,654
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	92,126,640	72,653,515	72,653,515	10/27/2022	09/12/2030	Currency Swap				G7496*-AC-3	RIT Capital Partners plc Senior Note Ser	2	92,126,640	72,653,515
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	27,783,334	22,947,317	22,947,317	10/27/2022	09/12/2030	Currency Swap				G8302#-AC-9	University of West Londo Senior Secured	1	27,783,334	22,947,317
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	7,404,630	6,288,666	6,288,666	10/27/2022	09/12/2030	Currency Swap				G7737#-AC-8	SGN MidCo Limited Gtd Senior Secu	2	7,404,630	6,288,666
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,650,400	9,171,750	9,171,750	10/27/2022	09/12/2030	Currency Swap				G2685#-AH-2	Great Portland Estates Senior Note Ser	2	10,650,400	9,171,750
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	54,511,185	52,116,611	52,116,611	10/27/2022	09/12/2030	Currency Swap				G8720#-AA-7	Wireless Infrastructure Senior Secured Notes	2	54,511,185	52,116,611
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	28,689,356	32,755,335	32,755,335	10/27/2022	09/12/2030	Currency Swap				G7445#-AA-5	Red Funnel Ferry Senior Term Loa	3	28,689,356	32,755,335
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	337,502,600	(18,977,975)	(4,076,209)	10/28/2022	10/26/2041	Currency Swap	(50,523,820)	(26,761,448)		G9302#-AB-3	University of Edinburgh Senior Note Ser	1	31,545,845	22,685,238
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	28,113,605	19,530,621	19,530,621	10/28/2022	10/26/2041	Currency Swap				G1128*-AC-2	BIRMINGHAM ARPT FIN PLC SR NT	2	28,113,605	19,530,621
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	41,280,000	25,977,257	25,977,257	10/28/2022	10/26/2041	Currency Swap				G7896*-AA-3	Scottish Oriental Smaller Senior Unsecured Notes	1	41,280,000	25,977,257
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	44,667,000	34,786,231	34,786,231	10/28/2022	10/26/2041	Currency Swap				G2493#-AA-7	Crail Meters Limited - Term Loan	2	44,667,000	34,786,231
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	13,549,440	9,003,056	9,003,056	10/28/2022	10/26/2041	Currency Swap				G9000#-AG-5	Tottenham Hotspur Stadiu Gtd Senior Secured Note Series C	2	13,549,440	9,003,056
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	97,315,727	52,997,575	52,997,575	10/28/2022	10/26/2041	Currency Swap				G0892#-AB-6	Bazalgette Tunnel Limite Senior Secured Notes	2	97,315,727	52,997,575
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	136,491,151	84,951,186	84,951,186	10/28/2022	10/26/2041	Currency Swap				G9160#-AB-4	UK Power Networks Serviv Senior Unsecured Notes	1	136,491,151	84,951,186
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	174,033,900	8,564,130	10,443,571	10/28/2022	12/02/2040	Currency Swap	(26,397,390)	(14,846,413)		G5304*-AC-9	Knowsley Housing Trust Senior Secured	2	34,961,520	25,289,984
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	61,264,897	38,247,483	38,247,483	10/28/2022	12/02/2040	Currency Swap				G5258#-AB-3	King's College, London Senior Note Ser	1	61,264,897	38,247,483
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,943,121	9,316,077	9,316,077	10/28/2022	12/02/2040	Currency Swap				G722#-AB-6	PREES & SCHOLARS ST MARY MAGDALEN SR NT SER B	1	13,943,121	9,316,077
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	18,601,203	13,666,039	13,666,039	10/28/2022	12/02/2040	Currency Swap				G6853#-AC-0	Oxford Brookes Universit Senior Note Ser	2	18,601,203	13,666,039
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,503,000	9,390,125	9,390,125	10/28/2022	12/02/2040	Currency Swap				G9000#-AB-6	Tottenham Hotspur Limite Senior Secured Note Series B	2	12,503,000	9,390,125
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	65,110,000	42,190,434	42,190,434	10/28/2022	12/02/2040	Currency Swap				G7895*-AH-9	Scottish Mortgage Invest Senior Unsecured Notes	1	65,110,000	42,190,434
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	294,033,600	(16,346,360)	(14,383,261)	10/27/2022	06/27/2029	Currency Swap	(30,686,840)	(28,218,451)		G294A#-AH-2	Dyson Finance Limited Gtd Senior Note	1	14,340,480	13,835,190
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	17,823,520	17,101,035	17,101,035	10/27/2022	06/27/2029	Currency Swap				B1401#-AB-3	Brussels Airport Company Senior Secured	2	17,823,520	17,101,035
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	26,068,040	24,069,819	24,069,819	10/27/2022	06/27/2029	Currency Swap				48021P-AB-7	Jones Lang LaSalle Finan Gtd Senior Note	2	26,068,040	24,069,819
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	45,832,540	43,200,836	43,200,836	10/27/2022	06/27/2029	Currency Swap				N9146#-AE-7	Van Oord NV - EUR Term Loan	2	45,832,540	43,200,836

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		135,240,840	129,955,900	10/27/2022	06/27/2029	Currency Swap				F2977#-AA-3	Elis S.A. Senior Note Series A	2	135,240,840	129,955,900
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		67,994,280	62,167,649	10/27/2022	06/27/2029	Currency Swap				F8568#-AF-6	Sonepar S.A. Senior Note Series C Bidcorp Foodservice Inte Senior	2	67,994,280	62,167,649
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,856,400	17,857,752	10/27/2022	06/27/2029	Currency Swap				G1267#-AB-5	Unsecured Notes Plymouth Community Homes Senior	2	18,856,400	17,857,752
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		144,459,719	(113,250)	10/28/2022	09/27/2042	Currency Swap	(21,625,483)	(11,309,658)		G7137#-AC-4	Secured University of Glasgow Senior Note Ser	1	21,512,234	16,969,844
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		51,097,200	34,343,572	10/28/2022	09/27/2042	Currency Swap				G8303#-AC-8	University of Birmingham Senior	1	51,097,200	34,343,572
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,911,400	21,011,028	10/28/2022	09/27/2042	Currency Swap				G8304#-AA-5	Unsecure University of Keele Senior Note Ser	1	30,911,400	21,011,028
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,535,600	20,343,335	10/28/2022	09/27/2042	Currency Swap				G8306#-AB-7	South East Water Limited Gtd Senior	1	27,535,600	20,343,335
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,827,810	11,017,092	10/28/2022	09/27/2042	Currency Swap				G8279#-AB-4	Secured Note Series 2 Last Mile Infrastructure Senior	2	17,827,810	11,017,092
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,177,000	9,091,877	10/28/2022	09/27/2042	Currency Swap				G5383#-AD-1	Secured Notes Howard De Walden Estates Senior	2	13,177,000	9,091,877
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		116,031,600	(6,494,220)	10/31/2022	06/28/2039	Currency Swap	(17,945,820)	(12,082,233)		G4622#-AP-4	Unsecured Notes Series B Bromford Housing Group L Senior	1	11,451,600	8,684,665
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		53,963,760	41,052,943	10/31/2022	06/28/2039	Currency Swap				G1608#-AA-1	Secured Notes Metropolitan Housing Tru Senior	1	53,963,760	41,052,943
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		63,390,000	50,150,619	10/31/2022	06/28/2039	Currency Swap				G6043#-AF-2	Secured Notes Transmission Finance DAC Senior	1	63,390,000	50,150,619
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		123,989,250	59,247,280	10/31/2022	03/31/2034	Currency Swap	(14,381,510)	(13,857,538)		G8006#-AD-8	Secured Molkerei Alois Muller GM Senior	2	73,628,790	66,718,621
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,293,880	7,453,911	10/31/2022	03/31/2034	Currency Swap				D5472#-AQ-3	Note Series M Rheinkalk Holding GmbH Senior Note	2	9,293,880	7,453,911
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		55,785,000	49,711,050	10/31/2022	03/31/2034	Currency Swap				D7002#-AB-3	Series A-2034 Knowsley Housing Trust Senior	2	55,785,000	49,711,050
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		166,457,590	2,303,573	10/31/2022	12/02/2035	Currency Swap	(25,910,987)	(17,036,052)		G5304#-AB-1	Secured Bankers Investment Trust Senior	2	28,214,560	21,769,837
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,515,313	44,985,999	10/31/2022	12/02/2035	Currency Swap				G0746#-AA-0	Note NT SER A	1	61,515,313	44,985,999
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,943,121	10,112,295	10/31/2022	12/02/2035	Currency Swap				G7228#-AA-8	Oxford Brookes Universit Senior	1	13,943,121	10,112,295
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,601,203	14,520,468	10/31/2022	12/02/2035	Currency Swap				G6853#-AB-2	Note Ser Tottenham Hotspur Limite Senior	2	18,601,203	14,520,468
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,251,500	5,230,620	10/31/2022	12/02/2035	Currency Swap				G8000#-AA-8	Secured Note Series A ESPUG Finance Limited Senior	2	6,251,500	5,230,620
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		29,849,635	22,489,739	10/31/2022	12/02/2035	Currency Swap				G3122#-AD-0	Secured Notes Great Portland Estates P Senior	2	29,849,635	22,489,739
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,792,200	25,776,911	10/31/2022	12/02/2035	Currency Swap				G2685#-AL-3	Unsecured Notes AVI Global Trust PLC - Senior Note	2	33,792,200	25,776,911
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		173,400,000	11,240,130	11/01/2022	12/14/2036	Currency Swap	(27,165,000)	(18,838,667)		G1512#-AA-8	Series A GBP University of Stirling Senior Note	1	38,405,130	30,983,421
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,142,450	18,467,558	11/01/2022	12/14/2036	Currency Swap				G8302#-AB-5	Ser Howard De Walden Estates Gtd Senior	1	23,142,450	18,467,558
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,107,200	15,654,329	11/01/2022	12/14/2036	Currency Swap				G4622#-AM-1	Note Heriot Watt University Senior	1	21,107,200	15,654,329
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,745,940	29,759,565	11/01/2022	12/14/2036	Currency Swap				G4410#-AB-5	Unsecure Tottenham Hotspur Stadiu Gtd Senior	2	34,745,940	29,759,565
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,774,720	4,937,844	11/01/2022	12/14/2036	Currency Swap				G8000#-AF-7	Secured Note Series B Hightown Housing Association	2	6,774,720	4,937,844
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,607,050	14,655,087	11/01/2022	12/14/2036	Currency Swap				G4569#-AB-0	Limited Heathrow Airport Limited Senior	1	18,607,050	14,655,087
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,980,100	49,260,807	11/01/2022	12/14/2036	Currency Swap				G4378#-AL-3	Secured Notes	2	61,980,100	49,260,807
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		171,178,020	(2,541,200)	11/01/2022	07/14/2032	Currency Swap	(20,181,060)	(19,928,257)		G1591#-BJ-0	Britvic PLC Senior Notes Series 0	2	17,639,860	15,364,401

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,682,040	28,836,402	11/01/2022	07/14/2032	Currency Swap				D5472#-AP-5	Molkerei Alois Muller GM Senior Note Series L	2	34,682,040	28,836,402
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,521,000	33,375,373	11/01/2022	07/14/2032	Currency Swap				F3152*-AJ-3	Ermewa Holding SAS Senior Secured Notes	2	38,521,000	33,375,373
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,623,000	14,511,452	11/01/2022	07/14/2032	Currency Swap				G2687*-AB-5	Dawsongroup plc Senior Note Series B	2	16,623,000	14,511,452
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,103,000	31,130,344	11/01/2022	07/14/2032	Currency Swap				N7660#-AY-3	SHV Holdings NV Guaranteed Notes	2	32,103,000	31,130,344
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,338,000	28,921,870	11/01/2022	07/14/2032	Currency Swap				479142-F#-3	Johnson Matthey PLC Senior Notes Sustainability-Linked Series A	1	31,338,000	28,921,870
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,093,000	15,939,862	11/01/2022	07/14/2032	Currency Swap				F4832#-AC-0	Groupe Holder S.A.S. Senior Unsecured Notes	2	15,093,000	15,939,862
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	128,662,800	(1,396,330)	(258,930)	11/01/2022	10/06/2032	Currency Swap	(20,156,430)	(16,940,870)		G6774*-AD-6	Origin Housing Limited Senior Secured	2	18,760,100	16,681,940
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,921,860	52,518,760	11/01/2022	10/06/2032	Currency Swap				G0892#-AA-8	Bazalgette Tunnel Limite Senior Secured	2	61,921,860	52,518,760
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,182,500	27,787,204	11/01/2022	10/06/2032	Currency Swap				G3122#-AB-4	ESPUG Finance Limited Gtd Senior Secu	2	33,182,500	27,787,204
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,122,000	11,205,359	11/01/2022	10/06/2032	Currency Swap				G6970*-AX-4	Peel Ports PP Finance Lt Senior Secured Notes	2	12,122,000	11,205,359
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,812,080	20,365,040	11/01/2022	10/06/2032	Currency Swap				G2283#-AG-8	Colombo BidCo Limited Senior Secured Notes	2	17,812,080	20,365,040
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		310,627,067	(18,817,189)	11/01/2022	10/06/2037	Currency Swap	(47,733,115)	(33,336,182)		G5676#-AA-9	Lowland Investment Compa Senior Note	1	17,366,970	14,518,994
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		138,286,288	122,608,169	11/01/2022	10/06/2037	Currency Swap				G7304#-AD-9	Quadgas Midco Limited Fixed Rate Guar	2	138,286,288	122,608,169
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,512,234	18,576,724	11/01/2022	10/06/2037	Currency Swap				G7137#-AB-6	Plymouth Community Homes Senior Secured	1	21,512,234	18,576,724
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,535,600	22,031,069	11/01/2022	10/06/2037	Currency Swap				G8306#-AA-9	University of Keele Senior Note Ser	1	27,535,600	22,031,069
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,921,860	52,087,754	11/01/2022	10/06/2037	Currency Swap				G3620#-AA-1	ForCapital Limited Senior Secured ESPUG Finance Limited Gtd Senior	2	61,921,860	52,087,754
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,182,500	25,290,713	11/01/2022	10/06/2037	Currency Swap				G3122#-AC-2	Secu	2	33,182,500	25,290,713
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,177,000	9,977,628	11/01/2022	10/06/2037	Currency Swap				G5383*-AC-3	Last Mile Infrastructure Senior Secured Notes	2	13,177,000	9,977,628
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,499,924	2,894,383	11/01/2022	10/06/2037	Currency Swap				G2711*-AA-7	Curro Places Ltd. Senior Secured Notes	1	4,499,924	2,894,383
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	160,260,800	(5,431,030)	3,929,370	11/02/2022	11/24/2051	Currency Swap	(26,398,360)	(9,530,808)		G8303#-AB-0	University of Glasgow Senior Note Ser	1	20,967,330	13,460,178
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		75,680,000	39,711,285	11/02/2022	11/24/2051	Currency Swap				G9312*-AB-3	Vale of Aylesbury Housin Senior Secured Notes	1	75,680,000	39,711,285
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,645,232	1,865,124	11/02/2022	11/24/2051	Currency Swap				G6260#-AB-7	MORhomes plc Senior Secured Notes Magna Housing Limited Senior	2	2,645,232	1,865,124
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,784,091	5,903,344	11/02/2022	11/24/2051	Currency Swap				G5744#-AA-7	Secured Notes	1	10,784,091	5,903,344
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,834,220	20,692,446	11/02/2022	11/24/2051	Currency Swap				G5702*-AA-1	MDS Group Investments Ltd Senior Unsecured Notes	1	41,834,220	20,692,446
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,598,720	17,624,725	11/02/2022	11/24/2051	Currency Swap				G5702*-AD-5	MDS Group Investments Ltd Senior Note Series D	1	32,598,720	17,624,725
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		117,044	75,284	11/02/2022	11/24/2051	Currency Swap				G2711*-AA-7	Curro Places Ltd. Senior Secured Notes	1	117,044	75,284
57629*JL6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	90,275,000	21,502,650	13,110,717	11/02/2022	11/17/2050	Currency Swap	(14,687,350)	(4,932,630)		G2034#-AA-3	Duchy of Lancaster Senior Unsecured Notes	2	36,190,000	18,043,347
57629*JL6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		67,304,700	31,400,560	11/02/2022	11/17/2050	Currency Swap				G6658#-AB-9	Northumberland Estates L Senior Unsecured Notes	1	67,304,700	31,400,560
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	56,197,920	33,168,480	30,037,867	11/02/2022	12/15/2035	Currency Swap	(7,031,840)	(7,285,284)		A8688#-AC-3	TIWAG-Tiroler Wasserkraf Senior Note	1	40,200,320	37,323,151
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		22,012,000	18,106,381	11/02/2022	12/15/2035	Currency Swap				F3152*-AK-0	Ermewa Holding SAS Senior Secured Notes	2	22,012,000	18,106,381

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	73,143,945	20,719,035	18,479,098	11/02/2022	06/08/2036	Currency Swap	(9,177,195)	(9,331,680)	G1512#-AB-6	AVI Global Trust PLC - Senior Note Series B EUR	1	29,896,230	27,810,778
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	29,253,780	29,253,780	20,505,783	11/02/2022	06/08/2036	Currency Swap			F1000#-MM-7	Akiem Holding SAS Green Senior Notes Series A	2	29,253,780	20,505,783
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	26,950,950	26,950,950	18,598,113	11/02/2022	06/08/2036	Currency Swap			G1847#-AC-8	Capital Investors Europe PBI Limited - Series C Senior Note	1	26,950,950	18,598,113
57629*KL4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	34,573,000	18,907,000	14,598,995	11/02/2022	11/01/2037	Currency Swap	(4,389,000)	(4,679,242)	G1512#-AC-4	British Empire Securitie Senior Unsecure	1	23,296,000	19,278,236
57629*KL4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	16,509,000	16,509,000	13,280,713	11/02/2022	11/01/2037	Currency Swap			F3152*-AL-8	Ermewa Holding SAS Senior Secured Notes	2	16,509,000	13,280,713
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	139,919,000	20,817,920	18,587,706	11/03/2022	11/14/2034	Currency Swap	(23,474,620)	(17,307,179)	G2479#-AB-3	Coventry University Senior Note Ser	1	44,292,540	35,894,886
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	11,485,969	11,485,969	9,710,085	11/03/2022	11/14/2034	Currency Swap			G4622#-AN-9	Howard De Walden Estates Senior Unsecured Notes Series A	1	11,485,969	9,710,085
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	19,605,946	19,605,946	17,418,285	11/03/2022	11/14/2034	Currency Swap			G6750*-AF-9	1887 Company Ltd Senior Secured Note Series F	2	19,605,946	17,418,285
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,272,000	10,272,000	8,494,381	11/03/2022	11/14/2034	Currency Swap			G4622#-AS-8	Howard De Walden Estates Senior Unsecured Notes Series E	1	10,272,000	8,494,381
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	57,620,079	57,620,079	46,832,372	11/03/2022	11/14/2034	Currency Swap			G6300#-AB-9	Moto Investments Limited Senior Secured Notes	2	57,620,079	46,832,372
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	12,122,000	12,122,000	10,631,498	11/03/2022	11/14/2034	Currency Swap			G6970*-AY-2	Peel Ports PP Finance Lt Senior Secured Notes	2	12,122,000	10,631,498
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	278,348,060	(13,761,260)	(13,394,765)	11/02/2022	11/30/2031	Currency Swap	(35,463,020)	(33,214,889)	X2145*-AD-8	Elenia Verkko Oyj Gtd Senior Note	2	21,701,760	19,820,124
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	42,847,000	42,847,000	33,664,106	11/02/2022	11/30/2031	Currency Swap			03063#-AD-6	Americold Realty Trust Senior Unsecured Notes	2	42,847,000	33,664,106
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	24,236,000	24,236,000	19,236,766	11/02/2022	11/30/2031	Currency Swap			D5472#-AL-4	Molkerei Alois Muller GM Senior Unsecured Notes	2	24,236,000	19,236,766
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	38,201,600	38,201,600	32,390,523	11/02/2022	11/30/2031	Currency Swap			F8494#-AC-0	Sodiaal International S. Senior Unsecured Notes	2	38,201,600	32,390,523
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,760,100	31,760,100	25,196,435	11/02/2022	11/30/2031	Currency Swap			L8367#-AG-8	Shurgard Self Storage S. Senior Unsecured Notes	2	31,760,100	25,196,435
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	56,590,000	56,590,000	49,943,597	11/02/2022	11/30/2031	Currency Swap			F9768#-AB-9	Vilmorin & Cie SA Senior Unsecured Notes	2	56,590,000	49,943,597
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	90,078,120	90,078,120	78,060,611	11/02/2022	11/30/2031	Currency Swap			F2000#-AA-6	C2 Developpement Senior Unsecured Notes	2	90,078,120	78,060,611
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	25,700,160	25,700,160	21,604,468	11/02/2022	11/30/2031	Currency Swap			F9731#-AJ-6	Vicat SA Senior Unsecured Notes ..	2	25,700,160	21,604,468
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,562,150	(2,012,095)	(1,248,771)	11/03/2022	12/22/2031	Currency Swap	(41,527,345)	(32,813,220)	G4133#-AA-1	Grosvenor Limited Senior Note Ser	2	39,515,250	31,564,449
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	14,241,960	14,241,960	12,611,509	11/03/2022	12/22/2031	Currency Swap			G7178*-AD-6	Porterbrook Rail Finance Senior Secured	2	14,241,960	12,611,509
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	11,872,800	11,872,800	9,882,197	11/03/2022	12/22/2031	Currency Swap			G4622#-AL-3	Howard De Walden Estates Gtd Senior Note	1	11,872,800	9,882,197
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	35,780,290	35,780,290	29,863,825	11/03/2022	12/22/2031	Currency Swap			G8279#-AA-6	South East Water Limited Gtd Senior Secured Notes Series 1	2	35,780,290	29,863,825
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,842,500	31,842,500	29,032,116	11/03/2022	12/22/2031	Currency Swap			L0808#-AC-1	Beacon Finco S.a.r.l Senior Secured Note Series B	2	31,842,500	29,032,116
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	22,260,800	22,260,800	18,397,451	11/03/2022	12/22/2031	Currency Swap			G1151#-AB-0	Bellway Plc Senior Note Series B .	2	22,260,800	18,397,451
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	54,378,334	54,378,334	43,278,509	11/03/2022	12/22/2031	Currency Swap			G8655#-AA-8	TP REIT Propco 2 Limited Senior Secured Notes	1	54,378,334	43,278,509
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	21,571,740	21,571,740	17,409,539	11/03/2022	12/22/2031	Currency Swap			G1320*-AB-0	Breedon Group Plc Senior Note Series B	2	21,571,740	17,409,539
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	38,868,870	38,868,870	32,171,264	11/03/2022	12/22/2031	Currency Swap			G8277#-AE-0	SOUTH STAFFORDSHIRE PLC GBP FAC A LN - ISSUED DEC 2021	2	38,868,870	32,171,264
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	234,948,546	40,203,209	34,227,986	11/04/2022	12/11/2031	Currency Swap	(30,067,891)	(28,068,153)	F3152*-AG-9	ERMEWA HLDG SEC2 SR INITIAL PP NTS 2019-2	2	70,271,100	62,296,139

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		141,191,040	112,634,161	11/04/2022	12/11/2031	Currency Swap			N5269#-AB-4	Lineage Treasury Europe Senior Unsecured Notes Series D	2	141,191,040	112,634,161
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		29,599,765	27,245,472	11/04/2022	12/11/2031	Currency Swap			E5444#-AF-1	Futbol Club Barcelona Senior Secured Note Series B1 (Amortizing)	2	29,599,765	27,245,472
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,828,004	29,741,377	11/04/2022	12/11/2031	Currency Swap			E5444#-AG-9	Futbol Club Barcelona Senior Secured Note Series B2 (Bullet)	2	33,828,004	29,741,377
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	144,418,111	(12,545,152)	(11,478,867)	11/04/2022	12/07/2029	Currency Swap	(18,399,634)	(16,897,801)	24906P-C#-4	DENTSPLY Sirona Inc. Senior Note Ser	2	5,854,482	5,418,934
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,563,446	16,256,803	11/04/2022	12/07/2029	Currency Swap			D8286#-AD-2	Sirona Dental Services G Senior Note Ser	2	17,563,446	16,256,803
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		64,579,647	57,102,975	11/04/2022	12/07/2029	Currency Swap			B9550#-AB-7	Unicore SA Senior Note Ser	2	64,579,647	57,102,975
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,280,890	12,206,247	11/04/2022	12/07/2029	Currency Swap			F5662#-AA-6	Laurent-Perrier Group Senior Unsecure	2	13,280,890	12,206,247
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,300,500	36,153,103	11/04/2022	12/07/2029	Currency Swap			B9550#-AD-3	Unicore SA Senior Note Series B	2	38,300,500	36,153,103
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,855,700	18,099,740	11/04/2022	12/07/2029	Currency Swap			F1000#-AB-4	Akiem Holding SAS Senior Secured Notes (Bullet)	2	19,855,700	18,099,740
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,596,230	5,171,803	11/04/2022	12/07/2029	Currency Swap			285295-B#-7	Electrocomponents plc Senior Notes Series C	2	5,596,230	5,171,803
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		1,506,465	1,564,995	11/04/2022	12/07/2029	Currency Swap			U74079-AP-6	Netflix Inc-SENIOR UNSECURED	2	1,506,465	1,564,995
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	292,527,085	5,549,915	2,570,336	11/04/2022	08/19/2030	Currency Swap	(37,369,735)	(35,689,626)	582688-B#-1	Mettler-Toledo Internati Senior Note	2	42,919,650	38,259,961
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		70,494,750	68,252,553	11/04/2022	08/19/2030	Currency Swap			X2145*-AC-0	Elenia Verkko Oyj Gtd Senior Note	2	70,494,750	68,252,553
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,749,000	32,321,251	11/04/2022	08/19/2030	Currency Swap			G3076*-AE-6	Envol Investments Limite Senior Secured Notes	2	34,749,000	32,321,251
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		36,998,400	33,119,049	11/04/2022	08/19/2030	Currency Swap			F5900#-AA-8	MacqPisto SAS Senior Term Loa	2	36,998,400	33,119,049
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,855,090	24,068,116	11/04/2022	08/19/2030	Currency Swap			G4940#-AA-4	Irish Residential Proper Senior Secured Notes	2	27,855,090	24,068,116
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,857,060	14,565,790	11/04/2022	08/19/2030	Currency Swap			G3301*-AB-9	FIL Limited Senior Unsecured Notes	2	15,857,060	14,565,790
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		47,506,560	48,236,706	11/04/2022	08/19/2030	Currency Swap			G294A#-AK-5	Dyson Finance Limited Guaranteed Series A Senior Notes	1	47,506,560	48,236,706
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		56,150,000	52,082,899	11/04/2022	08/19/2030	Currency Swap			F7754#-AC-7	Safran Group Senior Unsecured Notes	1	56,150,000	52,082,899
57629*KD2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		58,747,500	2,458,580	11/07/2022	04/05/2046	Currency Swap	(11,450,250)	(7,264,123)	G9302#-AC-1	University of Edinburgh Senior Note Ser	1	13,908,830	9,392,067
57629*KD2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		54,723,473	38,413,717	11/07/2022	04/05/2046	Currency Swap			X3204#-AB-4	Gibraltar Capital Assets Senior Secured	2	54,723,473	38,413,717
57629*KC4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	159,348,640	(7,360,000)	(7,413,335)	11/07/2022	11/29/2030	Currency Swap	(21,880,320)	(21,270,602)	F5662#-AB-4	Laurent-Perrier Group Senior Unsecured Notes	2	14,520,320	13,857,267
57629*KC4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		178,005,000	156,397,187	11/07/2022	11/29/2030	Currency Swap			F3806Z-MM-5	FFP SA Senior Unsecured Notes	1	178,005,000	156,397,187
57629*KB6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	41,179,875	5,850,861	3,207,675	11/07/2022	12/08/2045	Currency Swap	(8,092,260)	(5,442,637)	G7228#-AC-4	PRES & SCHOLARS ST MARY MAGDALEN SR NT SER C	1	13,943,121	8,650,312
57629*KB6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,378,100	23,491,995	11/07/2022	12/08/2045	Currency Swap			G2867#-AA-5	Dunedin Income Growth In Senior Secured	1	36,378,100	23,491,995
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	174,986,912	(2,026,624)	(4,296,942)	11/07/2022	12/31/2029	Currency Swap	(34,199,499)	(29,687,406)	G0566*-AC-3	Arqiva PP Financing plc Gtd Senior Secu	2	32,172,875	25,390,464
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,188,350	15,411,366	11/07/2022	12/31/2029	Currency Swap			G1745*-AM-3	BUUK Infrastructure Issuer PLC - Senior Note Series B	2	20,188,350	15,411,366
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		47,000,546	35,239,220	11/07/2022	12/31/2029	Currency Swap			G0176#-AA-7	ALLIANCE TR PLC	1	47,000,546	35,239,220
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		3,953,225	4,259,199	11/07/2022	12/31/2029	Currency Swap			G0566*-AD-1	Arqiva Financing No 1 Li Gtd Senior FI R	2	3,953,225	4,259,199

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,926,560	26,315,297	11/07/2022	12/31/2029	Currency Swap				G8472#-AE-1	STERIS Corporation Senior Note Ser	2	26,926,560	26,315,297
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,974,720	21,100,389	11/07/2022	12/31/2029	Currency Swap				G6750#-AE-2	1887 Company Ltd Senior Secured Note Series E	2	21,974,720	21,100,389
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,936,720	25,617,527	11/07/2022	12/31/2029	Currency Swap				L0808#-AB-3	Beacon Finco S.a.r.l Senior Secured Note Series A	2	26,936,720	25,617,527
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,774,350	47,175,261	11/07/2022	12/31/2029	Currency Swap				G8277#-AF-7	SOUTH STAFFORDSHIRE PLC GBP FAC B LN - ISSUED DEC 2021	2	60,774,350	47,175,261
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,605,300	26,450,653	11/07/2022	12/11/2033	Currency Swap	(6,844,800)	(5,952,701)		G6774#-AC-8	Origin Finance 2 plc Senior Secured	2	33,295,453	26,278,126
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,985,500	5,627,955	11/07/2022	12/11/2033	Currency Swap				G7737#-AD-6	SGN MidCo Limited Gtd Senior Secu	2	6,985,500	5,627,955
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,206,181	3,526,554	11/07/2022	12/11/2033	Currency Swap				G1591#-BF-8	Britvic PLC Senior Notes Se	2	4,206,181	3,526,554
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,834,505	15,486,811	11/07/2022	08/14/2029	Currency Swap	(6,008,688)	(6,705,362)		Q7794#-AF-0	QPH Finance Co. Pty. Ltd Gtd Senior Secu	2	21,495,499	16,555,704
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,415,500	29,698,825	11/07/2022	08/14/2029	Currency Swap				Q8458#-AA-0	Servco Australia Pty Ltd Senior Note Ser	2	31,415,500	29,698,825
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,181,920	21,508,124	11/07/2022	08/14/2029	Currency Swap				Q2600#-AD-2	Coates Group Pty Ltd Senior Note Series 2022-D (AUD)	2	24,181,920	21,508,124
57629*JX0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		48,513,122	44,669,352	11/07/2022	11/15/2049	Currency Swap	(1,824,579)	6,809,852		J891#-AC-6	Lilly Japan Financing Go Senior Note Series C	1	70,302,724	37,859,500
57629*JI12	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		65,036,160	35,818,560	11/08/2022	07/17/2034	Currency Swap	(4,616,640)	(4,541,234)		Q0846#-AA-4	Australian Laboratory Se Senior Unsecured Notes	2	40,435,200	34,759,607
57629*JI12	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,091,040	25,110,668	11/08/2022	07/17/2034	Currency Swap				Q2600#-AF-7	Coates Group Pty Ltd Senior Note Series 2022-F (AUD)	2	31,091,040	25,110,668
57629*JV4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		64,370,000	64,912,480	11/08/2022	06/25/2031	Currency Swap	(4,730,000)	(4,740,814)		74726M-A*-0	Qantas Airways Limited Senior Secured Notes	2	69,642,480	60,417,804
57629*JV6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		64,738,386	81,510,210	11/09/2022	05/11/2032	Currency Swap	(1,691,614)	3,584,005		L2289#-AB-7	DH Japan Finance SA Senior Note Ser	1	83,201,824	62,484,475
57629*JT9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,044,000	21,282,000	11/09/2022	10/14/2040	Currency Swap	(2,220,000)	(2,061,431)		A5791#-AA-9	ORB Produktion GmbH Senior Unsecured Notes	1	23,502,000	16,117,533
57629*JS1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		46,466,369	22,353,734	11/09/2022	06/04/2038	Currency Swap	(7,545,786)	(5,103,680)		G7895#-AE-6	Scottish Mortgage Invest Senior Note Ser	1	29,899,520	21,653,652
57629*JS1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		22,751,542	19,665,737	11/09/2022	06/04/2038	Currency Swap				G6260#-AA-9	MORhones plc Senior Secured Notes	2	22,751,542	19,665,737
57629*JR3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,645,360	44,480,160	11/09/2022	06/15/2041	Currency Swap	(2,643,840)	(1,708,577)		Q9609#-AD-0	WestConnex Finance Compa Senior Secured Notes	2	47,124,000	33,027,186
57629*JG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,353,747	50,413,366	11/09/2022	11/30/2027	Currency Swap	(8,100,842)	(7,083,035)		G2735#-AA-9	Great Rolling Stock Co PLC/The Origin Finance 2 plc Senior Secured	2	58,514,207	55,009,203
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		214,072,593	(20,472,855)	11/10/2022	12/11/2028	Currency Swap	(33,751,185)	(29,365,446)		G6774#-AB-0	BUJK Infrastructure Issuer PLC - Senior Note Series H	2	13,278,330	10,579,214
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		54,427,437	46,655,419	11/10/2022	12/11/2028	Currency Swap				G1745#-AJ-0	Porterbrook Rail Finance Senior Secured	2	54,427,437	46,655,419
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,099,370	31,010,232	11/10/2022	12/11/2028	Currency Swap				G7178#-AB-0	Porterbrook Rail Finance Senior Secured	2	33,099,370	31,010,232
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,043,002	1,884,775	11/10/2022	12/11/2028	Currency Swap				G1591#-BC-5	Britvic PLC Senior Notes Se	2	2,043,002	1,884,775
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,514,220	11,335,119	11/10/2022	12/11/2028	Currency Swap				G2685#-AG-4	Great Portland Estates Senior Note Ser	2	12,514,220	11,335,119
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,635,440	7,920,312	11/10/2022	12/11/2028	Currency Swap				G4133#-AE-3	Grosvenor Limited Senior Notes Series A	2	8,635,440	7,920,312
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		63,520,891	58,398,110	11/10/2022	12/11/2028	Currency Swap				G9075#-AA-2	Tritax Big Box REIT plc Senior Note Series A	2	63,520,891	58,398,110
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,559,280	11,088,253	11/10/2022	12/11/2028	Currency Swap				G1151#-AA-2	Bellway Plc Senior Note Series A . Aedifica SA Senior Unsecured Notes	2	12,559,280	11,088,253
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		40,348,572	34,786,570	11/10/2022	12/11/2028	Currency Swap				B1000#-AA-0	Cubitt Global LLC Senior Secured Notes	2	40,348,572	34,786,570
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		36,360,148	26,550,000	11/10/2022	12/11/2028	Currency Swap				Z2982#-AA-4	Cubitt Global LLC Senior Secured Notes	6	36,360,148	26,550,000

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		40,604,623	30,245,000	11/10/2022	12/11/2028	Currency Swap				22982*-AB-2	Cubitt Global LLC Senior Secured Notes Series 6	6	40,604,623	30,245,000
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	290,791,768	1,231,070	4,934,925	11/10/2022	10/31/2034	Currency Swap	(46,109,430)	(34,362,886)		G2686@-AB-4	Great Rolling Stock Comp Senior Secured	2	47,340,500	39,297,811
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		49,033,205	45,574,776	11/10/2022	10/31/2034	Currency Swap				00183F-AA-3	Anno 2017 Joint Holding Senior Secured	2	49,033,205	45,574,776
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		219,102	209,909	11/10/2022	10/31/2034	Currency Swap				9991DM-ON-6	ITEMOSA 3.40%	2	219,102	209,909
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,565,397	11,753,634	11/10/2022	10/31/2034	Currency Swap				G2854#-AA-0	Dudgeon Offshore Wind Lt Senior Secured Notes	1	12,565,397	11,753,634
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		54,979,425	49,318,095	11/10/2022	10/31/2034	Currency Swap				X2313#-AA-6	Eruca Investments Limite Senior Secured Notes	2	54,979,425	49,318,095
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,384,550	24,314,947	11/10/2022	10/31/2034	Currency Swap				L0808#-AG-2	Beacon Finco S.a.r.l Senior Secured Note Series F	2	27,384,550	24,314,947
57629*KP5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		127,854,812	102,914,703	11/10/2022	10/31/2034	Currency Swap				G6954#-AD-4	Peabody Trust Senior Secured Notes	1	127,854,812	102,914,703
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	294,295,155	(23,482,350)	(21,877,673)	11/14/2022	12/12/2027	Currency Swap	(50,609,790)	(44,376,231)		G3461@-AA-5	VIVID Housing Limited	1	27,127,440	22,498,558
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		46,153,930	36,946,588	11/14/2022	12/12/2027	Currency Swap				G6482*-AA-9	Newlon Housing Trust Senior Secured	2	46,153,930	36,946,588
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,700,200	23,376,757	11/14/2022	12/12/2027	Currency Swap				G8302#-AB-1	University of West Londo Senior Secured	1	27,700,200	23,376,757
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		94,623,360	85,973,662	11/14/2022	12/12/2027	Currency Swap				G8056*-AB-5	Severn Trent Water Limit Senior Note Ser	2	94,623,360	85,973,662
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,878,120	20,251,944	11/14/2022	12/12/2027	Currency Swap				G6970*-AJ-5	Peel Ports PP Finance Lt Senior Secured	2	20,878,120	20,251,944
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,217,360	24,389,475	11/14/2022	12/12/2027	Currency Swap				G8766#-AE-4	Workspace Group plc Senior Note Ser	2	25,217,360	24,389,475
57629*KNO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		116,299,983	113,209,970	11/14/2022	12/12/2027	Currency Swap				636012-AA-5	National Express Group P Senior Note Series A	2	116,299,983	113,209,970
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	213,882,579	(5,326,696)	(4,555,120)	11/14/2022	07/31/2039	Currency Swap	(37,995,523)	(28,071,189)		G9288#-AA-1	University of Brighton Senior Secured	2	32,668,826	23,516,069
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,110,971	16,805,276	11/14/2022	07/31/2039	Currency Swap				G3087#-AA-7	EQUITIX SOLAR FINCO 4 LTD GBP TERM LN	2	17,110,971	16,805,276
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		73,980,301	66,942,247	11/14/2022	07/31/2039	Currency Swap				G8408#-AA-8	St. James's Oncology Sr Note	1	73,980,301	66,942,247
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,323,345	24,141,626	11/14/2022	07/31/2039	Currency Swap				G3296*-AA-8	FOC Energy Limited Senior Secured	2	26,323,345	24,141,626
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,859,588	37,360,326	11/14/2022	07/31/2039	Currency Swap				G3426#-AB-5	GIP III Jupiter LTD Senior Secured Notes	2	39,859,588	37,360,326
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,115,659	32,874,925	11/14/2022	07/31/2039	Currency Swap				G1093*-AC-3	BLIF Bidco Limited Senior Secured Notes	2	39,115,659	32,874,925
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,275,456	6,880,362	11/14/2022	07/31/2039	Currency Swap				G5383*-AA-7	Last Mile Infrastructure Senior Secured Notes (Delayed Tranche)	2	8,275,456	6,880,362
57629*LF6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,919,914	3,764,184	11/14/2022	07/31/2039	Currency Swap				G2711*-AB-5	Coro Places Ltd. Senior Secured Notes	1	5,919,914	3,764,184
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	159,288,575	(4,318,685)	(3,459,958)	11/14/2022	10/30/2027	Currency Swap	(17,765,885)	(16,446,009)		L8367#-AE-3	Shurgard Luxembourg Sarl Gtd Senior Note	2	13,447,200	12,986,051
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,140,320	22,847,456	11/14/2022	10/30/2027	Currency Swap				G294A@-AG-4	Dyson Finance Limited Gtd Senior Note	1	23,140,320	22,847,456
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,425,600	12,706,446	11/14/2022	10/30/2027	Currency Swap				48021P-A*-9	Jones Lang LaSalle Finan Gtd Senior Note	2	13,425,600	12,706,446
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		65,238,650	58,773,361	11/14/2022	10/30/2027	Currency Swap				G7996#-AA-8	Segro Plc Senior Unsecure	1	65,238,650	58,773,361
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,281,493	14,174,693	11/14/2022	10/30/2027	Currency Swap				X0827*-AA-3	Budapest Airport Zrt. Tranche 2 Origi	2	14,281,493	14,174,693
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,855,307	21,691,870	11/14/2022	10/30/2027	Currency Swap				X0032*-AA-4	Airport Hungary Krt. Tranche 2 Origi	2	21,855,307	21,691,870
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,436,800	4,293,813	11/14/2022	10/30/2027	Currency Swap				G1267*-AA-7	Bidcorp Foodservice Inte Senior Unsecured Notes	2	4,436,800	4,293,813

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*LE9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		22,396,500	26,913,934	11/14/2022	10/30/2027	Currency Swap			T01498-AA-7	ASR Media and Sponsorshi Senior Secured Notes	2	22,396,500	26,913,934
57629*LD1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	53,114,700	50,854,000	39,805,929	11/07/2022	01/15/2049	Currency Swap	(9,729,000)	(5,583,603)	G6428#-AD-2	Network Homes Limited Senior Secured Notes	1	60,583,000	45,389,532
57629*LD1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		256,333	178,075	11/07/2022	01/15/2049	Currency Swap			G1128*-AC-2	BIRMINGHAM ARPT FIN PLC SR NT	2	256,333	178,075
57629*LC3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	151,856,505	71,395,519	67,087,850	11/15/2022	12/31/2047	Currency Swap	(22,044,945)	(12,063,806)	G7612Y-MM-2	Rock Rail Southwestern p Senior Secured	2	93,440,464	79,151,657
57629*LC3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		74,524,310	51,703,064	11/15/2022	12/31/2047	Currency Swap			PPE94P-1B-0	Enfinium Holding Limited Senior Secured Notes	2	74,524,310	51,703,064
57629*LB5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	23,217,790	24,977,870	16,130,458	11/16/2022	04/13/2041	Currency Swap	(1,773,550)	(1,762,331)	F1000#-MN-5	Akiem Holding SAS Green Senior Notes Series B	2	26,751,420	17,892,789
57629*LA7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	26,465,280	26,590,720	19,231,295	11/16/2022	04/30/2044	Currency Swap	(2,032,640)	(2,005,314)	G4460*-AB-4	Henderson International Senior Unsecured Notes	1	28,623,360	21,236,608
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	227,489,183	11,245,256	8,367,374	11/16/2022	08/31/2043	Currency Swap	(17,188,072)	(17,926,490)	EK4615-40-8	Via Solutions Nord GmbH Senior Secured	1	28,433,328	26,293,864
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,877,629	23,251,107	11/16/2022	08/31/2043	Currency Swap			25461C-AA-0	DirectRoute (Tuam) Limit Senior Secured	2	25,877,629	23,251,107
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		42,541,486	38,040,486	11/16/2022	08/31/2043	Currency Swap			382879-AA-2	Gorey To Enniscorthy M11 Senior Secured	2	42,541,486	38,040,486
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,766,854	33,308,087	11/16/2022	08/31/2043	Currency Swap			9991DM-ON-6	ITEMOSA 3.40%	2	34,766,854	33,308,087
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,486,011	63,201,641	11/16/2022	08/31/2043	Currency Swap			K7784*-AA-3	P/F Eystur-og Sandoyartu Senior Secured	1	61,486,011	63,201,641
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		44,972,070	38,032,529	11/16/2022	08/31/2043	Currency Swap			B7000#-AB-5	Puratos NV Senior Note Series B	2	44,972,070	38,032,529
57629*KZ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,459,090	5,616,757	11/16/2022	08/31/2043	Currency Swap			U74079-AR-2	Netflix Inc-SENIOR UNSECURED	1	5,459,090	5,616,757
57629*KY6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	123,383,920	121,881,044	96,034,001	11/16/2022	06/30/2050	Currency Swap	(9,309,520)	(10,810,252)	G2044*-AA-5	Channel Link Enterprises Senior Secured	2	131,190,564	106,844,253
57629*KX8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	150,220,554	34,581,968	30,584,918	11/16/2022	12/31/2027	Currency Swap	(11,506,255)	(11,083,125)	B9550#-AA-9	Unicore SA Senior Note Ser	2	46,088,223	41,668,043
57629*KX8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		100,485,300	92,033,816	11/16/2022	12/31/2027	Currency Swap			372460-D8-1	Genuine Parts Company Senior Note Ser	2	100,485,300	92,033,816
57629*KX8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		22,185,150	20,701,234	11/16/2022	12/31/2027	Currency Swap			031100-N*-7	AMITEK, Inc. Senior Secured Series T	2	22,185,150	20,701,234
57629*KI10	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	152,175,310	56,811,920	57,723,760	11/17/2022	06/27/2026	Currency Swap	(12,244,330)	(11,599,205)	G2037*-AE-6	Chanel Ltd EURO SR NT SER A	1	69,056,250	69,322,965
57629*KI10	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		40,226,400	39,147,459	11/17/2022	06/27/2026	Currency Swap			K2162#-AG-1	Danish Crown A/S Senior Unsecured Note	2	40,226,400	39,147,459
57629*KI10	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,557,000	16,197,280	11/17/2022	06/27/2026	Currency Swap			227047-AB-6	Croda International plc Senior Note Ser	1	16,557,000	16,197,280
57629*KI10	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,499,980	14,453,871	11/17/2022	06/27/2026	Currency Swap			G5264#-AV-1	Kingspan Securities 2017 Gtd Senior Note	2	16,499,980	14,453,871
57629*KI10	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,832,290	21,252,881	11/17/2022	06/27/2026	Currency Swap			G0488*-AA-2	Atlantica Yield Plc Senior Secured Notes	2	21,832,290	21,252,881
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	259,433,524	9,213,249	9,691,192	11/18/2022	11/30/2026	Currency Swap	(18,393,700)	(17,374,926)		TanQuid GmbH & Co. KG Senior Secured	1	27,606,949	27,066,118
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,480,130	37,594,939	11/18/2022	11/30/2026	Currency Swap			031100-H8-2	AMITEK, Inc. Senior Note	2	38,480,130	37,594,939
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		43,211,840	43,519,917	11/18/2022	11/30/2026	Currency Swap			G5264#-AS-8	Kingspan Group PLC Gtd Senior Note	2	43,211,840	43,519,917
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,781,250	39,178,234	11/18/2022	11/30/2026	Currency Swap			83379Z-MM-0	Sodial International S. Senior Note	2	38,781,250	39,178,234
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,380,720	11,180,678	11/18/2022	11/30/2026	Currency Swap			B9550#-AC-5	Unicore SA Senior Note Series A	2	11,380,720	11,180,678
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,436,780	9,193,348	11/18/2022	11/30/2026	Currency Swap			285295-B*-1	Electrocomponents plc Senior Notes Series A	2	9,436,780	9,193,348
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		83,898,000	81,121,432	11/18/2022	11/30/2026	Currency Swap			N3584#-AA-7	GLOBAL TIP FIN B V EUR FAC B LN	2	83,898,000	81,121,432

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*KV2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,662,633	20,000,000	11/18/2022	11/30/2026	Currency Swap			81809#-MN-6	17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan Facility	1	19,662,633	20,000,000
57629*KU4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	85,151,655	(6,579,350)	(6,370,362)	11/18/2022	12/16/2026	Currency Swap	(10,517,850)	(9,576,492)	G2479#-AB-5	Covent Garden Group Holdings Limited Senior Note Series B	1	3,938,500	3,206,130
57629*KU4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,966,660	10,570,286	11/18/2022	12/16/2026	Currency Swap			G1744#-AS-7	Cadogan Estates Ltd Gtd Senior Note	2	12,966,660	10,570,286
57629*KU4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,767,210	13,131,388	11/18/2022	12/16/2026	Currency Swap			40637C-C*-9	HALMA PLC GBP SER G SR NT	2	14,767,210	13,131,388
57629*KU4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,383,250	30,504,582	11/18/2022	12/16/2026	Currency Swap			227047-B*-7	Croda International plc Senior Note Ser	1	31,383,250	30,504,582
57629*KU4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,744,600	33,672,903	11/18/2022	12/16/2026	Currency Swap			G2479#-AC-3	Covent Garden Group Hold Senior Note Ser	1	33,744,600	33,672,903
57629*KT7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,040,690	49,599,790	11/21/2022	12/04/2044	Currency Swap	(1,715,210)	(1,250,929)	Q0832*-AK-2	Australian Pacific Airpo Gtd Senior Secured Note Series 2019D	2	51,315,000	35,215,130
57629*KS9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		46,391,010	46,846,907	11/22/2022	07/07/2030	Currency Swap	(1,340,062)	(1,721,759)	Q9749#-AN-5	Westrac Pty Ltd Senior Unsecured Notes	2	48,186,969	44,930,166
57629*KR1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,696,148	15,336,930	11/22/2022	03/15/2052	Currency Swap	(519,672)	266,556	Q8059#-AC-7	Registry Finance Pty Ltd Gtd Senior Secured Note Series C	1	15,856,602	10,818,241
57629*KQ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	262,948,369	66,056,466	55,089,808	11/22/2022	10/31/2049	Currency Swap	(32,951,534)	(10,263,537)	G2451Z-MM-4	Cottsway Housing Associa Senior Secured Notes	1	99,008,000	65,353,345
57629*KQ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		87,243,000	54,208,852	11/22/2022	10/31/2049	Currency Swap			G2711*-AC-3	Curio Places Ltd. Senior Secured Note Series C	1	87,243,000	54,208,852
57629*KQ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		90,567,937	77,761,200	11/22/2022	10/31/2049	Currency Swap			G3029#-AA-0	Eastlands Arena Limited Senior Secured Notes	2	90,567,937	77,761,200
57629*KQ3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,847,485	5,000,000	11/22/2022	10/31/2049	Currency Swap			22982*-AA-4	Cubitt Global LLC Senior Secured Notes	6	6,847,485	5,000,000
57629*LH2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		94,480,000	42,192,000	11/23/2022	09/17/2050	Currency Swap	(12,488,000)	(1,596,230)	G9143#-AB-4	Two Rivers Housing Senior Secured Note Series B	2	54,680,000	29,001,660
57629*LH2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		46,864,630	26,179,830	11/23/2022	09/17/2050	Currency Swap			G9143#-AA-6	Two Rivers Housing Senior Secured Notes	2	46,864,630	26,179,830
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,724,000	11,646,953	11/23/2022	11/01/2052	Currency Swap	(2,332,500)	(250,887)	G7150*-AA-4	Plus Dane Housing Limite Senior Secured Notes	1	17,202,000	11,897,840
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,937,755	7,653,164	11/23/2022	11/01/2052	Currency Swap			69324Z-MQ-6	PCRED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDCO ARGUS S.A R.L., -Term Loan Series 2022-2	1	6,937,755	7,653,164
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	267,249,976	11,463,132	17,542,026	11/23/2022	06/30/2046	Currency Swap	(35,349,688)	(16,799,068)	G9288#-AC-9	University of East Angli Senior Secured	1	46,812,820	34,341,094
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		49,132,380	40,458,351	11/23/2022	06/30/2046	Currency Swap			G7611*-AA-7	Rock Rail East Anglia pl Senior Secured	2	49,132,380	40,458,351
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		37,255,120	30,192,999	11/23/2022	06/30/2046	Currency Swap			G6853#-AE-6	Oxford Brookes Universit Senior Note Series E	2	37,255,120	30,192,999
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		97,493,090	69,597,454	11/23/2022	06/30/2046	Currency Swap			G2564*-AA-5	Cross London Trains Limi Senior Secured Notes	2	97,493,090	69,597,454
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,349,494	44,323,136	11/23/2022	06/30/2046	Currency Swap			G9369*-AA-7	Viridor Energy Group Lim Senior Secured Note	2	60,349,494	44,323,136
57629*MG3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		819,310	526,986	11/23/2022	06/30/2046	Currency Swap			G2711*-AA-7	Curio Places Ltd. Senior Secured Notes	1	819,310	526,986
57629*MF5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		53,370,000	49,464,000	11/25/2022	01/15/2050	Currency Swap	(6,799,500)	(2,588,304)	G9000#-AD-2	Tottenham Hotspur Limite Senior Secured Note Series D	2	56,263,500	42,309,477
57629*ME8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,285,912	13,868,698	11/25/2022	03/15/2047	Currency Swap	(552,745)	(149,885)	Q8059#-AB-9	Registry Finance Pty Ltd Gtd Senior Secured Note Series B	1	14,421,443	10,247,995
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		440,707,924	(36,341,500)	11/25/2022	12/31/2038	Currency Swap	(36,850,784)	(37,186,407)	L0175#-AB-8	Alpha Trains Finance S.A Term Loan	2	509,284	469,259
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,162,493	10,646,008	11/25/2022	12/31/2038	Currency Swap			LW4375-71-0	VELA ENERGY FINANCE SA-SECURED	2	11,162,493	10,646,008
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,636,392	13,215,451	11/25/2022	12/31/2038	Currency Swap			9991DM-TP-6	ITEPESA 3.34%	2	13,636,392	13,215,451

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,754,681	12,356,582	11/25/2022	12/31/2038	Currency Swap				E8T529-AA-2	Sonnedix Espana Finance - SENIOR UNSECURED	2	13,754,681	12,356,582
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		28,067,891	27,154,367	11/25/2022	12/31/2038	Currency Swap				K8808*-AA-3	SIKUKI NUUK HARBOUR A/S SR SEC'D NT	1	28,067,891	27,154,367
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		73,020,563	62,541,262	11/25/2022	12/31/2038	Currency Swap				G7605#-AD-5	Roadster Finance DAC Senior Secured Notes	2	73,020,563	62,541,262
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,382,704	2,184,666	11/25/2022	12/31/2038	Currency Swap				E8T529-AC-8	Sonnedix Espana Finance - SENIOR UNSECURED	2	2,382,704	2,184,666
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,587,206	39,117,005	11/25/2022	12/31/2038	Currency Swap				F1000#-AA-6	Akiem Holding SAS Senior Secured Notes (Amortizing)	2	45,587,206	39,117,005
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		30,692,944	28,210,791	11/25/2022	12/31/2038	Currency Swap				E7134#-AA-3	Linia Nou Tram Dos S.A. EUR Term Loan	2	30,692,944	28,210,791
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		37,916,800	32,476,447	11/25/2022	12/31/2038	Currency Swap				E2R15T-AB-7	Bothwell Spain SA-SECURED	2	37,916,800	32,476,447
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,823,809	25,689,127	11/25/2022	12/31/2038	Currency Swap					Eliantus Finco Duo, S.A. 2.20 31/12/2038	2	27,823,809	25,689,127
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,972,918	19,302,798	11/25/2022	12/31/2038	Currency Swap				L0527#-AA-5	BEIP S.a.r.l - EUR Term Loan	2	20,972,918	19,302,798
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		44,848,432	36,173,263	11/25/2022	12/31/2038	Currency Swap				E8417U-AA-6	Renovables Atlasol SA-SECURED	2	44,848,432	36,173,263
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,912,822	26,108,823	11/25/2022	12/31/2038	Currency Swap					Dunkerque LNG Holding SA Senior Secured Notes	2	27,912,822	26,108,823
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		35,224,000	35,664,130	11/25/2022	12/31/2038	Currency Swap				F2000#-AB-4	C2 Developpement Senior Unsecured Notes	2	35,224,000	35,664,130
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,274,353	26,442,189	11/25/2022	12/31/2038	Currency Swap				L0527#-AB-3	BEIP S.a.r.l - 2022 EUR Fixed Senior Term Loan	2	25,274,353	26,442,189
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		30,959,620	31,872,162	11/25/2022	12/31/2038	Currency Swap				X52212-AA-9	MDN Senior Holding, S.A. Senior Secured Floating Rate Term Note Facility	3	30,959,620	31,872,162
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,953,945	19,270,906	11/25/2022	12/31/2038	Currency Swap				X52212-AB-7	MDN Senior Holding, S.A. Capex Facility Note	3	19,953,945	19,270,906
57629*MDO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,437,410	7,833,923	11/25/2022	12/31/2038	Currency Swap				F4927#-AA-0	IM Square Euro SR BDS A	3	8,437,410	7,833,923
57629*MC2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	69,616,475	70,519,920	61,529,414	11/25/2022	12/31/2036	Currency Swap	658,445	(169,445)		66815P-AB-6	Northwestern Hydro Acqui Senior Secured Notes	2	69,616,475	61,698,859
57629*MB4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,580,492	15,184,612	11,087,650	11/25/2022	11/15/2034	Currency Swap	119,742	741,218		J3891#-AB-8	Lilly Japan Financing Go Senior Note Series B	1	15,064,869	10,346,432
57629*MA6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	29,864,118	31,074,083	27,085,057	11/29/2022	11/25/2030	Currency Swap	300,118	(111,837)		C3298#-AC-4	ALS Canada Limited Senior Unsecured Notes	2	30,773,965	27,196,895
57629*ML2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,311,589	12,760,293	11,037,430	11/29/2022	01/07/2032	Currency Swap	112,009	(31,728)		763169-D8-5	Richardson International Senior Secured Debentures Series 2021-2 (CAD)	2	12,648,283	11,069,158
57629*LY5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	77,746,500	77,434,500	38,904,101	11/30/2022	11/24/2056	Currency Swap	(9,165,000)	(865,074)		G5702*-AB-9	MDS Group Investments Ltd Senior Unsecured Notes	1	86,599,500	39,769,175
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	159,069,806	14,034,987	13,168,126	12/07/2022	06/30/2032	Currency Swap	(9,638,757)	(9,393,153)		F1068#-AG-2	Bonduelle SCA Gtd Senior Note	2	23,673,744	22,561,279
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,045,000	36,067,318	12/07/2022	06/30/2032	Currency Swap				K8553*-AA-0	Scandlines ApS Senior Secured	2	38,045,000	36,067,318
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		64,390,635	58,231,058	12/07/2022	06/30/2032	Currency Swap				E3075#-AA-3	Club Atletico de Madrid Euro Fac A Ln	2	64,390,635	58,231,058
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,789,203	10,273,918	12/07/2022	06/30/2032	Currency Swap				X7T60Y-AB-6	Sisu Industrial Energy Solutions Oy	2	9,789,203	10,273,918
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,272,080	9,209,949	12/07/2022	06/30/2032	Currency Swap				E3075#-AB-1	Club Atletico de Madrid - 2022 EUR Fixed Senior Term Loan	1	10,272,080	9,209,949
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,633,685	5,195,998	12/07/2022	06/30/2032	Currency Swap				X9273*-AA-3	AUTOSTRADA WIELKOPOLSKA TERM LOAN	2	5,633,685	5,195,998
57629*XL7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,662,633	20,000,000	12/07/2022	06/30/2032	Currency Swap				81809#-MN-6	17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan Facility	1	19,662,633	20,000,000

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
57629*MK4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	48,089,172	42,055,212	46,581,408	12/08/2022	08/15/2028	Currency Swap	(5,455,428)	(6,491,809)	24906P-B*-9	DENTSPLY SIRONA Inc. Senior Note Ser	2	47,510,640	53,073,217
57629*MK4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	1,324,139	1,324,139	1,220,072	12/08/2022	08/15/2028	Currency Swap			L0175#-AB-8	Alpha Trains Finance S.A Term Loan	2	1,324,139	1,220,072
57629*LIW9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	21,552,182	18,848,222	21,293,392	12/08/2022	08/15/2026	Currency Swap	(2,442,418)	(2,578,554)	24906P-A*-0	DENTSPLY SIRONA Inc. Senior Note Ser	2	21,290,640	23,871,947
57629*LIW9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	5,503,705	5,503,705	5,071,157	12/08/2022	08/15/2026	Currency Swap			L0175#-AB-8	Alpha Trains Finance S.A Term Loan	2	5,503,705	5,071,157
57629*LV1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	16,711,867	18,409,036	16,231,129	12/09/2022	09/20/2027	Currency Swap	(139,613)	(285,696)	C4931*-BC-6	Keyera Partnership Gtd Senior Note	2	18,548,650	16,516,826
57629*LU3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	43,621,500	43,737,800	42,601,191	12/09/2022	06/30/2026	Currency Swap	(1,293,500)	(1,112,399)	Q3973*-AB-5	GPC Asia Pacific Holding Senior Unsecured Notes	2	45,031,300	43,713,591
57629*LT6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	156,371,780	21,426,420	23,101,819	12/09/2022	12/19/2025	Currency Swap	(9,049,740)	(8,563,635)	G4691#-AD-7	IMI PLC Senior Note	2	30,476,160	31,665,453
57629*LT6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	26,139,440	26,139,440	25,513,713	12/09/2022	12/19/2025	Currency Swap			F8568#-AE-9	Sonepar S.A. Senior Note Ser	2	26,139,440	25,513,713
57629*LT6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	13,111,020	13,111,020	12,875,660	12/09/2022	12/19/2025	Currency Swap			L8367#-AD-5	Shurgard Luxembourg Sarl Gtd Senior Note	2	13,111,020	12,875,660
57629*LT6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	65,869,790	65,869,790	68,618,893	12/09/2022	12/19/2025	Currency Swap			N7660#-AR-8	SHV NEDERLAND BV EURO TERM LN	2	65,869,790	68,618,893
57629*LT6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	25,673,600	25,673,600	24,603,241	12/09/2022	12/19/2025	Currency Swap			479142-D8-7	Johnson Matthey PLC Senior Note Series A	1	25,673,600	24,603,241
57629*LS8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	3,985,450	4,154,780	3,412,227	12/12/2022	01/12/2032	Currency Swap	(91,450)	(150,540)	Q2600#-AE-0	Coates Group Pty Ltd Senior Note Series 2022-E (AUD)	2	4,246,230	3,562,767
57629*LR0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	16,574,646	19,278,729	15,693,788	12/12/2022	09/30/2033	Currency Swap	(289,948)	(984,630)	W9792#-AB-0	Vartan Gas AB - 12 Year Fixed Rate	2	19,568,676	16,678,418
57629*LM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	29,639,898	19,073,481	15,042,961	12/12/2022	12/17/2031	Currency Swap	(495,196)	(1,601,592)	W9792#-AA-2	Vartan Gas AB - 10 Year Fixed Rate	2	19,568,676	16,644,553
57629*LM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	14,823,111	14,823,111	13,084,029	12/12/2022	12/17/2031	Currency Swap			X7552#-AA-7	SISU Industrial Energy Solutions OY-SEK Fixed Term Loan	2	14,823,111	13,084,029
57629*LQ2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	36,170,441	30,545,911	34,022,381	12/13/2022	12/11/2029	Currency Swap	(3,662,959)	(4,885,435)	116794-B#-6	Braker Corporation Senior Unsecured Notes	2	34,208,870	38,907,816
57629*LQ2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	1,958,365	1,958,365	1,804,453	12/13/2022	12/11/2029	Currency Swap			L0175#-AB-8	Alpha Trains Finance S.A Term Loan	2	1,958,365	1,804,453
57629*LP4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	56,021,899	17,441,185	16,609,959	12/13/2022	11/17/2026	Currency Swap	(376,921)	(646,284)	C4931*-BA-0	Keyera Corp Senior Note Ser	2	17,818,107	17,256,242
57629*LP4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	39,041,704	39,041,704	38,618,759	12/13/2022	11/17/2026	Currency Swap			C3346#-AA-4	FA MGT Limited Partnersh Senior Secured	2	39,041,704	38,618,759
57629*MH1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	51,446,945	44,357,345	51,246,070	12/13/2022	10/08/2025	Currency Swap	(5,289,055)	(5,456,154)	Q1297#-AJ-7	CSL Finance Pty Ltd-GTD SENIOR NOTE SERIES B CHF	1	49,646,400	56,702,224
57629*MH1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,071,045	7,071,045	6,515,317	12/13/2022	10/08/2025	Currency Swap			L0175#-AB-8	Alpha Trains Finance S.A Term Loan	2	7,071,045	6,515,317
57629*LN9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	42,388,280	42,746,600	41,762,294	12/14/2022	08/27/2025	Currency Swap	(2,192,700)	(2,155,883)	K3752#-AH-1	Copenhagen Airports A/S-SENIOR NOTE	2	44,939,300	43,918,177
57629*MIJ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,496,055	19,838,492	15,586,533	12/14/2022	03/15/2027	Currency Swap	619,067	972,681	G294A#-AD-1	Dyson Finance Limited Gtd Senior Note	1	19,219,425	14,613,852
57629*LM1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	24,566,000	20,483,175	24,910,984	12/14/2022	05/02/2025	Currency Swap	(2,176,000)	(2,161,056)	G0567#-AA-4	Arqiva Broadcast Parent Limited - GBP Subordinated Term Loan	3	22,659,175	27,072,040
57629*LM1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	468,177	468,177	301,135	12/14/2022	05/02/2025	Currency Swap			G2711*-AA-7	Curo Places Ltd. Senior Secured Notes	1	468,177	301,135
57629*LM1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,065,212	9,065,212	10,000,000	12/14/2022	05/02/2025	Currency Swap			69324Z-MQ-6	PORED II HOLDING I LLC, PORED II HOLDING I OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L., -Term Loan Series 2022-2	1	9,065,212	10,000,000
57629*LL3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	79,335,260	26,191,150	21,689,640	12/14/2022	08/28/2025	Currency Swap	(7,041,400)	(6,653,863)	G6750*-AC-6	1887 CO LTD GBP SER C SR SECND NT	2	33,232,550	28,343,503
57629*LL3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	25,237,960	25,237,960	21,600,093	12/14/2022	08/28/2025	Currency Swap			G8302#-AA-3	University of West Londo Senior Secured	1	25,237,960	21,600,093

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629* LL3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,905,200	18,572,864	12/14/2022	08/28/2025	Currency Swap			G1696#-BK-1	Bunzl Finance plc-GTD SENIOR NOTE SERIES C -GBP	2	19,905,200	18,572,864
57629* LL3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,996,160	16,716,468	12/14/2022	08/28/2025	Currency Swap			G3301*-AA-1	FIL Limited Senior Unsecured Notes	2	14,996,160	16,716,468
57629* LK5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,000,000	19,466,000	01/31/2023	01/31/2033	Currency Swap	(2,264,000)	(2,679,109)	N3000#-AB-3	Cooperatie Koninklijke Cosun U.A - EUR Senior Unsecured Term Loan	2	21,730,000	24,535,990
57629* LJ8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,445,000	7,529,346	06/27/2023	06/27/2030	Currency Swap	(1,036,000)	(1,291,653)	877409-A#-9	Taylor Wimpey PLC Senior Notes	2	8,565,346	9,431,305
57629* LJ8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,419,986	12,369,447	06/27/2023	06/27/2030	Currency Swap			Z03502-21-3	Perusahaan Listrik Negara-SENIOR UNSECURED	2	14,419,986	12,369,447
57629* MI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		82,552,141	45,837,500	02/24/2023	02/26/2025	TRS Bond Index		(3,675,719)	14308#-MM-7	Carlyle Aviation Runway PDP Fund LP - Revolving Promissory Note	1	45,837,500	45,837,500
57629* MI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		29,930,097	30,047,370	02/24/2023	02/26/2025	TRS Bond Index			14316#-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	1	29,930,097	30,047,370
57629* MI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,630,037	25,032,800	02/24/2023	02/26/2025	TRS Bond Index			40639#-AA-7	Halseypoint Clo 6 Ltd-HLSY 2022-6A A1	1	24,630,037	25,032,800
57629* MVO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,310,000	21,957,059	02/22/2024	02/22/2034	Currency Swap	(1,398,100)	(1,268,098)	912810-QK-7	US TREASURY N/B-BOND	1	23,355,159	24,640,820
57629* MZ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,097,333	2,740,217	04/04/2023	03/05/2038	Currency Swap	(177,074)	(113,829)	G6260#-AA-9	MORhomes plc Senior Secured Notes	2	2,917,291	2,521,617
57629* NA5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,045,000	36,606,500	05/31/2023	06/30/2043	Currency Swap	(917,000)	(3,958,893)	E5000*-AB-0	Espai Barca FT - Senior Unsecured Note Series A2	2	37,523,500	43,195,657
57629* NA5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,021,887	1,646,666	05/31/2023	06/30/2043	Currency Swap			G2044*-AA-5	Channel Link Enterprises Senior Secured	2	2,021,887	1,646,666
57629* NB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,175,000	26,147,500	05/31/2023	06/30/2047	Currency Swap	(655,000)	(4,077,170)	E5000*-AC-8	Espai Barca FT - Senior Unsecured Note Series A3	2	26,802,500	33,035,286
57629* NB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,021,887	1,646,666	05/31/2023	06/30/2047	Currency Swap			G2044*-AA-5	Channel Link Enterprises Senior Secured	2	2,021,887	1,646,666
57629* MT5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		52,420,800	49,555,260	02/08/2023	10/01/2052	Currency Swap	(2,014,680)	(6,389,839)	09778#-A#-6	Bon Secours Mercy Health Senior Secured Notes	1	51,569,940	56,585,623
57629* MT5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,915,658	5,000,000	02/08/2023	10/01/2052	Currency Swap			81809#-MM-6	17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan Facility	1	4,915,658	5,000,000
57629* MU2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,085,000	18,268,431	02/08/2023	02/01/2053	Currency Swap	(3,342,500)	(1,618,897)	G7150*-AB-2	Plus Dane Housing Limite Senior Secured Notes (Delayed Tranche)	1	30,815,000	19,887,328
57629* MU2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,436,383	2,387,267	02/08/2023	02/01/2053	Currency Swap			G1128*-AC-2	BIRMINGHAM ARPT FIN PLC SR NT Transmission Finance DAC Senior Secured Notes	2	3,436,383	2,387,267
57629* MX6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,952,000	17,423,300	05/22/2023	05/22/2033	Currency Swap	(972,400)	(1,796,221)	G8006#-AM-8	Wireless Infrastructure Senior Secured Notes	2	18,395,700	20,188,059
57629* MY4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		36,630,000	33,675,000	03/31/2023	03/31/2033	Currency Swap	(3,483,000)	(3,432,159)	G9720#-AA-9	Secured Notes	2	37,158,000	39,808,443
57629* NF4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		69,201,121	70,999,684	03/21/2023	03/27/2026	Currency Forward		(1,410,770)	912810-QK-7	US TREASURY N/B-BOND	1	70,999,684	74,908,093
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		183,671,875	23,375,660	05/23/2024	05/23/2025	TRS Bond Index		13,378,058	57174#-AZ-5	Marsh & McLennan Cos Inc-SR UNSECURED	1	9,957,471	9,997,602
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,550,000	10,560,698	05/23/2024	05/23/2025	TRS Bond Index			74983A-AC-7	RR 19 Ltd-RRAM 2021-19A A2	1	10,550,000	10,560,698
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,509,074	8,517,870	05/23/2024	05/23/2025	TRS Bond Index			780082-AD-5	Royal Bank of Canada-SUBORDINATED	1	8,509,074	8,517,870
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,224,493	12,042,829	05/23/2024	05/23/2025	TRS Bond Index			74340X-BH-3	Prologis LP-SENIOR UNSECURED	1	12,224,493	12,042,829
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,000,000	14,009,282	05/23/2024	05/23/2025	TRS Bond Index			67582#-AC-7	Wells Fargo-OCT53 2021-1A B UNSECURED	1	14,000,000	14,009,282
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,437,731	27,537,321	05/23/2024	05/23/2025	TRS Bond Index			911312-AJ-5	UNITED PARCEL SERVICE IN-SENIOR UNSECURED NOTE	1	28,437,731	27,537,321
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,683,226	22,429,493	05/23/2024	05/23/2025	TRS Bond Index			06654D-AB-3	Banner Health-UNSECURED	1	22,683,226	22,429,493
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,891,997	3,958,199	05/23/2024	05/23/2025	TRS Bond Index			06051#-GA-1	BANK OF AMERICA CORP-SENIOR UNSECURED	1	3,891,997	3,958,199
57629* ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	15,021,270	05/23/2024	05/23/2025	TRS Bond Index			671020-AZ-1	QHA Credit Partners VII -SERIES 2012-7A CLASS BR3	1	15,000,000	15,021,270

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held					
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value	
57629*ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	25,453,450	05/23/2024	05/23/2025	TRS Bond Index				06763K-AE-9	Barings Middle Market CL-BMM 2023-1A A2	1	25,000,000	25,453,450
57629*ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	22,288,904	05/23/2024	05/23/2025	TRS Bond Index				06763R-AC-8	Barings Loan Partners CL-BABSN LP-1A C	1	22,000,000	22,288,904
57629*ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,381,590	13,930,092	05/23/2024	05/23/2025	TRS Bond Index				64033D-AB-4	NELNET STUDENT LOAN TRUS-SERIES 2013-3A CLASS B	1	13,381,590	13,930,092
57629*ND9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	13,055,874	05/23/2024	05/23/2025	TRS Bond Index				59801A-AS-3	MidOcean Credit CLO XI L-MIDO 2022-11A DR	2	13,000,000	13,055,874
57629*NE7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		56,266,206	75,000,000	04/26/2024	04/29/2025	TRS Bond Index		6,781,221		46143F-MY-0	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2022-10	2	75,000,000	75,000,000
57629*MQ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		207,031,250	62,200,000	06/08/2023	06/11/2025	TRS Bond Index		(9,892,175)		14314Z-MM-3	CARLYLE SECURED LENDING III SPV, - Senior Secured Loan	2	62,200,000	62,200,000
57629*MQ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,648,882	8,795,998	06/08/2023	06/11/2025	TRS Bond Index				06051G-GA-1	BANK OF AMERICA CORP-SENIOR UNSECURED	1	8,648,882	8,795,998
57629*MQ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,000,000	34,010,064	06/08/2023	06/11/2025	TRS Bond Index				06764A-AC-4	Barings Loan Partners CL-BABSN LP-4A A	1	34,000,000	34,010,064
57629*MQ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		75,000,000	75,899,025	06/08/2023	06/11/2025	TRS Bond Index				000849-AA-7	ABPCI Direct Lending Fun-ABPCI 2023-16A A	1	75,000,000	75,899,025
57629*MQ1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,175,188	40,276,000	06/08/2023	06/11/2025	TRS Bond Index				82808E-AA-9	Silver Point CLO 2 Ltd-SPCLO 2023-2A A1	1	39,175,188	40,276,000
57629*MN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,018,000	17,691,300	06/20/2023	06/20/2030	Currency Swap		(349,800)	(926,343)	L3551F-AN-0	Ferrero International SA Gtd Senior Note Series B	2	18,041,100	18,848,849
57629*MM0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		40,404,000	39,671,400	06/20/2023	06/20/2033	Currency Swap		(784,400)	(2,738,957)	L3551F-AQ-3	Ferrero International SA Gtd Senior Note Series D	2	40,455,800	43,887,034
57629*NC1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,690,000	17,551,500	05/10/2023	05/12/2030	Currency Swap		(1,366,500)	(1,680,080)	L3009F-AA-6	Ergea Group S.A r.L. Guaranteed Secured Senior Notes Series A	2	18,918,000	21,169,826
57629*NN7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,563,500	23,845,600	05/16/2023	05/16/2033	Currency Swap		(1,847,050)	(2,385,485)	X2004E-AA-2	Ciconia Investments Limi Senior Secured Notes	2	25,692,650	27,649,907
57629*MP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,165,372	24,942,307	12/27/2023	12/29/2030	Currency Swap		(962,128)	(2,164,910)	K3752E-AH-3	Copenhagen Airports Denm Senior Secured PP Note Delayed Draw	2	25,904,435	28,521,522
57629*NU6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		250,000,000	180,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			(20,991,902)	14308E-MM-7	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	180,000,000	180,000,000
57629*NU6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,965,000	36,965,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				78466Z-MM-4	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	36,965,000	36,965,000
57629*NU6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,000,000	34,266,424	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				06793Z-AE-3	SSG CREDIT STRATEGIES VII ICAV - Senior Secured Revolving Loan Facility	1	34,000,000	34,266,424
57629*NU6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,375,000	12,375,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				78466Z-MM-4	PIONEERS GATE LLC 2023-9 OR SSG CREDIT STRATEGIES VII ICAV - Senior Secured Revolving Loan Facility	1	12,375,000	12,375,000
57629*NH0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		200,000,000	205,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			(16,610,903)	901399-MY-8	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	205,000,000	205,000,000
57629*NG2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		190,000,000	50,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			(16,335,518)	75009L-AL-0	Rad CLO 16 Ltd-RAD 2022-16A A1R .. Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	50,000,000	50,380,200
57629*NG2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		58,000,000	58,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				14308E-MM-7	NXT Capital Structured Note I, LLC - Class A Secured Float Rate Revolving Loan	1	58,000,000	58,000,000
57629*NG2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		64,000,000	64,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				67080B-MM-6	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	64,000,000	64,000,000
57629*NG2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,000,000	30,000,000	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				14308E-MM-7	QHA Credit Solutions Master Fund I - Revolving Promissary Note	1	30,000,000	30,000,000
57629*NM9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		100,000,000	30,383,911	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			(8,670,688)	67098F-MM-7	SPV, L.P. - Fund I Revolver PORED II HOLDING I LLC, PORED II HOLDING I OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L., -Term Loan	1	30,383,911	30,383,911
57629*NM9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,356,459	67,683,426	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				69324Z-MQ-6	Elmwood CLO VIII Ltd-ELM18 2021-1A AR	1	61,356,459	67,683,426
57629*NM9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	50,371,150	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared				29003E-AS-4		1	50,000,000	50,371,150

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	150,000,000	10,000,000	(2,748,203)	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared	(12,964,943)		87251P-AJ-6	TCW CLO 2023-2 Ltd-TCW 2023-2A D1	2	10,000,000	10,216,740
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	20,000,000	20,152,080	20,152,080	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			75009L-AL-0	Rad CLO 16 Ltd-RAD 2022-16A A1R	1	20,000,000	20,152,080
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	9,701,486	10,016,640	10,016,640	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			48661Q-AA-9	Rad CLO 9 Ltd-RAD 2020-9A A1	1	9,701,486	10,016,640
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,000,000	10,009,870	10,009,870	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			12511A-AC-8	CBAM Ltd-CBAM 2020-13A B1	1	10,000,000	10,009,870
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,000,000	10,009,870	10,009,870	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			87246M-AU-6	TICP CLO VI 2016-2 Ltd-TICP 2016-6A BR2	1	10,000,000	10,009,870
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,900,000	10,012,190	10,012,190	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			26833R-AC-2	ECMC Group Student Loan -ECMC 2021-1A B	1	10,900,000	10,012,190
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,000,000	10,010,750	10,010,750	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			12563Y-AC-3	CIFC Funding 2021-II-CIFC 2021-2A B	1	10,000,000	10,010,750
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	12,000,000	12,351,660	12,351,660	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			38174Z-AJ-4	GoLub Capital Partners C-GOCAP 2019-42RA DR	2	12,000,000	12,351,660
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	11,750,000	11,831,157	11,831,157	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			067934-AG-4	Barings Middle Market CL-BMM 2023-IIA C	2	11,750,000	11,831,157
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	11,000,000	11,274,318	11,274,318	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			00084Z-AJ-3	ABPCI DIRECT LENDING FUND CLO LTD Barings Middle Market CL-BMM 2023-IA C	2	11,000,000	11,274,318
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	11,000,000	11,361,196	11,361,196	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			06763K-AJ-8	Barings Middle Market CL-BMM 2023-3A B	2	11,000,000	11,361,196
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,997,626	10,971,359	10,971,359	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			64034A-AD-5	Nelnet Student Loan Tru-NSLT 2018-3A B	1	10,997,626	10,971,359
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,000,000	10,186,690	10,186,690	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			70019A-AJ-8	PKBLU 2023-3A D-PKBLU 2023-3A D	2	10,000,000	10,186,690
57629*NL1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,000,000	10,156,490	10,156,490	04/10/2023	04/10/2053	Interest Rate Swap - SOFR CME cleared			67571L-AJ-0	OCTAGON 67 LTD-OCT67 2023-1A D	2	10,000,000	10,156,490
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	300,000,000	181,945,760	139,224,164	08/07/2023	08/07/2043	Interest Rate Swap - SOFR CME cleared	(16,894,971)		912810-TG-3	United States Treasury N-UNSECURED	1	181,945,760	156,119,135
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	98,608,100	99,860,423	99,860,423	08/07/2023	08/07/2043	Interest Rate Swap - SOFR CME cleared			53950U-AA-0	Loan Asset Issuer LLC - Series 2023 NG-1A Class A Asset Backed Notes	1	98,608,100	99,860,423
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	50,000,000	53,313,817	53,313,817	08/07/2023	08/07/2043	Interest Rate Swap - SOFR CME cleared			53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2 Class A Asset Backed Notes	1	50,000,000	53,313,817
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	615,000,000	283,121,395	193,864,877	08/07/2023	08/07/2042	Interest Rate Swap - SOFR CME cleared	(35,284,044)		912810-RU-4	US TREASURY N/B-UNSECURED	1	283,121,395	229,148,921
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	228,162,319	195,775,400	195,775,400	08/07/2023	08/07/2042	Interest Rate Swap - SOFR CME cleared			912810-TG-3	United States Treasury N-UNSECURED	1	228,162,319	195,775,400
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	223,599,073	191,859,892	191,859,892	08/07/2023	08/07/2042	Interest Rate Swap - SOFR CME cleared			912810-TG-3	United States Treasury N-UNSECURED	1	223,599,073	191,859,892
Need to File with the NAIC	Evergreen Basket of Floating Corporate Bonds	1Z	50,000,000	53,313,817	53,313,817	08/07/2023	08/07/2042	Interest Rate Swap - SOFR CME cleared			53946H-AA-6	NG-2 Class A Asset Backed Notes	1	50,000,000	53,313,817
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	270,000,000	193,719,419	200,103,894	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared	3,060,678		81809#-MV-6	17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan Facility	1	193,719,419	197,043,216
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	40,160,000	40,465,377	40,465,377	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			75009L-AL-0	Rad CLO 16 Ltd-RAD 2022-16A A1R	1	40,160,000	40,465,377
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	39,386,703	39,386,703	39,386,703	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			67080B-MM-6	NXT Capital Structured Note I, LLC - Class A Secured Float Rate Revolving Loan	1	39,386,703	39,386,703
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	270,000,000	75,000,000	78,411,889	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared	3,411,889		857931-AA-7	Station Place Securitized-SPST 2024-7 A	2	75,000,000	75,000,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	73,000,000	73,295,139	73,295,139	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			48256G-AA-2	KKR CLO 56 Ltd-KKR 2024-56A A1	1	73,000,000	73,295,139
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	56,250,000	56,303,461	56,303,461	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			72403Z-0W-9	Pioneers Gate 2024-6 BIZ Issuance Confirmation	1	56,250,000	56,303,461
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	55,000,000	55,009,350	55,009,350	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			69702M-AL-1	Palmer Square CLO 2022-5-PLMRS 2022-5A A1R	1	55,000,000	55,009,350
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	20,000,000	20,010,480	20,010,480	02/05/2024	02/05/2054	Interest Rate Swap - SOFR CME cleared			06764A-AE-0	Barings Loan Partners CL-BABSN LP-4A B	1	20,000,000	20,010,480

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STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1 Number	2 Description	3 NAIC Designation or Other Description	4 Notional Amount	5 Book/Adjusted Carrying Value	6 Fair Value	7 Effective Date	8 Maturity Date	Derivative Instrument(s) Open			Cash Instrument(s) Held				
								9 Description	10 Book/Adjusted Carrying Value	11 Fair Value	12 CUSIP	13 Description	14 NAIC Designation or Other Description	15 Book/Adjusted Carrying Value	16 Fair Value
Need to File with the NAIC	Sovereign Bond of Indonesia	1Z	40,000,000	15,381,047	12,648,713	06/20/2024	12/20/2029	5 Yr Credit Default Swap	479,921	588,244	912810-RU-4 .	US TREASURY N/B-UNSECURED	1	14,901,126	12,060,470
Need to File with the NAIC	Sovereign Bond of Indonesia	1Z		35,981,231	29,507,908	06/20/2024	12/20/2029	5 Yr Credit Default Swap			912810-RV-2 .	US TREASURY N/B-UNSECURED	1	35,981,231	29,507,908
999999999 - Totals				34,186,700,790	26,731,379,857	XXX	XXX	XXX	(1,393,945,328)	(6,307,584,181)	XXX	XXX	XXX	35,580,646,118	33,038,964,037

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 2

Replication (Synthetic Asset) Transactions Open

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Year To Date	
	1 Number of Positions	2 Total Replication (Synthetic Asset) Transactions Statement Value	3 Number of Positions	4 Total Replication (Synthetic Asset) Transactions Statement Value	5 Number of Positions	6 Total Replication (Synthetic Asset) Transactions Statement Value	7 Number of Positions	8 Total Replication (Synthetic Asset) Transactions Statement Value	9 Number of Positions	10 Total Replication (Synthetic Asset) Transactions Statement Value
1. Beginning Inventory	206	38,589,744,830	208	32,147,729,162	208	35,788,669,220			206	38,589,744,830
2. Add: Opened or Acquired Transactions.....	4	620,000,000	4	719,551,648	1	51,362,278			9	1,390,913,926
3. Add: Increases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX	680,781,642	XXX	3,789,285,872	XXX	276,034,290	XXX		XXX	4,746,101,804
4. Less: Closed or Disposed of Transactions.....	2	122,986,689	4	787,608,676	2	77,071,394			8	987,666,759
5. Less: Positions Disposed of for Failing Effectiveness Criteria.....										
6. Less: Decreases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX	7,619,810,621	XXX	80,288,786	XXX	1,852,293,604	XXX		XXX	9,552,393,011
7. Ending Inventory	208	32,147,729,162	208	35,788,669,220	207	34,186,700,790			207	34,186,700,790

STATEMENT AS OF SEPTEMBER 30, 2024 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - VERIFICATION

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

	Book/Adjusted Carrying Value Check
1. Part A, Section 1, Column 14.....	6,446,375,135
2. Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance.....	.....
3. Total (Line 1 plus Line 2)	6,446,375,135
4. Part D, Section 1, Column 6	20,094,292,020
5. Part D, Section 1, Column 7	(13,659,843,117)
6. Total (Line 3 minus Line 4 minus Line 5)	11,926,233
	Fair Value Check
7. Part A, Section 1, Column 16	1,532,736,283
8. Part B, Section 1, Column 13	(11,926,233)
9. Total (Line 7 plus Line 8)	1,520,810,050
10. Part D, Section 1, Column 9	20,153,474,567
11. Part D, Section 1, Column 10	(18,632,664,516)
12. Total (Line 9 minus Line 10 minus Line 11) .....	.....
	Potential Exposure Check
13. Part A, Section 1, Column 21	5,983,742,860
14. Part B, Section 1, Column 20	39,308,525
15. Part D, Section 1, Column 12	6,023,051,384
16. Total (Line 13 plus Line 14 minus Line 15)	1

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	8,139,293,764	4,623,151,857
2. Cost of cash equivalents acquired	149,827,297,918	249,758,322,676
3. Accrual of discount	178,829,886	276,751,847
4. Unrealized valuation increase/(decrease)	146	(142,540)
5. Total gain (loss) on disposals	63,788	(60,563)
6. Deduct consideration received on disposals	152,957,592,035	246,518,729,513
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)	5,187,893,467	8,139,293,764
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	5,187,893,467	8,139,293,764