



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

QUARTERLY STATEMENT

AS OF MARCH 31, 2023

OF THE CONDITION AND AFFAIRS OF THE

Massachusetts Mutual Life Insurance Company

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

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

Internet Website Address www.massmutual.com

Statutory Statement Contact Trevor Wade Gordon 617-695-4321 (Name) (Area Code) (Telephone Number) tgordon@MassMutual.com 413-226-4086 (E-mail Address) (FAX Number)

OFFICERS

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

OTHER

Elizabeth Ward Chicares, Chief Financial Officer Michael Robert Fanning, Head of MassMutual U.S. Eric William Partlan #, Chief Investment Officer Adnan Omar Ahmed, Head of MassMutual International Geoffrey James Craddock, Chief Risk Officer Susan Marie Cicco, Head of Human Resources & Employee Experience Michael James O'Connor, General Counsel Sears Andrew Merritt, Head of Enterprise Technology & Experience

DIRECTORS OR TRUSTEES

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

State of Massachusetts County of Hampden SS:

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

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 MARCH 31, 2023 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	138,749,338,617		138,749,338,617	136,445,220,548
2. Stocks:				
2.1 Preferred stocks	368,369,826		368,369,826	451,411,752
2.2 Common stocks	26,183,311,418		26,183,311,418	26,159,699,517
3. Mortgage loans on real estate:				
3.1 First liens	24,842,244,893		24,842,244,893	24,971,963,928
3.2 Other than first liens.....				
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)	358,294,655		358,294,655	364,794,557
4.2 Properties held for the production of income (less \$ 285,000,000 encumbrances)	(15,055,277)		(15,055,277)	(12,001,151)
4.3 Properties held for sale (less \$ encumbrances)	4,547,351		4,547,351	1,954,867
5. Cash (\$364,836,323), cash equivalents (\$ 4,266,151,676) and short-term investments (\$ 1,094,408,003)	5,725,396,002		5,725,396,002	5,568,063,455
6. Contract loans (including \$ premium notes)	17,408,056,740	438,845	17,407,617,895	17,053,622,863
7. Derivatives	19,323,197,338		19,323,197,338	22,031,949,832
8. Other invested assets	12,759,529,947	44,256,787	12,715,273,160	12,296,408,175
9. Receivables for securities	1,987,190,312		1,987,190,312	1,865,109,907
10. Securities lending reinvested collateral assets				
11. Aggregate write-ins for invested assets				
12. Subtotals, cash and invested assets (Lines 1 to 11)	247,694,421,821	44,695,632	247,649,726,190	247,198,198,250
13. Title plants less \$ charged off (for Title insurers only)				
14. Investment income due and accrued	4,387,092,310	444,374	4,386,647,936	4,222,914,360
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	120,575,747		120,575,747	186,722,600
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	1,071,744,027		1,071,744,027	1,094,164,269
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	124,490,490	3,785,549	120,704,941	88,995,295
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	27,633,504		27,633,504	43,583,724
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon				231,372,985
18.2 Net deferred tax asset	1,483,986,045		1,483,986,045	1,229,269,939
19. Guaranty funds receivable or on deposit	1,566,264		1,566,264	7,033,020
20. Electronic data processing equipment and software	258,205,448	249,498,903	8,706,544	8,472,305
21. Furniture and equipment, including health care delivery assets (\$)	44,269,741	44,269,741		
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	126,916,376		126,916,376	102,982,322
24. Health care (\$) and other amounts receivable				
25. Aggregate write-ins for other than invested assets	4,547,140,469	1,736,153,653	2,810,986,816	2,752,226,577
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	259,888,042,242	2,078,847,852	257,809,194,390	257,165,935,646
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	54,398,029,645		54,398,029,645	53,413,804,658
28. Total (Lines 26 and 27)	314,286,071,887	2,078,847,852	312,207,224,035	310,579,740,304
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	2,658,859,674		2,658,859,674	2,620,529,124
2502. Fully refundable deposits, prepayments and miscellaneous assets	123,260,840	31,198,306	92,062,534	71,442,867
2503. Employee insurance plan advances	40,985,916	3,620	40,982,296	40,252,979
2598. Summary of remaining write-ins for Line 25 from overflow page	1,724,034,040	1,704,951,728	19,082,313	20,001,607
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	4,547,140,469	1,736,153,653	2,810,986,816	2,752,226,577

STATEMENT AS OF MARCH 31, 2023 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 \$ 152,648,696,311 less \$ included in Line 6.3 (including \$ 146,534,989 Modco Reserve)	152,648,696,311	149,267,177,229
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	4,037,518,684	3,949,042,074
3. Liability for deposit-type contracts (including \$ Modco Reserve).....	18,764,657,330	18,089,278,812
4. Contract claims:		
4.1 Life	725,321,293	615,796,468
4.2 Accident and health	35,088,696	33,189,613
5. Policyholders' dividends/refunds to members \$ 8,841,829 and coupons \$ due and unpaid	8,841,829	8,979,074
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)	1,947,730,092	1,918,216,473
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 \$ 11,110,236 accident and health premiums	69,064,289	42,225,488
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	12,576,178	9,442,289
9.3 Other amounts payable on reinsurance, including \$ 1,795,386 assumed and \$ (106,471,376) ceded	(104,675,990)	48,081,237
9.4 Interest Maintenance Reserve		
10. Commissions to agents due or accrued-life and annuity contracts \$ 11,087,543 , accident and health \$ 134,574 and deposit-type contract funds \$	11,222,118	16,379,844
11. Commissions and expense allowances payable on reinsurance assumed	3,436,081	3,196,883
12. General expenses due or accrued	817,726,831	1,108,191,181
13. Transfers to Separate Accounts due or accrued (net) (including \$ (61,987,324) accrued for expense allowances recognized in reserves, net of reinsured allowances)	(74,998,070)	(69,697,466)
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	69,172,882	70,204,377
15.1 Current federal and foreign income taxes, including \$ 111,221,177 on realized capital gains (losses)	112,340,787	
15.2 Net deferred tax liability		
16. Unearned investment income	170,430,260	246,340,792
17. Amounts withheld or retained by reporting entity as agent or trustee	3,258,710	3,398,273
18. Amounts held for agents' account, including \$ agents' credit balances	375,439,694	364,955,431
19. Remittances and items not allocated	2,043,485,914	2,614,943,056
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above	222,185,247	218,843,513
22. Borrowed money \$ 249,415,414 and interest thereon \$	249,415,414	249,516,715
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	5,471,018,023	5,674,344,857
24.02 Reinsurance in unauthorized and certified (\$) companies	76,780	109,902
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers	11,080,888,074	10,344,839,427
24.04 Payable to parent, subsidiaries and affiliates	88,843,718	33,217,754
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance	11,472,211,740	11,570,969,538
24.08 Derivatives	11,728,372,525	14,002,945,928
24.09 Payable for securities	511,121,348	23,308,806
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	7,782,830,768	8,897,737,697
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	230,283,297,557	229,355,175,264
27. From Separate Accounts Statement	54,265,441,303	53,283,506,525
28. Total liabilities (Lines 26 and 27)	284,548,738,860	282,638,681,789
29. Common capital stock		
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds		
32. Surplus notes	5,000,961,848	5,025,961,848
33. Gross paid in and contributed surplus		
34. Aggregate write-ins for special surplus funds	3,250,000	3,250,000
35. Unassigned funds (surplus)	22,654,273,327	22,911,846,667
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 \$ 132,588,343 in Separate Accounts Statement)	27,658,485,175	27,941,058,515
38. Totals of Lines 29, 30 and 37	27,658,485,175	27,941,058,515
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	312,207,224,035	310,579,740,304
DETAILS OF WRITE-INS		
2501. Repurchase agreements	3,020,123,653	3,047,903,647
2502. Derivative collateral	2,720,151,287	4,065,226,774
2503. Derivative accrued interest	1,880,985,284	1,688,803,934
2598. Summary of remaining write-ins for Line 25 from overflow page	161,570,543	95,803,342
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	7,782,830,768	8,897,737,697
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. Designated surplus for group annuities	2,500,000	2,500,000
3402. Designated surplus for separate account business	750,000	750,000
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)	3,250,000	3,250,000

STATEMENT AS OF MARCH 31, 2023 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	5,477,623,199	5,136,448,980	23,496,212,326
2. Considerations for supplementary contracts with life contingencies	4,439,229	8,181,387	27,567,010
3. Net investment income	2,743,087,324	1,924,174,350	9,352,723,221
4. Amortization of Interest Maintenance Reserve (IMR)	(9,768,425)	22,865,524	(50,411,515)
5. Separate Accounts net gain from operations excluding unrealized gains or losses	841,973	(861,594)	(283,027)
6. Commissions and expense allowances on reinsurance ceded	123,045,010	113,148,808	517,503,640
7. Reserve adjustments on reinsurance ceded	(2,679,864)	422,561	(10,510,838)
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	58,968,716	64,516,161	253,571,520
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	56,204,233	61,929,322	378,492,917
9. Totals (Lines 1 to 8.3)	8,451,761,394	7,330,825,498	33,964,865,254
10. Death benefits	758,870,937	611,131,713	2,350,724,281
11. Matured endowments (excluding guaranteed annual pure endowments)	2,372,467	3,373,126	11,816,394
12. Annuity benefits	627,640,385	604,034,010	2,421,218,480
13. Disability benefits and benefits under accident and health contracts	93,251,400	94,576,825	377,457,003
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	1,858,136,372	2,269,612,166	11,269,837,564
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	122,748,853	94,052,246	445,727,374
18. Payments on supplementary contracts with life contingencies	6,648,910	6,132,278	22,596,551
19. Increase in aggregate reserves for life and accident and health contracts	3,346,253,797	2,310,427,812	14,851,696,792
20. Totals (Lines 10 to 19)	6,815,923,121	5,993,340,175	31,751,074,439
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	316,604,477	302,275,966	1,272,188,934
22. Commissions and expense allowances on reinsurance assumed	12,434,976	12,807,849	51,585,286
23. General insurance expenses and fraternal expenses	534,109,429	494,805,911	2,189,838,511
24. Insurance taxes, licenses and fees, excluding federal income taxes	87,818,087	95,759,529	310,306,868
25. Increase in loading on deferred and uncollected premiums	(24,285,341)	(8,458,329)	37,402,641
26. Net transfers to or (from) Separate Accounts net of reinsurance	(269,393,251)	(66,767,909)	(4,594,734,614)
27. Aggregate write-ins for deductions	257,965,135	162,760,748	699,949,747
28. Totals (Lines 20 to 27)	7,731,176,632	6,986,523,939	31,717,611,813
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	720,584,762	344,301,559	2,247,253,442
30. Dividends to policyholders and refunds to members	443,195,915	419,111,831	1,905,770,356
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	277,388,847	(74,810,272)	341,483,085
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	170,483,696	36,450,598	(64,368,788)
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)	106,905,151	(111,260,870)	405,851,873
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ (10,826,488) (excluding taxes of \$ (23,600,449) transferred to the IMR)	(353,931,638)	(121,950,542)	326,388,986
35. Net income (Line 33 plus Line 34)	(247,026,487)	(233,211,412)	732,240,859
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	27,941,058,515	26,979,255,991	26,979,255,991
37. Net income (Line 35)	(247,026,487)	(233,211,412)	732,240,859
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (47,205,014)	(512,350,880)	552,625,235	870,357,676
39. Change in net unrealized foreign exchange capital gain (loss)	119,822,439	(350,130,261)	(1,739,307,186)
40. Change in net deferred income tax	239,518,583	148,488,142	661,575,651
41. Change in nonadmitted assets	(110,380,797)	(5,394,113)	(562,886,836)
42. Change in liability for reinsurance in unauthorized and certified companies	33,122	3,595	12,520
43. Change in reserve on account of change in valuation basis, (increase) or decrease			(12,275,243)
44. Change in asset valuation reserve	203,326,834	224,700,052	739,839,478
45. Change in treasury stock			
46. Surplus (contributed to) withdrawn from Separate Accounts during period			(3)
47. Other changes in surplus in Separate Accounts Statement	1,448,236	(7,834,569)	(16,892,260)
48. Change in surplus notes	(25,000,000)	(25,000,000)	412,500,000
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	48,035,610	(22,458,419)	(123,362,131)
54. Net change in capital and surplus for the year (Lines 37 through 53)	(282,573,340)	281,788,252	961,802,524
55. Capital and surplus, as of statement date (Lines 36 + 54)	27,658,485,175	27,261,044,243	27,941,058,515
DETAILS OF WRITE-INS			
08.301. Management and administrative fees	41,000,460	79,452,970	208,945,821
08.302. Change in corporate owned life insurance asset	38,330,550	(19,648,937)	(51,864,798)
08.303. Revenue sharing	25,633,829	7,163,986	42,123,388
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	(48,760,605)	(5,038,698)	179,288,505
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	56,204,233	61,929,322	378,492,917
2701. Ceded income on funds withheld	248,541,165	192,864,263	806,904,305
2702. Change in liability for employee/agent benefit plans	25,279,528		(69,342,932)
2703. Reinsurance ceded adjustment	13,600,292	(20,641,183)	(86,272,996)
2798. Summary of remaining write-ins for Line 27 from overflow page	(29,455,850)	(9,462,333)	48,661,370
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	257,965,135	162,760,748	699,949,747
5301. Other changes in surplus	34,435,317	(1,817,236)	(43,668,847)
5302. Deferred gain on reinsurance ceded	13,600,292	(20,641,183)	(120,008,304)
5303. Change in minimum pension liability			40,315,020
5398. Summary of remaining write-ins for Line 53 from overflow page			
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	48,035,610	(22,458,419)	(123,362,131)

STATEMENT AS OF MARCH 31, 2023 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	5,746,574,940	5,366,599,773	23,358,051,170
2. Net investment income	2,938,573,436	2,276,133,852	8,171,862,985
3. Miscellaneous income	215,786,492	300,461,291	1,360,990,422
4. Total (Lines 1 to 3)	8,900,934,868	7,943,194,916	32,890,904,577
5. Benefit and loss related payments	3,382,669,894	3,739,977,967	16,698,464,149
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(272,175,610)	(383,264,208)	(4,947,039,344)
7. Commissions, expenses paid and aggregate write-ins for deductions	1,444,063,951	1,525,530,944	5,291,765,427
8. Dividends paid to policyholders	417,503,090	400,940,408	1,806,389,059
9. Federal and foreign income taxes paid (recovered) net of \$ 1,110,748 tax on capital gains (losses)	(197,912,071)	(3,672,373)	(5,309,882)
10. Total (Lines 5 through 9)	4,774,149,254	5,279,512,738	18,844,269,409
11. Net cash from operations (Line 4 minus Line 10)	4,126,785,614	2,663,682,178	14,046,635,168
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	4,701,933,157	8,105,037,175	28,498,075,523
12.2 Stocks	20,704,365	89,081,722	494,712,547
12.3 Mortgage loans	838,451,005	1,414,881,578	3,783,955,926
12.4 Real estate		96,872,221	176,722,654
12.5 Other invested assets	75,862,359	239,960,475	2,909,717,338
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	(51,135,980)	(12,057,144)	(142,216,262)
12.7 Miscellaneous proceeds	(138,665,210)	(494,535,608)	(896,854,827)
12.8 Total investment proceeds (Lines 12.1 to 12.7)	5,447,149,696	9,439,240,419	34,824,112,899
13. Cost of investments acquired (long-term only):			
13.1 Bonds	6,888,000,528	10,467,075,616	43,002,751,228
13.2 Stocks	261,607,805	222,259,021	1,195,896,346
13.3 Mortgage loans	656,120,133	732,376,384	2,094,819,588
13.4 Real estate	879,859	13,704,634	13,292,853
13.5 Other invested assets	547,980,572	768,700,146	3,932,315,900
13.6 Miscellaneous applications	(464,457,827)	(249,744,479)	256,328,689
13.7 Total investments acquired (Lines 13.1 to 13.6)	7,890,131,070	11,954,371,322	50,495,404,604
14. Net increase (or decrease) in contract loans and premium notes	353,875,807	72,254,266	934,865,632
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(2,796,857,181)	(2,587,385,169)	(16,606,157,337)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	(25,000,000)	(25,000,000)	412,500,000
16.2 Capital and paid in surplus, less treasury stock			
16.3 Borrowed funds	(100,890)	(59,903)	(904,826)
16.4 Net deposits on deposit-type contracts and other insurance liabilities	600,020,012	910,833,047	806,327,920
16.5 Dividends to stockholders			
16.6 Other cash provided (applied)	(1,747,515,008)	(1,254,465,876)	966,863,256
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	(1,172,595,886)	(368,692,732)	2,184,786,350
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)	157,332,547	(292,395,723)	(374,735,819)
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	5,568,063,455	5,942,799,274	5,942,799,274
19.2 End of period (Line 18 plus Line 19.1)	5,725,396,002	5,650,403,551	5,568,063,455

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

20.0001. Stock conversion	163,795,548	52,401,701	12,903,518
20.0002. Transfer of bonds to partnerships and LLCs	63,758,308		440,893,701
20.0003. Bond conversions and refinancing	60,388,283	127,475,093	1,177,449,074
20.0004. Change in market value of COLI	38,499,830	19,488,990	(46,160,211)
20.0005. Net investment income payment in-kind bonds	3,059,929	4,876,043	11,713,034
20.0006. Bonds transferred to mortgage loans			625,966,172
20.0007. Transfer of partnerships to partnerships			619,577,868
20.0008. Transfer of partnerships to common stocks - subsidiaries and affiliates			227,109,719
20.0009. Transfer of partnerships to bonds			187,357,404
20.0010. Transfer of common stocks unaffiliated to common stocks - subsidiaries and affiliates			97,458,165

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

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

20.0011. Transfer of mortgage loans to partnerships and limited liability companies .....	.....	.....	40,200,000
20.0012. Deferred gain on real estate .....	.....	.....	16,134,760
20.0013. Common stock purchased as consideration for cash equivalents .....	.....	.....	224
20.0014. Transfer of stocks to partnerships .....	.....	4,659,155	.....

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Industrial life			
2. Ordinary life insurance	2,291,748,684	2,625,563,520	11,049,356,155
3. Ordinary individual annuities	3,029,108,059	1,538,884,193	10,415,834,474
4. Credit life (group and individual)			
5. Group life insurance	44,560,703	34,601,127	139,347,566
6. Group annuities	2,137,204,571	3,708,295,612	13,133,132,079
7. A & H - group	128,541	170,893	633,884
8. A & H - credit (group and individual)			
9. A & H - other	191,711,790	189,887,967	764,002,431
10. Aggregate of all other lines of business			
11. Subtotal (Lines 1 through 10)	7,694,462,347	8,097,403,312	35,502,306,589
12. Fraternal (Fraternal Benefit Societies Only)			
13. Subtotal (Lines 11 through 12)	7,694,462,347	8,097,403,312	35,502,306,589
14. Deposit-type contracts	630,296,891	2,048,157,512	5,109,590,954
15. Total (Lines 13 and 14)	8,324,759,238	10,145,560,824	40,611,897,543
DETAILS OF WRITE-INS			
1001.			
1002.			
1003.			
1098. Summary of remaining write-ins for Line 10 from overflow page			
1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

NOTES TO FINANCIAL STATEMENTS

TABLE OF CONTENTS

Note 1 – Summary of Significant Accounting Policies and Going Concern
Note 2 – Accounting Changes and Corrections of Errors
Note 3 – Business Combinations and Goodwill
Note 4 – Discontinued Operations
Note 5 – Investments
Note 6 – Joint Ventures, Partnerships and Limited Liability Companies
Note 7 – Investment Income
Note 8 – Derivative Instruments
Note 9 – Income Taxes
Note 10 – Information Concerning Parent, Subsidiaries and Affiliates
Note 11 – Debt
Note 12 – Retirement Plans, Deferred Compensation, Postemployment Benefits and Compensated Absences and Other Postretirement Benefit Plans
Note 13 – Capital and Surplus, Dividend Restrictions and Quasi-Reorganizations
Note 14 – Liabilities, Contingencies and Assessments
Note 15 – Leases
Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With Concentrations of Credit Risk
Note 17 – Sale, Transfer and Servicing of Financial Assets and Extinguishments of Liabilities
Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans
Note 19 – Direct Premium Written/Produced by Managing General Agents/Third Party Administrators
Note 20 – Fair Value Measurements
Note 21 – Other Items
Note 22 – Events Subsequent
Note 23 – Reinsurance
Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination
Note 25 – Change in Incurred Losses and Loss Adjustment Expenses
Note 26 – Intercompany Pooling Arrangements
Note 27 – Structured Settlements
Note 28 – Health Care Receivables
Note 29 – Participating Policies
Note 30 – Premium Deficiency Reserves
Note 31 – Reserves for Life Contracts and Annuity Contracts
Note 32 – Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics
Note 33 – Analysis of Life Actuarial Reserves by Withdrawal Characteristics
Note 34 – Premium and Annuity Considerations Deferred and Uncollected
Note 35 – Separate Accounts
Note 36 – Loss/Claim Adjustment Expenses

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 #	2023	2022
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 3)	XXX	XXX	XXX	\$ (247,026,487)	\$ 732,240,859
(2) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(3) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$ (247,026,487)	\$ 732,240,859
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 27,658,485,175	\$ 27,941,058,515
(6) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(7) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$ 27,658,485,175	\$ 27,941,058,515

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.

Note 2 – Accounting Changes and Corrections of Errors

- a. For the three months ended March 31, 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
Other Liabilities	\$ 9,729,798	\$ 9,729,798	\$ (9,729,798)
Policyholders' reserves	(97,746,700)	(97,746,700)	97,746,700
Derivatives	124,676,448	124,676,448	(124,676,448)
Total	<u>\$ 36,659,546</u>	<u>\$ 36,659,546</u>	

Of the \$36,659,546 increase to surplus for prior years' errors, \$36,659,546 was recorded as prior period adjustments, net of taxes.

For the three months ended March 31, 2022, the Company did not record any corrections of prior years' errors.

- b. Adoption of new accounting standards – No change

NOTES TO 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

(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:

	Farm	Residential		Commercial		Mezzanine	Total
		Insured	All Other	Insured	All Other		
a. 2023							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. No allowance for credit losses	-	-	-	-	14,383,673	-	14,383,673
3. Total (1+2)	-	-	-	-	14,383,673	-	14,383,673
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. 2022							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. No allowance for credit losses	-	-	-	-	14,383,673	-	14,383,673
3. Total (1+2)	-	-	-	-	14,383,673	-	14,383,673
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	-	-	-	-	-	-	-

(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:

	Farm	Residential		Commercial		Mezzanine	Total
		Insured	All Other	Insured	All Other		
a. 2023							
1. Average recorded investment	\$ -	\$ -	\$ -	\$ -	14,383,673	\$ -	14,383,673
2. Interest income recognized	-	-	-	-	187,928	-	187,928
3. Recorded investment on nonaccrual status	-	-	-	-	14,383,673	-	14,383,673
4. Amount of interest income recognized using a cash-basis method of accounting	-	-	-	-	-	-	-
b. 2022							
1. Average recorded investment	\$ -	\$ -	\$ -	\$ -	15,399,942	\$ -	15,399,942
2. Interest income recognized	-	-	-	-	774,774	-	774,774
3. Recorded investment on nonaccrual status	-	-	-	-	14,383,673	-	14,383,673
4. Amount of interest income recognized using a cash-basis method of accounting	-	-	-	-	-	-	-

(7) Allowance for credit losses - No change

(8) As of March 31, 2023, 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>56,797,190</u>	<u>-</u>	<u>10,797,613</u>	<u>45,999,577</u>
c. Total first quarter	<u>\$ 56,797,190</u>	<u>\$ -</u>	<u>\$ 10,797,613</u>	<u>\$ 45,999,577</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>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
f. Total second quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</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>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
i. Total third quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</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>\$ 10,797,613</u>	

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

- (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.

NOTES TO FINANCIAL STATEMENTS

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
12624QAC7	\$ 3,512,422	\$ 3,120,715	\$ (391,707)	\$ 3,120,715	\$ 1,664,875	March 31, 2023
12624SAE9	2,546,182	2,252,873	(293,309)	2,252,873	672,000	March 31, 2023
36192RAL6	2,950,000	1,475,000	(1,475,000)	1,475,000	527,313	March 31, 2023
040104RV5	1,466,218	1,404,587	(61,631)	1,404,587	1,357,561	March 31, 2023
040104TF8	44,673	40,179	(4,494)	40,179	34,156	March 31, 2023
040104TG6	471,373	395,907	(75,465)	395,907	442,138	March 31, 2023
04012XAC9	136,023	130,363	(5,660)	130,363	111,736	March 31, 2023
1248MBAF2	12,589,914	5,496,141	(7,093,773)	5,496,141	5,479,168	March 31, 2023
1248MGAJ3	43,914	42,609	(1,305)	42,609	35,260	March 31, 2023
17311YAC7	1,273,018	1,228,216	(44,802)	1,228,216	1,264,914	March 31, 2023
30247DAD3	572,150	552,362	(19,788)	552,362	512,472	March 31, 2023
35729RAE6	3,632,752	3,523,491	(109,261)	3,523,491	3,272,827	March 31, 2023
40431KAE0	2,092,929	2,043,034	(49,895)	2,043,034	2,095,485	March 31, 2023
45071KDD3	419,879	359,858	(60,022)	359,858	365,022	March 31, 2023
46629NAC7	34,588	32,979	(1,610)	32,979	27,783	March 31, 2023
46630KAA4	158,522	155,152	(3,370)	155,152	149,476	March 31, 2023
617463AA2	8,733	7,949	(785)	7,949	6,705	March 31, 2023
61749BAB9	61,518	60,870	(648)	60,870	64,742	March 31, 2023
61750FAE0	412,694	394,112	(18,582)	394,112	366,377	March 31, 2023
61750MAB1	3,264	3,129	(136)	3,129	3,014	March 31, 2023
61755AAB2	3,183	2,639	(544)	2,639	2,526	March 31, 2023
86359DXD4	193,613	183,061	(10,552)	183,061	184,312	March 31, 2023
86363HAB8	36,193	34,244	(1,949)	34,244	30,923	March 31, 2023
92926SAB2	493	381	(111)	381	382	March 31, 2023
93934XAB9	137,528	122,528	(15,000)	122,528	129,850	March 31, 2023
12668ALV5	1,990,831	1,755,977	(234,854)	1,755,977	1,754,077	March 31, 2023
22540VG71	36,270	36,232	(38)	36,232	37,823	March 31, 2023
22943HAD8	3,510,613	3,380,974	(129,638)	3,380,974	1,886,340	March 31, 2023
32053LAA0	19,363	19,262	(101)	19,262	18,644	March 31, 2023
45254TRX4	23,933	23,574	(359)	23,574	23,161	March 31, 2023
45254TSM7	615,674	594,492	(21,182)	594,492	528,927	March 31, 2023
45660LAU3	57,004	56,426	(578)	56,426	55,897	March 31, 2023
45660LYW3	797,875	786,087	(11,788)	786,087	724,845	March 31, 2023
466247XE8	622,921	612,163	(10,758)	612,163	537,075	March 31, 2023
525221AJ6	561,909	502,260	(59,649)	502,260	551,875	March 31, 2023
61915RBZ8	178,926	178,879	(47)	178,879	164,881	March 31, 2023
65535VRK6	479,926	469,432	(10,494)	469,432	495,515	March 31, 2023
75115DAH8	3,502	3,266	(235)	3,266	3,118	March 31, 2023
761118FM5	1,722,865	1,583,656	(139,209)	1,583,656	1,584,522	March 31, 2023
76112BUE8	107,208	96,659	(10,549)	96,659	122,032	March 31, 2023
855541AC2	219,356	180,352	(39,005)	180,352	226,114	March 31, 2023
86359BLQ2	792,449	779,863	(12,586)	779,863	701,652	March 31, 2023
92978EAA2	83,791	81,555	(2,236)	81,555	79,259	March 31, 2023
92979DAA3	15,795	15,379	(416)	15,379	15,469	March 31, 2023
41161PWB5	723,595	713,315	(10,280)	713,315	587,280	March 31, 2023
45660N5H4	1,202,840	1,156,288	(46,553)	1,156,288	1,159,986	March 31, 2023
45660NT88	14,960	14,830	(130)	14,830	14,372	March 31, 2023
92922F5T1	1,438,953	1,412,027	(26,926)	1,412,027	1,244,390	March 31, 2023
939336X65	1,599,517	1,419,593	(179,924)	1,419,593	1,427,509	March 31, 2023
05949CCB0	34,367	34,278	(89)	34,278	35,010	March 31, 2023
32051DCJ9	44,524	44,461	(63)	44,461	43,405	March 31, 2023
36228FWU6	150,442	141,049	(9,393)	141,049	147,677	March 31, 2023
362341VU0	1,530,315	1,520,759	(9,556)	1,520,759	1,428,432	March 31, 2023
36298XAA0	4,788,213	4,743,999	(44,214)	4,743,999	4,501,267	March 31, 2023
5899292N7	48,660	47,935	(724)	47,935	46,874	March 31, 2023
589929N38	42,499	40,236	(2,263)	40,236	39,978	March 31, 2023
59020UNZ4	89,539	75,877	(13,662)	75,877	85,656	March 31, 2023
86359DME4	439,975	415,180	(24,794)	415,180	400,433	March 31, 2023
929227ZF6	6,804	883	(5,921)	883	3,055	March 31, 2023
Totals	\$ 56,797,190	\$ 45,999,577	\$ (10,797,613)	\$ 45,999,577	\$ 39,477,567	

NOTES TO FINANCIAL STATEMENTS

(4) As of March 31, 2023, 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	\$ (1,474,972,040)
2.	12 months or longer	\$ (115,291,781)
b.	The aggregate related fair value of securities with unrealized losses:	
1.	Less than 12 months	\$ 18,613,186,739
2.	12 months or longer	\$ 1,261,180,310

(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 March 31, 2023.

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			
b. Tri-Party (YES/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	\$ 771,927,581	\$ -	\$ -	\$ -
5. > 1 Month to 3 Months	\$ 3,053,763,802	\$ -	\$ -	\$ -
6. > 3 Months to 1 Year	\$ -	\$ -	\$ -	\$ -
7. > 1 Year	-	-	-	-

	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	\$ 397,625,000	\$ -	\$ -	\$ -
5. > 1 Month to 3 Months	\$ 2,144,361,728	\$ -	\$ -	\$ -
6. > 3 Months to 1 Year	\$ -	\$ -	\$ -	\$ -
7. > 1 Year	-	-	-	-

(4) The company did not have any repurchase agreements where securities sold and/or acquired resulted in default as of March 31, 2023.

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

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. BACV	XXX	XXX	XXX	XXX
2. Nonadmitted - Subset of BACV	XXX	XXX	XXX	XXX
3. Fair Value	\$ 3,053,763,802	\$ -	\$ -	\$ -

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
b. Ending Balance				
1. BACV	\$ 3,018,615,774	\$ -	\$ -	\$ -
2. Nonadmitted - Subset of BACV	-	-	-	-
3. Fair Value	\$ 3,018,615,774	\$ -	\$ -	\$ -

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	\$ -	\$ 3,018,615,774	\$ -	\$ -
b.	Bonds - FV	\$ -	\$ 3,018,615,774	\$ -	\$ -
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	\$ -	\$ 3,018,615,774	\$ -	\$ -
q.	Total Assets - FV	\$ -	\$ 3,018,615,774	\$ -	\$ -

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	\$ 129,727,704	\$ -	\$ -	\$ -
2.	Securities (FV)	\$ 3,065,998,409	\$ -	\$ -	\$ -
b.	Ending Balance				
1.	Cash	\$ 18,780,877	\$ -	\$ -	\$ -
2.	Securities (FV)	\$ 3,021,946,900	\$ -	\$ -	\$ -

(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	\$ 18,780,877	\$ -	\$ -	\$ -
b.	Bonds - FV	-	3,021,946,900	-	-
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)	\$ 18,780,877	\$ 3,021,946,900	\$ -	\$ -

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	\$ 259,215,895
c.	31 to 90 Days	\$ 2,787,046,284
d.	> 90 Days	\$ -

NOTES TO FINANCIAL STATEMENTS

(10) The company did not have any repurchase agreements where cash collateral received was reinvested as of March 31, 2023.

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

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Cash (Collateral – All)	\$ 129,727,704	\$ -	\$ -	\$ -
2. Securities Collateral (FV)	\$ 3,065,998,409	\$ -	\$ -	\$ -
b. Ending Balance				
1. Cash (Collateral – All)	\$ 18,780,877	\$ -	\$ -	\$ -
2. Securities Collateral (FV)	\$ 3,021,946,900	\$ -	\$ -	\$ -

- 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 March 31, 2023.
- 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 March 31, 2023.
- 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 March 31, 2023.
- 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 March 31, 2023.
- 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 March 31, 2023.
- o. 5GI Securities:

Investment	Number of 5GI Securities		Aggregate BACV		Aggregate Fair Value	
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
(1) Bonds - AC	210	191	\$1,559,728,277	\$1,456,580,250	\$1,526,712,672	\$1,434,388,058
(2) LB&SS - AC						
(3) Preferred Stock - AC	3	3	7,129,836	7,014,496	10,728,262	9,920,777
(4) Preferred Stock - FV						
(5) Total (1+2+3+4)	213	194	\$1,566,858,113	\$1,463,594,746	\$1,537,440,934	\$1,444,308,835

AC - Amortized Cost FV - Fair Value

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

	Three Months Ended March 31, 2023	
	General Account	Separate Account
1. Number of CUSIPS		4
2. Aggregate amount of investment income	\$ 937,907	\$

- 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 changes.

Note 10 – Information Concerning Parent, Subsidiaries and Affiliates

- a-c. MassMutual Holding LLC (MMHLLC) paid \$450,000,000 in dividends to MassMutual for the three months ended March 31, 2023, which were declared in 2022, and paid \$344,000,000 in dividends to MassMutual for the three months ended March 31, 2022, which were declared in 2021.

MMHLLC declared an additional \$280,000,000 in dividends to MassMutual for the three months ended March 31, 2023.

MassMutual contributed capital of \$43,711,417 to MMHLLC for the three months ended March 31, 2023 and \$65,100,000 for the three months ended March 31, 2022.

In February 2023, MassMutual made capital contributions of \$45,000,000 to ITPS Holdings LLC.

NOTES TO FINANCIAL STATEMENTS

In March 2023, MassMutual made capital contributions of \$87,814,303 to MassMutual Mortgage Lending LLC, \$50,000,000 to MMIH Bond Holdings LLC, and \$13,100,000 to MML CM LLC.

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. The Company has determined the actual maximum borrowing capacity as \$6,000,000,000. The Company's unused capacity was \$3,891,952,092 as of March 31, 2023.

(2) FHLB Boston capital stock

a. Aggregate totals:

		March 31, 2023		
		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	7,820,000	7,820,000	-
	(e) Aggregate Total	\$ 96,820,000	\$ 96,820,000	\$ -
	(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:

		Three Months Ended March 31, 2023					
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 March 31, 2023:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 3,391,213,161	\$ 2,569,307,136	\$ 2,108,047,908

2. Current year general account:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 3,391,213,161	\$ 2,569,307,136	\$ 2,108,047,908

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	\$ 3,663,321,862	\$ 2,536,224,711	\$ 2,110,751,541

b. Maximum amount pledged for the three months ended March 31, 2023:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 3,631,258,342	\$ 2,603,372,084	\$ 2,113,979,041

2. Current year general account:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 3,631,258,342	\$ 2,603,372,084	\$ 2,113,979,041

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	\$ 3,879,407,520	\$ 2,786,612,064	\$ 2,113,805,888

NOTES TO FINANCIAL STATEMENTS

(4) Borrowing from FHLB:

a. Amount:

1. Current year:

	March 31, 2023			
	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	2,108,047,908	2,108,047,908	-	2,108,047,908
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 2,108,047,908</u>	<u>\$ 2,108,047,908</u>	<u>\$ -</u>	<u>\$ 2,108,047,908</u>

2. Prior Year-end:

	December 31, 2022			
	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	2,110,751,541	2,110,751,541	-	2,110,751,541
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 2,110,751,541</u>	<u>\$ 2,110,751,541</u>	<u>\$ -</u>	<u>\$ 2,110,751,541</u>

b. Maximum Amount:

	Three Months Ended March 31, 2023		
	1 Total 2+3	2 General Account	3 Separate Account
1. Debt	\$ -	\$ -	\$ -
2. Funding	2,113,979,041	2,113,979,041	-
3. Other	-	-	-
4. Aggregate	<u>\$ 2,113,979,041</u>	<u>\$ 2,113,979,041</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)

	For Three Months Ended March 31,					
	2023		2022		2023	2022
	Pension Benefits		Postretirement Benefits		Special or Contractual Benefits per SSAP No 11	
a. Service cost	\$ 21,623,065	\$ 24,246,155	\$ 1,950,000	\$ 2,400,000	\$ -	\$ -
b. Interest cost	31,219,345	21,432,990	3,875,000	2,575,000	-	-
c. Expected return on plan assets	(42,135,780)	(48,404,854)	-	-	-	-
d. Transition asset or obligation	-	-	-	-	-	-
e. Gains and losses	6,662,975	2,331,789	(2,175,000)	(400,000)	-	-
f. Prior service cost or (benefit)	-	-	(1,375,000)	(1,375,000)	-	-
h. Total net periodic benefit cost/(benefit)	<u>\$ 17,369,605</u>	<u>\$ (393,920)</u>	<u>\$ 2,275,000</u>	<u>\$ 3,200,000</u>	<u>\$ -</u>	<u>\$ -</u>

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

NOTES TO FINANCIAL STATEMENTS

- 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 - No change
 - (1) The Company did not have any servicing assets or liabilities in 2023 or 2022.
 - (2) No change
 - (3) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2023 or 2022.
 - (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 three months ended March 31, 2023 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 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,

NOTES TO FINANCIAL STATEMENTS

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:

	March 31, 2023			Net Asset Value (NAV)	Total
	Level 1	Level 2	Level 3		
Financial assets:					
Bonds:					
All other governments	\$ -	\$ 5,359,622	\$ -	\$ -	\$ 5,359,622
Special revenue	\$ -	\$ 1,117,180	\$ -	\$ -	\$ 1,117,180
Industrial and miscellaneous	65,354,164	91,930,827	121,541,649	-	278,826,640
Hybrid securities	-	1,229,175	-	-	1,229,175
Preferred stocks	23,819,371	-	55,418,881	-	79,238,252
Common stock - subsidiaries and affiliates	342,297,435	-	624,589,355	-	966,886,790
Common stock - unaffiliated	673,403,008	194,220	944,171,807	-	1,617,769,035
Derivatives:					
Interest rate swaps	-	15,553,831,267	-	-	15,553,831,267
Options	20,984,050	528,847,226	-	-	549,831,276
Currency swaps	-	3,010,621,730	-	-	3,010,621,730
Forward contracts	-	81,865,558	-	-	81,865,558
Financial futures	125,794,348	-	-	-	125,794,348
Separate account assets	35,790,067,487	16,908,151,941	1,699,810,216	-	54,398,029,644
Total financial assets carried at fair value	\$ 37,041,719,863	\$ 36,183,148,746	\$ 3,445,531,908	\$ -	\$ 76,670,400,517
Financial liabilities:					
Interest rate swaps	\$ -	\$ 10,705,419,935	\$ -	\$ -	\$ 10,705,419,935
Options	3,856,200	-	-	-	3,856,200
Currency swaps	-	134,391,889	-	-	134,391,889
Forward contracts	-	60,638,371	-	-	60,638,371
Credit default swaps	-	17,224,180	-	-	17,224,180
Financial futures	24,080,731	-	-	-	24,080,731
Total financial liabilities carried at fair value	\$ 27,936,931	\$ 10,917,674,375	\$ -	\$ -	\$ 10,945,611,306

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 March 31, 2023, 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.

NOTES TO FINANCIAL STATEMENTS

December 31, 2022

	December 31, 2022				Total
	Level 1	Level 2	Level 3	Net Asset Value (NAV)	
Financial assets:					
Bonds:					
All other governments	-	5,554,888	-	-	5,554,888
Special revenue	\$ -	\$ 1,381,125	\$ -	\$ -	\$ 1,381,125
Industrial and miscellaneous	-	85,060,941	219,991,919	-	305,052,860
Preferred stocks	20,529,430	-	46,860,117	-	67,389,547
Common stock - subsidiaries and affiliates	109,945,579	-	349,974,518	-	459,920,097
Common stock - unaffiliated	506,886,908	-	970,148,972	-	1,477,035,880
Derivatives:					
Interest rate swaps	-	18,287,418,022	-	-	18,287,418,022
Options	29,969,900	608,882,832	-	-	638,852,732
Currency swaps	-	3,070,767,448	-	-	3,070,767,448
Forward contracts	-	13,803,075	-	-	13,803,075
Financial futures	21,108,555	-	-	-	21,108,555
Separate account assets	34,930,934,386	16,789,645,046	1,693,225,225	-	53,413,804,657
Total financial assets carried at fair value	\$ 35,619,374,758	\$ 38,862,513,377	\$ 3,280,200,751	\$ -	\$ 77,762,088,886

Financial liabilities:

Derivatives:

Interest rate swaps	\$ -	\$ 13,036,298,722	\$ -	\$ -	\$ 13,036,298,722
Options	5,952,000	-	-	-	5,952,000
Currency swaps	-	708,572,178	-	-	708,572,178
Forward contracts	-	236,132,392	-	-	236,132,392
Credit default swaps	-	12,319,618	-	-	12,319,618
Financial futures	2,985,920	-	-	-	2,985,920
Total financial liabilities carried at fair value	\$ 8,937,920	\$ 13,993,322,910	\$ -	\$ -	\$ 14,002,260,830

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

	Balance as of 1/1/2023	In	Transfers In	Out	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Balance as of 3/31/2023
Financial assets:											
Bonds:											
Industrial and miscellaneous Parent, subsidiaries	\$ 219,761,776	\$ -	\$ (94,742,390)	\$ (1,827,818)	\$ 1,574,417	\$ 2,543,948	\$ -	\$ (5,764,075)	\$ (4,209)	\$ -	\$ 121,541,649
Preferred stock	47,089,392	-	2,601,644	-	4,157,532	1,570,313	-	-	-	-	55,418,881
Common stock - subsidiaries and affiliates	349,974,519	-	(5,593,673)	-	271,060,640	-	9,147,869	-	-	-	624,589,355
Common stock - unaffiliated	970,144,486	3,065,827	(3,255,561)	342,272	(65,150,463)	20,990,409	18,535,909	-	(501,072)	-	944,171,807
Derivatives:											
Separate account assets	1,693,225,223	4,826,843	(14,000,000)	31,100,793	-	18,117,378	-	(33,128,560)	(331,463)	-	1,699,810,216
Total financial assets	\$ 3,280,195,396	\$ 7,892,670	\$ (114,989,980)	\$ 29,615,247	\$ 211,642,126	\$ 43,222,048	\$ 27,683,778	\$ (38,892,635)	\$ (836,744)	\$ -	\$ 3,445,531,908

(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 01/01/2022	In	Transfers ⁽¹⁾ In	Out	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Balance as of 12/31/2022
Financial assets:											
Bonds:											
Industrial and miscellaneous	\$ 186,869,899	\$ 63,585,571	\$ -	\$ 2,558,223	\$ (8,848,976)	\$ 19,170,175	\$ 8,598,716	\$ -	\$ (52,171,832)	\$ -	\$ 219,761,776
Preferred Stock	18,015,655	47,000,000	-	-	(17,926,263)	-	-	-	-	-	47,089,392
Common stock - subsidiaries and affiliates	253,282,028	-	(116,414,688)	(12,864,161)	110,495,297	(793,391,645)	979,949,809	(64,925,851)	(6,156,270)	(6,156,270)	349,974,519
Common stock - unaffiliated	753,425,003	416	(3,730,890)	27,616,461	2,294,443	326,642,527	3,111,577	(27,035,206)	(112,179,845)	(112,179,845)	970,144,486
Separate account assets	1,893,940,793	-	(12,868,618)	(173,960,223)	-	282,160,365	-	(295,557,370)	(489,724)	(489,724)	1,693,225,223
Total financial assets	\$ 3,105,533,378	\$ 110,585,987	\$ (133,014,196)	\$ (156,649,700)	\$ 86,014,501	\$ (165,418,578)	\$ 991,660,102	\$ (387,518,427)	\$ (170,997,671)	\$ (170,997,671)	\$ 3,280,195,396

(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.

NOTES TO FINANCIAL STATEMENTS

(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 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:

		March 31, 2023					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	\$	4,512,343,859	\$ 4,687,841,738	-	\$ 4,512,181,754	\$ 162,104	\$ -	-
All other governments		1,393,917,639	1,614,791,163	-	1,335,141,006	58,776,633	-	-
States, territories and possessions		247,249,837	248,181,915	-	247,249,837	-	-	-
Political subdivisions		396,869,724	403,498,363	-	396,869,724	-	-	-
Special revenue		4,255,414,231	4,228,137,672	-	4,248,961,642	6,452,590	-	-
Industrial and miscellaneous		109,730,917,118	119,421,429,950	97,906,273	47,811,335,145	61,821,675,701	-	-
Parent, subsidiaries and affiliates		7,534,950,543	8,145,457,816	-	1,097,465,269	6,437,485,273	-	-
Preferred stocks		375,055,928	368,369,826	64,334,826	-	310,721,102	-	-
Common stocks - subsidiaries								
and affiliates ⁽¹⁾		966,886,790	966,886,790	342,297,435	-	624,589,355	-	-
Common stocks - unaffiliated		1,617,769,035	1,617,769,035	673,403,008	194,220	944,171,807	-	-
Mortgage loans - commercial		19,094,022,498	20,420,756,914	-	-	19,094,022,498	-	-
Mortgage loans - residential		4,164,425,736	4,421,487,979	-	-	4,164,425,736	-	-
Cash, cash equivalents and								
short-term investments		5,725,403,728	5,725,403,728	364,844,048	5,360,559,680	-	-	-
Derivatives:								
Interest rate swaps		15,672,086,997	15,553,831,267	-	15,672,086,997	-	-	-
Options		549,831,276	549,831,276	20,984,050	528,847,226	-	-	-
Currency swaps		3,011,874,890	3,011,874,890	-	3,010,621,730	-	-	-
Forward contracts		81,865,558	81,865,558	-	81,865,558	-	-	-
Credit default swaps		460,000	-	-	460,000	-	-	-
Financial futures		125,794,348	125,794,348	125,794,348	-	-	-	-
Separate account assets		54,398,029,645	54,398,029,645	35,790,067,487	16,908,151,941	1,699,810,216	-	-
Financial liabilities:								
Repurchase agreements		3,017,044,862	3,017,044,862	-	3,017,044,862	-	-	-
Commercial paper		249,947,917	249,947,917	-	249,947,917	-	-	-
Guaranteed interest contracts		14,691,985,690	15,368,268,596	-	-	14,691,985,690	-	-
Group annuity contracts and								
other deposits		1,902,272,364	2,164,840,219	-	-	1,902,272,364	-	-
Individual annuity contracts		18,236,363,922	18,614,263,645	-	-	18,236,363,922	-	-
Supplementary contracts		1,062,884,133	1,061,788,035	-	-	1,062,884,133	-	-
Derivatives:								
Interest rate swaps		15,834,419,935	10,705,419,935	-	15,834,419,935	-	-	-
Options		3,856,200	3,856,200	3,856,200	-	-	-	-
Currency swaps		916,555,208	916,555,208	-	134,391,889	-	-	-
Forward contracts		60,638,371	60,638,371	-	60,638,371	-	-	-
Credit default swaps		17,312,095	17,822,080	-	17,312,095	-	-	-
Financial futures		24,080,731	24,080,731	24,080,731	-	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had a statutory carrying value of \$23,598,655,594

NOTES TO FINANCIAL STATEMENTS

December 31, 2022

	Aggregate	Admitted				Net	Not
	Fair Value	Assets	Level 1	Level 2	Level 3	Asset	Practicable
						Value	(Carrying
						(NAV)	Value)
Financial assets:							
Bonds:							
U. S. government and agencies	\$ 4,427,766,511	\$ 4,764,141,765	\$ -	\$ 4,427,676,771	\$ 89,740	\$ -	\$ -
All other governments	1,385,020,246	1,635,488,544	-	1,322,861,870	62,158,376	-	-
States, territories and possessions	241,029,806	248,419,799	-	241,029,806	-	-	-
Political subdivisions	388,165,728	404,416,301	-	388,165,728	-	-	-
Special revenue	4,110,747,489	4,186,668,736	-	4,101,957,597	8,789,892	-	-
Industrial and miscellaneous	105,790,586,118	117,023,317,719	42,325,191	45,769,408,257	59,978,852,670	-	-
Parent, subsidiaries and affiliates	7,956,165,771	8,182,767,682	-	1,014,933,180	6,941,232,591	-	-
Preferred stocks	445,941,513	451,411,752	45,250,616	-	400,690,897	-	-
Common stock - subsidiaries and affiliates ⁽¹⁾	459,920,097	459,920,097	109,945,579	-	349,974,518	-	-
Common stock - unaffiliated	1,477,035,880	1,477,035,880	506,886,908	-	970,148,972	-	-
Mortgage loans - commercial	19,151,961,603	20,755,372,546	-	-	19,151,961,603	-	-
Mortgage loans - residential	3,892,448,035	4,216,591,382	-	-	3,892,448,035	-	-
Cash, cash equivalents and short-term investments	5,568,063,455	5,568,063,455	419,730,608	5,148,332,847	-	-	-
Derivatives:							
Interest rate swaps	18,456,834,141	18,287,418,022	-	18,456,834,141	-	-	-
Options	638,852,732	638,852,732	29,969,900	608,882,832	-	-	-
Currency swaps	3,070,767,448	3,070,767,448	-	3,070,767,448	-	-	-
Forward contracts	13,803,075	13,803,075	-	13,803,075	-	-	-
Credit default swaps	460,000	-	-	460,000	-	-	-
Financial futures	21,108,555	21,108,555	21,108,555	-	-	-	-
Separate account assets	53,413,804,657	53,413,804,657	34,930,934,386	16,789,645,046	1,693,225,225	-	-
Financial liabilities:							
Repurchase agreements	3,041,983,723	3,041,983,723	-	3,041,983,723	-	-	-
Commercial paper	249,947,917	249,947,917	-	249,947,917	-	-	-
Guaranteed investment contracts	13,802,550,862	14,701,159,948	-	-	13,802,550,862	-	-
Group annuity contracts and other deposits	1,889,919,988	2,162,490,271	-	-	1,889,919,988	-	-
Individual annuity contracts	16,214,481,799	17,000,232,720	-	-	16,214,481,799	-	-
Supplementary contracts	1,139,882,636	1,138,650,972	-	-	1,139,882,636	-	-
Derivatives:							
Interest rate swaps	18,165,298,722	13,036,298,722	-	18,165,298,722	-	-	-
Options	5,952,000	5,952,000	5,952,000	-	-	-	-
Currency swaps	708,572,178	708,572,178	-	708,572,178	-	-	-
Forward contracts	236,132,392	236,132,392	-	236,132,392	-	-	-
Credit default swaps	12,574,665	13,004,716	-	12,574,665	-	-	-
Financial futures	2,985,920	2,985,920	2,985,920	-	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had statutory carrying values of \$24,222,743,540

d. As of March 31, 2023 and December 31, 2022, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

- Unusual or infrequent items - No change
- Troubled debt restructuring - No change
- 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 2022 Annual Statement.

Insurance and underwriting risks

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.

NOTES TO FINANCIAL STATEMENTS

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.

The spread of the coronavirus had caused increased cases of COVID-19 and significant volatility in U.S. and international markets. There is significant uncertainty around the breadth and duration of business disruptions related to COVID-19, as well as its impact on the U.S. and international economies. At this time, the Company is not able to reliably estimate the length and severity of the COVID-19 public health crises and, as such, cannot quantify its impact on the financial results, liquidity and capital resources and its operations in future periods.

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:	Three Months Ended March 31, 2023			
	Actual Cost	Carrying Value	Fair Value	OTTI
a. Residential mortgage-backed securities	\$ 162,207,473	\$ 187,500,230	\$ 190,827,435	\$ 947,525
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	\$ 6,419,933	\$ 7,980,433	\$ 8,011,565	\$ 43,479
f. Other assets	-	-	-	-
g. Total	<u>\$ 168,627,407</u>	<u>\$ 195,480,663</u>	<u>\$ 198,839,000</u>	<u>\$ 991,004</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, 2022			
	Actual Cost	Carrying Value	Fair Value	OTTI
a. Residential mortgage-backed securities	\$ 149,219,166	\$ 175,405,029	\$ 177,868,702	\$ 2,353,327
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	13,715,674	15,459,243	15,231,106	81,767
f. Other assets	-	-	-	-
g. Total	<u>\$ 162,934,841</u>	<u>190,864,272</u>	<u>193,099,808</u>	<u>2,435,094</u>

*The Company's Subsidiaries and Controlled Affiliates (SCA), C.M. Life Insurance Company (C.M. Life), has investments in Alt-A and subprime mortgages, as does C.M. Life's SCA, MML Bay State Insurance Company (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

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through May 12, 2023, 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 April 12, 2023, MassMutual issued a \$750,000,000 funding agreement with a 4.50% fixed rate and a 3-year maturity.

On May 3, 2023, MassMutual issued a CHF 215,000,000 funding agreement with a 2.65% fixed rate and a 5-year maturity.

Note 23 – Reinsurance - No change**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 2023 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** - No change**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 Name of Entity	2 NAIC Company Code	3 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 Affiliate Name	2 Location (City, State)	3 FRB	4 OCC	5 FDIC	6 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, OCC	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 [] 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 [] 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 []
- 9.31 If the response to 9.3 is Yes, provide the nature of any waiver(s).
.....

FINANCIAL

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

INVESTMENT

- 11.1 Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.) Yes [] No []
- 11.2 If yes, give full and complete information relating thereto:
12. Amount of real estate and mortgages held in other invested assets in Schedule BA: \$ 3,254,707,761
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 [] 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 | \$ 8,182,767,683 | \$ 8,145,457,816 |
| 14.22 Preferred Stock | \$ | \$ |
| 14.23 Common Stock | \$ 24,256,245,062 | \$ 24,729,739,108 |
| 14.24 Short-Term Investments | \$ | \$ |
| 14.25 Mortgage Loans on Real Estate | \$ | \$ |
| 14.26 All Other | \$ 5,819,534,587 | \$ 5,630,537,793 |
| 14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | \$ 38,258,547,333 | \$ 38,505,734,717 |
| 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 [] No []
- 15.2 If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes [] No [] N/A []
If no, attach a description with this statement.
.....
16. For the reporting entity's security lending program, state the amount of the following as of 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. \$

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company
GENERAL INTERROGATORIES

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

1 Name of Custodian(s)	2 Custodian Address
Citibank, N.A.	333 West 34th Street, New York, NY 10001
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105
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 Central Registration Depository Number	2 Name of Firm or Individual	3 Legal Entity Identifier (LEI)	4 Registered With	5 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	549300G36F1E2S4MQM37	SEC	DS.....
168456	Carlyle Aviation Group Capital Markets LLC	54930010815L9BP71G93	SEC	NO.....
311767	Fractal Investments LLC	984500D14JFD006CBC96	SEC	NO.....
104517	Franklin Advisers, Inc.	B1CG1NRZIDDJ0DQEXB52	SEC	NO.....
84-1444062	Great-West Capital Management LLC	549300S3EPOXXVYMD485	SEC	NO.....
162754	IFM Investors Pty Ltd	5493002BVK0Q17K1W7H93	SEC	NO.....
110363	Invesco Investment Management Company	037NHJV7S22110N0U83	SEC	NO.....
162264	Jefferies Finance LLC	549300SKVB18YSSIDT75	SEC	NO.....
104559	Pacific Investment Management Company LLC	549300KGPYQZGMYYN38	SEC	NO.....
801-8162	Western Asset Management Company	549300C5A561UXU1CN46	SEC	NO.....
157359	Centerbridge Martello Advisors, LLC	549300F5X7LPP05D3544	SEC	NO.....

STATEMENT AS OF MARCH 31, 2023 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 3/31/2023, 210 issues for 167 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 \$4,724,295,062 or 4.22% 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\$..... 4,421,493,951
- 1.13 Commercial Mortgages\$..... 20,384,113,350
- 1.14 Total Mortgages in Good Standing\$..... 24,805,607,301
- 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\$..... 36,637,592
- 1.44 Total Mortgages in Process of Foreclosure\$..... 36,637,592
- 1.5 Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)\$..... 24,842,244,893
- 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 MARCH 31, 2023 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-5420050	11/20/2021	KOREAN REINSURANCE COMPANY (KRUH)	KOR	YRT/I	OL	Unauthorized		
82627	06-0839705	11/20/2021	SWISS RE LIFE & HEALTH AMERICA INC. (SRUH)	MO	YRT/I	OL	Authorized		
86258	13-2572994	11/20/2021	GENERAL RE LIFE CORPORATION (GRUH)	CT	YRT/I	OL	Authorized		
88340	59-2859797	01/01/2023	HANNOVER LIFE REASSURANCE COMPANY OF AMERICA (HAEA)	FL	YRT/I	OL	Authorized		
88340	59-2859797	01/01/2023	HANNOVER LIFE REASSURANCE COMPANY OF AMERICA (HAEC)	FL	YRT/I	OL	Authorized		
88340	59-2859797	01/01/2023	HANNOVER LIFE REASSURANCE COMPANY OF AMERICA (HAHA)	FL	YRT/I	OL	Authorized		
97071	13-3126819	07/07/2018	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUU2)	DE	CO/I	OL	Authorized		
97071	13-3126819	11/20/2021	SCOR GLOBAL LIFE USA REINSURANCE COMPANY (SUUH)	DE	YRT/I	OL	Authorized		

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company
SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

States, Etc.	1	Life Contracts		Direct Business Only			7	
		Active Status (a)	2	3	4	5		6
			Life Insurance Premiums	Annuity Considerations					Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 Through 5
1. Alabama	AL	L	12,457,808	23,138,830	1,910,219	5,578,671	43,085,528	1,415,962
2. Alaska	AK	L	815,467	4,570,138	122,113	589,550	6,097,268	8,596,118
3. Arizona	AZ	L	26,275,829	93,033,533	3,027,443	913,917	123,250,722	4,744,783
4. Arkansas	AR	L	6,329,334	13,101,638	687,691	189,264	20,307,927	6,164,694
5. California	CA	L	213,465,863	358,845,550	16,857,378	67,897,438	657,066,229	72,709,932
6. Colorado	CO	L	33,721,251	59,268,826	2,926,622	14,539,056	110,455,755	19,375,536
7. Connecticut	CT	L	51,975,236	48,738,183	4,540,339	24,713,910	129,967,668	5,541,735
8. Delaware	DE	L	5,018,231	12,267,659	525,649	6,384,167	24,195,706	2,035,113
9. District of Columbia	DC	L	7,927,841	2,686,009	1,018,039	4,710,968	16,342,857	2,031,974
10. Florida	FL	L	156,253,374	243,265,101	9,995,448	24,286,935	433,800,858	72,052,406
11. Georgia	GA	L	57,696,979	55,525,744	6,565,351	23,253,088	143,041,162	14,177,592
12. Hawaii	HI	L	5,590,364	8,456,731	761,701	1,693,357	16,502,153	1,212,967
13. Idaho	ID	L	8,239,345	17,854,758	557,380	2,411,450	29,062,933	8,137,828
14. Illinois	IL	L	61,420,132	70,148,853	6,115,576	113,809,184	251,493,745	8,801,621
15. Indiana	IN	L	27,042,084	40,711,427	2,455,477	11,709,524	81,918,512	16,521,952
16. Iowa	IA	L	11,285,799	17,328,739	902,229	4,913,528	34,430,295	22,795,755
17. Kansas	KS	L	16,997,012	400,853,587	1,323,218	11,452,091	430,625,908	945,239
18. Kentucky	KY	L	7,976,339	23,705,795	1,362,332	2,442,933	35,487,399	4,132,569
19. Louisiana	LA	L	13,798,342	21,070,074	1,856,245	7,145,643	43,870,304	6,128,901
20. Maine	ME	L	3,716,215	235,413,024	683,843	1,168,952	240,982,034	12,858,295
21. Maryland	MD	L	33,160,112	45,297,797	6,598,293	37,106,482	122,162,684	9,239,919
22. Massachusetts	MA	L	189,632,236	155,189,252	8,008,595	436,181,558	789,011,641	6,995,398
23. Michigan	MI	L	36,754,389	73,927,313	3,647,354	28,125,385	142,454,441	17,299,630
24. Minnesota	MN	L	12,050,073	60,127,930	2,142,053	14,554,629	88,874,685	6,989,393
25. Mississippi	MS	L	11,218,197	11,544,268	2,482,702	4,827,811	30,072,978	3,474,544
26. Missouri	MO	L	18,956,207	38,240,163	2,536,526	15,179,512	74,912,408	7,981,653
27. Montana	MT	L	3,595,113	11,020,391	531,775	119,888	15,267,167	1,302,226
28. Nebraska	NE	L	8,606,965	5,787,486	1,468,251	168,714,143	184,576,845	22,258,321
29. Nevada	NV	L	12,916,745	23,758,746	956,721	3,820,517	41,452,729	2,063,530
30. New Hampshire	NH	L	11,295,023	32,391,791	1,071,566	2,802,108	47,560,488	6,055,156
31. New Jersey	NJ	L	129,600,712	158,017,422	9,037,767	58,539,868	355,195,769	11,787,907
32. New Mexico	NM	L	7,652,651	16,751,711	681,476	49,968	25,135,806	29,339,095
33. New York	NY	L	364,864,214	377,949,195	21,252,440	80,742,600	844,808,449	13,882,230
34. North Carolina	NC	L	45,189,597	81,087,608	7,682,536	5,834,303	139,794,044	10,838,178
35. North Dakota	ND	L	10,049,694	1,651,457	204,702	102,461	12,008,314	29,751,762
36. Ohio	OH	L	35,165,481	98,406,316	4,644,754	30,618,723	168,835,274	16,471,189
37. Oklahoma	OK	L	22,540,622	83,731,256	2,043,195	9,969,253	118,284,326	4,031,639
38. Oregon	OR	L	10,350,412	31,633,535	1,454,341	7,261,449	50,699,737	3,915,251
39. Pennsylvania	PA	L	84,292,213	133,721,282	10,426,645	41,559,093	269,999,233	6,988,358
40. Rhode Island	RI	L	5,132,296	12,235,555	754,990	3,290,402	21,413,243	3,120,533
41. South Carolina	SC	L	20,674,048	27,291,661	4,010,600	3,055,770	55,032,079	17,727,033
42. South Dakota	SD	L	1,917,359	4,655,797	199,920	(39,253)	6,733,823	902,279
43. Tennessee	TN	L	38,896,151	55,158,157	4,985,553	10,623,520	109,663,381	11,475,898
44. Texas	TX	L	121,212,816	260,529,186	12,767,161	35,811,563	430,320,726	52,598,362
45. Utah	UT	L	15,386,643	17,708,405	1,071,618	1,381,274	35,547,940	7,939,378
46. Vermont	VT	L	3,437,516	8,802,814	414,921	2,236,304	14,891,555	12,079,477
47. Virginia	VA	L	51,239,474	75,188,845	8,031,951	22,842,511	157,302,781	4,475,066
48. Washington	WA	L	22,279,665	61,530,822	3,055,615	10,902,642	97,768,744	5,480,087
49. West Virginia	WV	L	3,302,845	7,607,434	372,272	3,152,403	14,434,954	498,204
50. Wisconsin	WI	L	14,651,123	34,171,617	1,733,633	10,313,924	60,870,297	11,978,899
51. Wyoming	WY	L	1,559,755	6,613,002	158,795	41,825	8,373,377	950,834
52. American Samoa	AS	N						
53. Guam	GU	N	560		4,760		5,320	
54. Puerto Rico	PR	L	18,790,038	4,819,003	2,578,487	1,828,729	28,016,257	
55. U.S. Virgin Islands	VI	N	9,993	9,582	2,283		21,858	
56. Northern Mariana Islands	MP	N						
57. Canada	CAN	N	1,386,002	51,594	22,026	64,950	1,524,572	
58. Aggregate Other Aliens	OT	XXX	4,623,247	800	137,091	18,117,132	22,878,270	24,490
59. Subtotal	XXX		2,100,393,032	3,766,593,392	191,367,661	1,399,537,073	7,457,891,158	630,296,891
90. Reporting entity contributions for employee benefits plans	XXX							
91. Dividends or refunds applied to purchase paid-up additions and annuities	XXX		358,182,190	182,169			358,364,359	
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		7,547,469		2,460,550		10,008,019	
94. Aggregate or other amounts not allocable by State	XXX		80,054,730				80,054,730	
95. Totals (Direct Business)	XXX		2,546,177,421	3,766,775,561	193,828,211	1,399,537,073	7,906,318,266	630,296,891
96. Plus Reinsurance Assumed	XXX		9,623,990	52,152,469		195,877,680	257,654,139	248,331,537
97. Totals (All Business)	XXX		2,555,801,411	3,818,928,030	193,828,211	1,595,414,753	8,163,972,405	878,628,428
98. Less Reinsurance Ceded	XXX		319,750,411	1,133,718,779	28,126,808	935,801,460	2,417,397,458	
99. Totals (All Business) less Reinsurance Ceded	XXX		2,236,051,000	2,685,209,251	165,701,403	659,613,293	5,746,574,947	878,628,428
DETAILS OF WRITE-INS								
58001. HKG Hong Kong	XXX		85,699				85,699	
58002. ZZZ Other Alien	XXX		4,537,548	800	137,091	18,117,132	22,792,571	24,490
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		4,623,247	800	137,091	18,117,132	22,878,270	24,490
9401. Reinvested Net Non Forfeiture Option Proceeds	XXX		80,054,730				80,054,730	
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		80,054,730				80,054,730	

(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 Global Capabilities LLC	None		Delaware
MM Global Capabilities I LLC	None		Delaware
MassMutual Global Business Services India LLP	None		India
MM Global Capabilities (Netherlands) B.V.	None		Netherlands
MassMutual Global Business Services Romania S.R.L.	None		Romania
MM Global Capabilities II LLC	None		Delaware
MM Global Capabilities III LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
Lyme Adirondack Timber Sales, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
ITPS Holding LLC	None		Delaware
HITPS LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
MassMutual Ventures US IV, GP, LLC	None		Delaware
MassMutual Ventures US IV, L.P.	None		Delaware
MassMutual Ventures Europe/APAC I GP, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, L.P.	None		Cayman Islands
MassMutual Ventures Europe/APAC I L.P.	None		Cayman Islands
JFIN Parent LLC	None		Delaware
Jefferies Finance LLC	27-0105644		Delaware
JFIN GP Adviser LLC	None		Delaware
JFIN Fund III LLC	None		Delaware

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

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

PART 1 – ORGANIZATIONAL CHART

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

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

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

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

PART 1 – ORGANIZATIONAL CHART

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

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

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

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

PART 1 – ORGANIZATIONAL CHART

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

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

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

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

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

Barings Affiliates & Funds:

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

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

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

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

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

PART 1 – ORGANIZATIONAL CHART

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

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STATEMENT AS OF MARCH 31, 2023 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							MassMutual Ventures Europe/APAC I GP, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435							MassMutual Ventures Europe/APAC I GP, L.P.	CYM	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435							MassMutual Ventures Europe/APAC I L.P.	CYM	DS	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		
.0435	Massachusetts Mut Life Ins Co						CM Life Mortgage Lending LLC	DE	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							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							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	0.000	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				Berkshire Way 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	26.700	MMLIC		
.0000			82-2932156				GASL Holdings LLC	DE	DS	MassMutual Holding LLC	Ownership	11.300	MMLIC		
.0000			04-1590850				MSP-SC, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							EM Opportunities LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual MCAM Insurance Company, Inc.	VT	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV, GP, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV, LP	DE	NIA	MassMutual Ventures US IV, GP, LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 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			04-1590850				Insurance Road LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Trad Private Equity LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Intellectual Property LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000							Trad Investments I LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000							ITPSHolding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							HITPS LLC	DE	NIA	ITPS Holding LLC	Ownership	100.000	MMLIC		
.0000							JFIN Parent LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Forma Brands, LLC*	DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	DE	NIA	JFIN Parent LLC	Ownership	50.000	MMLIC		1
.0000							Massachusetts Mutual Life Insurance Company								
.0000			86-2294635				Glidepath Holdings Inc.	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	63312	13-1935920				MassMutual Ascend Life Insurance Company	OH	DS	Glidepath Holdings Inc.	Ownership	100.000	MMLIC		
.0000			31-1422717				AAG Insurance Agency, LLC	KY	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			31-1395344				MM Ascend Life Investor Services, LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Ascend Mortgage Lending LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-3260520				Manhattan National Holding, LLC	OH	DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	67083	45-0252531				Manhattan National Life Insurance Company	OH	DS	Manhattan National Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Mortgage Lending LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Jefferies Private Credit BDC Inc.	MD	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit Partners LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Management LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JCP Direct Lending CLO 2022 LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Direct Lending Europe SCSp SICAV-RAIF	LUX	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Jefferies Credit Management Holdings LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							Senior Credit Investments, LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	9.900	MMLIC		
.0000							JDLF GP (Europe) S.a.r.l	LUX	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LP	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C LP	DE	NIA	JFAM GP LP	Ownership	100.000	MMLIC		
.0000							Jefferies DLF C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund C LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C SPE LLC	DE	NIA	Jefferies DLF C Holdings LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JDLF II GP LP	DE	NIA	JDLF II GP LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund II C LP	DE	NIA	JDLF II GP LP	Ownership	100.000	MMLIC		
.0000							Jefferies DLF II C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund II C LP	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund II C SPE LLC	DE	NIA	Jefferies DLF II C Holdings LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Senior Lending LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Credit Partners BDC Inc	MD	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings II LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings IV LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 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							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Europe GP, S.a.r.l.	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							Jefferies Finance Europe, S.L.P.	LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MLL/C		
.0000							Jefferies Finance Europe, SCSp	LUX	NIA	JFIN Europe GP, S.a.r.l.	Ownership	100.000	MLL/C		
.0000							Jefferies Finance Business Credit LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Business Credit Fund I LLC	DE	NIA	Jefferies Finance Business Credit LLC	Ownership	100.000	MLL/C		
.0000							JFIN Funding 2021 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN High Yield Investments LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							Beauty Brands Acquisition Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							Beauty Brands Acquisition LLC	DE	NIA	Beauty Brands Acquisition Holdings LLC	Ownership	100.000	MLL/C		
.0000							Beauty Brands Acquisition Intermediate LLC	DE	NIA	Beauty Brands Acquisition LLC	Ownership	100.000	MLL/C		
.0000							Beauty Brands Acquisition Intermediate LLC	DE	NIA	Beauty Brands Acquisition Intermediate LLC	Ownership	100.000	MLL/C		
.0000							Forma Brands, LLC	DE	NIA		Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2017-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2018 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2019 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2019-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2020 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2021-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2021-V Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2022-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2022-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver CLO 2022-IV Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver Fund, L.P.	DE	NIA	Jefferies Finance LLC	Ownership	90.000	MLL/C		
.0000							JFIN Revolver Funding 2021 Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver Funding 2021 III Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver Funding 2021 IV Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver Funding 2022-I Ltd.	BMJ	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver SPE1 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver SPE3 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JFIN Revolver SPE4 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							SFL Parkway Funding 2022 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JCP Private Loan Management GP LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MLL/C		
.0000							JCP Private Loan Management LP	DE	NIA	JCP Private Loan Management GP LLC	Ownership	100.000	MLL/C		
.0000							Apex Credit Holdings LLC	DE	NIA	JFIN Parent LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2012 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2013 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2014 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2014-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2015-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	85.000	MLL/C		
.0000							JFIN CLO 2016 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2017 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							JFIN CLO 2017-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MLL/C		
.0000							Tomorrow Parent, LLC	DE	NIA	JFIN Parent LLC	Ownership	100.000	MLL/C		

STATEMENT AS OF MARCH 31, 2023 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
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.0000							Custom Ecology Holdco, LLC	DE	NIA	JFIN Parent LLC	Ownership	100.000	MLLIC		
.0000			04-1590850				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							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	99.600	MLLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	DE	DS	MM Investment Holding	Ownership	99.600	MLLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	DE	DS	C.M. Life Insurance Company	Ownership	0.400	MLLIC		
.0000			36-4785301				MMAF Equipment Finance LLC 2014-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000			35-2590691				MMAF Equipment Finance LLC 2017-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000			32-0546197				MMAF Equipment Finance LLC 2017-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000			82-5335801				MMAF Equipment Finance LLC 2018-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000			83-3722640				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		
.0000							Rozier LLC	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MLLIC		
.0000			04-2443240				MML Management Corporation	MA	DS	MM Investment Holding	Ownership	100.000	MLLIC	YES	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MLLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MLLIC		
.0000							MML CM LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Blueprint Income LLC	NY	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000							Flourish Digital Assets LLC	DE	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000							Flourish Financial LLC	DE	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000							Flourish Holding Company LLC	DE	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000							Flourish Insurance Agency LLC	DE	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000							Flourish Technologies LLC	DE	DS	MML CM LLC	Ownership	100.000	MLLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MLLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	MassMutual Holding LLC	Ownership	1.000	MLLIC		
.0000							MML Investment Advisers, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	CT	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC	YES	

STATEMENT AS OF MARCH 31, 2023 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
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.0000			04-1590850				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			06-1597528				MassMutual Assignment Company	NC	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.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							Intermodal Holding II LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Milestone Acquisition Holding 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			04-1590850				MassMutual Capital Partners LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-4255307				Marco Hotel LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			45-3623262				HB Naples Golf Owner LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			82-4411267				RB Apartments LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Holding LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Athens Fund Management LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							Crane Venture Partners LLP	GBR	DS	MassMutual Ventures Holding LLC	Ownership	33.000	MMLIC		
.0000							MassMutual Ventures Management LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures SEA Management Private Limited	DE	DS	MassMutual Ventures Management LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia II LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia III LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia III LLC	DE	DS	MassMutual Ventures Southeast Asia III LLC	Ownership	100.000	MMLIC		
.0000							MMV Digital I LLC	CYM	DS		Ownership	100.000	MMLIC		
.0000							MassMutual Ventures UK LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures US I LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US II LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US III LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US IV LLC	DE	DS	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Rothesay Limited	GBR	DS	MM Rothesay Holdco US LLC	Ownership	48.800	MMLIC		
.0000							Rothesay Life Plc	GBR	DS	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.1 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Mortgages Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.3 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay MA No.4 Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							LT Mortgage Finance Limited	GBR	DS	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Property Partnership 1 LLP	GBR	DS	Rothesay Life PLC	Ownership	100.000	MMLIC		
.0000							Rothesay Foundation	GBR	DS	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay Pensions Management Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MMLIC		
.0000							Rothesay Asset Management UK Limited	GBR	DS	Rothesay Limited	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 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							Rothesay Asset Management Australia Pty Ltd	.AUS	DS	Rothesay Asset Management UK Limited	Ownership	100.000	MMLIC		
.0000							Rothesay Asset Management North America LLC	.DE	DS	Rothesay Asset Management UK Limited	Ownership	100.000	MMLIC		
.0000							MM Catalyst Fund LLC	.DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MM Catalyst Fund II LLC	.DE	DS	MassMutual Holding 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			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			51-0504477				Barings LLC	.DE	DS	MassMutual Asset Management 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				Altis Property Partners Holdings Pty Ltd	.AUS	DS	Barings Australia Real Estate Pty Ltd	Ownership	100.000	MMLIC		
.0000							Altis Asset Management Pty Ltd	.AUS	DS	Altis Property Partners Holdings Pty Ltd	Ownership	100.000	MMLIC		
.0000							Altis Property Partners Pty Ltd	.AUS	DS	Altis 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			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		
.0000							Barings Europe Limited	.GBR	DS	Barings Guernsey Limited	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 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
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.0000							Barings Asset Management Spain SL	.ESP	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Baring France SAS	.FRA	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Baring International Fund Managers (Ireland) Limited	.IRL	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings GmbH	.DEU	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Italy S.r.l.	.ITA	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Sweden AB	.SWE	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Netherlands B.V.	.NLD	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Switzerland Sarl	.CHE	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR	..DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings European Direct Lending 1 GP LLP	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Baring International Investment Management Holdings	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457587				Baring International Investment Management Holdings	.GBR	..DS	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	.GBR	..DS	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	.GBR	..DS	Baring Fund Managers Limited	Ownership	100.000	MMLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Core Fund Feeder I GP S.a.r.l.	.LUX	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings BME GP S.a.r.l.	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.a.r.l.	.LUX	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings European Core Property Fund GP Sarl	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Fund (LUX) GP S.a.r.l.	.LUX	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Umbrella Fund (LUX) GP S.a.r.l.	.LUX	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							GPLF4(S) GP S.a.r.l.	.LUX	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							PREIF Holdings Limited Partnership	.GBR	..DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BMC Holdings DE LLC	.DE	..DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA	..DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	..NIA	Barings LLC	Influence		MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	.DE	..NIA	Barings LLC	Management		MMLIC		
.0000			82-2932156				GASL Holdings LLC	.DE	..NIA	Barings LLC	Board		MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	.DE	..NIA	Barings LLC	Management		MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	.DE	..NIA	MassMutual Holding LLC	Ownership/Influence	19.800	MMLIC		
.0000							Novation Companies, Inc.	.MD	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	17.100	MMLIC		
.0000							Novation Companies, Inc.	.MD	..NIA	Barings LLC	Influence		MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.500	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	..NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	19.900	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	..NIA	Barings LLC	Influence		MMLIC		
.0000							Tamiami Citrus, LLC	.DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		

STATEMENT AS OF MARCH 31, 2023 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							Tamiami Citrus, LLC	DE	NIA	Barings LLC	Management/Board		MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Techquity, LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.600	MMLIC		
.0000							Techquity, LP	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							EIP Holdings I, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	29.000	MMLIC		
.0000			46-0687392				Validus Holding Company LLC	DE	NIA	Barings LLC	Ownership	40.400	MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	33.300	MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Aland Royalty GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Alaska Future Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI Funds SLP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Baring Asset-Based Income Fund (US) GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CMS Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Infiniti Fund Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Hotel Opportunity Venture I GP, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Investment Series LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP II, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings ERS PE Emerging Manager III GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Investment Funds (U.S.) Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Barings CLO Investment Partners GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Core Property Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Direct Lending GP Ltd.	CYM	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund LP	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	46.100	MMLIC		
.0000			84-3784245				Barings Emerging Generation Fund LP	DE	DS	Barings LLC	Management		MMLIC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Centre Street CLO Equity Partnership GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund II Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund III Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings - MM Revolver Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							BMT RE Debt Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Real Assets Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings GPSF LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	33.600	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	DE	DS	Barings LLC	Management		MMLIC		

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			98-0536233				Benton Street Advisors, Inc.	..CYM	..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							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		
.0000							Lake Jackson LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Barings Emerging Markets Blended Fund I GP, LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			41-2280126				Mezzco III LLC	..DE	..DS	Barings LLC	Ownership	99.300	MLL IC		
.0000			80-0920285				Mezzco IV LLC	..DE	..DS	Barings LLC	Ownership	99.300	MLL IC		
.0000							Mezzco Australia II LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							RECSA-NY GP LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000			04-1590850				SBNP SIA II LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							SBNP SIA III LLC	..DE	..DS	Barings LLC	Ownership	100.000	MLL IC		
.0000							Amherst Long Term Holdings, LLC	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	24.500	MLL IC		
.0000			04-3313782				MassMutual International LLC	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC	..YES	
.0000							MassMutual Solutions LLC	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							Haven Technologies Asia Limited	..HKG	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							Yunfeng Financial Group Limited	..HKG	..DS	Massachusetts Mutual Life Insurance Company	Ownership	24.900	MLL IC		
.0000							MassMutual Asia Limited (SPV)	..HKG	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000			27-3576835				MassMutual External Benefits Group LLC	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							MMV CTF I GP LLC	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							MassMutual Ventures Climate Technology Fund I LP	..DE	..DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000			04-1590850				100 w. 3rd Street LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000			04-1590850				2160 Grand Manager LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MLL IC		
.0000			82-2432216				300 South Tryon Hotel LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000			04-1590850				300 South Tryon LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							Almack Mezzanine Fund II Unleveraged LP	..GBR	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.900	MLL IC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	..DE	..NIA	Barings LLC	Management		MLL IC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLL IC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	..DE	..NIA	Barings LLC	Management		MLL IC		

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			85-3036663				Barings Affordable Housing Mortgage Fund III LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			85-3036663				Barings Affordable Housing Mortgage Fund III LLC	DE	NIA	Barings LLC	Management		MLLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	11.200	MLLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	C.M. Life Insurance Company	Ownership/Influence	1.100	MLLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	53.200	MLLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Barings LLC	Ownership	17.200	MLLIC		
.0000							Barings European Real Estate Debt Income Fund	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.300	MLLIC		
.0000							Barings European Real Estate Debt Income Fund	LUX	NIA	Barings LLC	Influence		MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	MassMutual Holding LLC	Ownership/Influence	21.800	MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership		MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	Barings LLC	Management		MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	75.700	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	55.100	MLLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Management		MLLIC		
.0000							Babson CLO Ltd. 2013-I	CYM	NIA	Barings LLC	Influence		MLLIC	2	
.0000							Babson CLO Ltd. 2015-I	CYM	NIA	Barings LLC	Influence		MLLIC	3	
.0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MLLIC	4	
.0000							Babson CLO Ltd. 2016-I	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson CLO Ltd. 2016-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO Ltd. 2017-I	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-II	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			98-1624360				Barings CLO 2022-I	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Barings CLO 2022-II	CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2014-II BV	NLD	NIA	Barings LLC	Influence		MLLIC		

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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

13.10

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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

13.11

STATEMENT AS OF MARCH 31, 2023 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			37-1708623				Great Lakes III, L.P.	DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Management				
.0000							GIA EU Holdings - Emerson JV Sarl	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	63.300	MLLIC		
.0000							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			04-1590850				Miami Douglas Two GP LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MLLIC		
.0000			04-1590850				Miami Douglas Two GP LLC	DE	NIA	C.M. Life Insurance Company	Influence	0.000	MLLIC		
.0000			04-1590850				Miami Douglas Two LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MLLIC		
.0000			04-1590850				Miami Douglas Two LP	DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MLLIC		
.0000			04-1590850				Miami Douglas Three MM LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			87-4021641				MM BIG Peninsula Co-Invest Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	27.800	MLLIC		
.0000			87-4021641				MM BIG Peninsula Co-Invest Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.800	MLLIC		
.0000							MM CM Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				MM Direct Private Invetment Holding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	Management		MLLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.100	MLLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.900	MLLIC		
.0000			35-2553915				Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	Management		MLLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	16.500	MLLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	93.100	MLLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Barings LLC	Management		MLLIC		
.0000			04-1590850				Trailside MM Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	66.970	MLLIC		
.0000			04-1590850				Trailside MM Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.400	MLLIC		
.0000			04-1590850				Trailside MM Member II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership		MLLIC		
.0000			83-1325764				Washington Gateway Two LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.020	MLLIC		
.0000			83-1325764				Washington Gateway Two LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.700	MLLIC		
.0000			32-0574045				Washington Gateway Three LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.380	MLLIC		
.0000			32-0574045				Washington Gateway Three LLC	DE	NIA	C.M. Life Insurance Company	Ownership	11.400	MLLIC		
.0000			88-3861481				West 37th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	93.800	MLLIC		
.0000			88-3861481				West 37th Street Hotel LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.300	MLLIC		

STATEMENT AS OF MARCH 31, 2023 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							Martello Re Babson Capital Loan Strategies Master Fund LP	.BMU	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	0.300	MMLIC		
.0000							Barings China Aggregate Bond Private Securities Investment Fund	.CYM	NIA	Barings LLC	Management		MMLIC		
.0000							Barings European Growth Trust Fund	.CHN	NIA	Barings LLC	Management		MMLIC		
.0000			47-3790192				Barings Global High Yield Fund	.GBR	NIA	Barings LLC	Ownership/Influence	.26.000	MMLIC		
.0000							CCIC Fund	.MA	NIA	Barings LLC	Management		MMLIC		
.0000							Great Lakes II LLC	.CHN	NIA	Barings LLC	Ownership/Influence	.67.400	MMLIC		
.0000			71-1018134				Great Lakes II LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.10.600	MMLIC		
.0000			71-1018134				Great Lakes II LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	0.980	MMLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.40.000	MMLIC		
.0000			13-1935920				MMLIC Debt Participations LLC	.DE	NIA	Massachusetts Mutual Ascend	Ownership	100.000	MMLIC		
.0000							Barings California Mortgage Fund IV	.CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.50.000	MMLIC		
.0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	.LUX	NIA	C.M. Life Insurance Company	Ownership	2.300	MMLIC		
.0000			82-2285211				Calgary Railway Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.90.000	MMLIC		
.0000			82-2285211				Calgary Railway Holding LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	.10.000	MMLIC		
.0000			82-3307907				Cornbrook PRS Holdings LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund I LLC	.CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund II LLC	.CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund III LLC	.CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.90.000	MMLIC		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	.MA	NIA	Barings LLC	Management		MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	.MA	NIA	Barings LLC	Management		MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.28.500	MMLIC		
.0000			82-2783393				Danville Riverwalk Venture, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	.94.400	MMLIC		
.0000			04-1590850				DPI Acres Capital SPV LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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		

STATEMENT AS OF MARCH 31, 2023 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			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			04-1590850				GIA EU Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Brookhaven Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Kannapolis Industrial Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	82.700	MMLIC		
.0000			04-1590850				MM Kannapolis Industrial Member LLC	DE	NIA	Massachusetts Mutual Ascend	Ownership	12.300	MMLIC		
.0000			04-1590850				MM East South Crossing Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				MM Horizon Savannah Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.700	MMLIC		
.0000			04-1590850				MM National Self-Storage Program Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	98.000	MMLIC		
.0000			04-1590850				MM 1400 E 4th Street Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	96.000	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.990	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.000	MMLIC		
.0000			04-1590850				PACO France Logistics LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC		
.0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.100	MMLIC		
.0000			82-3250684				Unna, Dortmund Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.440	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC		
.0000			51-0529328		0000927972		MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	88.800	MMLIC		
.0000			26-3229251		0000927972		MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	27.100	MMLIC		
.0000			04-3512593		0000916053		MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	3.400	MMLIC		
.0000			42-1710935		0000916053		MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	29.200	MMLIC		
.0000			02-0769954		0000916053		MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			04-3584140		0000916053		MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.200	MMLIC		
.0000			82-3347422		0000916053		MassMutual Select T. Rowe Price Retirement 2005 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	5.400	MMLIC		
.0000			82-3355639		0000916053		MassMutual Select T. Rowe Price Retirement 2010 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3382389		0000916053		MassMutual Select T. Rowe Price Retirement 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3396442		0000916053		MassMutual Select T. Rowe Price Retirement 2020 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		

13.14

STATEMENT AS OF MARCH 31, 2023 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
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.0000			82-3417420		0000916053		MassMutual Select T. Rowe Price Retirement 2025 Fund	..MANIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3430358		0000916053		MassMutual Select T. Rowe Price Retirement 2030 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3439837		0000916053		MassMutual Select T. Rowe Price Retirement 2035 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3451779		0000916053		MassMutual Select T. Rowe Price Retirement 2040 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3472295		0000916053		MassMutual Select T. Rowe Price Retirement 2045 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3481715		0000916053		MassMutual Select T. Rowe Price Retirement 2050 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3502011		0000916053		MassMutual Select T. Rowe Price Retirement 2055 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3525148		0000916053		MassMutual Select T. Rowe Price Retirement 2060 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3533944		0000916053		MassMutual Select T. Rowe Price Retirement Balanced Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			46-4257056				MML Series International Equity Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		
.0000			47-3529636				MML Series II Dynamic Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			47-3544629				MML Series II Equity Rotation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.800	MMLIC		
.0000			27-1933389		0000916053		MassMutual RetireSMART 2035 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	3.900	MMLIC		
.0000			27-1932769		0000916053		MassMutual RetireSMART 2045 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	8.800	MMLIC		
.0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	22.900	MMLIC		
.0000			47-5326235		0000916053		MassMutual RetireSMART 2060 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	43.800	MMLIC		
.0000			45-1618155		0000916053		MassMutual 20/80 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		
.0000			45-1618222		0000916053		MassMutual 80/20 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	51.600	MMLIC		
.0000			03-0532464		0000916053		MassMutual RetireSMART In Retirement Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	2.000	MMLIC		
.0000			45-1618262		0000916053		MassMutual 40/60 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Influence	100.000	MMLIC		
.0000			45-1618046		0000916053		MassMutual 60/40 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-1618046		0000916053		MassMutual ishares 60/40 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	78.400	MMLIC		
.0000			04-3212054		0000916053		MassMutual Balanced Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3556992		0000916053		MassMutual Blue Chip Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3277549		0000916053		MassMutual Core Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3539084		0000916053		MassMutual Disciplined Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			04-3539083		0000916053		MassMutual Disciplined Value Fund	..MANIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			01-0821120		0000916053		MassMutual Diversified Value Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3512590		0000916053		MassMutual Equity Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3512589		0000916053		MassMutual Growth Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			03-0532475		0000916053		MassMutual Inflation-Protected and Income Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3512596		0000916053		MassMutual Mid Cap Growth Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3464165		0000916053		MassMutual Premier Diversified Bond Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			92-1441036		0000916053		MassMutual RetireSMART by JPMorgan 2065 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-1618222		0000916053		MassMutual Select 80/20 Allocation Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3584138		0000916053		MassMutual Select Fundamental Value Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3557000		0000916053		MassMutual Select Overseas Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			92-1427882		0000916053		MassMutual Select T Rowe Price Retirement 2065 Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3464205		0000916053		MassMutual Small Cap Growth Equity Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3424705		0000916053		MassMutual Small Cap Opportunities Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			02-0769954		0000916053		MassMutual Small Cap Value Equity Fund	..MA	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-0099965		0000916053		MassMutual Strategic Bond 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 9.6% and includes only Babson Capital Loan Strategies Fund, L.P.
3	Debt investors own .5% and includes only Great Lakes III, L.P.
4	Debt investors own .2% and includes only Great Lakes III, L.P.

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

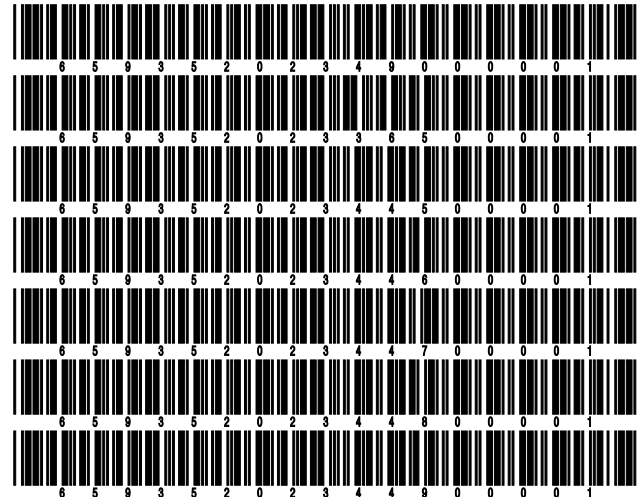
9. Will the regulator-only (non-public) Communication of Internal Control Related Matters Noted in Audit be filed with the state of domicile and electronically with the NAIC (as a regulator-only non-public document) by August 1? The response for 1st and 3rd quarters should be N/A. A NO response resulting 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 MARCH 31, 2023 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. Investment in trust	19,082,313		19,082,313	20,001,607
2505. Pension plan asset	671,357,432	671,357,432		
2506. Disallowed interest maintenance reserve	610,797,171	610,797,171		
2507. Cash advances to agents	293,850,899	293,850,899		
2508. Receivable for commissions and expenses on long-term lease	89,988,029	89,988,029		
2509. Intangible assets	38,944,474	38,944,474		
2510. Bills receivable	13,724	13,724		
2597. Summary of remaining write-ins for Line 25 from overflow page	1,724,034,040	1,704,951,728	19,082,313	20,001,607

Additional Write-ins for Liabilities Line 25

	1 Current Statement Date	2 December 31 Prior Year
2504. Funds awaiting escheat and other miscellaneous	134,814,658	68,839,651
2505. Deferred income liability	26,755,885	26,963,691
2597. Summary of remaining write-ins for Line 25 from overflow page	161,570,543	95,803,342

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. Experience refunds on reinsurance contracts	21,160,857	22,525,741	94,469,978
08.305. Miscellaneous	(69,921,462)	(27,564,439)	84,818,527
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	(48,760,605)	(5,038,698)	179,288,505

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	(29,455,850)	11,121,933	28,069,282
2705. Change in reserves due to reinsurance agreement		814,522	20,592,088
2706. Change in Liability for employee/agent benefit plans		(21,398,787)	
2797. Summary of remaining write-ins for Line 27 from overflow page	(29,455,850)	(9,462,333)	48,661,370

STATEMENT AS OF MARCH 31, 2023 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	354,748,274	394,897,743
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition	879,859	13,292,853
3. Current year change in encumbrances		
4. Total gain (loss) on disposals		127,364,440
5. Deduct amounts received on disposals		144,453,134
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	7,841,405	36,353,628
9. Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	347,786,728	354,748,274
10. Deduct total nonadmitted amounts		
11. Statement value at end of current period (Line 9 minus Line 10)	347,786,728	354,748,274

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	24,971,963,928	26,344,845,562
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	493,118,451	2,296,752,966
2.2 Additional investment made after acquisition	163,001,682	424,032,794
3. Capitalized deferred interest and other	8,763,357	32,386,748
4. Accrual of discount	825,520	14,924,106
5. Unrealized valuation increase (decrease)		
6. Total gain (loss) on disposals	(33,109,859)	(36,636,956)
7. Deduct amounts received on disposals	838,451,005	3,824,155,926
8. Deduct amortization of premium and mortgage interest points and commitment fees	7,243,540	11,056,884
9. Total foreign exchange change in book value/recorded investment excluding accrued interest	83,376,359	(265,231,166)
10. Deduct current year's other than temporary impairment recognized		3,897,317
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	24,842,244,893	24,971,963,928
12. Total valuation allowance		
13. Subtotal (Line 11 plus Line 12)	24,842,244,893	24,971,963,928
14. Deduct total nonadmitted amounts		
15. Statement value at end of current period (Line 13 minus Line 14)	24,842,244,893	24,971,963,928

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	12,340,402,460	12,601,759,357
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	138,262,185	926,646,083
2.2 Additional investment made after acquisition	473,476,695	4,121,215,415
3. Capitalized deferred interest and other		
4. Accrual of discount		
5. Unrealized valuation increase (decrease)	(11,272,336)	(368,153,834)
6. Total gain (loss) on disposals	1,098,984	31,348,188
7. Deduct amounts received on disposals	166,598,821	4,952,577,885
8. Deduct amortization of premium and depreciation	288,411	1,170,439
9. Total foreign exchange change in book/adjusted carrying value	25,108,362	1,620,012
10. Deduct current year's other than temporary impairment recognized	40,659,171	20,284,437
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	12,759,529,947	12,340,402,460
12. Deduct total nonadmitted amounts	44,256,787	43,994,285
13. Statement value at end of current period (Line 11 minus Line 12)	12,715,273,160	12,296,408,175

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	163,056,331,820	150,758,481,945
2. Cost of bonds and stocks acquired	7,468,356,677	45,554,452,552
3. Accrual of discount	62,911,858	290,264,109
4. Unrealized valuation increase (decrease)	(314,510,694)	(794,150,078)
5. Total gain (loss) on disposals	(101,724,098)	(403,895,086)
6. Deduct consideration for bonds and stocks disposed of	5,014,531,346	30,376,581,148
7. Deduct amortization of premium	60,503,554	168,675,549
8. Total foreign exchange change in book/adjusted carrying value	247,127,222	(1,394,352,669)
9. Deduct current year's other than temporary impairment recognized	41,500,116	440,227,144
10. Total investment income recognized as a result of prepayment penalties and/or acceleration fees	(937,907)	31,014,886
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	165,301,019,862	163,056,331,820
12. Deduct total nonadmitted amounts		
13. Statement value at end of current period (Line 11 minus Line 12)	165,301,019,862	163,056,331,820

STATEMENT AS OF MARCH 31, 2023 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)	73,982,473,782	10,576,632,638	8,269,059,605	(158,608,652)	76,131,438,163			73,982,473,782
2. NAIC 2 (a)	55,757,939,629	52,694,568,319	52,351,439,006	368,022,452	56,469,091,394			55,757,939,629
3. NAIC 3 (a)	5,496,598,645	1,035,245,246	1,200,182,270	(146,222,998)	5,185,438,623			5,496,598,645
4. NAIC 4 (a)	2,888,214,591	270,671,415	77,246,348	(29,640,767)	3,051,998,891			2,888,214,591
5. NAIC 5 (a)	2,602,990,396	7,647,034	211,560,121	153,153,903	2,552,231,212			2,602,990,396
6. NAIC 6 (a)	436,957,441	31,721,207	145,113,380	(23,055,606)	300,509,662			436,957,441
7. Total Bonds	141,165,174,484	64,616,485,859	62,254,600,730	163,648,332	143,690,707,945			141,165,174,484
PREFERRED STOCK								
8. NAIC 1	198,736,131				198,736,131			198,736,131
9. NAIC 2	71,565,877	17,638,503		795,328	89,999,708			71,565,877
10. NAIC 3	148,565,807		123,000,000	289,280	25,855,087			148,565,807
11. NAIC 4	5,192,519	1,259,764		(826,543)	5,625,740			5,192,519
12. NAIC 5	12,585,408	425,889		571,464	13,582,761			12,585,408
13. NAIC 6	14,766,010	14,717,508		5,086,881	34,570,399			14,766,010
14. Total Preferred Stock	451,411,752	34,041,664	123,000,000	5,916,410	368,369,826			451,411,752
15. Total Bonds and Preferred Stock	141,616,586,236	64,650,527,523	62,377,600,730	169,564,742	144,059,077,771			141,616,586,236

(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 \$ 969,987,769 ; NAIC 2 \$ 3,969,647,783 ; NAIC 3 \$ 558,600 ; NAIC 4 \$ 1,175,176 ; NAIC 5 \$; NAIC 6 \$

S102

SCHEDULE DA - PART 1

Short-Term Investments

	1 Book/Adjusted Carrying Value	2 Par Value	3 Actual Cost	4 Interest Collected Year-to-Date	5 Paid for Accrued Interest Year-to-Date
7709999999 Totals	1,094,408,003	xxx	1,101,790,079	2,677,660	13,477

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1 Year To Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	525,180,990	2,715,450,459
2. Cost of short-term investments acquired	726,301,197	1,296,966,809
3. Accrual of discount	3,359,148	3,245,603
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	(4,497,367)	3,129,406
6. Deduct consideration received on disposals	155,935,964	3,493,749,010
7. Deduct amortization of premium		
8. Total foreign exchange change in book/adjusted carrying value		137,723
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)	1,094,408,003	525,180,990
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	1,094,408,003	525,180,990

STATEMENT AS OF MARCH 31, 2023 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)	8,010,881,255
2. Cost Paid/(Consideration Received) on additions	23,354,828
3. Unrealized Valuation increase/(decrease)	(277,309,701)
4. SSAP No. 108 adjustments	
5. Total gain (loss) on termination recognized	(240,236,657)
6. Considerations received/(paid) on terminations	(168,912,624)
7. Amortization	60,658
8. Adjustment to the Book/Adjusted Carrying Value of hedged item	
9. Total foreign exchange change in Book/Adjusted Carrying Value	(192,551,713)
10. Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4+5-6+7+8+9)	7,493,111,294
11. Deduct nonadmitted assets	
12. Statement value at end of current period (Line 10 minus Line 11)	7,493,111,294

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1. Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year).....	18,122,637
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	101,713,519
3.14 Section 1, Column 18, prior year	18,122,636
	83,590,883
	83,590,883
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	101,713,519
3.24 Section 1, Column 19, prior year plus	18,122,636
3.25 SSAP No. 108 adjustments	83,590,883
	83,590,883
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year	(5,817,479)
4.2 Less:	
4.21 Amount used to adjust basis of hedged item	
4.22 Amount recognized	(23,940,116)
4.23 SSAP No. 108 adjustments	(23,940,116)
4.3 Subtotal (Line 4.1 minus Line 4.2)	18,122,637
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	(101,713,519)
6. Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	101,713,519
7. Deduct total nonadmitted amounts	
8. Statement value at end of current period (Line 6 minus Line 7)	101,713,519

STATEMENT AS OF MARCH 31, 2023 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*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	50,000,000	27,000,000	15,081,888	06/03/2021	06/03/2051	Interest Rate Swap	(11,518,458)		42086P-AC-7	Kingsland Ltd-SERIES 18-8A CLASS A	1	27,000,000	26,600,346
57629*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	12,190,403	11,999,000	11,999,000	06/03/2021	06/03/2051	Interest Rate Swap			320808-AD-0	FIRST MARYLAND CAP I-LIMITED GUARANTEE NOTE	2	12,190,403	11,999,000
57629*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	10,000,000	9,629,060	9,629,060	06/03/2021	06/03/2051	Interest Rate Swap			09629L-AE-5	BLUEMOUNTAIN CLO XXIII L-BLUEM 2018-23A B	1	10,000,000	9,629,060
57629*FX4	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	1	19,083,334	18,049,632	18,049,632	06/03/2021	06/03/2051	Interest Rate Swap			03328Y-AG-9	Anchorage Capital CLO Lt-ANCHC 2018-18A C	1	19,083,334	18,049,632
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	264,000,000	9,000,000	(25,554,640)	11/29/2012	11/29/2042	Interest Rate Swap	(34,554,640)		12499F-MM-8	CCOF Onshore Co-Borrower Revolving Loan	1	9,000,000	9,000,000
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,192,129	3,037,893	3,037,893	11/29/2012	11/29/2042	Interest Rate Swap			83149F-AD-6	SLM Student Loan Trust 2006-6	1	3,192,129	3,037,893
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	22,909,288	22,754,475	22,754,475	11/29/2012	11/29/2042	Interest Rate Swap			375415-AA-4	GILBERT PARK CLO LTD-SERIES 17-1A CLASS A	1	22,909,288	22,754,475
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,100,000	12,753,754	12,753,754	11/29/2012	11/29/2042	Interest Rate Swap			670970-AC-9	TOP CLO 2017-14 Ltd-SERIES 17-14A CLASS A1B	1	13,100,000	12,753,754
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,000,000	7,823,272	7,823,272	11/29/2012	11/29/2042	Interest Rate Swap			38137H-BW-7	Goldentree Loan Opportun-SERIES 2015-11A CLASS BR2	1	8,000,000	7,823,272
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,120,382	9,475,140	9,475,140	11/29/2012	11/29/2042	Interest Rate Swap			56845N-AE-0	Signal Peak CLO 8 Ltd-SPEAK 2020-8A C	1	10,120,382	9,475,140
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	9,566,370	9,566,370	11/29/2012	11/29/2042	Interest Rate Swap			33833V-AE-5	522 Funding CLO 2019-5 L-MORGN 2021-7A B	1	10,000,000	9,566,370
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,050,000	10,744,346	10,744,346	11/29/2012	11/29/2042	Interest Rate Swap			03331J-AJ-1	Anchorage Capital CLO Lt-ANCHC 2018-10A B	1	11,050,000	10,744,346
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,000,000	14,673,555	14,673,555	11/29/2012	11/29/2042	Interest Rate Swap			38137M-AK-3	Goldentree Loan Opportun-GLD12 2016-12A AJR	1	15,000,000	14,673,555
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,500,000	4,285,350	4,285,350	11/29/2012	11/29/2042	Interest Rate Swap			03767M-AJ-7	Apidos CLO-APID 2018-29A B	1	4,500,000	4,285,350
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	19,600,000	19,345,141	19,345,141	11/29/2012	11/29/2042	Interest Rate Swap			17181T-AA-9	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	19,600,000	19,345,141
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,000,000	11,617,620	11,617,620	11/29/2012	11/29/2042	Interest Rate Swap			04017J-AE-1	ARES CLO Ltd-ARES 2018-49A B	1	12,000,000	11,617,620
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	60,000,000	58,454,700	58,454,700	11/29/2012	11/29/2042	Interest Rate Swap			29002H-AL-3	Elmwood CLO III Ltd-ELMW3 2019-3A AR	1	60,000,000	58,454,700
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,220,000	1,114,337	1,114,337	11/29/2012	11/29/2042	Interest Rate Swap			056162-AU-4	Babson CLO Ltd 2015-I-SERIES 2015-1A CLASS DR	2	1,220,000	1,114,337
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	196,970	188,747	188,747	11/29/2012	11/29/2042	Interest Rate Swap			06759F-AE-6	BABSON CLO LTD 2015-II-SERIES 15-2A CLASS C1R	1	196,970	188,747
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	126,125,000	126,125,000	126,125,000	11/29/2012	11/29/2042	Interest Rate Swap			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	1,143,863	12/27/2012	12/27/2042	Interest Rate Swap	(10,466,281)		67112K-AC-3	TOP CLO Ltd-SEREIS 18-15A CLASS A3	1	12,000,000	11,610,144
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,575,000	12,419,938	12,419,938	12/27/2012	12/27/2042	Interest Rate Swap			056162-AN-0	Babson CLO Ltd 2015-I-BABSN 2015-1A AR	1	12,575,000	12,419,938
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,200,000	3,104,541	3,104,541	12/27/2012	12/27/2042	Interest Rate Swap			03330A-AC-6	Anchorage Capital CLO 3-ANCHC 2014-3RA B	1	3,200,000	3,104,541
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	65,000,000	63,968,060	63,968,060	12/27/2012	12/27/2042	Interest Rate Swap			87271L-AJ-1	TIAA CLO I Ltd-TIA 2016-1A AR	1	65,000,000	63,968,060
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,900,000	5,785,050	5,785,050	12/27/2012	12/27/2042	Interest Rate Swap			87250R-AB-0	TICP CLO XV Ltd-TICP 2020-15A B	1	5,900,000	5,785,050
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,928,459	2,050,688	2,050,688	12/27/2012	12/27/2042	Interest Rate Swap			429827-AR-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B1	1	1,928,459	2,050,688
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,107,923	9,657,584	9,657,584	12/27/2012	12/27/2042	Interest Rate Swap			46647P-AR-7	JPMorgan Chase & Co-SENIOR UNSECURED	1	10,107,923	9,657,584
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,000,000	10,034,790	10,034,790	12/27/2012	12/27/2042	Interest Rate Swap			04019R-AG-6	ARES CLO-ARES 2022-66A B	1	10,000,000	10,034,790
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	6,400,945	(4,299,769)	12/27/2012	12/27/2042	Interest Rate Swap	(10,466,281)		92977H-AG-3	WACHOVIA STUDENT LOAN TR-WSLT 2005-1 B	1	6,400,945	6,166,512
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,022,749	19,490,780	19,490,780	12/27/2012	12/27/2042	Interest Rate Swap			94950G-AN-7	Wellfleet CLO 2017-1 Ltd-WELF 2017-1A A2R	1	20,022,749	19,490,780

S105

STATEMENT AS OF MARCH 31, 2023 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*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,000,000	29,411,040	12/27/2012	12/27/2042	Interest Rate Swap				83004L-AC-9	610 Funding CLO-SIX10 2021-2RA A1R2	1	30,000,000	29,411,040
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,000,000	22,718,273	12/27/2012	12/27/2042	Interest Rate Swap				06760P-AE-1	Babson CLO Ltd/Cayman Is-BABSN 2018-3A A2	1	23,000,000	22,718,273
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,271,288	12/27/2012	12/27/2042	Interest Rate Swap				55821A-AE-8	Madison Park Funding Ltd-SERIES 18-28A CLASS B	1	9,500,000	9,271,288
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,563,213	12/27/2012	12/27/2042	Interest Rate Swap				06760B-AC-6	BABSON CLO LTD-SERIES 17-1A CLASS A2	1	6,700,000	6,563,213
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,250,000	3,019,900	12/27/2012	12/27/2042	Interest Rate Swap				08759B-AE-8	BETHPAGE PARK CLO LTD-BETHP 2021-1A	1	3,250,000	3,019,900
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,606,004	1,489,923	12/27/2012	12/27/2042	Interest Rate Swap				784424-AE-3	SLC STUDENT LOAN TRUST 2-SERIES 07-1 CLASS B	1	1,606,004	1,489,923
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,355,219	6,351,054	12/27/2012	12/27/2042	Interest Rate Swap				62983P-AB-1	Nakilat Inc-SECURED 144A	1	6,355,219	6,351,054
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	6,000,000	(4,270,995)	12/28/2012	12/28/2042	Interest Rate Swap		(10,161,999)		38138B-AG-5	Goldentree Loan Managem-GLM 2018-3A B1	1	6,000,000	5,891,004
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,241,828	19,296,440	12/28/2012	12/28/2042	Interest Rate Swap				58845N-AC-4	Signal Peak CLO 8 Ltd-SPEAK 2020-8A B	1	20,241,828	19,296,440
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,750,000	13,307,195	12/28/2012	12/28/2042	Interest Rate Swap				55954K-AN-5	Magnetite XIX Ltd-SERIES 2017-19A CLASS B1R	1	13,750,000	13,307,195
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,745,000	33,854,034	12/28/2012	12/28/2042	Interest Rate Swap				13876N-AL-7	Canyon CLO 2020-2 Ltd-CANYC 2020-2A AR	1	34,745,000	33,854,034
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,088,342	13,479,499	12/28/2012	12/28/2042	Interest Rate Swap				92917N-AJ-7	Voya CLO 2019-1 Ltd-VOYA 2019-1A AR	1	13,088,342	13,479,499
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,043,035	1,931,122	12/28/2012	12/28/2042	Interest Rate Swap				64033T-AB-9	INELNET STUDENT LOAN TRUS-SERIES 2015-3A CLASS B	1	2,043,035	1,931,122
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	2,924,154	12/28/2012	12/28/2042	Interest Rate Swap				87248K-AS-3	TICOP CLO VI 2016-5 LTD-TICOP 2016-5A A2R	1	3,000,000	2,924,154
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	980,869	12/28/2012	12/28/2042	Interest Rate Swap				94950J-AA-9	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	1,000,000	980,869
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,000,000	3,868,700	12/28/2012	12/28/2042	Interest Rate Swap				40437L-AE-2	HPS LOAN MANAGEMENT 13-2-HLM 13A-18 A2	1	4,000,000	3,868,700
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,060,000	4,684,325	12/28/2012	12/28/2042	Interest Rate Swap				92917A-AE-6	Voya CLO Ltd-SERIES 18-1A CLASS B Symphony CLO XXIX Ltd-SYMP 2021-29A C	1	5,060,000	4,684,325
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,150,000	3,006,392	12/28/2012	12/28/2042	Interest Rate Swap				87168G-AG-4	ASSURANT CLO I LTD-MORGN 2017-1A CR	1	3,150,000	3,006,392
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	2,996,477	12/28/2012	12/28/2042	Interest Rate Swap				33836J-AG-4		1	3,200,000	2,996,477
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,012,040	12/28/2012	12/28/2042	Interest Rate Swap				617924-AE-5	Morgan Stanley Eaton Van-MISEV 2022-18A B	1	10,000,000	10,012,040
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	29,200,000	18,479,376	12/28/2012	12/28/2042	Interest Rate Swap		(10,161,999)		94950J-AA-9	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	29,200,000	28,641,375
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,795,417	13,663,174	12/28/2012	12/28/2042	Interest Rate Swap				06759F-AB-2	BABSON CLO LTD 2015-11-SERIES 15-2A CLASS AR	1	13,795,417	13,663,174
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,319,860	12/28/2012	12/28/2042	Interest Rate Swap				04017T-AE-9	Ares XXXIR CLO Ltd-SERIES 14-31RA CLASS B	1	20,000,000	19,319,860
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,600,000	1,496,198	12/28/2012	12/28/2042	Interest Rate Swap				87246M-AW-2	TICOP CLO VI 2016-2 Ltd-TICOP 2016-6A CR2	1	1,600,000	1,496,198
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,200,000	3,945,451	12/28/2012	12/28/2042	Interest Rate Swap				12551R-AE-8	CIFC Funding 2018-1 Ltd-SERIES 18-1A CLASS C	1	4,200,000	3,945,451
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,100,000	1,067,039	12/28/2012	12/28/2042	Interest Rate Swap				08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,067,039
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,575,000	8,039,028	12/28/2012	12/28/2042	Interest Rate Swap				151895-D8-5	CenterPoint Properties T Senior Note Ser	1	8,575,000	8,039,028
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,000,000	9,031,680	12/28/2012	12/28/2042	Interest Rate Swap				06762Q-AC-1	Babson CLO Ltd/Cayman Is-BABSN LP-3A B	1	9,000,000	9,031,680
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	13,000,000	12/28/2012	12/28/2042	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund -Senior Secured Revolving Credit Facility	1	13,000,000	13,000,000

S105.1

STATEMENT AS OF MARCH 31, 2023 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*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	20,000,000	9,268,721	12/28/2012	12/28/2042	Interest Rate Swap	(10,161,999)		09628N-AQ-5	BlueMountain CLO 2015-4 -SERIES 15-4A CLASS A2R	1	20,000,000	19,430,720
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,050,000	12,050,000	11,864,053	12/28/2012	12/28/2042	Interest Rate Swap			64031D-AB-6	Nelnet Student Loan Tru-SERIES 19-3A CLASS B	1	12,050,000	11,864,053
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,958,206	1,958,206	1,699,898	12/28/2012	12/28/2042	Interest Rate Swap			63939F-AC-4	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	1,958,206	1,699,898
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,000,000	5,000,000	4,829,890	12/28/2012	12/28/2042	Interest Rate Swap			12550G-AE-3	CIFC Funding Ltd-CIFC 2018-5A B ..	1	5,000,000	4,829,890
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,750,000	6,750,000	6,500,210	12/28/2012	12/28/2042	Interest Rate Swap			77341D-AE-7	Rockford Tower CLO 2017--SERIES 17-3A CLASS B	1	6,750,000	6,500,210
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,600,000	3,600,000	3,430,159	12/28/2012	12/28/2042	Interest Rate Swap			87249C-AE-1	TICP CLO X LTD-SERIES 18-10A CLASS C	1	3,600,000	3,430,159
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,200,000	3,200,000	3,105,930	12/28/2012	12/28/2042	Interest Rate Swap			48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2	1	3,200,000	3,105,930
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,250,000	4,250,000	4,122,292	12/28/2012	12/28/2042	Interest Rate Swap			75888M-AG-5	Regatta XIV Funding Ltd-SERIES 18-3A CLASS B	1	4,250,000	4,122,292
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,200,000	5,200,000	5,060,505	12/28/2012	12/28/2042	Interest Rate Swap			41154X-AG-0	Harbor Park CLO, Ltd-HAR-HARB 2018-1A B1	1	5,200,000	5,060,505
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	38,600,000	38,600,000	37,550,852	12/28/2012	12/28/2042	Interest Rate Swap			06762L-AM-0	Barings CLO Ltd 2020-I-BABSN 2020-1A AR	1	38,600,000	37,550,852
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,813,243	6,813,243	6,807,344	12/28/2012	12/28/2042	Interest Rate Swap			032095-AH-4	Amphenol Corp-SENIOR UNSECURED	1	6,813,243	6,807,344
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	9,550,000	4,277,761	12/28/2012	12/28/2042	Interest Rate Swap	(5,081,000)		04965F-AG-6	Atrium XV-SERIES 15A CLASS B	1	9,550,000	9,358,761
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	18,690,655	18,690,655	17,141,807	12/28/2012	12/28/2042	Interest Rate Swap			66704J-CB-2	NORTHSTAR EDUCATION FINA-SERIES 07-1 CLASS B	1	18,690,655	17,141,807
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,600,000	5,600,000	5,314,779	12/28/2012	12/28/2042	Interest Rate Swap			64034N-AB-1	NSLT 2019-2A B	1	5,600,000	5,314,779
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,600,000	6,600,000	5,663,976	12/28/2012	12/28/2042	Interest Rate Swap			63940A-AD-0	NAVIENT STUDENT LOAN TRU-SERIES 17-4A CLASS B	1	6,600,000	5,663,976
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,000,000	6,000,000	5,761,164	12/28/2012	12/28/2042	Interest Rate Swap			06762L-AN-8	Barings CLO Ltd 2020-I-BABSN 2020-1A BR	1	6,000,000	5,761,164
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,100,000	1,100,000	1,067,039	12/28/2012	12/28/2042	Interest Rate Swap			08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,067,039
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	2,500,000	2,500,000	2,420,883	12/28/2012	12/28/2042	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	2,500,000	2,420,883
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,400,000	6,400,000	6,175,706	12/28/2012	12/28/2042	Interest Rate Swap			77342K-AC-4	Rockford Tower CLO 2018-2 Ltd	1	6,400,000	6,175,706
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,050,000	8,050,000	7,475,729	12/28/2012	12/28/2042	Interest Rate Swap			06760G-AC-5	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS B	1	8,050,000	7,475,729
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	10,000,000	4,626,570	12/28/2012	12/28/2042	Interest Rate Swap	(5,081,000)		24380L-AE-3	DEER CREEK CLO LTD 2017--SERIES 17-1A CLASS B	1	10,000,000	9,707,570
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	24,500,000	24,500,000	23,848,839	12/28/2012	12/28/2042	Interest Rate Swap			05683E-AN-2	Bain Capital Credit CLO -BCC 2020-2A AR	1	24,500,000	23,848,839
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,570,000	13,570,000	13,207,681	12/28/2012	12/28/2042	Interest Rate Swap			48249V-AQ-4	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A2R	1	13,570,000	13,207,681
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,000,000	4,000,000	3,870,088	12/28/2012	12/28/2042	Interest Rate Swap			05874X-AC-3	Ballyrock CDO Ltd-BALLY 2020-14A A2	1	4,000,000	3,870,088
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,400,000	3,400,000	3,200,362	12/28/2012	12/28/2042	Interest Rate Swap			75009P-AE-7	Rad CLO 12 Ltd-RAD 2021-12A C	1	3,400,000	3,200,362
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,104,438	6,104,438	6,124,810	12/28/2012	12/28/2042	Interest Rate Swap			46149M-AA-4	Invesco CLO Ltd-INVCO 2021-2A A	1	6,104,438	6,124,810
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	2,068,538	(3,013,132)	12/28/2012	12/28/2042	Interest Rate Swap	(5,081,000)		50188Q-AJ-0	LCM XVIII LP-LCM 19A AR	1	2,068,538	2,067,868
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,900,000	3,900,000	3,674,970	12/28/2012	12/28/2042	Interest Rate Swap			69703P-AE-9	Palmer Square CLO 2018-1-PLMRS 2018-1A B	1	3,900,000	3,674,970
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	24,500,000	24,500,000	23,369,252	12/28/2012	12/28/2042	Interest Rate Swap			784170-ZZ-8	SFR FTTH SAS Term Loan	2		
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	24,500,000	24,500,000	23,369,252	12/28/2012	12/28/2042	Interest Rate Swap			06760W-AG-1	Barings Middle Market CL-BMM 2021-1A B	1	24,500,000	23,369,252

S105.2

STATEMENT AS OF MARCH 31, 2023 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*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,750,000	9,343,961	12/28/2012	12/28/2042	Interest Rate Swap				92918Q-AE-0	Voya CLO Ltd-VOYA 2021-1A B	1	9,750,000	9,343,961
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,100,000	1,067,039	1,067,039	12/28/2012	12/28/2042	Interest Rate Swap				08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,067,039
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	4,600,000	4,315,729	4,315,729	12/28/2012	12/28/2042	Interest Rate Swap				05875H-AE-3	Ballyrock CLO 2018-1 Ltd-SERIES 2018-1A CLASS B	1	4,600,000	4,315,729
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	6,375,000	6,347,280	6,347,280	12/28/2012	12/28/2042	Interest Rate Swap				680033-AC-1	Old National Bancorp/IN-SENIOR UNSECURED NOTE	1	6,375,000	6,347,280
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,000,000	5,026,630	5,026,630	12/28/2012	12/28/2042	Interest Rate Swap				55819F-AE-1	Madison Park Funding Ltd-MDPK 2022-55A B1	1	5,000,000	5,026,630
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	50,000,000	5,400,000	271,469	12/28/2012	12/28/2042	Interest Rate Swap		(5,081,000)		12548J-AE-2	CIFC FUNDING LTD-SERIES 17-3A CLASS A2	1	5,400,000	5,352,469
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,900,000	11,578,379	11,578,379	12/28/2012	12/28/2042	Interest Rate Swap				74988L-AC-8	ALM XIV Ltd-SERIES 14-14A CLASS A2R2	1	11,900,000	11,578,379
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,864,562	5,768,687	5,768,687	12/28/2012	12/28/2042	Interest Rate Swap				66704J-AJ-7	NorInstar Education Fina-REVENUE BONDS	1	5,864,562	5,768,687
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,000,000	7,769,512	7,769,512	12/28/2012	12/28/2042	Interest Rate Swap				38808P-AN-6	Greywolf CLO V Ltd-GWOLF 2015-1A A2R	1	8,000,000	7,769,512
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,200,000	10,835,832	10,835,832	12/28/2012	12/28/2042	Interest Rate Swap				08181B-AS-8	Benefit Street Partners -SERIES 16-9A CLASS BR	1	11,200,000	10,835,832
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,000,000	7,553,808	7,553,808	12/28/2012	12/28/2042	Interest Rate Swap				94951D-AC-7	Wellfleet CLO 2018-3 Ltd-SERIES 18-3A CLASS A1B	1	8,000,000	7,553,808
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,301,973	8,700,312	8,700,312	12/28/2012	12/28/2042	Interest Rate Swap				05389L-AB-9	Avolon Aerospace Leasing Secured Note B7	1	9,301,973	8,700,312
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	40,000,000	(47,987,131)	06/10/2021	06/10/2051	Interest Rate Swap		(87,500,411)		36248M-AJ-6	GT Loan Financing I Ltd -SERIES 2013-1A CLASS AR	1	40,000,000	39,513,280
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	324,676,545	324,676,545	324,676,545	06/10/2021	06/10/2051	Interest Rate Swap				49232F-MM-2	KREOCS LENDING I LLC - Senior Secured Term Facility	1	324,676,545	324,676,545
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	34,829,125	34,394,360	34,394,360	06/10/2021	06/10/2051	Interest Rate Swap				04941Y-AC-3	Atlas Senior Loan Fund X-SERIES 18-11A CLASS A1L	1	34,829,125	34,394,360
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	23,000,000	22,258,871	22,258,871	06/10/2021	06/10/2051	Interest Rate Swap				G7332F-AG-8	FRPF Engine Leasing Ltd Senior Secured	2	23,000,000	22,258,871
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,365,564	4,772,119	4,772,119	06/10/2021	06/10/2051	Interest Rate Swap				78443G-AJ-4	SLM STUDENT LOAN TRUST 2-SERIES 06-7 CLASS B	1	5,365,564	4,772,119
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,385,083	14,311,455	14,311,455	06/10/2021	06/10/2051	Interest Rate Swap				25763F-AF-7	Donaldson Co Inc Senior Unsecured Notes	1	15,385,083	14,311,455
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	14,808,000	13,949,610	13,949,610	06/10/2021	06/10/2051	Interest Rate Swap				392709-AF-8	Green Brick Partners, In Senior Unsecured Notes	1	14,808,000	13,949,610
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	18,000,000	18,000,000	18,000,000	06/10/2021	06/10/2051	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	18,000,000	18,000,000
57629*G00	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	225,000,000	360,000,000	302,811,011	06/10/2021	06/10/2051	Interest Rate Swap		(57,188,989)		88165Z-MM-7	Tetragon Financial Group (Delaware) LLC - Revolver	1	360,000,000	360,000,000
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	169,261,595	169,261,595	169,261,595	06/10/2021	06/10/2051	Interest Rate Swap				32008Z-MM-6	FIRST EAGLE DIRECT LENDING V-B, LLC - Secured Revolving Loan Facility	1	169,261,595	169,261,595
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	98,854,000	98,854,000	98,854,000	06/10/2021	06/10/2051	Interest Rate Swap				91831Z-MM-3	YPC ASSET BACKED OPPORTUNISTIC CREDIT Holdings Fund, L.P - Secured Revolving Loan Facility	1	98,854,000	98,854,000
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	25,000,000	24,525,800	24,525,800	06/10/2021	06/10/2051	Interest Rate Swap				67104L-AF-4	CHA Loan Funding 2013-2 -OHALF 2013-2A BR	1	25,000,000	24,525,800
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,850,000	13,606,836	13,606,836	06/10/2021	06/10/2051	Interest Rate Swap				38137P-AU-4	Goldentree Loan Opportun-SERIES 2015-10A CLASS BR	1	13,850,000	13,606,836
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	1,000,000	988,657	988,657	06/10/2021	06/10/2051	Interest Rate Swap				941848-DE-9	Waters Corporation Gtd Senior Note Series H	2	1,000,000	988,657
57629*GF2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	3,800,000	3,534,065	3,534,065	06/10/2021	06/10/2051	Interest Rate Swap				74988L-AJ-3	ALM XIV Ltd-SERIES 14-14A CLASS BR2	1	3,800,000	3,534,065
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	15,000,000	(59,795,609)	06/10/2021	06/10/2051	Interest Rate Swap		(74,332,814)		48250W-AJ-4	KKR CLO 14 Ltd-KKR 14 BR	1	15,000,000	14,537,205
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	5,000,000	4,873,590	4,873,590	06/10/2021	06/10/2051	Interest Rate Swap				87248K-AS-3	TICP CLO VI 2016-5 LTD-TICP 2016-5A A2R	1	5,000,000	4,873,590

S105.3

STATEMENT AS OF MARCH 31, 2023 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		1,030,635	894,683	06/10/2021	06/10/2051	Interest Rate Swap				63939F-AC-4	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	1,030,635	894,683
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		732,932	732,053	06/10/2021	06/10/2051	Interest Rate Swap				78448Q-AD-0	SMB PRIVATE EDUCATION LO-SMB 2015-B A3	1	732,932	732,053
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,350,000	7,715,016	06/10/2021	06/10/2051	Interest Rate Swap				97315T-AG-7	THL Credit Wind River 20-WINDR 2017-1A CR	1	8,350,000	7,715,016
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		252,000,000	249,326,784	06/10/2021	06/10/2051	Interest Rate Swap				06762W-AA-2	Barings Clo Ltd 2020-III-BABSN 2020-3A A	1	252,000,000	249,326,784
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,475,000	16,220,445	06/10/2021	06/10/2051	Interest Rate Swap				06760G-AA-9	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS A1	1	16,475,000	16,220,445
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,164,357	16,066,661	06/10/2021	06/10/2051	Interest Rate Swap				13877P-AA-5	Canyon CLO 2021-4 Ltd-CANVC 2021-4A A	1	16,164,357	16,066,661
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,200,000	15,698,529	06/10/2021	06/10/2051	Interest Rate Swap				06760J-AE-5	Barings CLO Ltd 2018-II-SERIES 2018-20A CLAS A1B	1	16,200,000	15,698,529
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	15,558,960	06/10/2021	06/10/2051	Interest Rate Swap				06760X-AC-8	BARINGS CLO LTD 2018-IV-SERIES 18-4A CLASS A2	1	16,000,000	15,558,960
57629*GE5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,594,350	06/10/2021	06/10/2051	Interest Rate Swap				13876L-AL-1	Canyon CLO 2020-1 Ltd-CANVC 2020-1A BR	1	10,000,000	9,594,350
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	8,800,000	(54,967,356)	06/11/2021	06/11/2051	Interest Rate Swap		(63,589,112)		38137P-AS-9	Goldentree Loan Opportun-SERIES 2015-10A CLASS AJR	1	8,800,000	8,621,756
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		81,994,925	81,994,925	06/11/2021	06/11/2051	Interest Rate Swap				96269#-MM-9	X WH REDF2-TSE SELLER, LLC - Term Loan Facility	1	81,994,925	81,994,925
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,056,983	06/11/2021	06/11/2051	Interest Rate Swap				55819T-AU-5	Madison Park Funding XX -SERIES 2016-20A CLASS CR	1	7,500,000	7,056,983
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,000	13,448,375	06/11/2021	06/11/2051	Interest Rate Swap				03328Y-AE-4	Anchorage Capital CLO Lt-ANCHC 2018-1RA B	1	13,900,000	13,448,375
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,487,380	6,944,592	06/11/2021	06/11/2051	Interest Rate Swap				64034C-AB-5	NetNet Student Loan Trus-NSLT 2019-1A B	1	7,487,380	6,944,592
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		53,355,848	52,319,929	06/11/2021	06/11/2051	Interest Rate Swap				278300-AJ-7	Eaton Vance CLO 2020-1 L-EATON 2020-1A AR	1	53,355,848	52,319,929
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,350,000	5,122,197	06/11/2021	06/11/2051	Interest Rate Swap				36320T-AX-1	Galaxy XXI CLO Ltd-GALXY 2016-22A BRR	1	5,350,000	5,122,197
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,020,000	58,617,693	06/11/2021	06/11/2051	Interest Rate Swap				03768M-AJ-6	Apidos CLO XXXIII-APID 2020-33A AR	1	60,020,000	58,617,693
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		35,142,815	34,404,126	06/11/2021	06/11/2051	Interest Rate Swap				282523-AH-2	1828 CLO Ltd-GUGG4 2016-1A A1S1 .. Barings Middle Market CL-BMM 2017-1A CR	1	35,142,815	34,404,126
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,460,500	10,935,472	06/11/2021	06/11/2051	Interest Rate Swap				06760Q-AU-3	Barings Middle Market CL-BMM 2017-1A CR	2	12,460,500	10,935,472
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,800,000	11,754,330	06/11/2021	06/11/2051	Interest Rate Swap				06762T-AG-6	Babson CLO Ltd/Cayman Islands VCP PRL ABS II Ltd-VCPRL 2022-1A B	2	12,800,000	11,754,330
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,319,593	2,237,120	06/11/2021	06/11/2051	Interest Rate Swap				91824X-AE-0	Bain Capital Credit CLO -BCC 2020-2A DR	2	2,319,593	2,237,120
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,400,000	2,140,090	06/11/2021	06/11/2051	Interest Rate Swap				05683E-AU-6	Elmwood CLO III Ltd-ELMW3 2019-3A DR	2	2,400,000	2,140,090
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,250,000	2,098,170	06/11/2021	06/11/2051	Interest Rate Swap				29002H-AS-8	Eaton Vance CLO 2020-1 L-EATON 2020-1A DR	2	2,250,000	2,098,170
57629*GD7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,250,000	2,000,777	06/11/2021	06/11/2051	Interest Rate Swap				278300-AQ-1	Eaton Vance CLO 2020-1 L-EATON 2020-1A DR	2	2,250,000	2,000,777
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	325,000,000	8,300,000	(75,790,994)	06/11/2021	06/11/2051	Interest Rate Swap		(83,824,116)		05684D-AG-8	Bain Capital Credit CLO-BCC 2020-1A B FLOATING	1	8,300,000	8,033,122
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,561,104	06/11/2021	06/11/2051	Interest Rate Swap				83608G-AQ-9	Sound Point CLO II Ltd-SNDPT 2013-1A A2R	1	8,000,000	7,561,104
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,502,630	06/11/2021	06/11/2051	Interest Rate Swap				05682V-AC-9	Bain Capital Credit CLO -SERIES 18-2A CLASS A2	1	15,000,000	14,502,630
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,910,000	6,892,684	06/11/2021	06/11/2051	Interest Rate Swap				50188Q-AE-1	LGM XIX LTD PARTNERSHIP DEF MEZZ NT CL C	1	6,910,000	6,892,684
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		111,951,538	111,951,538	06/11/2021	06/11/2051	Interest Rate Swap				901399-MQ-5	Twinbrook Capital Funding VII DSPV, LLC - Term Loan	1	111,951,538	111,951,538

S105.4

STATEMENT AS OF MARCH 31, 2023 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*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		118,106,753	118,106,753	06/11/2021	06/11/2051	Interest Rate Swap			69324#-MM-7	PCRED LENDING III LLC, PCRED LENDING III SPE I LLC and PCRED LENDING III OFFSHORE LTD.-Term Loan 2020-2	1	118,106,753	118,106,753
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,100,000	1,067,039	06/11/2021	06/11/2051	Interest Rate Swap			08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,067,039
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,800,000	5,393,327	06/11/2021	06/11/2051	Interest Rate Swap			01749B-AC-3	Allegro CLO VI Ltd-ALLEG 2017-2A C	1	5,800,000	5,393,327
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	3,008,397	06/11/2021	06/11/2051	Interest Rate Swap			06762J-AE-3	Babson CLO Ltd/Cayman Is-BABSN 2021-2A C	1	3,200,000	3,008,397
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,903,824	28,175,765	06/11/2021	06/11/2051	Interest Rate Swap			341081-FR-3	Florida Power & Light Co-SECURED Barings Middle Market CL-BMM 2018-1A B	1	32,903,824	28,175,765
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,130,840	22,262,168	06/11/2021	06/11/2051	Interest Rate Swap			06761M-AC-1	Canyon Capital CLO 2019-CANVC 2019-2A CR	1	22,130,840	22,262,168
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,232,926	06/11/2021	06/11/2051	Interest Rate Swap			13887W-AN-0	Hayfin Kingsland XI Ltd-HAYFN 2019-2A BR	1	5,600,000	5,232,926
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,330,000	5,150,091	06/11/2021	06/11/2051	Interest Rate Swap			42086N-AJ-7	Bain Capital Credit CLO -BCC 2020-3A A1R	1	5,330,000	5,150,091
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,811,065	4,808,960	06/11/2021	06/11/2051	Interest Rate Swap			05684C-AL-9	QHA Credit Funding 4 Ltd-OAKC 2019-4A CR	1	4,811,065	4,808,960
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,100,000	4,843,388	06/11/2021	06/11/2051	Interest Rate Swap			67098D-AW-3	Signal Peak CLO 9 Ltd-SPEAK 2021-9A C	1	5,100,000	4,843,388
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,956,132	5,692,080	06/11/2021	06/11/2051	Interest Rate Swap			82670Q-AG-4	Elmwood CLO VII Ltd-ELMW7 2020-4A A	1	5,956,132	5,692,080
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,659,917	4,697,156	06/11/2021	06/11/2051	Interest Rate Swap			29002Q-AA-7		1	4,659,917	4,697,156
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,099,186	06/11/2021	06/11/2051	Interest Rate Swap			67707L-AJ-7	Oak Hill Credit Partners KVK CLO 2016-1 Ltd-KVK 2016-1A CR2	1	4,300,000	4,099,186
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,200,000	3,893,719	06/11/2021	06/11/2051	Interest Rate Swap			97314D-AG-3	Bain Capital Credit CLO -BCC 2021-5A C	1	4,200,000	3,893,719
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	3,974,352	06/11/2021	06/11/2051	Interest Rate Swap			05682E-AG-8	Neuberger Berman CLO XX -NEUB 2015-20A BRR	1	4,300,000	3,974,352
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,525,000	3,415,418	06/11/2021	06/11/2051	Interest Rate Swap			64130T-BC-8	Landmark Equity Partners XVI-D, LLC	1	3,525,000	3,415,418
57629*GC9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,000,000	40,000,000	06/11/2021	06/11/2051	Interest Rate Swap			515095-MM-6		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	5,800,000	(79,622,328)	06/11/2021	06/11/2051	Interest Rate Swap		(85,008,301)	67570Q-AP-6	QCP CLO 2019-16 Ltd-SERIES 19-16A CLASS CR	1	5,800,000	5,385,973
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,000,000	11,470,152	06/11/2021	06/11/2051	Interest Rate Swap			92917J-AE-7	Voya CLO 2018-2 Ltd-VOYA 2018-2A B1	1	12,000,000	11,470,152
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		82,175,689	82,175,689	06/11/2021	06/11/2051	Interest Rate Swap			69324#-MM-9	PCRED LENDING III LLC, PCRED LENDING III SPE I LLC and PCRED LENDING III OFFSHORE LTD.-Term Loan Series 2019-1	1	82,175,689	82,175,689
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	57,878,640	06/11/2021	06/11/2051	Interest Rate Swap			83614X-AQ-4	Sound Point CLO XXVI Ltd-SNDPT 2020-1A AR	1	60,000,000	57,878,640
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		57,813,323	56,936,831	06/11/2021	06/11/2051	Interest Rate Swap			67115L-AA-2	Oak Hill Credit Partners-OAKC 2021-16A A	1	57,813,323	56,936,831
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		54,100,000	53,532,221	06/11/2021	06/11/2051	Interest Rate Swap			67104L-AE-7	QHA Loan Funding 2013-2 -QHAF 2013-2A AR	1	54,100,000	53,532,221
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,304,100	06/11/2021	06/11/2051	Interest Rate Swap			17275G-AA-4	CIRUS-2018-1A A	1	50,000,000	48,304,100
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	47,713,300	06/11/2021	06/11/2051	Interest Rate Swap			25255A-AA-4	DCF 2019-1A A	1	50,000,000	47,713,300
57629*GB1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	12,745,789	06/11/2021	06/11/2051	Interest Rate Swap			67098D-AU-7	QHA Credit Funding 4 Ltd-OAKC 2019-4A BR	1	13,100,000	12,745,789
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	23,500,000	16,884,532	04/09/2013	04/09/2043	Interest Rate Swap		(5,559,449)	92558V-AC-8	Vibrant CLO Ltd-SERIES 18-9A CLASS A2	1	23,500,000	22,443,981
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,476,583	6,031,814	04/09/2013	04/09/2043	Interest Rate Swap			78442G-PL-4	SLM STUDENT LOAN TRUST-SERIES 2005-4 CLASS B	1	6,476,583	6,031,814

S105.5

STATEMENT AS OF MARCH 31, 2023 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		6,400,000	6,134,157	04/09/2013	04/09/2043	Interest Rate Swap				01749B-AB-5	Alllegro CLO VI Ltd-ALLEG 2017-2A B	1	6,400,000	6,134,157
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,279,607	3,472,007	04/09/2013	04/09/2043	Interest Rate Swap				12481X-AS-9	CBAM 2018-6 Ltd-CBAM 2018-6A B1R	1	3,279,607	3,472,007
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,236,990	04/09/2013	04/09/2043	Interest Rate Swap				77342J-AC-7	Rockford Tower CLO 2018--SERIES 18-1A CLASS B	1	7,500,000	7,236,990
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,900,000	6,755,624	04/09/2013	04/09/2043	Interest Rate Swap				65023T-AK-8	Newark BSL CLO 1 Ltd-NBCLO 2016-1A A2R	1	6,900,000	6,755,624
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		496,718	486,091	04/09/2013	04/09/2043	Interest Rate Swap				06759F-AD-8	BABSON CLO LTD 2015-II-SERIES 15-2A CLASS B2R	1	496,718	486,091
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,619,285	11,759,988	04/09/2013	04/09/2043	Interest Rate Swap				38137W-AQ-8	Goldentree Loan Managem-GLM 2019-6A AR	1	11,619,285	11,759,988
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	60,000,000	25,326,145	18,871,222	04/09/2013	04/09/2043	Interest Rate Swap		(6,064,853)		784170-ZZ-8	SFR FTTH SAS Term Loan	2	25,326,145	24,936,075
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,500,000	17,797,352	04/09/2013	04/09/2043	Interest Rate Swap				50188G-AX-1	LCM XVIII LP-LCM 18A A2R	1	18,500,000	17,797,352
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,281,293	04/09/2013	04/09/2043	Interest Rate Swap				33882G-AG-3	Flatiron Clo 17 Ltd-FLAT 2017-1A BR	1	7,500,000	7,281,293
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,700,000	4,444,987	04/09/2013	04/09/2043	Interest Rate Swap				67707C-AU-2	Oak Hill Credit Partners-OAKC 2014-10RA CR	1	4,700,000	4,444,987
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,000,000	1,952,440	04/09/2013	04/09/2043	Interest Rate Swap				62849F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	2,000,000	1,952,440
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,647,811	5,750,601	04/09/2013	04/09/2043	Interest Rate Swap				25654F-AA-0	Dodger Tickets LLC Senior Secured	1	5,647,811	5,750,601
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	8,027,896	04/09/2013	04/09/2043	Interest Rate Swap				75009J-AB-7	Rad CLO 17 Ltd-RAD 2022-17A B1	1	8,000,000	8,027,896
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	26,000,000	20,038,994	04/09/2013	04/09/2043	Interest Rate Swap		(5,473,298)		83609Y-AC-0	Sounds Point CLO IV-R LT-SERIES 13-3RA CLASS A	1	26,000,000	25,512,292
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,151,112	5,465,439	04/09/2013	04/09/2043	Interest Rate Swap				78442G-QA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	6,151,112	5,465,439
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,353,849	20,240,476	04/09/2013	04/09/2043	Interest Rate Swap				29002G-AB-7	Elmwood CLO IV Ltd-ELMW4 2020-1A A	1	20,353,849	20,240,476
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,622,315	04/09/2013	04/09/2043	Interest Rate Swap				29001L-AN-1	Elmwood CLO II Ltd-ELMW2 2019-2A BR	1	15,000,000	14,622,315
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,900,000	5,651,852	04/09/2013	04/09/2043	Interest Rate Swap				40436X-AG-2	HIGHBRIDGE LOAN MANAGEM-SERIES 2014 CLASS BR	1	5,900,000	5,651,852
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	25,900,000	19,604,299	04/09/2013	04/09/2043	Interest Rate Swap		(5,473,298)		04016V-AC-9	ARES XLVII CLO Ltd-SERIES 18-47A CLASS A2	1	25,900,000	25,077,597
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,877,860	04/09/2013	04/09/2043	Interest Rate Swap				03329Z-AS-2	ANCHORAGE CAPITAL CLO 20-SERIES 13-1A CLASS A2R	1	10,000,000	9,877,860
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,900,000	10,339,914	04/09/2013	04/09/2043	Interest Rate Swap				38138D-AS-5	Goldentree Loan Managem-GLM 2019-5A CR	1	10,900,000	10,339,914
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,750,890	04/09/2013	04/09/2043	Interest Rate Swap				29001L-AQ-4	Elmwood CLO II Ltd-ELMW2 2019-2A CR	1	5,000,000	4,750,890
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,575,000	2,426,979	04/09/2013	04/09/2043	Interest Rate Swap				08179H-AC-4	Benefit Street Partners-BSP 2017-12A B	1	2,575,000	2,426,979
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	968,353	04/09/2013	04/09/2043	Interest Rate Swap				13876J-AE-2	Canyon Capital CLO Ltd-CANYC 2012-1RA B	1	1,000,000	968,353
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,498,311	6,368,874	04/09/2013	04/09/2043	Interest Rate Swap				512807-AU-2	Lan Research Corp-SENIOR UNSECURED	1	6,498,311	6,368,874
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,026,630	04/09/2013	04/09/2043	Interest Rate Swap				55819F-AE-1	Madison Park Funding Ltd-MDPK 2022-55A B1	1	5,000,000	5,026,630
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	2,904,821	(2,589,651)	04/09/2013	04/09/2043	Interest Rate Swap		(5,529,648)		38137W-AQ-8	Goldentree Loan Managem-GLM 2019-6A AR	1	2,904,821	2,939,997
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,812,500	20,950,487	04/09/2013	04/09/2043	Interest Rate Swap				06763H-AC-0	Babson CLO Ltd/Cayman Is-BABSN 2022-4A B	1	20,812,500	20,950,487
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,234,970	12,343,513	04/09/2013	04/09/2043	Interest Rate Swap				87248K-AJ-3	TICP CLO V 2016-1 Ltd-TICP 2016-5A A1R	1	12,234,970	12,343,513

S105.6

STATEMENT AS OF MARCH 31, 2023 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*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,729,436	13,407,134	04/09/2013	04/09/2043	Interest Rate Swap			05875H-AC-7	BALLYROCK CLO 2018-1 LTD-SERIES 2018-1A CLASS A2	1	13,729,436	13,407,134
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	976,220	04/09/2013	04/09/2043	Interest Rate Swap			62848F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	1,000,000	976,220
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,439,154	04/09/2013	04/09/2043	Interest Rate Swap			48661N-AE-8	KAYNE CLO-SERIES 19-6A CLASS B1	1	5,500,000	5,439,154
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,402,191	6,692,543	04/09/2013	04/09/2043	Interest Rate Swap			25654#-AB-8	Dodger Tickets LLC Senior Secured Marble Point CLO XI Ltd-MP11 2017-2A A	1	6,402,191	6,692,543
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	60,000,000	21,900,000	15,491,744	04/09/2013	04/09/2043	Interest Rate Swap		(6,032,343)	56607F-AA-3	NORTHSTAR EDUCATION FINA-SERIES 04-2 CLASS B	1	21,900,000	21,524,087
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,911,900	11,895,200	04/09/2013	04/09/2043	Interest Rate Swap			66704J-BD-9	NORTHSTAR EDUCATION FINA-SERIES 05-1 CLASS B	1	12,911,900	11,895,200
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,278,940	9,981,233	04/09/2013	04/09/2043	Interest Rate Swap			66704J-BK-3	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	11,278,940	9,981,233
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,500,000	3,334,090	04/09/2013	04/09/2043	Interest Rate Swap			94950J-AC-5	Crestline Denali CLO Ltd-SERIES 2018-1A CLASS C	1	3,500,000	3,334,090
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	2,933,536	04/09/2013	04/09/2043	Interest Rate Swap			22615E-AE-0	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	3,200,000	2,933,536
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,000,000	1,952,440	04/09/2013	04/09/2043	Interest Rate Swap			62848F-AC-6	Highbridge Loan Managem-SERIES 4A-2014 CLASS A2R	1	2,000,000	1,952,440
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,478,062	04/09/2013	04/09/2043	Interest Rate Swap			44330G-AE-3	H.H.I. HULL NO. S856 L.L Guaranteed Notes	1	11,900,000	11,478,062
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,943,750	7,697,843	04/09/2013	04/09/2043	Interest Rate Swap			40425Q-AA-3	Allegro CLO VII Ltd-ALLEG 2018-1A A	1	7,943,750	7,697,843
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	225,000,000	34,500,000	(24,324,767)	06/11/2021	06/11/2051	Interest Rate Swap		(58,217,740)	01750C-AA-1	KKR CLO 14 Ltd-KKR 14 AR	1	34,500,000	33,892,973
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,000,000	986,744	06/11/2021	06/11/2051	Interest Rate Swap			48250W-AG-0	Waters Corporation Gtd Senior Note Series H	1	1,000,000	986,744
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,100,000	7,019,465	06/11/2021	06/11/2051	Interest Rate Swap			941848-D8-9	Carlyle Global Market S1-CGMS 2014-2RA A2	2	7,100,000	7,019,465
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,836,555	06/11/2021	06/11/2051	Interest Rate Swap			14314L-AE-5	NetNet Student Loan Trus-NSLT 2020-5A B	1	5,000,000	4,836,555
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,500,000	2,479,583	06/11/2021	06/11/2051	Interest Rate Swap			64032V-AB-5	YPC SPECIALTY LENDING INVESTMENTS INTERMEDIATE, L.P. - Secured Revolving Loan Facility	1	2,500,000	2,479,583
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		93,095,090	93,095,090	06/11/2021	06/11/2051	Interest Rate Swap			91831Z-MM-5	PIONEERS GATE LLC 2021-1 CFCC	1	93,095,090	93,095,090
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		63,324,996	62,455,387	06/11/2021	06/11/2051	Interest Rate Swap			72403Z-NS-9	Benefit Street Partners -SERIES 18-14A CLASS A2	1	63,324,996	62,455,387
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,400,000	12,944,936	06/11/2021	06/11/2051	Interest Rate Swap			08179L-AC-5	QHA Credit Funding 1 LTD-SERIES 18-1A CLASS B	1	13,400,000	12,944,936
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,795,976	06/11/2021	06/11/2051	Interest Rate Swap			67115W-AG-5	Diameter Capital CLO 1 L-DOLO 2021-1A A2	1	8,000,000	7,795,976
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,100,000	6,788,395	06/11/2021	06/11/2051	Interest Rate Swap			25255D-AE-0	Mesa Air Group, Inc. Class A Notes	1	7,100,000	6,788,395
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,482,315	22,751,507	06/11/2021	06/11/2051	Interest Rate Swap			59048#-AA-6	Landmark Equity Partners XVI-D, LLC	2	24,482,315	22,751,507
57629*GA3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		56,000,000	56,000,000	06/11/2021	06/11/2051	Interest Rate Swap			51509S-MM-6	MADISON PARK FUNDING XXI-MDPK 2018-23A A2	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	14,000,000	(50,513,779)	06/11/2021	06/11/2051	Interest Rate Swap		(64,278,901)	55820C-AE-5	DRYDEN 64 CLO LTD-DRSLF 2018-64A A	1	14,000,000	13,765,122
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,850,000	22,510,129	06/11/2021	06/11/2051	Interest Rate Swap			26251L-AC-8	Regatta X Funding Ltd-SERIES 2017-3A CLASS B	1	22,850,000	22,510,129
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	12,606,274	06/11/2021	06/11/2051	Interest Rate Swap			75884B-AC-2	Atlas Senior Loan Fund X-ATCLO 2018-10A B	1	13,100,000	12,606,274
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,700,000	4,519,797	06/11/2021	06/11/2051	Interest Rate Swap			04942J-AE-1	Wellfleet CLO Ltd-WELF 2021-1A C	1	4,700,000	4,519,797
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,403,075	06/11/2021	06/11/2051	Interest Rate Swap			94950C-AG-1	Wellfleet CLO Ltd-WELF 2021-1A C	1	7,000,000	6,403,075

S105.7

STATEMENT AS OF MARCH 31, 2023 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*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		172,028,803	172,028,803	06/11/2021	06/11/2051	Interest Rate Swap				46143F-MM-6	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2020-1	2	172,028,803	172,028,803
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,600,000	29,650,533	06/11/2021	06/11/2051	Interest Rate Swap				06760W-AE-6	Barings Middle Market CL-BMM 2021-1A A2	1	31,600,000	29,650,533
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		29,501,023	29,196,449	06/11/2021	06/11/2051	Interest Rate Swap				62983P-AA-3	Nakilat Inc-SECURED BOND Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	29,501,023	29,196,449
57629*FZ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	11,000,000	06/11/2021	06/11/2051	Interest Rate Swap				186858-AC-6	Madison Park Funding XIV-MDPK 2014-14A BRR	1	11,000,000	11,000,000
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	15,000,000	13,818,443	03/05/2014	03/05/2034	Interest Rate Swap		(818,752)		55818R-BA-3	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS BR	1	15,000,000	14,637,195
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,920,000	4,734,501	03/05/2014	03/05/2034	Interest Rate Swap				48249V-AS-0	Carlyle US CLO 2021-10 L-GMS 2021-10A A	1	4,920,000	4,734,501
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,186,215	16,435,254	03/05/2014	03/05/2034	Interest Rate Swap				14316Y-AA-3	Bain Capital Credit CLO -BCC 2019-2A BR	1	16,186,215	16,435,254
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,193,415	03/05/2014	03/05/2034	Interest Rate Swap				05682L-AL-1	KKR Clo 24 Ltd-KKR 24 BR	1	13,700,000	13,193,415
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,050,000	7,808,073	03/05/2014	03/05/2034	Interest Rate Swap				48252R-AQ-7	KKR CLO 14 Ltd-KKR 14 AR	1	8,050,000	7,808,073
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,907,208	03/05/2014	03/05/2034	Interest Rate Swap				48250W-AG-0	GAIF Bond Issuer Pty Ltd Gtd Senior Note	1	7,000,000	6,907,208
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,800,000	19,634,670	03/05/2014	03/05/2034	Interest Rate Swap				Q39588-AC-0	Bain Capital Credit CLO -BCC 2020-4A B	1	19,800,000	19,634,670
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,218,790	03/05/2014	03/05/2034	Interest Rate Swap				05684K-AN-7	BlueMountain CLO XXX Ltd-BLUEM 2020-30A BR	1	6,400,000	6,218,790
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	2,847,444	03/05/2014	03/05/2034	Interest Rate Swap				09630Q-AN-1	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS C	2	3,000,000	2,847,444
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,650,000	1,488,689	03/05/2014	03/05/2034	Interest Rate Swap				06760G-AD-3	Madison Park Funding Ltd-MDPK 2022-62A B	1	1,650,000	1,488,689
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,350,000	12,365,808	03/05/2014	03/05/2034	Interest Rate Swap				55817H-AE-9	Fort Benning Family Comm-UNSECURED	1	12,350,000	12,365,808
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	19,290,954	19,369,160	03/05/2014	03/05/2034	Interest Rate Swap		(800,583)		346845-AC-4	Magna Imperio Systems Co-SECURED Sixth Street CLO-SIXST 2021-20A A1	1	19,290,954	20,169,743
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,630,970	21,552,817	03/05/2014	03/05/2034	Interest Rate Swap				55921Q-AA-0	THL Credit Wind River 20-SERIES 18-2A CLASS A2	1	21,630,970	21,552,817
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,300,000	17,888,872	03/05/2014	03/05/2034	Interest Rate Swap				83012Q-AA-2	BlueMountain CLO XXX Ltd-BLUEM 2020-30A BR	1	18,300,000	17,888,872
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,400,000	9,105,225	03/05/2014	03/05/2034	Interest Rate Swap				88434H-AE-3	ARES XXX IIR CLO LTD-SERIES 14-32RA CLASS A1B	1	9,400,000	9,105,225
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,700,000	3,511,848	03/05/2014	03/05/2034	Interest Rate Swap				09630Q-AN-1	ACCESS GROUP INC-SERIES 2015-1 CLASS B	1	3,700,000	3,511,848
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,625,000	13,097,535	03/05/2014	03/05/2034	Interest Rate Swap				04017E-AE-2	CIFC Funding 2021-I Ltd-CIFC 2021-1A B	1	13,625,000	13,097,535
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,985,481	1,833,562	03/05/2014	03/05/2034	Interest Rate Swap				00435T-AB-7	KAYNE CLO I Ltd-KAYNE 2018-1A CR	1	1,985,481	1,833,562
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,447,938	03/05/2014	03/05/2034	Interest Rate Swap				12563E-AC-7	US Bancorp-SENIOR UNSECURED Barings Loan Partners CL-BABSN 2022-3A B	1	5,600,000	5,447,938
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,178,388	03/05/2014	03/05/2034	Interest Rate Swap				48661A-AN-6	Rockford Tower CLO 2018-SERIES 18-1A CLASS A	1	5,500,000	5,178,388
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,179,924	3,011,186	03/05/2014	03/05/2034	Interest Rate Swap				91159H-HR-4	Neuberger Berman CLO Ltd-NEUB 2018-28A B	1	3,179,924	3,011,186
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,900,000	6,930,740	03/05/2014	03/05/2034	Interest Rate Swap				06762V-AC-0	Canyon Capital CLO Ltd-CANYC 2021-1A B	1	6,900,000	6,930,740
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	56,094,611	51,556,325	05/19/2014	05/19/2034	Interest Rate Swap		(3,753,017)		77342J-AA-1	US Bancorp-SENIOR UNSECURED Barings Loan Partners CL-BABSN 2022-3A B	1	56,094,611	55,309,342
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,814,787	05/19/2014	05/19/2034	Interest Rate Swap				64130P-AE-3	Neuberger Berman CLO Ltd-NEUB 2018-28A B	1	7,000,000	6,814,787
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,288,640	05/19/2014	05/19/2034	Interest Rate Swap				13877E-AE-2	Canyon Capital CLO Ltd-CANYC 2021-1A B	1	15,000,000	14,288,640

SI05.8

STATEMENT AS OF MARCH 31, 2023 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*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,938,991	6,971,760	05/19/2014	05/19/2034	Interest Rate Swap				64132J-AN-5	Neuberger Berman Loan Ad-NEUB 2019-31A AR	1	6,938,991	6,971,760
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	15,503,248	05/19/2014	05/19/2034	Interest Rate Swap				04017Q-AE-5	ARES CLO Ltd-SERIES 18-28RA CLASS B	1	16,000,000	15,503,248
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,512,285	05/19/2014	05/19/2034	Interest Rate Swap				087598-AC-2	BETHPAGE PARK CLO LTD-BETHP 2021-1A B	1	6,750,000	6,512,285
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,800,000	2,765,154	05/19/2014	05/19/2034	Interest Rate Swap				48661Y-AA-2	Kayne CLO 4 Ltd-SERIES 19-4A CLASS B1	1	2,800,000	2,765,154
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,111,360	10,831,050	05/19/2014	05/19/2034	Interest Rate Swap				55922Z-AR-5	Magna International Inc-SR UNSECURED	1	11,111,360	10,831,050
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,460,482	7,512,330	05/19/2014	05/19/2034	Interest Rate Swap				871980-AE-8	Symphony CLO 35 Ltd-SYMP 2022-35A B1	1	7,460,482	7,512,330
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	85,000,000	23,487,000	21,466,737	05/09/2014	05/09/2034	Interest Rate Swap		(1,691,281)		12551R-AA-6	CIFC Funding 2018-I Ltd-CIFC 2018-1A A	1	23,487,000	23,158,018
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,483,595	05/09/2014	05/09/2034	Interest Rate Swap				03765W-BC-1	Apollo Credit Funding IV-SERIES 4A CLASS A1BR	1	15,000,000	14,483,595
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,478,031	05/09/2014	05/09/2034	Interest Rate Swap				50184N-AN-2	LOM LTD PARTNERSHIP-SERIES 15A CLASS BR	1	5,650,000	5,478,031
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,607,203	5,544,835	05/09/2014	05/09/2034	Interest Rate Swap				04009G-AE-7	ARES L CLO Ltd-SERIES 19-53A CLASS B	1	5,607,203	5,544,835
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,064,493	05/09/2014	05/09/2034	Interest Rate Swap				97314D-AE-8	KVK CLO 2016-1 Ltd-KVK 2016-1A BR2	1	6,400,000	6,064,493
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,649,080	05/09/2014	05/09/2034	Interest Rate Swap				77342K-AA-8	ROCKFORD TOWER CLO 2018-ROCKT 2018-2A A	1	20,000,000	19,649,080
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,900,000	3,640,564	05/09/2014	05/09/2034	Interest Rate Swap				05683L-AG-1	Bain Capital Credit CLO -SERIES 1A CLASS C	1	3,900,000	3,640,564
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1				05/09/2014	05/09/2034	Interest Rate Swap				784170-ZZ-8	SFR FTTH SAS Term Loan	2		
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	5,026,630	05/09/2014	05/09/2034	Interest Rate Swap				55819F-AE-1	Madison Park Funding Ltd-MDPK 2022-55A B1	1	5,000,000	5,026,630
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	55,000,000	10,000,000	7,254,877	10/06/2014	10/06/2034	Interest Rate Swap		(2,512,143)		55819B-AN-0	Madison Park Funding XVI-MDPK 2015-18A BR	1	10,000,000	9,767,020
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,100,000	19,369,566	10/06/2014	10/06/2034	Interest Rate Swap				06760G-AB-7	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS A2	1	20,100,000	19,369,566
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,076,091	23,913,182	10/06/2014	10/06/2034	Interest Rate Swap				77341D-AA-5	Rockford Tower CLO 2017-ROCKT 2017-3A A	1	24,076,091	23,913,182
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,100,000	2,922,990	10/06/2014	10/06/2034	Interest Rate Swap				04943A-AG-4	ATLAS SENIOR LOAN FUND L-SERIES 17-8A CLASS C	1	3,100,000	2,922,990
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,528,938	7,211,498	10/06/2014	10/06/2034	Interest Rate Swap				172967-LW-9	Citigroup Inc-SENIOR UNSECURED	1	7,528,938	7,211,498
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	100,000,000	12,417,512	(14,847,485)	06/16/2021	06/16/2051	Interest Rate Swap		(26,696,710)		66776M-ZZ-9	ORANGE GROVE ENERGY, L.P DELAYED DRAW TE	2	12,417,512	11,849,225
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,940,444	3,879,754	06/16/2021	06/16/2051	Interest Rate Swap				784170-ZZ-8	SFR FTTH SAS Term Loan	2	3,940,444	3,879,754
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,114,685	4,184,382	06/16/2021	06/16/2051	Interest Rate Swap				429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	4,114,685	4,184,382
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,200,000	9,908,984	06/16/2021	06/16/2051	Interest Rate Swap				00889B-AB-7	AIMCO CDO-AIMCO 2021-15A B	1	10,200,000	9,908,984
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,009,101	19,882,306	06/16/2021	06/16/2051	Interest Rate Swap				55818Y-BN-0	Madison Park Funding XVI-MDPK 2015-17A AR2	1	20,009,101	19,882,306
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,500,000	19,897,464	06/16/2021	06/16/2051	Interest Rate Swap				44927Z-AA-1	ICG US CLO Ltd-ICG 2021-4A A1	1	20,500,000	19,897,464
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,443,418	19,370,400	06/16/2021	06/16/2051	Interest Rate Swap				75009R-AA-1	Rad CLO 14 Ltd-RAD 2021-14A A	1	19,443,418	19,370,400
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,394,800	06/16/2021	06/16/2051	Interest Rate Swap				67707C-AS-7	Oak Hill Credit Partners-OAKC 2014-10RA BR	1	20,000,000	19,394,800
57629*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,700,000	8,272,160	06/16/2021	06/16/2051	Interest Rate Swap				33836J-AE-9	ASSURANT CLO I LTD-MORGN 2017-1A BR	1	8,700,000	8,272,160

S105.9

STATEMENT AS OF MARCH 31, 2023 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*FY2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,000,000	12,000,000	06/16/2021	06/16/2051	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	12,000,000	12,000,000
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	17,544,773	(48,007,604)	06/16/2021	06/16/2051	Interest Rate Swap		(65,211,597)		29002H-AN-9	Elmwood CLO III Ltd-ELMW3 2019-3A BR	1	17,544,773	17,203,993
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		49,972,995	49,417,500	06/16/2021	06/16/2051	Interest Rate Swap				05682V-AA-3	BAIN CAPITAL CREDIT CLO -SERIES 18-2A CLASS A1	1	49,972,995	49,417,500
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		73,475,379	73,475,379	06/16/2021	06/16/2051	Interest Rate Swap				500798-MR-7	KREF Lending VII - Term Loan Series 2019-6	1	73,475,379	73,475,379
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,400,000	12,045,050	06/16/2021	06/16/2051	Interest Rate Swap				124166-AE-9	Buttermilk Park CLO Ltd-BMILK 2018-1A B1	1	12,400,000	12,045,050
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,600,000	7,363,260	06/16/2021	06/16/2051	Interest Rate Swap				75888K-AC-8	REGATTA VIII FUNDING LTD-SERIES 2017-1A CLASS B	1	7,600,000	7,363,260
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,452,499	06/16/2021	06/16/2051	Interest Rate Swap				78108Y-AQ-5	RR 1 LLC-RRAM 2017-1A A2B	1	5,650,000	5,452,499
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,236,723	06/16/2021	06/16/2051	Interest Rate Swap				14315L-AC-8	Carlyle Global Market St-SERIES 14-3RA CLASS A1B	1	10,500,000	10,236,723
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,214,012	06/16/2021	06/16/2051	Interest Rate Swap				12564D-AC-8	CIFC Funding Ltd-CIFC 2021-3A B .. Palmer Square CLO Ltd-SERIES 2021-2A CLASS B	1	10,500,000	10,214,012
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,703,210	06/16/2021	06/16/2051	Interest Rate Swap				69701X-AC-8	Barings Middle Market CL-BMM 2017-1A A2R	1	10,000,000	9,703,210
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,012,800	28,758,169	06/16/2021	06/16/2051	Interest Rate Swap				06760Q-AQ-2	Allegro CLO XIII Ltd-ALLEG 2021-1A	1	31,012,800	28,758,169
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,234,770	23,333,832	06/16/2021	06/16/2051	Interest Rate Swap				01750W-AC-3	A Barings Middle Market CL-BMM 2017-1A BR	1	23,234,770	23,333,832
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,998,000	22,250,610	06/16/2021	06/16/2051	Interest Rate Swap				06760Q-AS-8	Benefit Street Partners -BSP 2019-18A BR	1	23,998,000	22,250,610
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,600,000	22,818,934	06/16/2021	06/16/2051	Interest Rate Swap				30259A-AA-0	FDF I Ltd-SERIES 17-3A CLASS A1 ..	1	23,600,000	22,818,934
57629*GH8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,200,000	7,863,242	06/16/2021	06/16/2051	Interest Rate Swap				08186P-AN-3	Invesco CMI Investments MM, LLC - TERM LN SER 2021-3	1	8,200,000	7,863,242
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	170,100,000	104,911,587	06/16/2021	06/16/2051	Interest Rate Swap		(65,188,413)		46143F-MO-2	HPS Loan Management 13-2-HLM 13A-18 B	1	170,100,000	170,100,000
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,490,000	10,157,121	06/16/2021	06/16/2051	Interest Rate Swap				40437L-AG-7	HPS Loan Management 9-20-HLM 9A-2016 A1BR	1	10,490,000	10,157,121
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,731,490	06/16/2021	06/16/2051	Interest Rate Swap				40436Q-AL-6	Neuberger Berman Loan Advisers CLO 32 Ltd	1	10,000,000	9,731,490
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,292,640	06/16/2021	06/16/2051	Interest Rate Swap				64132D-AL-2	Neuberger Berman Loan Advisers CLO 25 Ltd	1	7,500,000	7,292,640
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,800,000	4,499,875	06/16/2021	06/16/2051	Interest Rate Swap				64131J-AQ-9	Magnetite XX Ltd	1	4,800,000	4,499,875
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,600,000	17,363,262	06/16/2021	06/16/2051	Interest Rate Swap				55955A-AA-4	Steele Creek Clo 2018-2 Ltd	1	17,600,000	17,363,262
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	15,709,904	06/16/2021	06/16/2051	Interest Rate Swap				85816L-AA-6	TCP DLF VIII 2018 CLO, LLC	1	16,000,000	15,709,904
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,494,941	10,425,674	06/16/2021	06/16/2051	Interest Rate Swap				87289B-AA-2	GAIF Bond Issuer Pty Ltd	1	10,494,941	10,425,674
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		29,925,000	29,092,457	06/16/2021	06/16/2051	Interest Rate Swap				Q39588-AJ-5	Landmark Equity Partners XVI-D, LLC	1	29,925,000	29,092,457
57629*GS4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		55,000,000	55,000,000	06/16/2021	06/16/2051	Interest Rate Swap				515095-MM-6	Voya CLO 2014-1 Ltd-INGIM 2014-1A ABR2	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	16,600,000	(47,657,673)	06/17/2021	06/17/2051	Interest Rate Swap		(63,750,111)		92915P-AK-1	Nelnet Student Loan Trus-NSLT 2020-5A B	1	16,600,000	16,092,438
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,959,165	06/17/2021	06/17/2051	Interest Rate Swap				64032V-AB-5	RRPF Engine Leasing Ltd Senior Secured	2	5,000,000	4,959,165
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	12,258,857	06/17/2021	06/17/2051	Interest Rate Swap				67332F-AH-6	Atlas Senior Loan Fund X-ATCLO 2018-11A B	1	13,000,000	12,258,857
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,489,020	06/17/2021	06/17/2051	Interest Rate Swap				04941Y-AJ-8		1	10,000,000	9,489,020

S105.10

STATEMENT AS OF MARCH 31, 2023 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*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,815,000	26,198,550	06/17/2021	06/17/2051	Interest Rate Swap				55954Y-AJ-4	Magnetite XXVI Ltd-MAGNE 2020-26A A1R	1	26,815,000	26,198,550
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,442,873	06/17/2021	06/17/2051	Interest Rate Swap				40256G-AC-5	Gulf Stream Meridian-GSM 2021-6A A2	1	11,900,000	11,442,873
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		68,313,143	68,313,143	06/17/2021	06/17/2051	Interest Rate Swap				50079E-MP-1	KREF Lending VII 2018-4 Term Loan Middle Market Credit Fund II SPV, LLC-Class A-1 Senior Secured Notes (Carlyle BDC Direct Lending)	1	68,313,143	68,313,143
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		59,280,186	59,280,186	06/17/2021	06/17/2051	Interest Rate Swap				59576F-MM-5	Wellfleet CLO 2018-3 Ltd-SERIES 18-3A CLASS A2	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	7,125,878	06/17/2021	06/17/2051	Interest Rate Swap				94951D-AJ-2	Parliament Funding I LLC-Variable Funding Notes	1	7,500,000	7,125,878
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,571,429	41,571,429	06/17/2021	06/17/2051	Interest Rate Swap				70163F-AA-0	Anchorage Capital CLO Lt-ANOH	1	41,571,429	41,571,429
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,770,640	06/17/2021	06/17/2051	Interest Rate Swap				03331J-AA-0	2018-10A A1A	1	20,000,000	19,770,640
57629*GR6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,268,985	40,288,735	06/17/2021	06/17/2051	Interest Rate Swap				82340*-AB-3	Shepherds Flat Funding T Trust A-1-G Cer	1	41,268,985	40,288,735
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	25,000,000	17,392,781	05/04/2017	11/04/2044	Interest Rate Swap		(6,867,944)		48253H-AN-5	KKR CLO 26 Ltd-KKR 26 AR	1	25,000,000	24,260,725
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		55,139,326	53,873,813	05/04/2017	11/04/2044	Interest Rate Swap				05683H-AN-5	Bain Capital Credit CLO -BCC 2017-2A AR2	1	55,139,326	53,873,813
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,980,000	11,732,397	05/04/2017	11/04/2044	Interest Rate Swap				149420-AE-1	CATSKILL PARK CLO LTD.-SERIES 17-1A CLASS A2	1	11,980,000	11,732,397
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,843,205	05/04/2017	11/04/2044	Interest Rate Swap				88434H-AE-3	THL Credit Wind River 20-SERIES 18-2A CLASS A2	1	5,000,000	4,843,205
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,036,507	22,674,327	05/04/2017	11/04/2044	Interest Rate Swap				24824T-AQ-3	Denali Capital Clo XII L-DEN12	1	23,036,507	22,674,327
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,250,000	9,900,485	05/04/2017	11/04/2044	Interest Rate Swap				44330Q-AB-7	2016-1A A1R	1	10,250,000	9,900,485
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,832,000	05/04/2017	11/04/2044	Interest Rate Swap				06422T-AC-5	Highridge Loan Managemen-SERIES 12A-18 CLASS A1B	1	9,200,000	8,832,000
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,730,241	3,756,165	05/04/2017	11/04/2044	Interest Rate Swap				87198Q-AE-8	Bank of NT Butterfield &-SUBORDINATED	1	3,730,241	3,756,165
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	36,000,000	(28,241,302)	06/17/2021	06/17/2051	Interest Rate Swap		(63,773,302)		39808C-AA-3	Symphony CLO 35 Ltd-SYMP 2022-35A B1	1	36,000,000	35,532,000
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,900,000	25,219,762	06/17/2021	06/17/2051	Interest Rate Swap				14307P-AE-5	Gridiron Fdg LLC Sr Secd Nt Carlyle Global Market St-SERIES C17A CLASS A1BR	2	25,900,000	25,219,762
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,600,000	11,110,318	06/17/2021	06/17/2051	Interest Rate Swap				88434H-AG-8	THL Credit Wind River 20-WINDR 2018-2A B	1	11,600,000	11,110,318
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,400,000	11,000,977	06/17/2021	06/17/2051	Interest Rate Swap				67097Q-AE-5	OCP CLO 2017-14 Ltd-SERIES 17-14A CLASS A2	1	11,400,000	11,000,977
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,564,537	06/17/2021	06/17/2051	Interest Rate Swap				64034W-AD-7	Navient Student Loan Tru-NSLT 2019-7A B	1	10,500,000	10,564,537
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,471,625	06/17/2021	06/17/2051	Interest Rate Swap				05875M-AQ-5	Ballyrock CLO 2019-2 Ltd-SERIES 19-2A CLASS A2R	1	15,000,000	14,471,625
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		846,852	846,852	06/17/2021	06/17/2051	Interest Rate Swap				50079E-MQ-9	KREF Lending VII 2018-5 Term Loan	1	846,852	846,852
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,000,000	23,652,816	06/17/2021	06/17/2051	Interest Rate Swap				92917A-AA-4	VOYA 2018-1A A1	1	24,000,000	23,652,816
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,538,375	06/17/2021	06/17/2051	Interest Rate Swap				64034B-AB-7	Netnet Student Loan Trus-NSLT 2018-5A B	1	5,000,000	4,538,375
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,000,000	44,346,375	06/17/2021	06/17/2051	Interest Rate Swap				94949J-AA-3	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A1	1	45,000,000	44,346,375
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,125,000	5,761,071	06/17/2021	06/17/2051	Interest Rate Swap				94950C-AE-6	Wellfleet CLO Ltd-WELF 2021-1A B	1	6,125,000	5,761,071
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,790,000	8,593,974	06/17/2021	06/17/2051	Interest Rate Swap				55951P-BC-0	Magnetite VII Ltd-MAGNE 2012-7A A2R2	1	8,790,000	8,593,974
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,100,000	10,611,223	06/17/2021	06/17/2051	Interest Rate Swap				12481Q-AE-5	Cam 2018-5 Ltd-SERIES 18-5A CLASS B1	1	11,100,000	10,611,223
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,700,000	2,556,087	06/17/2021	06/17/2051	Interest Rate Swap				14316W-AE-9	Carlyle Global Market St-CGMS 2021-7A B	1	2,700,000	2,556,087

S105.11

STATEMENT AS OF MARCH 31, 2023 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		31,311,399	30,940,492	06/17/2021	06/17/2051	Interest Rate Swap				Q35348-AB-5	Australian Gas Networks Senior Note Ser	1	31,311,399	30,940,492
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,058,621	14,592,715	06/17/2021	06/17/2051	Interest Rate Swap				61744Y-AP-3	Morgan Stanley-SENIOR UNSECURED Landmark Equity Partners XVI-D, LLC	1	15,058,621	14,592,715
57629*G08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		70,000,000	70,000,000	06/17/2021	06/17/2051	Interest Rate Swap				515095-MM-6	MM Investment Holding Revolver	1	70,000,000	70,000,000
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	178,000,000	93,368,901	06/18/2021	06/18/2051	Interest Rate Swap		(64,663,983)		57542Z-A7-2	Floating Line Morgan Stanley Eaton Van-MSEV 2021-1A C	2	178,000,000	158,032,884
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		3,600,000	3,356,377	06/18/2021	06/18/2051	Interest Rate Swap				61773K-AE-2	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	3,600,000	3,356,377
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,000,000	5,000,000	06/18/2021	06/18/2051	Interest Rate Swap				186858-AC-6	Danby Park CLO Ltd-DANBY 2022-1A A1A	1	5,000,000	5,000,000
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	25,087,200	06/18/2021	06/18/2051	Interest Rate Swap				236057-AA-3	OHA Credit Funding 3 LTD-OAKC 2019-3A AR	1	25,000,000	25,087,200
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,932,432	15,087,162	06/18/2021	06/18/2051	Interest Rate Swap				67112R-AS-3	Palmer Square CLO 2022-4-PLMRS 2022-4A A1A	1	14,932,432	15,087,162
57629*GP0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,000,000	25,002,850	06/18/2021	06/18/2051	Interest Rate Swap				69700X-AA-3	OHA Credit Solutions Master Fund I SPV, L.P. - Fund I Revolver	1	25,000,000	25,002,850
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	271,261,063	180,601,619	06/18/2021	06/18/2051	Interest Rate Swap		(90,659,444)		67098#-MM-7	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	271,261,063	271,261,063
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,762,985	06/18/2021	06/18/2051	Interest Rate Swap				94950J-AC-5	KAYNE CLO-KAYNE 2021-11A B	1	5,000,000	4,762,985
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,150,000	9,646,814	06/18/2021	06/18/2051	Interest Rate Swap				48662N-AC-1	OHA Credit Funding 1 LTD-SERIES 18-1A CLASS A2	1	10,150,000	9,646,814
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,400,000	10,162,464	06/18/2021	06/18/2051	Interest Rate Swap				67115W-AE-0	Dryden 58 CLO Ltd-DRLSLF 2018-58A A1	1	10,400,000	10,162,464
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	21,675,742	06/18/2021	06/18/2051	Interest Rate Swap				26245R-AA-8	KAYNE CLO-SERIES 19-3A CLASS A	1	22,000,000	21,675,742
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		72,000,000	71,251,272	06/18/2021	06/18/2051	Interest Rate Swap				48661W-AA-6	Madison Park Funding XX-MDPK 2018-32A CR	1	72,000,000	71,251,272
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,455,920	06/18/2021	06/18/2051	Interest Rate Swap				55817A-AU-8	Ares XXXVIII CLO Ltd-SERIES 2015-38A CLASS CR	1	10,000,000	9,455,920
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,750,000	2,583,947	06/18/2021	06/18/2051	Interest Rate Swap				04015U-AK-4	Landmark Equity Partners XVI-D, LLC	1	2,750,000	2,583,947
57629*GN5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		48,000,000	48,000,000	06/18/2021	06/18/2051	Interest Rate Swap				515095-MM-6	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2020-2	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	177,146,096	73,609,513	06/18/2021	06/18/2051	Interest Rate Swap		(103,536,583)		46143#-MN-4	Twinbrook Capital Funding VIII DSPV, LLC - Term Loan	2	177,146,096	177,146,096
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		69,305,129	69,305,129	06/18/2021	06/18/2051	Interest Rate Swap				901399-MR-3	Rockford Tower CLO 2020-ROCKT	1	69,305,129	69,305,129
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,510,310	06/18/2021	06/18/2051	Interest Rate Swap				77341E-AC-9	2020-1A B	1	15,000,000	14,510,310
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,500,000	13,206,416	06/18/2021	06/18/2051	Interest Rate Swap				06760B-AE-2	BARSON CLO LTD-SERIES 17-1A CLASS B1	1	13,500,000	13,206,416
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,600,000	9,600,941	06/18/2021	06/18/2051	Interest Rate Swap				63941R-AC-4	NAVSL 2019-2A B	1	9,600,000	9,600,941
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,700,000	12,404,014	06/18/2021	06/18/2051	Interest Rate Swap				40436X-AE-7	HIGHBRIDGE LOAN MANAGEMEN-SERIES BlueMountain CLO 2015-3-BLUEM	1	12,700,000	12,404,014
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,000	13,371,175	06/18/2021	06/18/2051	Interest Rate Swap				09628J-AN-1	2015-3A A2R	1	13,900,000	13,371,175
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,373,589	10,213,816	06/18/2021	06/18/2051	Interest Rate Swap				784170-ZZ-8	SFR FTTH SAS Term Loan	2	10,373,589	10,213,816
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,400,000	7,209,332	06/18/2021	06/18/2051	Interest Rate Swap				55821T-AC-1	Madison Park Funding Ltd-SERIES 18-30A CLASS A2R	1	7,400,000	7,209,332
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,750,000	12,429,440	06/18/2021	06/18/2051	Interest Rate Swap				67706X-AG-8	OHA Credit Partners XIV -OAKC 2017-14A B FLOATING COUP	1	12,750,000	12,429,440
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,400,000	27,399,695	06/18/2021	06/18/2051	Interest Rate Swap				04017T-AC-3	Ares XXXIR CLO Ltd-SERIES 14-31RA CLASS A2	1	28,400,000	27,399,695

S105.12

STATEMENT AS OF MARCH 31, 2023 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		65,000,000	65,000,000	06/18/2021	06/18/2051	Interest Rate Swap				515095-1M-6	Landmark Equity Partners XVI-D, LLC	1	65,000,000	65,000,000
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,630,490	06/18/2021	06/18/2051	Interest Rate Swap				86271P-AE-5	Strata CLO II Ltd-STRTA 2021-1A B Babson CLO Ltd/Cayman Is-BABSN LP-2A B	1	10,000,000	9,630,490
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,400,000	16,960,128	06/18/2021	06/18/2051	Interest Rate Swap				06763B-AC-3	2A B	1	17,400,000	16,960,128
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,400,000	16,678,753	06/18/2021	06/18/2051	Interest Rate Swap				06762T-AC-5	Babson CLO Ltd/Cayman Islands VCP RRL ABS II Ltd-VRRL 2022-1A A	1	17,400,000	16,678,753
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,972,131	14,675,960	06/18/2021	06/18/2051	Interest Rate Swap				91824X-AC-4		1	14,972,131	14,675,960
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,709,543	14,746,185	06/18/2021	06/18/2051	Interest Rate Swap				48661C-AA-0	Rad CLO 7 Ltd-RAD 2020-7A A1	1	14,709,543	14,746,185
57629*GM7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,128,288	06/18/2021	06/18/2051	Interest Rate Swap				40637L-AC-4	Halsey Point CLO Ltd-SERIES 2021-4A CLASS B	1	4,300,000	4,128,288
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	9,470,000	(42,442,762)	06/18/2021	06/18/2051	Interest Rate Swap		(51,694,081)		74989H-AA-2	RR 12 Ltd-PRAM 2020-12A A2R2	1	9,470,000	9,251,319
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,350,000	9,067,920	06/18/2021	06/18/2051	Interest Rate Swap				87166R-DG-9	SYMP 2019-21A BR	1	9,350,000	9,067,920
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,922,822	06/18/2021	06/18/2051	Interest Rate Swap				65357L-AL-9	Niagara Park CLO Ltd-NIAPK 2019-1A BR	1	9,200,000	8,922,822
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,100,000	8,670,398	06/18/2021	06/18/2051	Interest Rate Swap				12551J-AQ-9	CIFC Funding 2017-IV Ltd-CIFC 2017-4A BR	1	9,100,000	8,670,398
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,100,000	8,835,590	06/18/2021	06/18/2051	Interest Rate Swap				42087D-AC-3	Hayfin US XII Ltd-HAYFN 2020-12A B1	1	9,100,000	8,835,590
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,000,000	8,732,952	06/18/2021	06/18/2051	Interest Rate Swap				38138L-AN-8	Goldentree Loan Management-SERIES 2020-7A CLASS BR	1	9,000,000	8,732,952
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		74,229,708	76,080,675	06/18/2021	06/18/2051	Interest Rate Swap				316502-AA-1	Fidus Re Ltd-UNSECURED	1	74,229,708	76,080,675
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,116,677	15,384,762	06/18/2021	06/18/2051	Interest Rate Swap				66704J-AY-4	NORTHSTAR EDUCATION FINA-SERIES 2004-1 CLASS B1	1	17,116,677	15,384,762
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,000,000	26,583,903	06/18/2021	06/18/2051	Interest Rate Swap				75887X-AA-5	Regatta Funding Ltd.-REG11 2018-1A	1	27,000,000	26,583,903
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,685,074	06/18/2021	06/18/2051	Interest Rate Swap				449258-AA-0	10G US CLO 2018-1 LTD-SERIES 2018-1A CLASS A1	1	11,900,000	11,685,074
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	3,152,285	06/18/2021	06/18/2051	Interest Rate Swap				63942N-AC-2	Navient Student Loan Tru-NAVSL 2021-1A B	1	3,200,000	3,152,285
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,200,000	10,945,155	06/18/2021	06/18/2051	Interest Rate Swap				17181T-AC-5	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A2	1	11,200,000	10,945,155
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,200,000	15,956,676	06/18/2021	06/18/2051	Interest Rate Swap				16409T-AC-3	CHENANGO PARK CLO LTD-SERIES 18-1A CLASS A1B	1	16,200,000	15,956,676
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,187,971	2,095,875	06/18/2021	06/18/2051	Interest Rate Swap				05890M-AA-1	BANCO DE CREDITO E INVER-SENIOR UNSECURED	1	2,187,971	2,095,875
57629*GL9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,830,000	13,399,660	06/18/2021	06/18/2051	Interest Rate Swap				53636C-AA-2	LiquiGlide Inc-SECURED	1	13,830,000	13,399,660
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	125,000,000	13,600,000	(9,032,932)	02/05/2015	02/05/2045	Interest Rate Swap		(22,290,824)		67690A-AG-6	CHA Credit Funding 9 Ltd-OAKC 2021-9A B	1	13,600,000	13,257,892
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,750,000	12,394,900	02/05/2015	02/05/2045	Interest Rate Swap				404360-AN-2	HPS Loan Management 9-20-HLM 9A-2016 A2R	1	12,750,000	12,394,900
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	24,701,375	02/05/2015	02/05/2045	Interest Rate Swap				872490-AA-8	TICP CLO Ltd-TICP 2018-11A A	1	25,000,000	24,701,375
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,200,000	14,898,067	02/05/2015	02/05/2045	Interest Rate Swap				87248K-AL-8	TICP CLO VI 2016-5 Ltd-TICP 2016-5A BR	1	15,200,000	14,898,067
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,000,000	29,202,240	02/05/2015	02/05/2045	Interest Rate Swap				00119V-AN-9	AGL CLO 6 LTD-AGL 2020-6A AR	1	30,000,000	29,202,240
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,400,000	11,196,008	02/05/2015	02/05/2045	Interest Rate Swap				38138D-AQ-9	Goldentree Loan Management-GLM 2019-5A BR	1	11,400,000	11,196,008
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,000,000	18,000,000	02/05/2015	02/05/2045	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund-Senior Secured Revolving Credit Facility	1	18,000,000	18,000,000

S105.13

STATEMENT AS OF MARCH 31, 2023 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*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,123,204	15,685,772	02/05/2015	02/05/2045	Interest Rate Swap				74340X-BL-4	Prologis LP-SENIOR UNSECURED	1	16,123,204	15,685,772
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	1,113,098	(81,072,103)	06/21/2021	06/21/2051	Interest Rate Swap		(82,184,142)		78449F-AC-5	SMB PRIVATE ED LN TR 201-SMB PRIVATE ED LN TR 2016-A NT	1	1,113,098	1,112,039
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,835,233	4,818,476	06/21/2021	06/21/2051	Interest Rate Swap				63940F-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 16-2 CLASS A3	1	4,835,233	4,818,476
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		292,000,000	292,000,000	06/21/2021	06/21/2051	Interest Rate Swap				143088-MM-7	Carlyle Aviation Runway PDP Fund LP - Revolving Promissary Note	1	292,000,000	292,000,000
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,000,000	60,365,661	06/21/2021	06/21/2051	Interest Rate Swap				48661W-AA-6	KAYNE CLO-SERIES 19-3A CLASS A	1	61,000,000	60,365,661
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,784,860	06/21/2021	06/21/2051	Interest Rate Swap				67109Y-AN-4	Oak Hill Credit Partners-SERIES 15-12A CLASS A2R	1	10,000,000	9,784,860
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,200,000	3,899,797	06/21/2021	06/21/2051	Interest Rate Swap				08180X-AU-6	Benefit Street Partners -BSP 2015-8A BR	1	4,200,000	3,899,797
57629*GK1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,819,140	06/21/2021	06/21/2051	Interest Rate Swap				04965L-AE-8	ATRIUM XIV LLC-ATRM 14A A2A	1	10,000,000	9,819,140
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	462,861	(56,443,662)	06/22/2021	06/22/2051	Interest Rate Swap		(56,862,779)		MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN TICP CLO XIII Ltd-TICP 2019-13A BR	2	462,861	419,117
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,808,040	06/22/2021	06/22/2051	Interest Rate Swap				87250A-AL-5	BlueMountain Fuji US CLO-SERIES 2017-3A CLASS B	1	8,000,000	7,808,040
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,671,848	06/22/2021	06/22/2051	Interest Rate Swap				09628F-AE-9	Steele Creek CLO 2016-1-SERIES 2016-1A CLASS AR	1	8,000,000	7,671,848
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	58,912,140	06/22/2021	06/22/2051	Interest Rate Swap				858102-AX-4	Steele Creek CLO 2014-1-SERIES 14-1RA CLASS A	1	60,000,000	58,912,140
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,155,722	5,093,425	06/22/2021	06/22/2051	Interest Rate Swap				85816W-AC-8	ATRIUM XIV LLC-ATRM 14A A2A	1	5,155,722	5,093,425
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,819,140	06/22/2021	06/22/2051	Interest Rate Swap				04965L-AE-8	TCI-Flatiron CLO 2018-1-TFLAT 2018-1A BR	1	10,000,000	9,819,140
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,761,950	06/22/2021	06/22/2051	Interest Rate Swap				87232A-AN-4	Rockford Tower CLO 2019-SERIES 2019-1A CLASS B1R	1	10,000,000	9,761,950
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,491,330	06/22/2021	06/22/2051	Interest Rate Swap				77342M-AQ-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A10	1	10,000,000	9,491,330
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,621,652	1,706,938	06/22/2021	06/22/2051	Interest Rate Swap				429827-AK-4	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A14	1	1,621,652	1,706,938
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,260,205	1,281,955	06/22/2021	06/22/2051	Interest Rate Swap				429827-AP-3	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A2	1	1,260,205	1,281,955
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,177,754	1,190,232	06/22/2021	06/22/2051	Interest Rate Swap				429827-AB-4	SOUTH CAROLINA STUDENT L-SR UNSECURED	1	1,177,754	1,190,232
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,011,317	1,004,446	06/22/2021	06/22/2051	Interest Rate Swap				83715A-AJ-8	MELNET STUDENT LOAN TRUS-SERIES 2015-2A CLASS B	1	1,011,317	1,004,446
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,794,571	1,679,900	06/22/2021	06/22/2051	Interest Rate Swap				640330-AC-3	PENNSYLVANIA ST HGR EDU -SERIES 2006 CL B	1	1,794,571	1,679,900
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		619,822	605,214	06/22/2021	06/22/2051	Interest Rate Swap				709163-GJ-2	CIT EDUCATION LOAN TRUST-SERIES 2007-1 CLASS B	1	619,822	605,214
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,075,196	952,838	06/22/2021	06/22/2051	Interest Rate Swap				17284L-AB-0	Babson CLO Ltd 2015-I-BABSN 2015-IA CR	1	1,075,196	952,838
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,275,000	7,900,664	06/22/2021	06/22/2051	Interest Rate Swap				056162-AS-9	CULLEN/FROST CAP TR II-SUBORDINATED NOTE	2	8,275,000	7,900,664
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,554,191	22,017,218	06/22/2021	06/22/2051	Interest Rate Swap				230000-AB-7	Regatta Funding Ltd.-REG11 2018-1A B	1	22,554,191	22,017,218
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	12,562,628	06/22/2021	06/22/2051	Interest Rate Swap				75887X-AC-1	Harbor Park CLO, Ltd-HARB 2018-1A C	1	13,000,000	12,562,628
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,000,000	3,800,052	06/22/2021	06/22/2051	Interest Rate Swap				41154X-AL-9	Point Au Roche Park CLO -PARPK 2021-1A B1	1	4,000,000	3,800,052
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,935,239	6,971,915	06/22/2021	06/22/2051	Interest Rate Swap				73052V-AC-9	Eaton Vance CLO 2020-2 L-EATON 2020-2A AR	1	6,935,239	6,971,915
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,780,453	6,834,163	06/22/2021	06/22/2051	Interest Rate Swap				27829P-AL-0	Canyon Capital CLO 2019-CANVC 2019-2A BR	1	6,780,453	6,834,163
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,672,897	06/22/2021	06/22/2051	Interest Rate Swap				13887W-AL-4		1	7,000,000	6,672,897

S105_14

STATEMENT AS OF MARCH 31, 2023 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*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,000,000	5,594,850	06/22/2021	06/22/2051	Interest Rate Swap			92919D-AE-8	Voya CLO Ltd-VOYA 2021-3A C	1	6,000,000	5,594,850
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,408,881	5,417,280	06/22/2021	06/22/2051	Interest Rate Swap			64132D-AJ-7	Neuberger Berman Loan Ad-NEUB 2019-32A AR	1	5,408,881	5,417,280
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,800,000	5,385,990	06/22/2021	06/22/2051	Interest Rate Swap			06762T-AE-1	Babson CLO Ltd/Cayman Islands HPS Loan Management 14-2-HLM 14A-19	1	5,800,000	5,385,990
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,333,961	06/22/2021	06/22/2051	Interest Rate Swap			40437W-AS-7	BR Sound Point CLO Ltd-SNDPT 2021-4A C	1	5,600,000	5,333,961
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,600,000	5,042,570	06/22/2021	06/22/2051	Interest Rate Swap			83616A-AL-3	Madison Park Funding XLV-MDPK 2020-46A CR	1	5,600,000	5,042,570
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,460,000	3,234,501	06/22/2021	06/22/2051	Interest Rate Swap			55822A-AQ-0	Goldentree Loan Management-GLM 2021-10A C	1	3,460,000	3,234,501
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,450,000	3,213,896	06/22/2021	06/22/2051	Interest Rate Swap			38138T-AG-6	Landmark Equity Partners XVI-D, LLC	1	3,450,000	3,213,896
57629*GIW5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		37,000,000	37,000,000	06/22/2021	06/22/2051	Interest Rate Swap			51509S-MM-6		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	1,846,968	(80,390,018)	06/28/2021	06/28/2051	Interest Rate Swap		(82,062,431)	MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN SMB PRIVATE ED LN TR 2015-C LN BCK	2	1,846,968	1,672,413
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		456,600	456,896	06/28/2021	06/28/2051	Interest Rate Swap			78448R-AD-8	NT CL A-3 SMB PRIVATE ED LOAN TR 2015-A LN	1	456,600	456,896
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		185,064	185,033	06/28/2021	06/28/2051	Interest Rate Swap			78448P-AD-2	BACKED NT A-3 Benefit Street Partners -BSP 2017-11A A2R FLOATING	1	185,064	185,033
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,600,000	11,316,925	06/28/2021	06/28/2051	Interest Rate Swap			08179C-AQ-4	ACCESS GROUP INC-SERIES 2005-B CLASS A3	1	11,600,000	11,316,925
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,227,227	1,203,621	06/28/2021	06/28/2051	Interest Rate Swap			00432C-CW-9	EDUCATIONAL FUNDING OF T-SERIES 2011-1 CLASS B	1	1,227,227	1,203,621
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,927,163	8,880,940	06/28/2021	06/28/2051	Interest Rate Swap			28148W-AC-7		1	8,927,163	8,880,940
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		285,311,717	276,780,897	06/28/2021	06/28/2051	Interest Rate Swap			03113F-MM-3	AMF Levered II, LLC - Revolver GOAL CAPITAL FUNDING TRU-SERIES	1	285,311,717	276,780,897
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,728,024	1,666,823	06/28/2021	06/28/2051	Interest Rate Swap			38021F-AB-7	2015-1 CLASS B EDUCATIONAL SERVICES OF	3	1,728,024	1,666,823
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,747,640	1,721,516	06/28/2021	06/28/2051	Interest Rate Swap			28138J-AB-0	2 CLASS B SLM STUDENT LOAN TRUST 2003-4 LN	1	1,747,640	1,721,516
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,340,722	1,183,539	06/28/2021	06/28/2051	Interest Rate Swap			78442G-GM-2	BKD CTF CL B EDUCATIONAL SERVICES OF -2014-4	2	1,340,722	1,183,539
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,438,810	1,328,796	06/28/2021	06/28/2051	Interest Rate Swap			28090A-AB-5	SERIES B Apidos CLO-SERIES 18-29A CLASS A1B	1	1,438,810	1,328,796
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,200,000	7,019,460	06/28/2021	06/28/2051	Interest Rate Swap			03767M-AE-8		1	7,200,000	7,019,460
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,800,000	8,478,378	06/28/2021	06/28/2051	Interest Rate Swap			39729R-AC-2	Greenwood Park CLO Ltd-SERIES 18-1A CLASS B	1	8,800,000	8,478,378
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,500,000	10,167,707	06/28/2021	06/28/2051	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-18A B	1	10,500,000	10,167,707
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,190,983	7,106,051	06/28/2021	06/28/2051	Interest Rate Swap			03768R-AG-1	Apidos CLO Series 19-32A-APID 2019-32A B1	1	7,190,983	7,106,051
57629*GV7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,512,569	24,669,850	06/28/2021	06/28/2051	Interest Rate Swap			06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A1R	1	24,512,569	24,669,850
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	7,650,000	(47,334,744)	06/28/2021	06/28/2051	Interest Rate Swap		(54,689,725)	281397-AP-4	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A1	1	7,650,000	7,354,981
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,910,000	10,784,400	06/28/2021	06/28/2051	Interest Rate Swap			MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN EDUCATION LOAN ASSET-BAC-SERIES	2	11,910,000	10,784,400
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,350,000	4,182,244	06/28/2021	06/28/2051	Interest Rate Swap			281397-AB-5	2003-1 CLASS A2 NELNET STUDENT LOAN TRUS-SERIES	1	4,350,000	4,182,244
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,650,000	2,344,441	06/28/2021	06/28/2051	Interest Rate Swap			64031Q-CK-5	2005-4 CLASS A4R1 EDLINC STUDENT LOAN FUND-SERIES	2	2,650,000	2,344,441
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,470,147	4,684,668	06/28/2021	06/28/2051	Interest Rate Swap			28108Q-AB-0	2012-1 CLASS B EDUCATION LOAN ASSET-BAC-SERIES	1	5,470,147	4,684,668
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,950,000	2,836,234	06/28/2021	06/28/2051	Interest Rate Swap			281397-AQ-2	2003-2 CLASS 2A2	1	2,950,000	2,836,234

S105.15

STATEMENT AS OF MARCH 31, 2023 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		865,433	855,414	06/28/2021	06/28/2051	Interest Rate Swap				38021E-AA-2	GOAL CAPITAL FUNDING TR 2010-1 STUDENT LN BKD NT	1	865,433	855,414
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,699,233	2,654,084	06/28/2021	06/28/2051	Interest Rate Swap				64031Q-CM-1	Nelnet Student Loan Trus-SERIES 2005-4 CLASS A4R2	2	2,699,233	2,654,084
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,126,854	9,214,848	06/28/2021	06/28/2051	Interest Rate Swap				83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B Dryden 64 CLO Ltd-DRSLF 2018-64A B	1	10,126,854	9,214,848
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,900,000	13,445,470	06/28/2021	06/28/2051	Interest Rate Swap				26251L-AE-4	2012-2A CLASS B	1	13,900,000	13,445,470
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,000,000	24,869,561	06/28/2021	06/28/2051	Interest Rate Swap				64033E-AB-2	NSLT 2013-2A B	1	28,000,000	24,869,561
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,275,000	22,190,916	06/28/2021	06/28/2051	Interest Rate Swap				66704J-AF-5	Northstar Education Fina-REVENUE BONDS	1	22,275,000	22,190,916
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,066,868	9,680,223	06/28/2021	06/28/2051	Interest Rate Swap				78442G-KP-0	SLM Student Loan Trust 2-SLMA 2003-14 B	1	11,066,868	9,680,223
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,600,000	12,193,852	06/28/2021	06/28/2051	Interest Rate Swap				64034X-AB-9	Nelnet Student Loan Trus-NSLT 2021-1A B	1	13,600,000	12,193,852
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,100,000	9,145,604	06/28/2021	06/28/2051	Interest Rate Swap				64034G-AB-6	Nelnet Student Loan Trus-NSLT 2020-1A B	1	10,100,000	9,145,604
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,618,359	6,347,926	06/28/2021	06/28/2051	Interest Rate Swap				64031C-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2012-2A CLASS B	1	6,618,359	6,347,926
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,849,807	3,357,654	06/28/2021	06/28/2051	Interest Rate Swap				78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS B	1	3,849,807	3,357,654
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,275,000	16,033,756	06/28/2021	06/28/2051	Interest Rate Swap				04623T-AA-3	ASSURANT CLO I LTD-ASRNT 2018-1A A	1	16,275,000	16,033,756
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	12,722,524	06/28/2021	06/28/2051	Interest Rate Swap				67707B-AB-6	OHA Credit Partners XV L-SERIES 17-15A CLASS B	1	13,100,000	12,722,524
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,350,000	7,125,105	06/28/2021	06/28/2051	Interest Rate Swap				12551R-AC-2	CIFC Funding 2018-I Ltd-SERIES 18-1A CLASS B	1	7,350,000	7,125,105
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	12,516,725	06/28/2021	06/28/2051	Interest Rate Swap				21623P-AC-1	COOK PARK CLO LTD-COOK 2018-1A A2 Navient Student Loan Tru-NAVSL	1	13,000,000	12,516,725
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,000,000	3,940,356	06/28/2021	06/28/2051	Interest Rate Swap				63942N-AC-2	2021-1A B	1	4,000,000	3,940,356
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,400,000	8,132,410	06/28/2021	06/28/2051	Interest Rate Swap				48252Y-AE-9	YKR CLO 23 Ltd-KKR 23 B	1	8,400,000	8,132,410
57629*GU9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,948,000	26,948,000	06/28/2021	06/28/2051	Interest Rate Swap				67098#-MM-7	OHA 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	10,917,500	(6,919,923)	12/06/2016	12/06/2046	Interest Rate Swap		(16,805,623)		MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN SOUTH CAROLINA STUDENT L-SERIES	2	10,917,500	9,885,700
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,765,904	12,281,339	12/06/2016	12/06/2046	Interest Rate Swap				83715R-AG-7	2014-1 CLASS B	1	12,765,904	12,281,339
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,867,038	3,476,069	12/06/2016	12/06/2046	Interest Rate Swap				78442G-AE-1	SLC STUDENT LOAN TRUST-SERIES 2005-1 CLASS B	1	3,867,038	3,476,069
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,755,966	2,439,981	12/06/2016	12/06/2046	Interest Rate Swap				78442G-OT-6	SLM STUDENT LOAN TRUST-SERIES 2005-8 CLASS B	1	2,755,966	2,439,981
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,300,000	18,660,533	12/06/2016	12/06/2046	Interest Rate Swap				15033E-AC-2	Cedar Funding IX CLO Ltd-SERIES 18-9A CLASS A2	1	19,300,000	18,660,533
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,645,000	2,335,374	12/06/2016	12/06/2046	Interest Rate Swap				63938E-AE-4	NAVIENT STUDENT LOAN TRU-SERIES 2014-1A CLASS B	1	2,645,000	2,335,374
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,556,437	1,217,318	12/06/2016	12/06/2046	Interest Rate Swap				64031A-AJ-5	NELNET STUDENT LOAN TRUS-SERIES 2006-3 CLASS B	1	1,556,437	1,217,318
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,423,489	5,849,022	12/06/2016	12/06/2046	Interest Rate Swap				63939L-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 2015-3 CLASS B	1	6,423,489	5,849,022
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,388,775	3,297,740	12/06/2016	12/06/2046	Interest Rate Swap				64033J-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2014-1A CLASS B	1	3,388,775	3,297,740
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,754,662	1,591,347	12/06/2016	12/06/2046	Interest Rate Swap				194266-AE-2	COLLEGE LOAN CORPORATION-SERIES 2005-2 CLASS B	1	1,754,662	1,591,347
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,250,329	3,001,468	12/06/2016	12/06/2046	Interest Rate Swap				64033N-AB-2	NELNET STUDENT LOAN TRUS-SERIES 2014-5A CLASS B	1	3,250,329	3,001,468
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,455,340	1,336,226	12/06/2016	12/06/2046	Interest Rate Swap				78442G-LJ-3	SLM STUDENT LOAN TRUST-SERIES 2004-3 CLASS B	1	1,455,340	1,336,226

S105.16

STATEMENT AS OF MARCH 31, 2023 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		3,250,000	3,108,980	12/06/2016	12/06/2046	Interest Rate Swap				64032A-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2012-1A CLASS B	1	3,250,000	3,108,980
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,025,520	2,873,296	12/06/2016	12/06/2046	Interest Rate Swap				64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	3,025,520	2,873,296
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,240,000	2,945,676	12/06/2016	12/06/2046	Interest Rate Swap				64033K-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2014-3A CLASS B	1	3,240,000	2,945,676
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,750,000	14,347,886	12/06/2016	12/06/2046	Interest Rate Swap				03767M-AG-3	Apidos CLO-SERIES 18-29A CLASS A2 Magnetite VIII Ltd-MAGNE 2014-8A	1	14,750,000	14,347,886
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,276,629	12/06/2016	12/06/2046	Interest Rate Swap				55952Y-AT-4	CR2 Ares XXXVIII CLO Ltd-SERIES 15-38A CLASS BR	1	4,500,000	4,276,629
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,437,883	12/06/2016	12/06/2046	Interest Rate Swap				04015U-AJ-7		1	6,700,000	6,437,883
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	2,911,809	12/06/2016	12/06/2046	Interest Rate Swap				48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2 OCP CLO Ltd-SERIES 18-15A CLASS A2	1	3,000,000	2,911,809
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,250,000	13,852,810	12/06/2016	12/06/2046	Interest Rate Swap				67112K-AB-5		1	14,250,000	13,852,810
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,380,000	13,259,690	12/06/2016	12/06/2046	Interest Rate Swap				043671-AA-4	Aseko Inc-FIRST LIEN ENERGY MISSISSIPPI INC-SECURED	1	13,380,000	13,259,690
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	17,648,366	(21,372,762)	09/15/2017	09/15/2047	Interest Rate Swap		(38,670,937)		29364N-AS-7	NOTE Bain Capital Credit CLO-BCC 2021-1A C	1	17,648,366	17,298,175
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,815,000	9,022,017	09/15/2017	09/15/2047	Interest Rate Swap				05684L-AG-0	RENAISSANCE FINANCE-SR UNSECURED	1	9,815,000	9,022,017
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,581,538	31,961,887	09/15/2017	09/15/2047	Interest Rate Swap				75972Y-AA-9	Flatiron Clo 17 Ltd-FLAT 2017-1A CR	1	32,581,538	31,961,887
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,026,245	09/15/2017	09/15/2047	Interest Rate Swap				33882G-AJ-7	Crestline Denali CLO Ltd-SERIES 2018-1A CLASS C	1	9,500,000	9,026,245
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,200,000	2,933,536	09/15/2017	09/15/2047	Interest Rate Swap				22615E-AE-0	CHA Loan Funding 2013-2 -OHALF 2013-2A CR	1	3,200,000	2,933,536
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,673,360	09/15/2017	09/15/2047	Interest Rate Swap				67104L-AG-2	GRIPPEN PARK CLO LTD-SERIES 17-1A CLASS B	1	8,000,000	7,673,360
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,000,000	13,745,746	09/15/2017	09/15/2047	Interest Rate Swap				39862E-AB-0	Barings Middle Market CI-BMM 2019-1A A2	1	14,000,000	13,745,746
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,212,967	28,301,913	09/15/2017	09/15/2047	Interest Rate Swap				06761T-AE-2	Long Point Park CLO Ltd-LNGPT 2017-1A A1B	1	28,212,967	28,301,913
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,600,000	22,843,266	09/15/2017	09/15/2047	Interest Rate Swap				542798-AC-7	Neuberger Berman Loan Ad-SERIES 2017-24A CLASS CR	1	23,600,000	22,843,266
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,400,000	5,125,556	09/15/2017	09/15/2047	Interest Rate Swap				64130H-AQ-4		1	5,400,000	5,125,556
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,369,999	10,285,758	09/15/2017	09/15/2047	Interest Rate Swap				00206R-GL-0	AT&T Inc-SENIOR UNSECURED	2	10,369,999	10,285,758
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,216,647	20,816,707	09/15/2017	09/15/2047	Interest Rate Swap				009280-AQ-4	AIRCATTLE LTD-SENIOR UNSECURED	2	21,216,647	20,816,707
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,491,174	6,051,322	09/15/2017	09/15/2047	Interest Rate Swap				29365T-AF-1	Entergy Texas Inc-SECURED United Airlines 2016-2 C-UNTD AIR 16-2 B	1	6,491,174	6,051,322
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,778,795	11,869,509	09/15/2017	09/15/2047	Interest Rate Swap				90933J-AA-9	Bain Capital Credit CLO -BCC 2019-2A AR	3	12,778,795	11,869,509
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,794,674	9,897,869	09/15/2017	09/15/2047	Interest Rate Swap				05682L-AJ-6	Neuberger Berman Loan Ad-NEUB 2022-47A A	1	9,794,674	9,897,869
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,856,143	25,377,101	09/15/2017	09/15/2047	Interest Rate Swap				64135D-AA-3		1	24,856,143	25,377,101
57629*DMO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,973,264	18,973,495	09/15/2017	09/15/2047	Interest Rate Swap				96467K-AA-7	Whitebox CLO Ltd-WIBOX 2023-4A A1	1	18,973,264	18,973,495
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	1,525,258	(36,873,378)	09/15/2017	09/15/2047	Interest Rate Swap		(38,355,153)		031162-CJ-7	AMGEN INC-SENIOR UNSECURED JB HUNT TRANSPRT SVCS-SENIOR UNSECURED NOTE	2	1,525,258	1,481,775
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		175,309	172,695	09/15/2017	09/15/2047	Interest Rate Swap				445658-CD-7		2	175,309	172,695
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,829,133	22,292,611	09/15/2017	09/15/2047	Interest Rate Swap				456866-AM-4	INGERSOLL-RAND CO-DEBENTURE	2	21,829,133	22,292,611
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		1,799,931	1,794,835	09/15/2017	09/15/2047	Interest Rate Swap				664397-AK-2	EVERSOURCE ENERGY-UNSECURED NOTE	2	1,799,931	1,794,835

S105.17

STATEMENT AS OF MARCH 31, 2023 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*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		184,900,000	182,163,110	09/15/2017	09/15/2047	Interest Rate Swap				42086P-AC-7	Kingsland Ltd-SERIES 18-8A CLASS A	1	184,900,000	182,163,110
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,900,000	5,576,515	09/15/2017	09/15/2047	Interest Rate Swap				05875M-AS-1	Ballyrock CLO 2019-2 Ltd-SERIES 19-2A CLASS BR	1	5,900,000	5,576,515
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,469,049	6,316,950	09/15/2017	09/15/2047	Interest Rate Swap				919794-AB-3	VALLEY NATIONAL BANCORP-SUBORDINATED NOTE	2	6,469,049	6,316,950
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,788,879	14,500,189	09/15/2017	09/15/2047	Interest Rate Swap				042735-AK-6	Arrow Electronics Inc-DEBENTURE	2	13,788,879	14,500,189
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		3,000,000	2,826,849	09/15/2017	09/15/2047	Interest Rate Swap				830120-AE-4	Sixth Street CLO-SIXST 2021-20A C Barings Middle Market CL-BMM 2018-IA C	1	3,000,000	2,826,849
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,698,927	11,328,625	09/15/2017	09/15/2047	Interest Rate Swap				06761M-AD-9	Barings Middle Market CL-BMM 2018-IA C	2	11,698,927	11,328,625
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,200,000	11,004,290	09/15/2017	09/15/2047	Interest Rate Swap				06760W-AJ-5	Barings Middle Market CL-BMM 2021-IA C	2	12,200,000	11,004,290
57629*DL2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		1,725,000	1,630,436	09/15/2017	09/15/2047	Interest Rate Swap				04018X-AJ-8	ARES CLO-ARES 2021-ALFA D	2	1,725,000	1,630,436
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	1,022,337	(37,306,681)	09/15/2017	09/15/2047	Interest Rate Swap		(38,186,735)		04352E-AA-3	Ascension Health-SENIOR UNSECURED	1	1,022,337	880,054
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,175,960	5,023,957	09/15/2017	09/15/2047	Interest Rate Swap				195869-AP-7	COLONIAL PIPELINE CO-SR UNSECURED DISCOVER FINANCIAL SVS-SENIOR UNSECURED	1	5,175,960	5,023,957
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		47,836,315	45,609,682	09/15/2017	09/15/2047	Interest Rate Swap				254709-AM-0	LTM LTD PARTNERSHIP-SERIES 25A CLASS C2	2	47,836,315	45,609,682
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,500,000	2,357,070	09/15/2017	09/15/2047	Interest Rate Swap				50189P-AN-2	Barings Clo Ltd 2020-III-BABSN 2020-3A B	1	2,500,000	2,357,070
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		39,096,830	32,622,981	09/15/2017	09/15/2047	Interest Rate Swap				06762X-AA-0	Steele Creek CLO 2016-1-SERIES 2016-1A CLASS AR	2	39,096,830	32,622,981
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		73,500,000	72,167,372	09/15/2017	09/15/2047	Interest Rate Swap				858102-AX-4	FLORIDA POWER & LIGHT CO-SECURED BOND	1	73,500,000	72,167,372
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		47,151,842	41,868,690	09/15/2017	09/15/2047	Interest Rate Swap				341081-FG-7	Bain Capital Credit CLO-BCC 2018-1A A2	1	47,151,842	41,868,690
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,800,000	8,519,500	09/15/2017	09/15/2047	Interest Rate Swap				05683L-AC-0	COX COMMUNICATIONS INC-SENIOR UNSECURED	1	8,800,000	8,519,500
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,654,454	11,094,484	09/15/2017	09/15/2047	Interest Rate Swap				224044-CG-0	Penske Truck Leasing Co -SENIOR UNSECURED	2	11,654,454	11,094,484
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,275,763	15,889,961	09/15/2017	09/15/2047	Interest Rate Swap				709599-AZ-7	Xcel Energy Inc-SENIOR UNSECURED	2	16,275,763	15,889,961
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,383,222	19,882,177	09/15/2017	09/15/2047	Interest Rate Swap				98389B-AV-2	Babson CLO Ltd 2013-I-SERIES 2013-IS CLASS BR	2	20,383,222	19,882,177
57629*DP3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,000,000	33,000,000	09/15/2017	09/15/2047	Interest Rate Swap				186858-AC-6	AERCAP IRELAND CAPITAL D-SENIOR UNSECURED	1	33,000,000	33,000,000
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	16,908,509	(22,959,637)	09/15/2017	09/15/2047	Interest Rate Swap		(38,565,675)		00774M-AB-1	GLENCORE FUNDING LLC-SR UNSECURED	2	16,908,509	15,606,038
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,432,889	18,018,978	09/15/2017	09/15/2047	Interest Rate Swap				378272-AL-2	Coca-Cola Co/The-SENIOR UNSECURED	2	18,432,889	18,018,978
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		50,436,577	36,372,908	09/15/2017	09/15/2047	Interest Rate Swap				191216-CY-4	Bon Secours Mercy Health-SECURED O'REILLY AUTOMOTIVE INC-SENIOR UNSECURED	1	50,436,577	36,372,908
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,442,497	14,638,678	09/15/2017	09/15/2047	Interest Rate Swap				09778P-AA-3	SCHLUMBERGER HLDGS CORP-SR RECKITT BENCKISER TREASURY-SENIOR UNSECURED	1	16,442,497	14,638,678
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,892,959	8,587,407	09/15/2017	09/15/2047	Interest Rate Swap				67103H-AF-4	ISRAEL ELECTRIC CORP LTD-SECURED NOTE	2	8,892,959	8,587,407
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,344,132	9,325,509	09/15/2017	09/15/2047	Interest Rate Swap				806851-AG-6	DTE Electric Co-SECURED	2	9,344,132	9,325,509
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,531,926	5,458,491	09/15/2017	09/15/2047	Interest Rate Swap				75625Q-AD-1	INTEL CORP-SENIOR UNSECURED NOTE	1	5,531,926	5,458,491
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,015,112	20,685,246	09/15/2017	09/15/2047	Interest Rate Swap				465077-AK-1	DTE Electric Co-SECURED	2	21,015,112	20,685,246
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,805,240	13,272,169	09/15/2017	09/15/2047	Interest Rate Swap				23338V-AE-6	INTEL CORP-SENIOR UNSECURED NOTE	1	15,805,240	13,272,169
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		70,768,053	63,790,412	09/15/2017	09/15/2047	Interest Rate Swap				458140-AK-6		1	70,768,053	63,790,412

S105.18

STATEMENT AS OF MARCH 31, 2023 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*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	23,277,641	22,044,901	22,044,901	09/15/2017	09/15/2047	Interest Rate Swap				11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED	1	23,277,641	22,044,901
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	18,383,517	16,827,487	16,827,487	09/15/2017	09/15/2047	Interest Rate Swap				40728T-AA-1	HAMILTON COLLEGE-UNSECURED	1	18,383,517	16,827,487
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	18,670,389	18,252,052	18,252,052	09/15/2017	09/15/2047	Interest Rate Swap				75625Q-AE-9	Reckitt Benckiser Treasu-SENIOR UNSECURED	1	18,670,389	18,252,052
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	15,500,000	12,933,432	12,933,432	09/15/2017	09/15/2047	Interest Rate Swap				06762X-AA-0	Barings Clo Ltd 2020-III-BABS N 2020-3A B	2	15,500,000	12,933,432
57629*DN8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	34,000,000	34,000,000	34,000,000	09/15/2017	09/15/2047	Interest Rate Swap				515095-MM-6	Landmark Equity Partners XVI-D, LLC	1	34,000,000	34,000,000
57629*DN8	Need to File with the NAIC	2Z	20,000,000	25,813,252	25,878,186	12/20/2022	06/20/2028	5 Yr Credit Default Swap	(288,238)	(170,675)		912810-FP-8	US TREAS N/B-BOND	1	26,101,490	26,048,861
57629*DN8	Need to File with the NAIC	2Z	40,000,000	35,670,869	31,450,572	12/20/2022	06/20/2028	5 Yr Credit Default Swap	(309,662)	82,760		912810-RV-2	US TREASURY N/B-UNSECURED	1	35,980,531	31,367,812
57629*DN8	Need to File with the NAIC	2Z		14,896,536	12,801,563	12/20/2022	06/20/2028	5 Yr Credit Default Swap				912810-RU-4	US TREASURY N/B-UNSECURED	1	14,896,536	12,801,563
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1	985,000,000	56,764,398	110,665,112	07/12/2022	07/12/2048	Interest Rate Swap		59,262,780		882508-BD-5	Texas Instruments Inc-SENIOR UNSECURED	1	56,764,398	51,402,332
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		49,643,624	43,290,748	07/12/2022	07/12/2048	Interest Rate Swap				745332-CG-9	PUGET SOUND ENERGY INC-SECURED	1	49,643,624	43,290,748
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		48,669,321	40,472,579	07/12/2022	07/12/2048	Interest Rate Swap				81373P-AA-1	Securian Financial Group-SENIOR UNSECURED	1	48,669,321	40,472,579
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		55,641,566	50,395,400	07/12/2022	07/12/2048	Interest Rate Swap				92826C-AF-9	VISA INC-SR UNSECURED	1	55,641,566	50,395,400
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		37,000,470	38,527,789	07/12/2022	07/12/2048	Interest Rate Swap				670346-AH-8	NUCOR CORP-SENIOR UNSECURED NOTE	1	37,000,470	38,527,789
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		45,538,182	42,331,614	07/12/2022	07/12/2048	Interest Rate Swap				12572Q-AH-8	OME Group Inc-SENIOR UNSECURED	1	45,538,182	42,331,614
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		51,213,593	44,010,920	07/12/2022	07/12/2048	Interest Rate Swap				00440E-AW-7	ACE INA HOLDINGS-SR UNSECURED	1	51,213,593	44,010,920
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		1,581,270	1,503,044	07/12/2022	07/12/2048	Interest Rate Swap				30231G-AW-2	EXXON MOBIL CORPORATION-SR UNSECURED	1	1,581,270	1,503,044
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		59,067,012	54,428,039	07/12/2022	07/12/2048	Interest Rate Swap				037833-BX-7	APPLE INC-SENIOR UNSECURED	1	59,067,012	54,428,039
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		56,247,701	48,507,415	07/12/2022	07/12/2048	Interest Rate Swap				91324P-CR-1	UNITEDHEALTH GROUP INC-SR UNSECURED	1	56,247,701	48,507,415
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		76,216,193	65,711,684	07/12/2022	07/12/2048	Interest Rate Swap				023135-AQ-9	AMAZON.COM INC-SR UNSECURED	1	76,216,193	65,711,684
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		11,324,704	10,064,007	07/12/2022	07/12/2048	Interest Rate Swap				438516-BS-4	Honeywell International -SENIOR UNSECURED	1	11,324,704	10,064,007
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		10,000,000	9,680,630	07/12/2022	07/12/2048	Interest Rate Swap				12511A-AC-8	CBAM Ltd-CBAM 2020-13A B1	1	10,000,000	9,680,630
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		13,300,000	12,850,606	07/12/2022	07/12/2048	Interest Rate Swap				75888F-AE-5	Regatta XIII Funding LLC-SERIES 18-2A CLASS A2	1	13,300,000	12,850,606
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		19,248,454	14,225,048	07/12/2022	07/12/2048	Interest Rate Swap				037833-DW-7	Apple Inc-SENIOR UNSECURED	1	19,248,454	14,225,048
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		12,500,000	12,086,450	07/12/2022	07/12/2048	Interest Rate Swap				55818R-BC-9	Madison Park Funding XIV-MDPK 2014-14A CRR	1	12,500,000	12,086,450
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		37,935,090	29,458,064	07/12/2022	07/12/2048	Interest Rate Swap				575634-AT-7	MASSACHUSETTS ELECTRIC-SENIOR UNSECURED	2	37,935,090	29,458,064
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		35,471,169	27,402,733	07/12/2022	07/12/2048	Interest Rate Swap				45138L-BD-4	IDAHO POWER CORP-SECURED NOTE	1	35,471,169	27,402,733
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		29,325,967	26,976,528	07/12/2022	07/12/2048	Interest Rate Swap				29246Q-AB-1	Empresa de Transporte de-SENIOR UNSECURED	1	29,325,967	26,976,528
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		27,765,949	25,069,476	07/12/2022	07/12/2048	Interest Rate Swap				771196-BH-4	ROCHE HOLDING INC-SENIOR UNSECURED NOTE	1	27,765,949	25,069,476
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		30,872,231	27,015,849	07/12/2022	07/12/2048	Interest Rate Swap				437076-BH-4	Home Depot Inc/The-SENIOR UNSECURED	1	30,872,231	27,015,849
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		24,754,577	21,812,519	07/12/2022	07/12/2048	Interest Rate Swap				578454-AD-2	Mayo Clinic-UNSECURED	1	24,754,577	21,812,519

S105.19

STATEMENT AS OF MARCH 31, 2023 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*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		17,491,398	13,224,704	07/12/2022	07/12/2048	Interest Rate Swap				571676-AH-8	Mars Inc-SENIOR UNSECURED	1	17,491,398	13,224,704
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		44,399,974	38,759,801	07/12/2022	07/12/2048	Interest Rate Swap				828807-CZ-8	SIMON PROPERTY GROUP LP-SENIOR UNSECURED	1	44,399,974	38,759,801
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		32,897,671	29,315,869	07/12/2022	07/12/2048	Interest Rate Swap				12189L-BB-6	BURLINGTN NORTH SANTA FE-SENIOR UNSECURED	1	32,897,671	29,315,869
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		34,015,786	27,670,680	07/12/2022	07/12/2048	Interest Rate Swap				391382-AB-4	GREAT-WEST LIFECCO FINANC-SENIOR UNSECURED	1	34,015,786	27,670,680
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		30,549,104	25,948,557	07/12/2022	07/12/2048	Interest Rate Swap				455434-BR-0	INDIANAPOLIS PIIR & LIGHT-SECURED BOND	1	30,549,104	25,948,557
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		55,160,999	52,087,562	07/12/2022	07/12/2048	Interest Rate Swap				002824-BH-2	ABBOTT LABORATORIES-SENIOR UNSECURED	1	55,160,999	52,087,562
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		60,345,062	53,265,560	07/12/2022	07/12/2048	Interest Rate Swap				68389X-AH-7	ORACLE CORP-SENIOR UNSECURED NOTE	2	60,345,062	53,265,560
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		63,236,768	57,093,843	07/12/2022	07/12/2048	Interest Rate Swap				149123-CB-5	Caterpillar Inc-SENIOR UNSECURED BOND	1	63,236,768	57,093,843
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		72,759,360	71,383,160	07/12/2022	07/12/2048	Interest Rate Swap				377372-AE-7	GLAXOSMITHKLINE CAP INC-SR UNSECURED	1	72,759,360	71,383,160
57629*HA2	Evergreen Basket of Floating Rate Corporate Bonds	1		44,657,261	39,880,114	07/12/2022	07/12/2048	Interest Rate Swap				983024-AN-0	Wyeth LLC-NOTE	1	44,657,261	39,880,114
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	197,639,266	56,816,695	31,852,327	07/29/2022	08/01/2023	TRS Bond Index		(27,516,715)		539830-AH-9	Lockheed Martin Corp-SENIOR UNSECURED NOTE	1	56,816,695	59,369,042
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,011,580	13,564,969	07/29/2022	08/01/2023	TRS Bond Index				521070-AJ-4	Lazard Group LLC-SENIOR UNSECURED RIO TINTO FIN USA LTD-SENIOR UNSECURED NOTE	2	14,011,580	13,564,969
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,401,676	13,947,013	07/29/2022	08/01/2023	TRS Bond Index				767201-AD-8	BURLINGTN NORTH SANTA FE-SENIOR UNSECURED NOTE	1	13,401,676	13,947,013
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,740,108	1,612,804	07/29/2022	08/01/2023	TRS Bond Index				12189L-AW-1	BURLINGTN NORTH SANTA FE-SENIOR UNSECURED	1	1,740,108	1,612,804
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,578,014	14,374,188	07/29/2022	08/01/2023	TRS Bond Index				03076C-AH-9	Ameriprise Financial Inc-SENIOR UNSECURED	1	15,578,014	14,374,188
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,474,347	12,105,941	07/29/2022	08/01/2023	TRS Bond Index				92928Q-AE-8	WEA Finance LLC-SENIOR UNSECURED GEORGIA-PACIFIC LLC-SENIOR UNSECURED NOTE	2	13,474,347	12,105,941
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,495,340	8,425,957	07/29/2022	08/01/2023	TRS Bond Index				373298-CF-3	Anchorage Capital CLO Lt-SERIES UNSECURED NOTE	1	8,495,340	8,425,957
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,500,000	13,235,670	07/29/2022	08/01/2023	TRS Bond Index				03329A-AE-5	2014-SRA CLASS B	1	13,500,000	13,235,670
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,643,070	07/29/2022	08/01/2023	TRS Bond Index				87246M-AU-6	TICOP CLO VI 2016-2 Ltd-TICOP 2016-6A BR2	1	10,000,000	9,643,070
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,553,110	07/29/2022	08/01/2023	TRS Bond Index				12563Y-AC-3	CIFC Funding 2021-11-CIFC 2021-2A B	1	10,000,000	9,553,110
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,025,887	4,986,703	07/29/2022	08/01/2023	TRS Bond Index				020002-AZ-4	ALLSTATE CORP-SR UNSECURED	1	5,025,887	4,986,703
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		251,332	249,309	07/29/2022	08/01/2023	TRS Bond Index				12189L-AQ-4	Burlington Northern Sant-SENIOR UNSECURED	1	251,332	249,309
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,752,317	26,012,523	07/29/2022	08/01/2023	TRS Bond Index				448814-EJ-8	HYDRO-QUEBEC-NOTE	1	25,752,317	26,012,523
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	59,760,780	07/29/2022	08/01/2023	TRS Bond Index				67332F-AD-5	RRPF Engine Leasing Ltd Senior Secured	2	60,000,000	59,760,780
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,500,000	12,156,600	07/29/2022	08/01/2023	TRS Bond Index				67115L-AC-8	Oak Hill Credit Partners-OAKC 2021-16A B	1	12,500,000	12,156,600
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,800,000	10,274,072	07/29/2022	08/01/2023	TRS Bond Index				94949J-AC-9	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A2	1	10,800,000	10,274,072
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,700,000	8,344,692	07/29/2022	08/01/2023	TRS Bond Index				03330Y-AE-0	Anchorage Capital CLO 20-ANCHC 2021-20A B	1	8,700,000	8,344,692
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,700,000	8,439,348	07/29/2022	08/01/2023	TRS Bond Index				69700G-AL-6	Palmer Square CLO 2019-1-PLMRS 2019-1A A2R	1	8,700,000	8,439,348
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	7,149,638	07/29/2022	08/01/2023	TRS Bond Index				67112C-AN-7	OZLM XIX Ltd-OZLM 2017-19A A2AR Flatiron CLO 19 Ltd-FLAT 2019-1A BR	1	7,500,000	7,149,638
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,500,000	6,294,568	07/29/2022	08/01/2023	TRS Bond Index				33883J-AQ-4		1	6,500,000	6,294,568

S105.20

STATEMENT AS OF MARCH 31, 2023 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*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,100,000	5,801,753	07/29/2022	08/01/2023	TRS Bond Index				05684C-AQ-8	Bain Capital Credit CLO -BCC 2020-3A BR	1	6,100,000	5,801,753
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,000,000	5,604,138	07/29/2022	08/01/2023	TRS Bond Index				40440X-AE-1	Highbridge Loan Managem-HLM 2021-16A C	1	6,000,000	5,604,138
57629*HF1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,850,000	3,602,453	07/29/2022	08/01/2023	TRS Bond Index				70470M-AJ-4	Peace Park CLO Ltd-PCEPK 2021-1A C	1	3,850,000	3,602,453
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	233,593,750	4,756,862	(19,401,011)	06/08/2022	06/08/2023	TRS Bond Index		(24,043,240)		571748-AZ-5	Marsh & McLennan Cos Inc-SR UNSECURED	2	4,756,862	4,642,229
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,556,545	5,350,537	06/08/2022	06/08/2023	TRS Bond Index				69353R-EQ-7	PNC Bank NA-SENIOR UNSECURED	1	5,556,545	5,350,537
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,550,000	10,179,695	06/08/2022	06/08/2023	TRS Bond Index				74983A-AC-7	RR 19 Ltd-PRAM 2021-19A A2	1	10,550,000	10,179,695
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,406,780	17,022,972	06/08/2022	06/08/2023	TRS Bond Index				52107Q-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED	2	17,406,780	17,022,972
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,557,091	13,299,506	06/08/2022	06/08/2023	TRS Bond Index				780082-AD-5	Royal Bank of Canada-SUBORDINATED Africa Finance Corp-SENIOR UNSECURED	1	13,557,091	13,299,506
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,876,433	18,430,357	06/08/2022	06/08/2023	TRS Bond Index				00830Y-AB-7	UNSECURED	1	18,876,433	18,430,357
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,657,317	16,035,197	06/08/2022	06/08/2023	TRS Bond Index				74340X-BH-3	Prologis LP-SENIOR UNSECURED	1	16,657,317	16,035,197
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,000,000	13,431,530	06/08/2022	06/08/2023	TRS Bond Index				67592R-AC-7	Wells Fargo-OCT53 2021-1A B	1	14,000,000	13,431,530
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,790,009	27,506,204	06/08/2022	06/08/2023	TRS Bond Index				911312-AJ-5	UNITED PARCEL SERVICE IN-SENIOR UNSECURED NOTE	1	28,790,009	27,506,204
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	6,491,701	06/08/2022	06/08/2023	TRS Bond Index				06654D-AB-3	Banner Health-UNSECURED	1	7,500,000	6,491,701
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,879,883	2,875,838	06/08/2022	06/08/2023	TRS Bond Index				06051G-GA-1	BANK OF AMERICA CORP-SENIOR UNSECURED	1	2,879,883	2,875,838
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		136,412,335	121,110,308	06/08/2022	06/08/2023	TRS Bond Index				57542Z-A7-2	MM Investment Holding Revolver Floating Line	2	136,412,335	121,110,308
57629*HE4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,560,710	06/08/2022	06/08/2023	TRS Bond Index				67102Q-AZ-1	2012-7A CLASS BR3	1	15,000,000	14,560,710
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	150,000,000	9,900,000	(19,269,427)	08/30/2019	08/30/2034	Interest Rate Swap		(28,892,544)		69688X-AJ-5	Palmer Square CLO 2014-1-SERIES 2014-1A CLASS AZRR	1	9,900,000	9,623,117
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,235,360	2,211,741	08/30/2019	08/30/2034	Interest Rate Swap				281378-AB-5	EDUCATIONAL SERVICES OF -SERIES 2015-1 CLASS B	1	2,235,360	2,211,741
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,359,076	2,145,018	08/30/2019	08/30/2034	Interest Rate Swap				28137T-AB-9	EDUCATIONAL SERVICES OF -SERIES 2014-2 CLASS B	1	2,359,076	2,145,018
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		782,045	600,137	08/30/2019	08/30/2034	Interest Rate Swap				19458L-BD-1	COLLEGIATE FUNDING SERVI-SERIES 2005-A CLASS B	1	782,045	600,137
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,360,675	16,119,538	08/30/2019	08/30/2034	Interest Rate Swap				03666H-AA-9	Antares Holdings LP-SENIOR UNSECURED	2	16,360,675	16,119,538
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,000,000	15,000,000	08/30/2019	08/30/2034	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund -Senior Secured Revolving Credit Facility	1	15,000,000	15,000,000
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,294,877	11,761,996	08/30/2019	08/30/2034	Interest Rate Swap				708696-BY-4	Pennsylvania Electric Co-SENIOR UNSECURED	2	12,294,877	11,761,996
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,053,369	23,682,659	08/30/2019	08/30/2034	Interest Rate Swap				806851-AK-7	Schlumberger Holdings Co-SENIOR UNSECURED	2	24,053,369	23,682,659
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		28,096,425	27,690,901	08/30/2019	08/30/2034	Interest Rate Swap				10510K-AC-1	BRAMBLES USA INC-SR UNSECURED HONEYWELL INTERNATIONAL - SENIOR UNSECURED NOTE	2	28,096,425	27,690,901
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,349,704	29,634,498	08/30/2019	08/30/2034	Interest Rate Swap				438516-BB-1	HONEYWELL INTERNATIONAL -SENIOR UNSECURED NOTE	1	32,349,704	29,634,498
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,852,182	23,185,127	08/30/2019	08/30/2034	Interest Rate Swap				438516-AT-3	NOTE ANCHORAGE CAPITAL CLO 1-ANCHC 2018-TRA A1	1	24,852,182	23,185,127
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,450,000	15,273,082	08/30/2019	08/30/2034	Interest Rate Swap				03328Y-AA-2	Barings Middle Market CI-BMM 2019-1A C	1	15,450,000	15,273,082
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,141,515	9,823,724	08/30/2019	08/30/2034	Interest Rate Swap				06761T-AJ-1	CIFC Funding 2020-I Ltd-CIFC 2020-1A DR	2	10,141,515	9,823,724
57629*ER8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,700,000	2,545,279	08/30/2019	08/30/2034	Interest Rate Swap				125550-AW-6		2	2,700,000	2,545,279

S105.21

STATEMENT AS OF MARCH 31, 2023 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		2,700,000	2,550,053	08/30/2019	08/30/2034	Interest Rate Swap				06762J-AG-8	Babson CLO Ltd/Cayman Is-BABSN 2021-2A D	2	2,700,000	2,550,053
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	19,727,488	(36,807,117)	08/30/2019	08/30/2039	Interest Rate Swap		(50,332,892)		693304-AY-3	PECO Energy Co-SECURED	1	19,727,488	13,525,775
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,015,589	15,655,560	08/30/2019	08/30/2039	Interest Rate Swap				579780-AN-7	MCCORMICK & CO INC/MID-SENIOR UNSECURED	2	16,015,589	15,655,560
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,174,075	14,556,298	08/30/2019	08/30/2039	Interest Rate Swap				90932K-AA-7	United Airlines 2019-2 C-UNTD AIR 19-2 B FIXED	3	16,174,075	14,556,298
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,334,217	13,898,150	08/30/2019	08/30/2039	Interest Rate Swap				22822V-AE-1	CROWN CASTLE INTL CORP-SENIOR UNSECURED	2	14,334,217	13,898,150
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,186,625	15,161,570	08/30/2019	08/30/2039	Interest Rate Swap				37827Z-AF-5	GLENCORE FUNDING LLC-SENIOR UNSECURED NOTE	2	15,186,625	15,161,570
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,489,674	24,658,551	08/30/2019	08/30/2039	Interest Rate Swap				05369A-AA-9	Aviation Capital Group L-SENIOR UNSECURED	2	26,489,674	24,658,551
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,350,000	44,265,636	08/30/2019	08/30/2039	Interest Rate Swap				592688-B8-3	Mettler-Toledo Internati Senior Note Ser	2	45,350,000	44,265,636
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,000,000	9,835,080	08/30/2019	08/30/2039	Interest Rate Swap				290015-AN-6	Elmwood CLO I Ltd-ELMW1 2019-1A BR	1	10,000,000	9,835,080
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		7,850,000	7,698,707	08/30/2019	08/30/2039	Interest Rate Swap				48661Q-AE-1	Kayne CLO 9 Ltd-SERIES 20-9A CLASS B1	1	7,850,000	7,698,707
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,000,000	14,607,075	08/30/2019	08/30/2039	Interest Rate Swap				04019L-AL-8	ARES LI CLO Ltd-ARES 2019-51A AIR C1FC Funding 2018-II Ltd-C1FC 2018-2A A2	1	15,000,000	14,607,075
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,000,000	14,634,345	08/30/2019	08/30/2039	Interest Rate Swap				17180W-AC-9	Madison Park Funding Ltd-SERIES 18-28A CLASS A2	1	15,000,000	14,634,345
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,750,000	11,472,947	08/30/2019	08/30/2039	Interest Rate Swap				55821A-AC-2	Barings Clo Ltd 2020-IIII-BABSN 2020-3A B	1	11,750,000	11,472,947
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		35,500,000	29,621,732	08/30/2019	08/30/2039	Interest Rate Swap				06762X-AA-0	Cliffwater Corporate Lending Fund-Senior Secured Revolving Credit Facility	2	35,500,000	29,621,732
57629*EY3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,000,000	21,000,000	08/30/2019	08/30/2039	Interest Rate Swap				186658-AC-6	Yara International ASA-SENIOR UNSECURED	1	21,000,000	21,000,000
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	925,475	(63,031,291)	08/30/2019	08/30/2049	Interest Rate Swap		(63,917,371)		984851-AF-2	Edwards Lifesciences Cor-SENIOR UNSECURED	2	925,475	886,080
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		30,169,387	30,073,830	08/30/2019	08/30/2049	Interest Rate Swap				28176E-AD-0	GATX Corp-SENIOR UNSECURED	2	30,169,387	30,073,830
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		36,977,289	35,884,138	08/30/2019	08/30/2049	Interest Rate Swap				36144B-BC-6	BUNGE LTD FINANCE CORP-SENIOR UNSECURED	2	36,977,289	35,884,138
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,682,049	17,103,823	08/30/2019	08/30/2049	Interest Rate Swap				120568-AX-8	Air Canada 2017-1 Class -SECURED	2	17,682,049	17,103,823
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,157,561	16,815,868	08/30/2019	08/30/2049	Interest Rate Swap				00908P-AC-1	CHURCH & DWIGHT CO INC-SENIOR UNSECURED	2	18,157,561	16,815,868
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,193,045	5,166,270	08/30/2019	08/30/2049	Interest Rate Swap				171340-AN-2	DTE Electric Co-SECURED	1	5,193,045	5,166,270
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,194,446	37,951,233	08/30/2019	08/30/2049	Interest Rate Swap				23338V-AE-6	MM Investment Holding Revolver Fixed Line	2	45,194,446	37,951,233
57629*EU1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2		131,999,996	117,192,926	08/30/2019	08/30/2049	Interest Rate Swap				57542Z-A9-8	FS Global Credit Opportu-FS GLOBAL CREDIT	2	131,999,996	117,192,926
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	306,000,000	75,000,000	(21,925,715)	09/03/2019	09/03/2049	Interest Rate Swap		(95,638,444)		30290Y-AC-5	Sanofi-SENIOR UNSECURED	1	75,000,000	73,712,729
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,464,084	10,269,521	09/03/2019	09/03/2049	Interest Rate Swap				801060-AD-6	AEP Texas Inc-SENIOR UNSECURED	1	10,464,084	10,269,521
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,048,893	6,720,010	09/03/2019	09/03/2049	Interest Rate Swap				00108W-AH-3	Toyota Motor Corp-SENIOR UNSECURED	2	7,048,893	6,720,010
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,200,000	20,670,509	09/03/2019	09/03/2049	Interest Rate Swap				892331-AD-1	salesforce.com Inc-SENIOR UNSECURED	1	21,200,000	20,670,509
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,698,283	20,371,966	09/03/2019	09/03/2049	Interest Rate Swap				79466L-AF-1	General Dynamics Corp-SENIOR UNSECURED	1	20,698,283	20,371,966
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,023,293	7,728,550	09/03/2019	09/03/2049	Interest Rate Swap				369550-BC-1	General Dynamics Corp-SENIOR UNSECURED	1	8,023,293	7,728,550

S105.22

STATEMENT AS OF MARCH 31, 2023 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		23,851,663	22,637,112	09/03/2019	09/03/2049	Interest Rate Swap				892330-AC-5	Toyota Industries Corp-SENIOR UNSECURED	1	23,851,663	22,637,112
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		35,000,000	34,594,735	09/03/2019	09/03/2049	Interest Rate Swap				501886-AT-0	LCM XVIII LP-LCM 18A A1R	1	35,000,000	34,594,735
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,450,500	43,943,676	09/03/2019	09/03/2049	Interest Rate Swap				13876J-AC-6	Canyon Capital CLO Ltd-CANVC 2012-18A A	1	44,450,500	43,943,676
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,302,845	2,246,750	09/03/2019	09/03/2049	Interest Rate Swap				313747-AU-1	Federal Realty Investmen-SENIOR UNSECURED	2	2,302,845	2,246,750
57629*FB2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,629,748	53,828,620	09/03/2019	09/03/2049	Interest Rate Swap				57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	60,629,748	53,828,620
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	255,000,000	140,999,996	46,471,105	09/03/2019	09/03/2049	Interest Rate Swap		(78,712,247)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	140,999,996	125,183,352
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,954,647	7,596,198	09/03/2019	09/03/2049	Interest Rate Swap				06406R-AF-4	Bank of New York Mellon -SENIOR UNSECURED	1	7,954,647	7,596,198
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,800,883	7,873,183	09/03/2019	09/03/2049	Interest Rate Swap				90932P-AA-6	United Airlines 2014-1 C-SECURED NOTE	2	7,800,883	7,873,183
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,845,524	12,419,685	09/03/2019	09/03/2049	Interest Rate Swap				606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURED	1	12,845,524	12,419,685
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,088,580	3,015,594	09/03/2019	09/03/2049	Interest Rate Swap				857477-AN-3	State Street Corp-SR UNSECURED	1	3,088,580	3,015,594
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,800,000	6,561,426	09/03/2019	09/03/2049	Interest Rate Swap				631005-BH-7	Narragansett Electric Co-SENIOR UNSECURED	1	6,800,000	6,561,426
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,349,770	2,314,602	09/03/2019	09/03/2049	Interest Rate Swap				532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED	1	2,349,770	2,314,602
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,102,291	11,812,912	09/03/2019	09/03/2049	Interest Rate Swap				09062X-AF-0	BIODEN INC-SR UNSECURED	2	12,102,291	11,812,912
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,112,695	2,948,547	09/03/2019	09/03/2049	Interest Rate Swap				46625H-JY-7	JPMorgan Chase & Co-SUBORDINATED NOTE	1	3,112,695	2,948,547
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,711,471	2,661,478	09/03/2019	09/03/2049	Interest Rate Swap				452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED	1	2,711,471	2,661,478
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,190,102	28,152,514	09/03/2019	09/03/2049	Interest Rate Swap				254687-CP-9	Walt Disney Co/The-SENIOR UNSECURED	1	28,190,102	28,152,514
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,629,853	7,123,093	09/03/2019	09/03/2049	Interest Rate Swap				313747-AY-3	Federal Realty Investmen-SENIOR UNSECURED	2	7,629,853	7,123,093
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,195,388	7,288,722	09/03/2019	09/03/2049	Interest Rate Swap				477143-AJ-0	JetBlue 2019-1 Class A P-JETBLUE 19-1 A	2	8,195,388	7,288,722
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,195,301	5,969,438	09/03/2019	09/03/2049	Interest Rate Swap				670346-AP-0	Nucor Corp-SENIOR UNSECURED	1	6,195,301	5,969,438
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,981,573	1,847,769	09/03/2019	09/03/2049	Interest Rate Swap				78442G-RY-4	SLM STUDENT LOAN TRUST-SERIES 2006-2 CLASS B	1	1,981,573	1,847,769
57629*ES6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		100,000,000	98,854,300	09/03/2019	09/03/2049	Interest Rate Swap				42086Q-AA-9	Kingsland VI Ltd-KING 2013-6A AR	1	100,000,000	98,854,300
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	100,673,053	67,400,147	01/08/2020	01/08/2032	Interest Rate Swap		(32,056,474)		85816W-AC-8	Steele Creek CLO 2014-1 -SERIES 14-18A CLASS A	1	100,673,053	99,456,621
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		91,424,392	90,103,998	01/08/2020	01/08/2032	Interest Rate Swap				12555Q-AN-6	CIFC Funding 2020-1 Ltd-CIFC 2020-1A A1R	1	91,424,392	90,103,998
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,900,000	15,752,225	01/08/2020	01/08/2032	Interest Rate Swap				74988L-AA-2	ALM XIV Ltd-SERIES 14-14A CLASS A1R2	1	15,900,000	15,752,225
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,500,000	15,363,259	01/08/2020	01/08/2032	Interest Rate Swap				12550A-AT-3	CIFC Funding 2014-V Ltd-CIFC 2014-5A A1R2	1	15,500,000	15,363,259
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,389,590	01/08/2020	01/08/2032	Interest Rate Swap				88432U-AC-0	Wind River CLO Ltd-SERIES 18-3A CLASS A2	1	15,000,000	14,389,590
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,465,400	01/08/2020	01/08/2032	Interest Rate Swap				00190Y-BF-1	Ares XXVII CLO Ltd-ARES 2013-2A BR2	1	11,900,000	11,465,400
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,914,459	24,626,825	01/08/2020	01/08/2032	Interest Rate Swap				05875H-AA-1	Ballyrock CLO 2018-1 Ltd	1	24,914,459	24,626,825
57629*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,538,886	11,476,620	01/08/2020	01/08/2032	Interest Rate Swap				48251C-AA-6	KKR Wolverine I Ltd Class A Senior	1	12,538,886	11,476,620

S105.23

STATEMENT AS OF MARCH 31, 2023 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*EB3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,826,086	9,826,086	01/08/2020	01/08/2032	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	9,826,086	9,826,086
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	127,900,000	96,266,101	01/08/2020	01/08/2035	Interest Rate Swap		(31,633,899)		12499#-MM-8	COOF Onshore Co-Borrower Revolving Loan	1	127,900,000	127,900,000
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,168,422	17,884,193	01/08/2020	01/08/2035	Interest Rate Swap				61744Y-AK-4	Morgan Stanley-SENIOR UNSECURED ... Diameter Capital CLO 4 L-DCL0 2022-4A A1	1	19,168,422	17,884,193
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		49,957,999	49,966,300	01/08/2020	01/08/2035	Interest Rate Swap				25255N-AA-6	Barings CLO Ltd 2019-III-BABSN 2019-3A A1R	1	49,957,999	49,966,300
57629*EW7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,707,541	14,801,910	01/08/2020	01/08/2035	Interest Rate Swap				06761K-AL-5	Hofer Financial Services Senior Note Ser	1	14,707,541	14,801,910
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	400,000,000	74,770,000	(39,258,057)	02/11/2020	02/11/2050	Interest Rate Swap		(111,877,148)		A3158#-AC-3	TPF Equity REIT Operatin Gtd Senior Note	1	74,770,000	72,619,091
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		79,100,000	75,011,796	02/11/2020	02/11/2050	Interest Rate Swap				87278*-AD-4	AquaSure Finance Pty Ltd Gtd Senior Secu	1	79,100,000	75,011,796
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		57,050,000	56,325,009	02/11/2020	02/11/2050	Interest Rate Swap				00458*-AB-5	Johnson Matthey PLC Senior Note Ser	1	57,050,000	56,325,009
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		59,800,000	55,366,607	02/11/2020	02/11/2050	Interest Rate Swap				G5147*-AD-8	Safran Senior Note Ser	2	59,800,000	55,366,607
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		62,900,000	62,103,120	02/11/2020	02/11/2050	Interest Rate Swap				786584-A#-9	Australia Pacific Airpor Gtd Senior Note	2	62,900,000	62,103,120
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		62,800,000	61,365,117	02/11/2020	02/11/2050	Interest Rate Swap				00832*-AD-8	Anchorage Capital CLO 3-ANCHC 2014-3RA C	1	62,800,000	61,365,117
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,500,000	6,999,180	02/11/2020	02/11/2050	Interest Rate Swap				03330A-AE-2	AGL CLO Ltd-AGL 2021-10A B	1	7,500,000	6,999,180
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,479,399	02/11/2020	02/11/2050	Interest Rate Swap				00119Y-AC-7	Babson CLO Ltd/Cayman Is-BABSN 2021-2A B	1	6,750,000	6,479,399
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,025,000	11,544,409	02/11/2020	02/11/2050	Interest Rate Swap				06762J-AC-7	Neuberger Berman CLO Ltd-NEUB 2021-44A B	1	12,025,000	11,544,409
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,900,000	11,513,607	02/11/2020	02/11/2050	Interest Rate Swap				64133V-AC-1	Bain Capital Credit CLO -BCC 2021-5A B	1	11,900,000	11,513,607
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,100,000	5,816,911	02/11/2020	02/11/2050	Interest Rate Swap				05682E-AE-3	AGL CLO 10 Ltd-AGL 2021-10A A	1	6,100,000	5,816,911
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,621,269	14,621,280	02/11/2020	02/11/2050	Interest Rate Swap				00119Y-AA-1	ANCHORAGE CREDIT FUNDING-SERIES 18-5A CLASS A	1	14,621,269	14,621,280
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,000,000	13,403,656	02/11/2020	02/11/2050	Interest Rate Swap				03330P-AA-7	Rad CLO 12 Ltd-RAD 2021-12A B	1	14,000,000	13,403,656
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	12,676,136	02/11/2020	02/11/2050	Interest Rate Swap				75009P-AC-1	Benefit Street Partners -BSP 2022-27A B1	1	13,100,000	12,676,136
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	10,024,570	02/11/2020	02/11/2050	Interest Rate Swap				08179P-AE-2	KKR CLO 30 Ltd-KKR 30A BR	1	10,000,000	10,024,570
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,625,000	6,376,026	02/11/2020	02/11/2050	Interest Rate Swap				48250E-AS-4	Landmark Equity Partners XVI-D, LLC	1	6,625,000	6,376,026
57629*FA4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		43,000,000	43,000,000	02/11/2020	02/11/2050	Interest Rate Swap				515095-MM-6	Barings Middle Market CL-BMM 2018-1A A2	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	23,681,157	(30,138,897)	02/20/2020	02/20/2050	Interest Rate Swap		(54,211,613)		06761M-AB-3	Madison Park Funding XLV-HDPK 2020-45A BR	1	23,681,157	24,072,716
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,299,872	02/20/2020	02/20/2050	Interest Rate Swap				55820B-AL-1	Goldentree Loan Managemen-GLM 2019-4A BR	1	5,500,000	5,299,872
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,732,190	02/20/2020	02/20/2050	Interest Rate Swap				38137Y-AS-0	1828 CLO Ltd-GUGG4 2016-1A A1JR .. CARLYLE US CLO 2018-3 LT-CGIS 2018-3A A1B	1	15,000,000	14,732,190
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,500,000	11,174,999	02/20/2020	02/20/2050	Interest Rate Swap				282523-AM-1	Oak Hill Credit Partners-OAKC 2020-5A B	1	11,500,000	11,174,999
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,703,608	02/20/2020	02/20/2050	Interest Rate Swap				14317R-AC-3	Neuberger Berman CLO XIV-NEUB 2013-14A BR2	1	8,000,000	7,703,608
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,700,000	7,532,841	02/20/2020	02/20/2050	Interest Rate Swap				67113G-AG-2		1	7,700,000	7,532,841
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,948,187	02/20/2020	02/20/2050	Interest Rate Swap				64129J-BG-4		1	9,200,000	8,948,187

S105.24

STATEMENT AS OF MARCH 31, 2023 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*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,783,296	02/20/2020	02/20/2050	Interest Rate Swap				27831B-AE-3	Eaton Vance CLO 2018-1 L-EATON 2018-1A B	1	8,000,000	7,783,296
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,700,000	14,112,515	02/20/2020	02/20/2050	Interest Rate Swap				58821L-AC-8	Madison Park Funding XXX-MDPK 2021-39A B	1	14,700,000	14,112,515
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,187,074	13,988,881	02/20/2020	02/20/2050	Interest Rate Swap				553205-AC-9	MP CLO III LTD-MP3 2013-1A AR Wind River CLO Ltd-SERIES 18-3A CLASS B	1	14,187,074	13,988,881
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,069,251	02/20/2020	02/20/2050	Interest Rate Swap				88432U-AE-6	BALLYROCK CLO 2018-1 LTD-SERIES 2018-1A CLASS A2	1	9,500,000	9,069,251
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,160,734	3,086,534	02/20/2020	02/20/2050	Interest Rate Swap				05875H-AC-7	Anchorage Capital CLO 7 - ANCHC	1	3,160,734	3,086,534
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,950,000	9,641,570	02/20/2020	02/20/2050	Interest Rate Swap				03328T-BC-8	2015-7A BR2 FLOATING	1	9,950,000	9,641,570
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,000,000	7,833,296	02/20/2020	02/20/2050	Interest Rate Swap				74979V-AE-3	PR Ltd-BRAM 2018-5A A2	1	8,000,000	7,833,296
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,153,100	02/20/2020	02/20/2050	Interest Rate Swap				74980P-AC-7	ALM Ltd/KY-SERIES 21-14A CLASS A2 Wind River CLO Ltd-WINDR 2021-1A B1	1	20,000,000	19,153,100
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,700,000	7,170,533	02/20/2020	02/20/2050	Interest Rate Swap				97314H-AC-3	Madison Park Funding XXI-MDPK 2018-29A B	1	7,700,000	7,170,533
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,461,794	11,262,928	02/20/2020	02/20/2050	Interest Rate Swap				55820C-AG-0	LCM XVIII LP-LCM 19A BR GT Loan Financing I Ltd -SERIES 2013-1A CLASS BR	1	11,461,794	11,262,928
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,986,105	02/20/2020	02/20/2050	Interest Rate Swap				50188Q-AL-5	Sound Point Clo XXXI Ltd-SNDPT 2021-3A B	1	7,000,000	6,986,105
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,883,044	02/20/2020	02/20/2050	Interest Rate Swap				36248M-AL-1	CenterPoint Properties T Senior Note Ser	1	7,000,000	6,883,044
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,100,000	9,429,158	02/20/2020	02/20/2050	Interest Rate Swap				83615P-AC-1	RREEF America REIT II, I Senior Unsecured Notes	1	10,100,000	9,429,158
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,135,000	13,677,182	02/20/2020	02/20/2050	Interest Rate Swap				151895-D*-7	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	14,135,000	13,677,182
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	12,973,245	02/20/2020	02/20/2050	Interest Rate Swap				74986B-BB-6	KREF Lending VII LLC - Term Loan Series 2019-7	1	15,000,000	12,973,245
57629*EJ6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	16,000,000	02/20/2020	02/20/2050	Interest Rate Swap				18685B-AC-6	Peace Park CLO Ltd-PCEPK 2021-1A A	1	16,000,000	16,000,000
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	215,000,000	50,250,049	(12,984,376)	02/20/2020	02/20/2050	Interest Rate Swap		(63,234,425)		50079E-MS-5	THL Credit Wind River 20-WINDR 2017-1A BR	1	50,250,049	50,250,049
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,300,000	23,746,470	02/20/2020	02/20/2050	Interest Rate Swap				70470M-AC-9	TICP CLO VI 2016-2 Ltd-TICP 2016-6A AR2	1	24,300,000	23,746,470
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	20,513,878	02/20/2020	02/20/2050	Interest Rate Swap				97315T-AE-2	Atrium IX-ATRM 9A BR2	1	22,000,000	20,513,878
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		35,975,660	35,671,064	02/20/2020	02/20/2050	Interest Rate Swap				87246M-AS-1	Goldentree Loan Managem-SERIES 19-4A CLASS AJR	1	35,975,660	35,671,064
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,000,000	20,484,366	02/20/2020	02/20/2050	Interest Rate Swap				55821C-AC-8	TIAA CLO I Ltd-TIA 2016-1A AR Flatiron CLO 18 Ltd-FLAT 2018-1A A	1	21,000,000	20,484,366
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,000,000	23,464,248	02/20/2020	02/20/2050	Interest Rate Swap				38137Y-AQ-4	Kingsland Ltd-SERIES 18-8A CLASS A	1	24,000,000	23,464,248
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,900,000	8,758,704	02/20/2020	02/20/2050	Interest Rate Swap				87271L-AJ-1	Millennium Pipeline Comp Senior Secured	1	8,900,000	8,758,704
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,000,000	26,641,332	02/20/2020	02/20/2050	Interest Rate Swap				33883G-AA-5	Manchester United Football Club, Ltd Senior Secu	1	27,000,000	26,641,332
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,100,000	7,980,104	02/20/2020	02/20/2050	Interest Rate Swap				42086P-AC-7	MM Investment Holding Revolver Fixed Line	2	8,100,000	7,980,104
57629*FC0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,930,785	20,834,136	02/20/2020	02/20/2050	Interest Rate Swap				60040F-AB-8	Victoria Power Networks Gtd Senior Note	1	19,930,785	20,834,136
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	51,500,000	(29,655,922)	02/25/2020	02/25/2050	Interest Rate Swap		(78,755,147)		G5791F-AA-9		1	51,500,000	49,099,225
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		189,999,994	168,686,787	02/25/2020	02/25/2050	Interest Rate Swap				57542Z-A9-8		2	189,999,994	168,686,787
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,500,000	36,668,245	02/25/2020	02/25/2050	Interest Rate Swap				Q8396F-AK-7		1	39,500,000	36,668,245

S105.25

STATEMENT AS OF MARCH 31, 2023 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*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,238,638	23,781,556	02/25/2020	02/25/2050	Interest Rate Swap				04351L-AA-8	Ascension Health-UNSECURED BOND	1	24,238,638	23,781,556
57629*EV9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,401,563	25,619,258	02/25/2020	02/25/2050	Interest Rate Swap				46247@-AA-2	Iowa Interstate Railroad Senior Secured	1	26,401,563	25,619,258
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	37,900,000	(42,061,694)	02/25/2020	02/25/2050	Interest Rate Swap		(78,216,096)		Q3920#-AL-3	Fonterra Co-operative Gr Senior Unsecured Notes	1	37,900,000	36,154,402
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		42,700,000	41,589,885	02/25/2020	02/25/2050	Interest Rate Swap				838515-G*-9	South Jersey Gas Co. First Mortgage	1	42,700,000	41,589,885
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,200,000	29,868,042	02/25/2020	02/25/2050	Interest Rate Swap				23325P-A*-5	DNP Select Income Fund I Senior Secured	1	30,200,000	29,868,042
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,150,000	38,249,737	02/25/2020	02/25/2050	Interest Rate Swap				Q3535#-AD-8	Envestra Victoria Pty Lt Senior Secured	1	36,150,000	38,249,737
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,000,000	37,125,348	02/25/2020	02/25/2050	Interest Rate Swap				74986@-AV-3	PREEF AMERICA REIT II INC SR UNSECD NT SER D	1	39,000,000	37,125,348
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		38,250,000	36,193,030	02/25/2020	02/25/2050	Interest Rate Swap				Q3920#-AG-4	Fonterra Co-operative Gr Senior Note	1	38,250,000	36,193,030
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,035,352	27,204,366	02/25/2020	02/25/2050	Interest Rate Swap				87305Q-CM-1	TTX CO-SENIOR UNSECURED	1	31,035,352	27,204,366
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		778,796	744,033	02/25/2020	02/25/2050	Interest Rate Swap				493268-BW-5	KEYCORP STUDENT LOAN TRU-SERIES 2004-A CLASS 1B	1	778,796	744,033
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,900,000	7,563,697	02/25/2020	02/25/2050	Interest Rate Swap				92916Q-AC-6	VOYA CLO 2017-4 LTD-SERIES 17-4A CLASS B	1	7,900,000	7,563,697
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,050,000	6,723,592	02/25/2020	02/25/2050	Interest Rate Swap				04016P-AN-8	Ares XLIII CLO Ltd-SERIES 2017-43A CLASS CR	1	7,050,000	6,723,592
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,828,479	02/25/2020	02/25/2050	Interest Rate Swap				14315R-AE-1	Carlyle Global Market S1-SERIES 18-4A CLASS A2	1	7,000,000	6,828,479
57629*EZO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,500,000	43,444,174	02/25/2020	02/25/2050	Interest Rate Swap				27889*-AM-1	ECOM Atlantic Inc - Guaranteed Series A Senior Note	1	45,500,000	43,444,174
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	38,900,000	(48,216,704)	02/26/2020	02/26/2050	Interest Rate Swap		(83,522,811)		06235#-AN-2	Mirvac Group Finance Ltd Senior Note	1	38,900,000	35,306,107
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,482,500	31,447,543	02/26/2020	02/26/2050	Interest Rate Swap				74979U-AA-3	RS 2018 Private, LLC Senior Secured Note	1	32,482,500	31,447,543
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		35,600,000	34,982,126	02/26/2020	02/26/2050	Interest Rate Swap				05565E-G@-8	BMW U.S. Capital LLC Gtd Senior Note	1	35,600,000	34,982,126
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		38,150,000	34,947,193	02/26/2020	02/26/2050	Interest Rate Swap				Q3189*-AC-3	DEXUS Funds Management L Senior Note Ser	1	38,150,000	34,947,193
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,000,000	60,000,000	02/26/2020	02/26/2050	Interest Rate Swap				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	29,450,021	02/26/2020	02/26/2050	Interest Rate Swap				74264*-AC-0	PRISA LHC Senior Note Ser	1	31,100,000	29,450,021
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		32,900,000	32,812,655	02/26/2020	02/26/2050	Interest Rate Swap				48661E-B*-8	KAYNE ANDERSON MID/ENERGY-SR UNSECD SER D	1	32,900,000	32,812,655
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	15,548,240	02/26/2020	02/26/2050	Interest Rate Swap				65023P-AQ-3	Newark BSL CLO 2 Ltd-NBCLO 2017-1A A2R	1	16,000,000	15,548,240
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,850,000	9,554,480	02/26/2020	02/26/2050	Interest Rate Swap				48254H-AC-8	KKR Clo 32 Ltd-KKR 32A B	1	9,850,000	9,554,480
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,300,000	8,117,491	02/26/2020	02/26/2050	Interest Rate Swap				29002Q-AC-3	Elmwood CLO VII Ltd-ELMW7 2020-4A B	1	8,300,000	8,117,491
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,125,000	4,899,116	02/26/2020	02/26/2050	Interest Rate Swap				05683H-AS-4	Bain Capital Credit CLO -BCC 2017-2A CR2	1	5,125,000	4,899,116
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,100,000	4,937,621	02/26/2020	02/26/2050	Interest Rate Swap				06760B-AJ-1	BARBSON CLO LTD-SERIES 17-1A CLASS C	1	5,100,000	4,937,621
57629*FD8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,500,000	38,507,247	02/26/2020	02/26/2050	Interest Rate Swap				G2037*-AA-4	Chanel Limited Senior Note Series A	1	39,500,000	38,507,247
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	50,000,000	(57,623,346)	06/15/2020	06/15/2050	Interest Rate Swap		(106,454,696)		143133-AA-4	CGMS 2021-6A A1	1	50,000,000	48,831,350
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,909,000	06/15/2020	06/15/2050	Interest Rate Swap				82670Q-AA-7	Signal Peak CLO 9 Ltd-SPEAK 2021-9A A1	1	50,000,000	48,909,000
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,100,000	12,811,486	06/15/2020	06/15/2050	Interest Rate Swap				03766@-AQ-5	Apidos CLO XXVI-APID 2017-26A A2R	1	13,100,000	12,811,486

S105.26

STATEMENT AS OF MARCH 31, 2023 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*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,599,855	59,170,013	06/15/2020	06/15/2050	Interest Rate Swap				25255D-AA-8	Diameter Capital CLO 1 L-DCL0 2021-1A A1A	1	60,599,855	59,170,013
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,600,000	12,922,312	06/15/2020	06/15/2050	Interest Rate Swap				97316L-AC-2	THL Credit Wind River 20-WINDR 2017-3A BR	1	13,600,000	12,922,312
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,525,000	11,067,884	06/15/2020	06/15/2050	Interest Rate Swap				48252U-AJ-6	KKR Clo 25 Ltd-SERIES 25 CLASS BR Barings CLO Ltd 2019-I-SERIES 2019-1A CLASS BR	1	11,525,000	11,067,884
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	10,616,628	06/15/2020	06/15/2050	Interest Rate Swap				06759J-AS-7	GREYWOLF CLO VI Ltd-GWOLF 2018-1A A2	1	11,000,000	10,616,628
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,016,350	06/15/2020	06/15/2050	Interest Rate Swap				39809G-AC-9	OAKTREE CLO 2018-1 LTD SR SECD NT CL A-2	1	9,200,000	9,016,350
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,650,000	8,325,426	06/15/2020	06/15/2050	Interest Rate Swap				67400F-AE-1	Buttermilk Park CLO Ltd-BMILK 2018-1A A1	1	8,650,000	8,325,426
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,179,923	8,185,103	06/15/2020	06/15/2050	Interest Rate Swap				124166-AA-7	Canyon CLO 2021-3 Ltd-CANYC 2021-3A B	1	8,179,923	8,185,103
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	10,564,884	06/15/2020	06/15/2050	Interest Rate Swap				13875M-AC-0	Babson CLO Ltd 2016-I-BABSN 2016-1A A2R	1	11,000,000	10,564,884
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,200,000	6,957,108	06/15/2020	06/15/2050	Interest Rate Swap				06759M-AE-1	CHA Loan Funding 2016-1 -OHALF 2016-1A B1R	1	7,200,000	6,957,108
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,900,000	6,745,130	06/15/2020	06/15/2050	Interest Rate Swap				67110U-AN-9	TICP CLO X LTD-SERIES 18-10A CLASS B	1	6,900,000	6,745,130
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,533,190	06/15/2020	06/15/2050	Interest Rate Swap				87249C-AC-5	CCOF Onshore Co-Borrower Revolving Loan	1	6,700,000	6,533,190
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	25,000,000	06/15/2020	06/15/2050	Interest Rate Swap				12499H-MM-8	LCM 26 Ltd-SERIES 26A CLASS C	1	25,000,000	25,000,000
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,052,266	6,115,190	06/15/2020	06/15/2050	Interest Rate Swap				87250R-AA-2	Elmwood CLO IV Ltd-ELMW4 2020-1A B	1	6,052,266	6,115,190
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,800,000	5,637,994	06/15/2020	06/15/2050	Interest Rate Swap				29002G-AC-5	Rockford Tower CLO 2017-2 Ltd	1	5,800,000	5,637,994
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,750,000	5,572,095	06/15/2020	06/15/2050	Interest Rate Swap				77340G-AL-5	LCM 26 Ltd-SERIES 26A CLASS C	1	5,750,000	5,572,095
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,169,558	06/15/2020	06/15/2050	Interest Rate Swap				50200F-AG-4	CIFC Funding Ltd-CIFC 2019-6A C	1	5,650,000	5,169,558
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,250,000	5,092,579	06/15/2020	06/15/2050	Interest Rate Swap				12555X-AG-6	TOW Direct Lending Structured Solutions 2019 LLC - Class A Note	1	5,250,000	5,092,579
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,236,842	14,196,979	06/15/2020	06/15/2050	Interest Rate Swap				87241F-AA-0	PRISA LHC, LLC Senior Note Series C	1	14,236,842	14,196,979
57629*FF3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,500,000	20,045,461	06/15/2020	06/15/2050	Interest Rate Swap				74264*-AE-6	Caterpillar Inc-SENIOR UNSECURED	1	21,500,000	20,045,461
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	56,445,868	(84,793,926)	06/29/2020	06/29/2050	Interest Rate Swap		(129,644,414)		149123-CJ-8	UnitedHealth Group Inc-SENIOR UNSECURED	1	56,445,868	44,850,488
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,517,329	35,133,618	06/29/2020	06/29/2050	Interest Rate Swap				91324P-EA-6	Carnegie Institution of -UNSECURED	1	50,517,329	35,133,618
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		46,541,072	33,896,421	06/29/2020	06/29/2050	Interest Rate Swap				143499-AB-7	Fred Hutchinson Cancer R-UNSECURED	1	46,541,072	33,896,421
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		44,773,958	35,658,903	06/29/2020	06/29/2050	Interest Rate Swap				355611-AA-2	Emory University-UNSECURED	1	44,773,958	35,658,903
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,894,177	10,994,675	06/29/2020	06/29/2050	Interest Rate Swap				29157T-AD-8	Landmark Equity Partners XVI-D, LLC	1	12,894,177	10,994,675
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		86,000,000	86,000,000	06/29/2020	06/29/2050	Interest Rate Swap				515095-MM-6	Carlyle Global Market St-CGMS 2021-3SA A2	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	6,447,624	06/29/2020	06/29/2050	Interest Rate Swap				14315D-AC-6	Duke University-UNSECURED	1	6,700,000	6,447,624
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,904,073	18,023,049	06/29/2020	06/29/2050	Interest Rate Swap				26442T-AH-0	Banner Health-UNSECURED	1	25,904,073	18,023,049
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,636,898	18,667,804	06/29/2020	06/29/2050	Interest Rate Swap				06654D-AC-1	LCM 26 Ltd-SERIES 26A CLASS B	1	25,636,898	18,667,804
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,750,000	11,170,361	06/29/2020	06/29/2050	Interest Rate Swap				50200F-AE-9	Neuberger Berman Loan Ad-NEUB 2017-24A BR FLOATING	1	11,750,000	11,170,361
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,600,000	11,317,598	06/29/2020	06/29/2050	Interest Rate Swap				64130H-AN-1		1	11,600,000	11,317,598

S105.27

STATEMENT AS OF MARCH 31, 2023 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*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	10,325,000	9,848,512	06/29/2020	06/29/2050	Interest Rate Swap				05683E-AQ-5	Bain Capital Credit CLO -BCC 2020-2A BR	1	10,325,000	9,848,512
57629*FE6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	42,350,531	39,442,108	06/29/2020	06/29/2050	Interest Rate Swap				44919*-AC-2	1 595 Express, LLC Senior Secured CSLB Holdings, Inc. Gtd Senior Note	1	42,350,531	39,442,108
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	124,464,783	16,600,000	07/13/2022	07/13/2023	TRS Bond Index		(15,578,038)		12656*-AD-4	CSLB Holdings, Inc. Gtd Senior Note	1	16,600,000	16,146,405
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	16,500,000	16,298,073	07/13/2022	07/13/2023	TRS Bond Index				12656*-AC-6	Transpower New Zealand L Senior Note Ser	1	16,500,000	16,298,073
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	16,500,000	15,930,569	07/13/2022	07/13/2023	TRS Bond Index				091948-AC-1	Oaktree Capital Managemen Senior Note Ser	1	16,500,000	15,930,569
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	16,450,000	15,933,651	07/13/2022	07/13/2023	TRS Bond Index				674003-A*-9	American Airlines Group Senior Secured Notes Class A	1	16,450,000	15,933,651
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,591,875	7,937,567	07/13/2022	07/13/2023	TRS Bond Index				02379*-AA-7	University of Chicago/TH-UNSECURED BOND	1	8,591,875	7,937,567
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	37,500,034	35,983,339	07/13/2022	07/13/2023	TRS Bond Index				91412N-AK-6	KAYNE ANDERSON MLP INVT CO-SR UNSEC SER KK	1	37,500,034	35,983,339
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	14,250,000	13,852,837	07/13/2022	07/13/2023	TRS Bond Index				486606-K#-2	BABSON CAPITAL PARTN INVS TR-SR CONV NT	2	14,250,000	13,852,837
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,000,000	14,795,250	07/13/2022	07/13/2023	TRS Bond Index				05616B-A*-1	Prime Property Fund LLC Senior Note Ser	1	15,000,000	14,795,250
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,500,000	12,364,583	07/13/2022	07/13/2023	TRS Bond Index				74170*-AN-9	PNG Companies LLC Senior Secured Austin Powder Holdings C Senior Note Ser	2	13,500,000	12,364,583
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	11,900,000	11,113,208	07/13/2022	07/13/2023	TRS Bond Index				73020*-AK-9	Oaktree Capital Managemen Senior Note Ser	1	11,900,000	11,113,208
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,730,000	13,422,187	07/13/2022	07/13/2023	TRS Bond Index				05237*-AH-7	Anchorage Capital Clo 13-ANCHC 2019-13A B1R	1	13,730,000	13,422,187
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	14,325,000	13,579,513	07/13/2022	07/13/2023	TRS Bond Index				674003-A8-7	Hardwood Funding LLC Senior Secured	1	14,325,000	13,579,513
57629*HD6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,175,000	6,918,831	07/13/2022	07/13/2023	TRS Bond Index				033291-AN-5	QIC Finance (Shopping Ce Gtd Senior Note	1	7,175,000	6,918,831
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	23,000,000	09/02/2020	09/02/2050	Interest Rate Swap		(79,488,574)		41242*-AY-8	Wellman Park CLO Ltd-SERIES 21-1A CLASS B	1	23,000,000	21,457,988
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	22,190,000	20,652,677	09/02/2020	09/02/2050	Interest Rate Swap				Q7795#-AA-0	American Airlines Group Senior Secured	1	22,190,000	20,652,677
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,700,000	7,453,469	09/02/2020	09/02/2050	Interest Rate Swap				949723-AC-4	Austin Powder Holdings C Senior Note Ser	2	7,700,000	7,453,469
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	9,475,432	8,790,421	09/02/2020	09/02/2050	Interest Rate Swap				02376*-AA-0	Compass Group PLC Senior Note Ser WINGS Aviation 62696 USD Tranche A-1 Ln	1	9,475,432	8,790,421
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	21,600,000	21,211,740	09/02/2020	09/02/2050	Interest Rate Swap				05237*-AF-1	CSLB Holdings, Inc. Gtd Senior Note	1	21,600,000	21,211,740
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	18,600,000	17,994,291	09/02/2020	09/02/2050	Interest Rate Swap				G20448-BA-2	YORKSHIRE WTR SERV BRADFORD-GTD SR SEC CL A	1	18,600,000	17,994,291
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,694,099	14,515,347	09/02/2020	09/02/2050	Interest Rate Swap				929287-ZZ-6	LOM LTD PARTNERSHIP-SERIES 15A CLASS CR	1	15,694,099	14,515,347
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,400,000	18,947,520	09/02/2020	09/02/2050	Interest Rate Swap				12656*-AK-8	Cargill Inc-SENIOR UNSECURED	1	20,400,000	18,947,520
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	21,100,000	20,802,849	09/02/2020	09/02/2050	Interest Rate Swap				G88508-AC-7	Goldentree Loan Managem-GLM 2017-1A B1R2	1	21,100,000	20,802,849
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,950,000	8,509,213	09/02/2020	09/02/2050	Interest Rate Swap				50184N-AP-7	Voya CLO 2018-4 Ltd-SERIES 18-4A CLASS BR	1	8,950,000	8,509,213
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	28,012,589	23,830,321	09/02/2020	09/02/2050	Interest Rate Swap				141781-BJ-2	Bain Capital Credit CLO-BCC 2021-2A B	1	28,012,589	23,830,321
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	8,500,000	8,185,347	09/02/2020	09/02/2050	Interest Rate Swap				38136F-BJ-1	KKR CLO 36 Ltd-KKR 36A B	1	8,500,000	8,185,347
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	7,550,000	7,257,989	09/02/2020	09/02/2050	Interest Rate Swap				92917W-AY-4		1	7,550,000	7,257,989
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,850,000	13,266,873	09/02/2020	09/02/2050	Interest Rate Swap				05684R-AE-2		1	13,850,000	13,266,873
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	13,700,000	13,103,913	09/02/2020	09/02/2050	Interest Rate Swap				48255A-AC-2		1	13,700,000	13,103,913

S105.28

STATEMENT AS OF MARCH 31, 2023 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*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,500,000	5,317,433	09/02/2020	09/02/2050	Interest Rate Swap				08182B-AN-8	Benefit Street Partners -BSP 2019-17A BR	1	5,500,000	5,317,433
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,050,000	17,941,213	09/02/2020	09/02/2050	Interest Rate Swap				151895-C*-8	CenterPoint Properties T Senior Note Ser	1	18,050,000	17,941,213
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,900,000	16,062,028	09/02/2020	09/02/2050	Interest Rate Swap				74170*-AW-9	Prime Property Fund LLC Senior Note Series U	1	17,900,000	16,062,028
57629*FJ5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,000,000	22,000,000	09/02/2020	09/02/2050	Interest Rate Swap				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	18,750,000	(61,123,211)	09/02/2020	09/02/2050	Interest Rate Swap		(79,361,167)		74170*-AC-3	Prime Property Fund LLC Senior Note Ser	1	18,750,000	18,237,956
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,100,000	19,342,934	09/02/2020	09/02/2050	Interest Rate Swap				56081#-CA-6	Major League Baseball Tr Series 44 Term Note	1	20,100,000	19,342,934
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,450,000	20,246,850	09/02/2020	09/02/2050	Interest Rate Swap				G2044#-AY-1	Compass Group PLC Senior Note Ser	1	20,450,000	20,246,850
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,700,000	17,639,112	09/02/2020	09/02/2050	Interest Rate Swap				41242*-AU-6	Hardwood Funding LLC Senior Note Ser	1	18,700,000	17,639,112
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		19,315,000	18,422,161	09/02/2020	09/02/2050	Interest Rate Swap				36198*-AA-4	GI Manager L.P. Senior Secured Notes	1	19,315,000	18,422,161
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,700,000	16,918,527	09/02/2020	09/02/2050	Interest Rate Swap				41242*-AX-0	Hardwood Funding LLC Senior Secured	1	17,700,000	16,918,527
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,900,000	15,408,467	09/02/2020	09/02/2050	Interest Rate Swap				68233J-A#-3	Oncor Electric Delivery SR SECD NT SER B	1	15,900,000	15,408,467
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		78,317,205	85,377,928	09/02/2020	09/02/2050	Interest Rate Swap				931142-CS-0	WAL-MART STORES INC-SENIOR NOTE	1	78,317,205	85,377,928
57629*FLO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,700,000	26,940,161	09/02/2020	09/02/2050	Interest Rate Swap				38176D-AJ-8	GoLub Capital Partners C-GOCAP 2015-26A AZR	1	27,700,000	26,940,161
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	200,000,000	24,000,000	(56,307,868)	09/02/2020	09/02/2050	Interest Rate Swap		(79,597,780)		00114*-AR-4	AEP Transmission Company Senior Note Ser	1	24,000,000	23,289,912
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,700,000	25,344,877	09/02/2020	09/02/2050	Interest Rate Swap				G4622#-AB-5	Howard De Walden Estates Gtd Senior Note	1	25,700,000	25,344,877
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		24,750,000	24,287,348	09/02/2020	09/02/2050	Interest Rate Swap				G0646#-AN-9	Associated British Foods Senior Note Ser	1	24,750,000	24,287,348
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		23,900,000	22,698,786	09/02/2020	09/02/2050	Interest Rate Swap				57169*-AU-1	Mars, Inc. Senior Note Ser	1	23,900,000	22,698,786
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,750,000	21,274,262	09/02/2020	09/02/2050	Interest Rate Swap				06235#-AF-9	Mirvac Group Finance Ltd Gtd Senior Note	1	21,750,000	21,274,262
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,150,000	19,736,300	09/02/2020	09/02/2050	Interest Rate Swap				25763#-AE-0	Donaldson Co Inc Senior Note Ser	1	20,150,000	19,736,300
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		135,999,996	120,744,226	09/02/2020	09/02/2050	Interest Rate Swap				57542Z-AG-8	MM Investment Holding Revolver Fixed Line	2	135,999,996	120,744,226
57629*FMI8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,000,000	12,827,672	09/02/2020	09/02/2050	Interest Rate Swap				48250W-AG-0	KKR CLO 14 Ltd-KKR 14 AR	1	13,000,000	12,827,672
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	8,500,000	(51,603,645)	09/02/2020	09/02/2050	Interest Rate Swap		(59,398,018)		74170*-AR-0	Prime Property Fund LLC Senior Note Ser	1	8,500,000	7,794,373
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	9,124,468	09/02/2020	09/02/2050	Interest Rate Swap				G1108#-AF-5	British Land Company PLC Senior Note Ser	1	9,200,000	9,124,468
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,500,000	7,985,750	09/02/2020	09/02/2050	Interest Rate Swap				41242*-BF-8	Hardwood Funding LLC Senior Secured	1	8,500,000	7,985,750
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,200,000	7,957,944	09/02/2020	09/02/2050	Interest Rate Swap				47914Z-E#-6	Johnson Matthey PLC Series A Senior Notes	1	8,200,000	7,957,944
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,750,000	8,109,992	09/02/2020	09/02/2050	Interest Rate Swap				151515-YY-3	Bridge Investment Group Senior Secured Notes	1	8,750,000	8,109,992
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,133,334	5,093,530	09/02/2020	09/02/2050	Interest Rate Swap				838515-F#-8	South Jersey Gas Co. Medium Term Not	1	5,133,334	5,093,530
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,386,855	7,348,243	09/02/2020	09/02/2050	Interest Rate Swap				184692-B#-9	Clearbridge Energy MLP F Senior Secured	1	7,386,855	7,348,243
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,386,855	7,070,452	09/02/2020	09/02/2050	Interest Rate Swap				184692-B#-7	Clearbridge Energy MLP Fd Inc-Senior Secured	1	7,386,855	7,070,452
57629*FNG	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,866,805	4,520,902	09/02/2020	09/02/2050	Interest Rate Swap				05389L-AK-9	Avolon Aerospace Leasing Secured Note B7	1	4,866,805	4,520,902

S105.29

STATEMENT AS OF MARCH 31, 2023 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*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,375,055	5,334,382	09/02/2020	09/02/2050	Interest Rate Swap				C1466#-AA-6	OPR Leasing Ltd Senior Secured	2	5,375,055	5,334,382
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,950,000	6,894,087	09/02/2020	09/02/2050	Interest Rate Swap				92203#-AR-9	Yanguard Group, Inc. Senior Notes Series D	1	6,950,000	6,894,087
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,450,000	4,130,517	09/02/2020	09/02/2050	Interest Rate Swap				04018E-AE-1	Ares LIX CLO Ltd-ARES 2021-59A C1 Avolon Aerospace Leasing Secured	1	4,450,000	4,130,517
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,554,717	4,246,380	09/02/2020	09/02/2050	Interest Rate Swap				05389L-AH-6	Note B7	1	4,554,717	4,246,380
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		93,408,040	82,737,732	09/02/2020	09/02/2050	Interest Rate Swap				055451-AV-0	BHP Billiton Finance USA-SR UNSECURED	1	93,408,040	82,737,732
57629*FN6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		29,578,520	28,654,280	09/02/2020	09/02/2050	Interest Rate Swap				90226#-AA-3	2014 REPLACEMENT PWR STATUTORY TR SR SEC'D NT	1	29,578,520	28,654,280
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	13,864,000	(47,157,063)	09/02/2020	09/02/2050	Interest Rate Swap		(59,029,448)		78403D-AR-1	SBA Tower Trust-ASSET BACKED	1	13,864,000	11,872,385
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,700,000	6,585,122	09/02/2020	09/02/2050	Interest Rate Swap				74986#-AN-1	PRIEEF America REIT II, I Senior Note Ser	1	6,700,000	6,585,122
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,417,709	4,118,515	09/02/2020	09/02/2050	Interest Rate Swap				05389L-AA-1	Avolon Aerospace Leasing Secured Note A3	1	4,417,709	4,118,515
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,440,000	6,244,610	09/02/2020	09/02/2050	Interest Rate Swap				74170*-AD-1	Prime Property Fund LLC Senior Note Ser	1	6,440,000	6,244,610
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,399,938	4,101,512	09/02/2020	09/02/2050	Interest Rate Swap				05389L-AD-5	Avolon Aerospace Leasing Secured Note A3	1	4,399,938	4,101,512
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,420,351	5,153,361	09/02/2020	09/02/2050	Interest Rate Swap				05400F-AE-1	Avolon Aerospace Funding Senior Secured	1	5,420,351	5,153,361
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,403,893	5,151,899	09/02/2020	09/02/2050	Interest Rate Swap				05400F-AG-6	Avolon Aerospace Funding Senior Secured	1	5,403,893	5,151,899
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,500,805	6,339,091	09/02/2020	09/02/2050	Interest Rate Swap				184692-B*-1	Clearbridge Energy MLP Fd Inc-Senior Secured	1	6,500,805	6,339,091
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,049,568	4,803,250	09/02/2020	09/02/2050	Interest Rate Swap				05400F-AC-5	Avolon Aerospace Funding Senior Secured	1	5,049,568	4,803,250
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,200,000	5,646,560	09/02/2020	09/02/2050	Interest Rate Swap				393154-L8-6	Green Mountain Power Cor First Mtg Bond	1	5,200,000	5,646,560
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,662,782	30,472,081	09/02/2020	09/02/2050	Interest Rate Swap				45866F-AH-7	Intercontinental Exchang-SENIOR UNSECURED	1	36,662,782	30,472,081
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,000,000	19,585,920	09/02/2020	09/02/2050	Interest Rate Swap				55819D-AE-6	Madison Park Funding XIX-MDPK 2018-31A A2A	1	20,000,000	19,585,920
57629*FP1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		106,999,997	94,997,296	09/02/2020	09/02/2050	Interest Rate Swap				57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	106,999,997	94,997,296
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	6,500,000	(52,502,748)	09/02/2020	09/02/2050	Interest Rate Swap		(59,070,400)		90312*-AC-8	UNS Gas, Inc. Gtd Senior Note	1	6,500,000	6,567,652
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,987,716	4,022,305	09/02/2020	09/02/2050	Interest Rate Swap				63080#-AA-5	NARA Caves Lease Trust Lease Backed Ce	1	3,987,716	4,022,305
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,400,000	5,189,362	09/02/2020	09/02/2050	Interest Rate Swap				479142-E#-4	Johnson Matthey PLC Series B Senior Notes	1	5,400,000	5,189,362
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,185,390	3,965,640	09/02/2020	09/02/2050	Interest Rate Swap				05400F-AA-9	Avolon Aerospace Funding Senior Secured	1	4,185,390	3,965,640
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		559,697	555,159	09/02/2020	09/02/2050	Interest Rate Swap				05577#-AN-0	BTMU Capital Corp. Equipment Note	1	559,697	555,159
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,244,167	14,973,585	09/02/2020	09/02/2050	Interest Rate Swap				216378-AA-7	Cooks Venture Inc-SECURED	1	15,244,167	14,973,585
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,986,029	19,146,395	09/02/2020	09/02/2050	Interest Rate Swap				06761T-AG-7	Barings Middle Market CI-BMM 2019-1A B	1	18,986,029	19,146,395
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,071,569	4,361,696	09/02/2020	09/02/2050	Interest Rate Swap				589331-AD-9	MERCK SHARP & DOHME CORP-DEBENTURE	1	4,071,569	4,361,696
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		929,073	899,014	09/02/2020	09/02/2050	Interest Rate Swap				05348E-AII-9	AVALONBAY COMMUNITIES IN-SR UNSECURED	1	929,073	899,014
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,173,156	09/02/2020	09/02/2050	Interest Rate Swap				74264*-AD-8	PRISA LHC LLC-SENIOR NOTE SER B	1	4,500,000	4,173,156
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,155,400	4,786,983	09/02/2020	09/02/2050	Interest Rate Swap				89236T-DR-3	Toyota Motor Credit Corp-SENIOR UNSECURED	1	5,155,400	4,786,983

S105.30

STATEMENT AS OF MARCH 31, 2023 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*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,750,000	3,738,941	09/02/2020	09/02/2050	Interest Rate Swap			018522-D8-8	ALLETE Inc. First Mortgage	1	3,750,000	3,738,941
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,870,527	3,737,635	09/02/2020	09/02/2050	Interest Rate Swap			18469P-AA-7	Clearbridge Energy MLP Op Fd Inc-Senior Secured	1	3,870,527	3,737,635
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,894,904	10,476,630	09/02/2020	09/02/2050	Interest Rate Swap			74980X-AC-0	ALM Ltd/KY-PRAM 2021-15A A2	1	10,894,904	10,476,630
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,767,648	3,637,351	09/02/2020	09/02/2050	Interest Rate Swap			18469Q-AA-5	Clearbridge Energy MLP Fd Inc-Senior Secured	1	3,767,648	3,637,351
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,250,000	8,532,968	09/02/2020	09/02/2050	Interest Rate Swap			64131T-AS-3	Neuberger Berman CLO XVI-SERIES 2017 CALSS 16SA	1	9,250,000	8,532,968
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,240	2,996,274	09/02/2020	09/02/2050	Interest Rate Swap			486606-J8-6	Kayne Anderson MLP Inves Senior Note Ser	1	3,000,240	2,996,274
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,003,623	982,700	09/02/2020	09/02/2050	Interest Rate Swap			84519#-AF-1	Southwest Power Pool, In Senior Note Ser	1	1,003,623	982,700
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		108,986	108,955	09/02/2020	09/02/2050	Interest Rate Swap			89838#-AA-5	Dartmouth College Senior Secured	1	108,986	108,955
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,739,350	09/02/2020	09/02/2050	Interest Rate Swap			03329F-AN-4	Anchorage Capital CLO 15-ANCHC 2020-15A AR	1	50,000,000	48,739,350
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,000,000	20,356,413	09/02/2020	09/02/2050	Interest Rate Swap			97316D-AA-4	Wind River CLO Ltd-WINDR 2021-3A A	1	21,000,000	20,356,413
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,425,000	6,173,969	09/02/2020	09/02/2050	Interest Rate Swap			08180X-AQ-5	Benefit Street Partners -BSP 2015-8A A1B1R	1	6,425,000	6,173,969
57629*F09	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,450,000	2,277,324	09/02/2020	09/02/2050	Interest Rate Swap			04018X-AG-4	ARES CLO-ARES 2021-ALFA C	1	2,450,000	2,277,324
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	300,000,000	24,973,834	(108,784,726)	07/14/2020	07/14/2050	Interest Rate Swap		(136,449,126)	244199-AW-5	Deere & Co-BOND	1	24,973,834	27,664,400
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		21,465,000	27,305,639	07/14/2020	07/14/2050	Interest Rate Swap			ZZ2066-36-8	AUST & NZ BANKING GROUP-SUBORDINATED NOTE	1	21,465,000	27,305,639
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,835,820	43,156,518	07/14/2020	07/14/2050	Interest Rate Swap			873050-CB-5	TTX CO-UNSECURED NOTE	1	41,835,820	43,156,518
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,104,870	36,787,217	07/14/2020	07/14/2050	Interest Rate Swap			584918-CB-8	MICROSOFT CORP-SENIOR UNSECURED	1	36,104,870	36,787,217
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		137,343,949	137,343,949	07/14/2020	07/14/2050	Interest Rate Swap			50079#-MM-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		50,375,000	50,375,000	07/14/2020	07/14/2050	Interest Rate Swap			68324Z-MO-1	PCRED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDING I OFFSHORE LP and PCRED II	1	50,375,000	50,375,000
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		69,519,000	68,024,342	07/14/2020	07/14/2050	Interest Rate Swap			46655H-AB-9	JCP Direct Lending CLO 2-JCPDL 2022-11 A	1	69,519,000	68,024,342
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		64,000,000	60,728,960	07/14/2020	07/14/2050	Interest Rate Swap			18685#-AA-0	Cliffwater Corporate Len Senior Secured Notes	1	64,000,000	60,728,960
57629*FT3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,000,000	11,000,000	07/14/2020	07/14/2050	Interest Rate Swap			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	13,785,405	(55,567,191)	07/14/2020	07/14/2050	Interest Rate Swap		(68,755,191)	662325-B8-7	North Shore Gas Co. First Mtg Bond	1	13,785,405	13,188,000
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,300,000	13,008,092	07/14/2020	07/14/2050	Interest Rate Swap			G1108#-AG-3	British Land Company PLC Senior Note Ser	1	13,300,000	13,008,092
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,400,000	11,714,503	07/14/2020	07/14/2050	Interest Rate Swap			720186-F*-1	Piedmont Natural Gas Co. Senior Note Ser	2	12,400,000	11,714,503
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,600,000	11,182,110	07/14/2020	07/14/2050	Interest Rate Swap			41242*-AT-9	Hardwood Funding LLC Senior Note Ser	1	11,600,000	11,182,110
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,042,308	10,935,447	07/14/2020	07/14/2050	Interest Rate Swap			48661E-C8-5	Kayne Anderson Midstream SER H SR UNSECD NT	1	11,042,308	10,935,447
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,534,615	10,079,684	07/14/2020	07/14/2050	Interest Rate Swap			48661E-C8-3	Kayne Anderson Midstream SER I SR UNSECD NT	1	10,534,615	10,079,684
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,250,000	10,673,188	07/14/2020	07/14/2050	Interest Rate Swap			151515-XX-6	Bridge Investment Group Senior Secured Notes	1	11,250,000	10,673,188
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,925,000	9,410,002	07/14/2020	07/14/2050	Interest Rate Swap			74170*-AE-9	Prime Property Fund LLC Senior Note Ser	1	9,925,000	9,410,002

S105.31

STATEMENT AS OF MARCH 31, 2023 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*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,695,290	07/14/2020	07/14/2050	Interest Rate Swap			57169*-AT-4	Mars, Inc. Senior Note Ser	1	10,000,000	9,695,290
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,600,000	8,456,475	07/14/2020	07/14/2050	Interest Rate Swap			05237*-AG-9	Austin Powder Holdings C Senior Note Ser	2	8,600,000	8,456,475
57629*FU0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		105,999,997	94,109,470	07/14/2020	07/14/2050	Interest Rate Swap			57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	105,999,997	94,109,470
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	250,000,000	119,331,707	20,153,000	09/02/2020	09/02/2050	Interest Rate Swap		(99,178,707)	117028-AA-4	Brunswick Asset Financing LLC - Term A Loan	1	119,331,707	119,331,707
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,000,000	61,000,000	09/02/2020	09/02/2050	Interest Rate Swap			515095-MM-6	Landmark Equity Partners XVII-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	27,990,450	09/02/2020	09/02/2050	Interest Rate Swap			57629Z-YY-6	Barings Corporate Invest Convertible Not	1	30,000,000	27,990,450
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,500,000	25,694,374	09/02/2020	09/02/2050	Interest Rate Swap			68233J-A*-5	Oncor Electric Delivery & Senior Secured	1	26,500,000	25,694,374
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,200,000	12,239,528	09/02/2020	09/02/2050	Interest Rate Swap			Q1297*-AK-4	CSL Finance Pty Ltd Gtd Senior Note	1	13,200,000	12,239,528
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		41,561,860	43,377,021	09/02/2020	09/02/2050	Interest Rate Swap			20030N-AN-3	Comcast Corp-NOTE	1	41,561,860	43,377,021
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,045,000	1,984,959	09/02/2020	09/02/2050	Interest Rate Swap			05616Z-AQ-3	Babson CLO Ltd 2015-I-BABSN 2015-IA BR	1	2,045,000	1,984,959
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,900,000	17,264,904	09/02/2020	09/02/2050	Interest Rate Swap			03464A-A*-1	Angel Oak Financial Stra Senior Note Series A	1	18,900,000	17,264,904
57629*FK2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,376,000	15,765,666	09/02/2020	09/02/2050	Interest Rate Swap			05707*-AA-9	Baird Financial Corporat Senior Secured Notes	1	16,376,000	15,765,666
57629*HL8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	262,999,992	176,403,912	07/08/2021	07/08/2051	Interest Rate Swap		(57,094,114)	57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	262,999,992	233,498,026
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	150,000,000	6,650,000	(36,942,706)	07/08/2021	07/08/2051	Interest Rate Swap		(43,377,878)	55954Y-AL-9	Magnetite XXVI Ltd-MAGNE 2020-26A BR	1	6,650,000	6,435,172
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,550,000	6,171,443	07/08/2021	07/08/2051	Interest Rate Swap			00190Y-BH-7	Ares XXVII CLO Ltd-ARES 2013-2A CR2	1	6,550,000	6,171,443
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,086,656	07/08/2021	07/08/2051	Interest Rate Swap			278300-AN-8	Eaton Vance CLO 2020-1 L-EATON 2020-1A CR	1	6,400,000	6,086,656
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,086,534	07/08/2021	07/08/2051	Interest Rate Swap			143133-AG-1	CGMS 2021-6A C	1	6,400,000	6,086,534
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,051,878	07/08/2021	07/08/2051	Interest Rate Swap			87168B-AG-5	SYMP 2021-28A C-SYMP 2021-28A C	1	6,400,000	6,051,878
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,049,901	07/08/2021	07/08/2051	Interest Rate Swap			12565E-AE-1	CIFC Funding Ltd-CIFC 2021-5A C	1	6,400,000	6,049,901
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	5,932,730	07/08/2021	07/08/2051	Interest Rate Swap			97316J-AG-8	THL Credit Wind River 20-WINDR 2019-1A CR	1	6,400,000	5,932,730
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	5,859,654	07/08/2021	07/08/2051	Interest Rate Swap			05685A-AJ-7	Bain Capital Credit CLO-BCC 2021-4A C	1	6,400,000	5,859,654
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,400,000	6,006,278	07/08/2021	07/08/2051	Interest Rate Swap			38136N-AU-0	Goldentree Loan Managem-GLM 2020-BA CR	1	6,400,000	6,006,278
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,100,000	5,759,077	07/08/2021	07/08/2051	Interest Rate Swap			00900L-AS-3	AIMCO CLO Series 2015-A-AIMCO 2015-AA CR2	1	6,100,000	5,759,077
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,050,000	5,737,760	07/08/2021	07/08/2051	Interest Rate Swap			05685A-AG-3	Bain Capital Credit CLO-BCC 2021-4A B	1	6,050,000	5,737,760
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,050,000	5,856,763	07/08/2021	07/08/2051	Interest Rate Swap			00119V-AQ-2	AGL CLO 6 LTD-AGL 2020-6A BR	1	6,050,000	5,856,763
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,700,000	5,495,929	07/08/2021	07/08/2051	Interest Rate Swap			13887T-AN-7	Canyon Capital CLO 2019-CANVC 2019-1A BR	1	5,700,000	5,495,929
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,650,000	5,433,289	07/08/2021	07/08/2051	Interest Rate Swap			670881-AP-6	OCP CLO 2020-19 Ltd-OCP 2020-19A BR	1	5,650,000	5,433,289
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,625,000	5,363,606	07/08/2021	07/08/2051	Interest Rate Swap			03766G-AS-1	Apidos CLO XXVI-APID 2017-26A BR	1	5,625,000	5,363,606
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,300,000	5,102,824	07/08/2021	07/08/2051	Interest Rate Swap			48253U-AC-0	KKR-SERIES 34A CLASS B	1	5,300,000	5,102,824
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,300,000	5,041,599	07/08/2021	07/08/2051	Interest Rate Swap			09627F-AQ-3	BlueMountain CLO XXV Ltd-BLUEM 2019-25A BR	1	5,300,000	5,041,599

S105.32

STATEMENT AS OF MARCH 31, 2023 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*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,150,000	4,875,927	07/08/2021	07/08/2051	Interest Rate Swap				95023A-AC-4	Wellfleet CLO Ltd-WELF 2021-2A B	1	5,150,000	4,875,927
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,125,000	4,796,329	07/08/2021	07/08/2051	Interest Rate Swap				14317Y-AG-9	Carlyle Global Market St-SERIES 21-5A CLASS C	1	5,125,000	4,796,329
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,650,000	4,486,976	07/08/2021	07/08/2051	Interest Rate Swap				48661A-AL-0	KAYNE CLO I Ltd-KAYNE 2018-1A BR	1	4,650,000	4,486,976
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,600,000	4,340,597	07/08/2021	07/08/2051	Interest Rate Swap				29002V-AE-8	ELM10 2021-3A C-ELM10 2021-3A C	1	4,600,000	4,340,597
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,600,000	4,474,728	07/08/2021	07/08/2051	Interest Rate Swap				67110N-AP-0	QHA Credit Partners XIII-OAKC 2016-13A BR	1	4,600,000	4,474,728
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,165,686	07/08/2021	07/08/2051	Interest Rate Swap				73052V-AG-0	Point Au Roche Park CLO -PARPK 2021-1A C	1	4,500,000	4,165,686
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,061,471	07/08/2021	07/08/2051	Interest Rate Swap				83615P-AE-7	Sound Point Clo XXXI Ltd-SNDPT 2021-3A C	1	4,500,000	4,061,471
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,307,535	07/08/2021	07/08/2051	Interest Rate Swap				29002H-AQ-2	Elmwood CLO III Ltd-ELMW3 2019-3A CR	1	4,500,000	4,307,535
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,225,599	07/08/2021	07/08/2051	Interest Rate Swap				33835N-AE-1	ASSURANT CLO LTD-MORGN 2018-3A CR	1	4,500,000	4,225,599
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,500,000	4,149,032	07/08/2021	07/08/2051	Interest Rate Swap				97316D-AG-1	Wind River CLO Ltd-WINDR 2021-3A C	1	4,500,000	4,149,032
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,400,000	4,101,926	07/08/2021	07/08/2051	Interest Rate Swap				48255A-AE-8	KKR CLO 36 Ltd-KKR 36A C	1	4,400,000	4,101,926
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,300,000	4,047,771	07/08/2021	07/08/2051	Interest Rate Swap				125550-AU-0	CIFC Funding 2020-I Ltd-CIFC 2020-1A CR	1	4,300,000	4,047,771
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,139,564	8,203,571	07/08/2021	07/08/2051	Interest Rate Swap				48253W-AA-0	KKR CLO 28 LTD-KKR 28A A	1	8,139,564	8,203,571
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		5,000,000	4,762,985	07/08/2021	07/08/2051	Interest Rate Swap				94950J-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	5,000,000	4,762,985
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		25,000,000	22,744,225	07/08/2021	07/08/2051	Interest Rate Swap				886758-AB-3	Tiger Global Management Senior Note Series B	1	25,000,000	22,744,225
57629*H07	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,000,000	16,000,000	07/08/2021	07/08/2051	Interest Rate Swap				186858-AC-6	Cliffwater Corporate Lending Fund - Senior Secured Revolving Credit Facility	1	16,000,000	16,000,000
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	49,463,278	(55,552,348)	07/09/2021	07/09/2051	Interest Rate Swap		(104,353,748)		14316W-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	1	49,463,278	48,801,400
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		48,500,000	47,376,886	07/09/2021	07/09/2051	Interest Rate Swap				12547L-AL-2	CIFC Funding 2020-II Ltd-CIFC 2020-2A AR	1	48,500,000	47,376,886
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		45,100,000	43,961,315	07/09/2021	07/09/2051	Interest Rate Swap				05876L-AA-1	Ballyrock CDO Ltd-BALLY 2021-17A A1A	1	45,100,000	43,961,315
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,270,190	07/09/2021	07/09/2051	Interest Rate Swap				87168B-AE-0	SYMP-SYMP 2021-28A B	1	13,700,000	13,270,190
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,700,000	13,024,343	07/09/2021	07/09/2051	Interest Rate Swap				97316D-AC-0	Wind River CLO Ltd-WINDR 2021-3A B1	1	13,700,000	13,024,343
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,850,225	07/09/2021	07/09/2051	Interest Rate Swap				13876G-AL-2	Canyon Capital CLO 2017-CANVC 2017-1A BR	1	9,200,000	8,850,225
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,899,767	07/09/2021	07/09/2051	Interest Rate Swap				03330N-AK-0	Anchorage Capital Clo 11-ANCHC 2019-11A BR	1	9,200,000	8,899,767
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,920,651	07/09/2021	07/09/2051	Interest Rate Swap				03328W-AU-2	Anchorage Capital CLO 9-ANCHC 2016-9A BR2	1	9,200,000	8,920,651
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,919,428	07/09/2021	07/09/2051	Interest Rate Swap				14316W-AC-3	Carlyle Global Market St-CGMS 2021-7A A2	1	9,200,000	8,919,428
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,900,135	07/09/2021	07/09/2051	Interest Rate Swap				12547L-AQ-1	CIFC Funding 2020-II Ltd-CIFC 2020-2A BR	1	9,200,000	8,900,135
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,866,555	07/09/2021	07/09/2051	Interest Rate Swap				04018X-AE-9	ARES CLO-ARES 2021-ALFA B	1	9,200,000	8,866,555
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,769,753	07/09/2021	07/09/2051	Interest Rate Swap				25255L-AC-6	Diameter Capital Clo 2 L-DCLD 2021-2A A2	1	9,200,000	8,769,753
57629*H08	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,200,000	8,926,226	07/09/2021	07/09/2051	Interest Rate Swap				125550-AS-5	CIFC Funding 2020-I Ltd-CIFC 2020-1A BR	1	9,200,000	8,926,226

S105.33

STATEMENT AS OF MARCH 31, 2023 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		9,200,000	8,804,299	07/09/2021	07/09/2051	Interest Rate Swap			48253H-AQ-8	KKR CLO 26 Ltd-KKR 26 BR	1	9,200,000	8,804,299
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,100,000	8,678,406	07/09/2021	07/09/2051	Interest Rate Swap			86271P-AG-0	Strata CLO II Ltd-STRTA 2021-1A C Goldentree Loan Managem-GLM 2020-8A BR	1	9,100,000	8,678,406
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,725,000	8,445,905	07/09/2021	07/09/2051	Interest Rate Swap			38136N-AS-5	Canyon CLO 2020-2 Ltd-CANYC 2020-2A BR	1	8,725,000	8,445,905
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		16,952,166	16,716,337	07/09/2021	07/09/2051	Interest Rate Swap			13876N-AN-3	CGMS 2021-6A B-CGMS 2021-6A B	1	16,952,166	16,716,337
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,800,000	7,569,370	07/09/2021	07/09/2051	Interest Rate Swap			143133-AE-6	CANYC-2021-4A B	1	7,800,000	7,569,370
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,375,000	7,063,613	07/09/2021	07/09/2051	Interest Rate Swap			13877P-AC-1	Canyon CLO 2021-3 Ltd-CANYC 2021-3A C	1	7,375,000	7,063,613
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,300,000	6,801,425	07/09/2021	07/09/2051	Interest Rate Swap			13875M-AE-6	CIFC Funding 2017-IV Ltd-CIFC 2017-4A A2R	1	7,300,000	6,801,425
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,300,000	7,091,753	07/09/2021	07/09/2051	Interest Rate Swap			12551J-AN-6	Wind River CLO Ltd-WINDR 2021-2A B	1	7,300,000	7,091,753
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,200,000	6,829,272	07/09/2021	07/09/2051	Interest Rate Swap			97315V-AE-7	ARES LI CLO Ltd-ARES 2019-51A BR	1	7,200,000	6,829,272
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,100,000	6,863,861	07/09/2021	07/09/2051	Interest Rate Swap			04019L-AN-4	Anchorage Capital CLO 9 -ANCHC 2016-9A CR2	1	7,100,000	6,863,861
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,040,000	6,659,741	07/09/2021	07/09/2051	Interest Rate Swap			03328W-AW-8	Morgan Stanley Eaton Van-MSEV 2021-1A B	1	7,040,000	6,659,741
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,705,216	07/09/2021	07/09/2051	Interest Rate Swap			61773K-AC-6	AIMCO CLO 10 Ltd-AIMCO 2019-10A BR	1	7,000,000	6,705,216
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		7,000,000	6,815,340	07/09/2021	07/09/2051	Interest Rate Swap			00901A-AL-1	Apidos Clo XXV-APID 2016-25A A2R	1	7,000,000	6,815,340
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,800,000	6,625,444	07/09/2021	07/09/2051	Interest Rate Swap			03762Y-AH-0	LOM LP-LOM 32A B	1	6,800,000	6,625,444
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,750,000	6,432,190	07/09/2021	07/09/2051	Interest Rate Swap			50204A-AE-6	KKR CLO 15 Ltd-KKR 15 A2R	1	6,750,000	6,432,190
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,525,085	07/09/2021	07/09/2051	Interest Rate Swap			48251M-AS-5	Magnetite VIII Ltd-MAGNE 2014-8A BR2	1	15,000,000	14,525,085
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		15,000,000	14,647,695	07/09/2021	07/09/2051	Interest Rate Swap			55952Y-AR-8	KKR CLO LTD 22-SERIES 22A CLASS B Stonehenge OH Rural Fund II LLC Series 2021B-1	1	15,000,000	14,647,695
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		9,500,000	9,153,583	07/09/2021	07/09/2051	Interest Rate Swap			48252W-AC-7	Stonehenge Cap Fund Conn VI Series 2021B-1	1	9,500,000	9,153,583
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,884,136	8,115,252	07/09/2021	07/09/2051	Interest Rate Swap			86209*-AA-6	TCP DLF VIII 2018 CLO, LLC - Class A-2 Secured Floating Rate Note	1	8,884,136	8,115,252
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,225,357	7,413,596	07/09/2021	07/09/2051	Interest Rate Swap			86208*-AA-3	JCP Direct Lending CLO 2-JCPDL 2022-11 D	1	8,225,357	7,413,596
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,666,667	6,666,667	07/09/2021	07/09/2051	Interest Rate Swap			87289B-AB-0	JCP Direct Lending CLO 2-JCPDL 2022-11 C	2	6,666,667	6,666,667
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,063,868	5,450,205	07/09/2021	07/09/2051	Interest Rate Swap			46655H-AH-6	JCP Direct Lending CLO 2-JCPDL 2022-11 B	1	6,063,868	5,450,205
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,547,901	4,232,213	07/09/2021	07/09/2051	Interest Rate Swap			46655H-AF-0	JCP Direct Lending CLO 2-JCPDL 2022-11 A	1	4,547,901	4,232,213
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		8,390,224	7,981,620	07/09/2021	07/09/2051	Interest Rate Swap			46655H-AD-5	Stonehenge Capital Fund South Carolina IV, LLC Senior Structured Notes	1	8,390,224	7,981,620
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		1,923,759	1,828,696	07/09/2021	07/09/2051	Interest Rate Swap			86208*-AA-5	TCP DLF VIII 2018 CLO, LLC - Class B Secured Floating Rate Note	1	1,923,759	1,828,696
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,666,667	2,666,667	07/09/2021	07/09/2051	Interest Rate Swap			87289B-AD-6	TCP DLF VIII 2018 CLO, LLC - Class C Secured Floating Rate Note	1	2,666,667	2,666,667
57629*HC8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,222,223	2,241,112	07/09/2021	07/09/2051	Interest Rate Swap			87289B-AE-4	MM Investment Holding Revolver Fixed Line	2	2,222,223	2,241,112
57629*HM6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	267,999,992	175,732,265	07/12/2021	07/12/2051	Interest Rate Swap		(62,204,887)	57542Z-A9-8	Sound Point Clo XXXI Ltd-SNDPT 2021-3A A	1	267,999,992	237,937,152
57629*HB0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1	350,000,000	50,000,000	(64,247,573)	07/21/2021	07/21/2051	Interest Rate Swap		(112,449,573)	83615P-AA-5		1	50,000,000	48,202,000

S105.34

STATEMENT AS OF MARCH 31, 2023 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*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,577,100	07/21/2021	07/21/2051	Interest Rate Swap				95023A-AA-8	Wellfleet CLO Ltd-WELF 2021-2A A1	1	50,000,000	48,577,100
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,710,450	07/21/2021	07/21/2051	Interest Rate Swap				69702E-AA-3	Palmer Square CLO Ltd-PLMRS 2021-4A	1	50,000,000	48,710,450
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,728,650	07/21/2021	07/21/2051	Interest Rate Swap				03328J-AA-5	Anchorage Capital CLO 19-ANCHC 2021-19A A	1	50,000,000	48,728,650
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,885,850	07/21/2021	07/21/2051	Interest Rate Swap				42088A-AA-2	Hayfin US XII Ltd-HAYFN 2021-14A A1	1	50,000,000	48,885,850
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,041,303	58,946,232	07/21/2021	07/21/2051	Interest Rate Swap				87168B-AC-4	SYMP-SYMP 2021-28A A	1	60,041,303	58,946,232
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,000,000	48,714,850	07/21/2021	07/21/2051	Interest Rate Swap				67110N-AM-7	OHA Credit Partners XIII-OAKC 2016-13A AR	1	50,000,000	48,714,850
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,312,500	13,818,347	07/21/2021	07/21/2051	Interest Rate Swap				70470M-AE-5	Peace Park CLO Ltd-PCEPK 2021-1A B1	1	14,312,500	13,818,347
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		14,090,000	13,541,969	07/21/2021	07/21/2051	Interest Rate Swap				55822A-AN-7	Madison Park Funding XLV-MDPK 2020-46A B1R	1	14,090,000	13,541,969
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,617,710	07/21/2021	07/21/2051	Interest Rate Swap				13876R-AE-4	Canyon CLO 2020-3 Ltd-CANYC 2020-3A B	1	10,000,000	9,617,710
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,734,680	07/21/2021	07/21/2051	Interest Rate Swap				69703P-AC-3	Palmer Square CLO 2018-1-PLMRS 2018-1A A2	1	10,000,000	9,734,680
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,000,000	9,547,800	07/21/2021	07/21/2051	Interest Rate Swap				13876X-AG-6	Canyon Capital CLO Ltd-CANYC 2021-2A B1	1	10,000,000	9,547,800
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,000,000	3,836,368	07/21/2021	07/21/2051	Interest Rate Swap				94949R-AW-7	Wellfleet CLO 2016-1 Ltd-WELF 2016-1A CR	1	4,000,000	3,836,368
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,917,378	3,879,776	07/21/2021	07/21/2051	Interest Rate Swap				25255L-AA-0	Diameter Capital Clo 2 L-DOLO 2021-2A A1	1	3,917,378	3,879,776
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		4,050,000	3,896,189	07/21/2021	07/21/2051	Interest Rate Swap				00120B-AE-0	AGL CLO Ltd-AGL 2021-12A B	1	4,050,000	3,896,189
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,885,000	3,672,215	07/21/2021	07/21/2051	Interest Rate Swap				83012K-AE-7	SIXST-SERIES 2021-19A CLASS C	1	3,885,000	3,672,215
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,750,000	3,663,859	07/21/2021	07/21/2051	Interest Rate Swap				74980Q-AE-1	ALM Ltd/KY-PRAM 2021-17A A2	1	3,750,000	3,663,859
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,550,000	3,472,280	07/21/2021	07/21/2051	Interest Rate Swap				26251B-AN-6	Dryden XXVIII Senior Loa-DRSLF 2013-28A AZLR	1	3,550,000	3,472,280
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,600,000	3,423,355	07/21/2021	07/21/2051	Interest Rate Swap				67110N-AT-2	OHA Credit Partners XIII-OAKC 2016-13A CR	1	3,600,000	3,423,355
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,600,000	3,345,300	07/21/2021	07/21/2051	Interest Rate Swap				92918Q-AG-5	Voya CLO Ltd-VOYA 2021-1A C	1	3,600,000	3,345,300
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,525,000	3,235,143	07/21/2021	07/21/2051	Interest Rate Swap				94950A-AS-9	Wellfleet CLO 2020-2 Ltd-WELF 2020-2A CR	1	3,525,000	3,235,143
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,500,000	3,280,445	07/21/2021	07/21/2051	Interest Rate Swap				55821L-AE-4	Madison Park Funding XXX-MDPK 2021-39A C	1	3,500,000	3,280,445
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,500,000	3,257,065	07/21/2021	07/21/2051	Interest Rate Swap				13876N-AS-2	Canyon CLO 2020-2 Ltd-CANYC 2020-2A CR	1	3,500,000	3,257,065
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		3,000,000	2,739,495	07/21/2021	07/21/2051	Interest Rate Swap				05684A-AU-3	Bain Capital Credit Clo -BCC 2019-4A CR	1	3,000,000	2,739,495
57629*H0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,800,000	2,662,486	07/21/2021	07/21/2051	Interest Rate Swap				27829P-AS-5	Eaton Vance CLO 2020-2 L-EATON 2020-2A CR	1	2,800,000	2,662,486
57629*H14	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	266,999,992	175,262,363	08/09/2021	08/09/2051	Interest Rate Swap		(61,786,964)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	266,999,992	237,049,327
57629*H9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	300,000,000	399,999,987	262,589,213	08/09/2021	08/09/2051	Interest Rate Swap		(92,540,864)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	399,999,987	355,130,077
57629*H39	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	330,999,990	219,752,956	08/10/2021	08/10/2051	Interest Rate Swap		(74,117,183)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	330,999,990	293,870,139
57629*H7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	200,000,000	264,999,992	176,054,378	08/10/2021	08/10/2051	Interest Rate Swap		(59,219,298)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	264,999,992	235,273,676
57629*HJ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	300,000,000	395,999,988	262,526,484	08/10/2021	08/10/2051	Interest Rate Swap		(89,052,293)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	395,999,988	351,578,777
57629*HK0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,000,000	331,999,990	219,849,765	08/10/2021	08/10/2051	Interest Rate Swap		(74,908,199)		57542Z-A9-8	MM Investment Holding Revolver Fixed Line	2	331,999,990	294,757,964

S105.35

STATEMENT AS OF MARCH 31, 2023 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	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	200,000,000	23,791,321	(39,335,495)	08/23/2021	08/23/2051	Interest Rate Swap		(63,126,816)	482480-MM-7	KKR Eagle Asset Term Loan A PORED II HOLDING I LLC, PORED II HOLDING I OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L., -Term Loan	1		23,791,321	23,791,321
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		41,325,000	41,325,000	08/23/2021	08/23/2051	Interest Rate Swap			69324Z-MM-3	Series 2022-3 PORED II HOLDING I LLC, PORED II HOLDING I OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L., -Term Loan	1		41,325,000	41,325,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		39,246,047	39,246,047	08/23/2021	08/23/2051	Interest Rate Swap			69324Z-MM-5	Series 2022-1 PORED II HOLDING I LLC, PORED II HOLDING I OFFSHORE LP and PORED II HOLDCO ARGUS S.A R.L., -Term Loan	1		39,246,047	39,246,047
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		23,728,070	23,635,531	08/23/2021	08/23/2051	Interest Rate Swap			87241F-AB-8	TCW Direct Lending Structured Solutions 2019 LLC - Class B Note - NXT Capital Structured Note I, LLC - Class A Secured Float Rate Revolving Loan	2		23,728,070	23,635,531
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		26,990,789	26,990,789	08/23/2021	08/23/2051	Interest Rate Swap			67080B-MM-6	PARTNERS GROUP PRIVATE EQUITY II, LLC - Senior Secured Revolving Facility	1		26,990,789	26,990,789
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		20,400,000	20,400,000	08/23/2021	08/23/2051	Interest Rate Swap			70212Z-MM-8	TREZ CAPITAL MANHATTAN BRIDGE LP - Secured Term Loan Facility - Series 2022-3	1		20,400,000	20,400,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		42,267,279	42,267,279	08/23/2021	08/23/2051	Interest Rate Swap			89532Z-MM-9	Crown Castle Towers LLC-SECURED .. M360 MM Series LLC - Series 2022-1	1		42,267,279	42,267,279
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		27,801,128	25,892,054	08/23/2021	08/23/2051	Interest Rate Swap			22822R-BH-2	Secured Secure Notes	1		27,801,128	25,892,054
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		10,020,297	10,020,297	08/23/2021	08/23/2051	Interest Rate Swap			55379Z-MM-8	Symphony CLO 35 Ltd-SYMP 2022-35A	1		10,020,297	10,020,297
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		3,730,241	3,756,165	08/23/2021	08/23/2051	Interest Rate Swap			871980-AE-8	B1 Vanguard Group, Inc. Senior Notes	1		3,730,241	3,756,165
57629*GZ8	Evergreen Basket of Floating Rate Corporate Bonds	1	250,000,000	200,000,000	129,236,115	07/13/2022	07/13/2052	Interest Rate Swap		15,568,715	92203#-AY-4	Inova Health System Foun Senior Unsecured Notes	1		200,000,000	113,667,400
57629*GZ8	Evergreen Basket of Floating Rate Corporate Bonds	1		101,500,000	68,819,436	07/13/2022	07/13/2052	Interest Rate Swap			45774*-AA-7	Galaxy Pipeline Assets B-SECURED . SIEMENS FINANCIERINGSMAT-SENIOR UNSECURED	1		101,500,000	68,819,436
57629*GZ8	Evergreen Basket of Floating Rate Corporate Bonds	1		81,885,276	71,476,657	07/13/2022	07/13/2052	Interest Rate Swap			36321P-AC-4	MEDTRONIC INC-SR UNSECURED	1		81,885,276	71,476,657
57629*GY1	Evergreen Basket of Floating Rate Corporate Bonds	1	250,000,000	76,171,558	85,693,436	07/13/2022	07/13/2052	Interest Rate Swap		15,496,934	82620K-AT-0	West Penn Power Company First Mortgage	1		76,171,558	70,196,502
57629*GY1	Evergreen Basket of Floating Rate Corporate Bonds	1		78,943,481	67,931,867	07/13/2022	07/13/2052	Interest Rate Swap			585055-BU-9	MEAD JOHNSON NUTRITION C-SENIOR UNSECURED NOTE	1		78,943,481	67,931,867
57629*GY1	Evergreen Basket of Floating Rate Corporate Bonds	1		65,759,199	59,339,995	07/13/2022	07/13/2052	Interest Rate Swap			278865-AM-2	MEAL JOHNSON NUTRITION C-SENIOR UNSECURED NOTE	1		65,759,199	59,339,995
57629*GY1	Evergreen Basket of Floating Rate Corporate Bonds	1		62,600,000	51,378,074	07/13/2022	07/13/2052	Interest Rate Swap			955278-C*-5	MEAD JOHNSON NUTRITION C-SENIOR UNSECURED NOTE	1		62,600,000	51,378,074
57629*GY1	Evergreen Basket of Floating Rate Corporate Bonds	1		15,480,110	16,089,597	07/13/2022	07/13/2052	Interest Rate Swap			582839-AF-3	UNSECURED NOTE	1		15,480,110	16,089,597
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1	250,000,000	60,995,857	72,312,566	07/13/2022	07/13/2052	Interest Rate Swap		16,071,180	141781-BF-0	CARGILL INC-SR UNSECURED	1		60,995,857	56,241,386
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1		44,363,444	49,984,657	07/13/2022	07/13/2052	Interest Rate Swap			54246#-AA-5	Long Beach Judicial Part Senior Secured	1		44,363,444	49,984,657
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1		53,465,277	53,345,487	07/13/2022	07/13/2052	Interest Rate Swap			038222-AG-0	APPLIED MATERIALS INC-SENIOR UNSECURED NOTE	1		53,465,277	53,345,487
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1		59,710,715	52,086,868	07/13/2022	07/13/2052	Interest Rate Swap			478165-AG-8	JOHNSON (S.C.) & SON INC-SENIOR UNSECURED NOTE	1		59,710,715	52,086,868
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1		37,828,298	36,653,582	07/13/2022	07/13/2052	Interest Rate Swap			110122-DJ-4	Bristol-Myers Squibb Co-SENIOR UNSECURED	1		37,828,298	36,653,582
57629*GX3	Evergreen Basket of Floating Rate Corporate Bonds	1		17,678,286	18,374,320	07/13/2022	07/13/2052	Interest Rate Swap			582839-AF-3	MEAD JOHNSON NUTRITION C-SENIOR UNSECURED NOTE	1		17,678,286	18,374,320
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	204,377,590	25,000,000	33,439,184	11/23/2022	05/23/2024	TRS Bond Index		8,439,184	00108Z-MM-2	JAG CAPITAL FUNDING, LLC - Revolving Senior Secured Term Loan Facility	1		25,000,000	25,000,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		45,948,000	45,948,000	11/23/2022	05/23/2024	TRS Bond Index			14314Z-MM-3	CARLYLE SECURED LENDING III SPV, - Senior Secured Loan	1		45,948,000	45,948,000

S105.36

STATEMENT AS OF MARCH 31, 2023 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	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		65,036,037	65,036,037	11/23/2022	05/23/2024	TRIS Bond Index				46143#-MY-0	Invesco CMI Investments MM, LLC - Senior Secured Notes - Term Loan Series 2022-10	2	65,036,037	65,036,037
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		68,150,000	68,150,000	11/23/2022	05/23/2024	TRIS Bond Index				69324Z-MS-2	PORED II HOLDING I LLC, PCRED II HOLDING I OFFSHORE LP and PCRED II HOLDCO ARGUS S.A.R.L., -Term Loan Series 2022-7	1	68,150,000	68,150,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		9,749,859	9,859,650	11/23/2022	05/23/2024	TRIS Bond Index				00140L-AG-9	Aimco CLO 12 Ltd-AIMCO 2020-12A AR	1	9,749,859	9,859,650
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	269,184,783	24,670,083	14,434,587	12/13/2022	06/13/2024	TRIS Bond Index		(10,235,496)		12625Z-MP-4	CRE II LENDER SUB I, LLC - Term Loan Series 2022-2	1	24,670,083	24,670,083
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		240,581,252	240,581,252	12/13/2022	06/13/2024	TRIS Bond Index				901399-MY-8	Twin Brook Capital Funding XIII WSPV, LLC	1	240,581,252	240,581,252
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		9,585,591	9,748,200	12/13/2022	06/13/2024	TRIS Bond Index				460988-AA-6	Invesco CLO 2022-1 Ltd-INVCO 2022-1A A	1	9,585,591	9,748,200
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	308,812,500	34,692,500	(15,803,737)	10/24/2022	11/28/2048	Currency Swap		(34,079,425)		G18198-AA-6	Canal & River Trust Senior Note Ser	1	34,692,500	18,275,688
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,759,662	8,560,315	10/24/2022	11/28/2048	Currency Swap				G9302*-AE-9	University of Stirling Senior Note Ser	1	13,759,662	8,560,315
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		66,111,210	39,656,183	10/24/2022	11/28/2048	Currency Swap				G6892#-AA-5	Paradigm Homes Charitabl Senior Secured	1	66,111,210	39,656,183
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,912,520	27,264,962	10/24/2022	11/28/2048	Currency Swap				G6892#-AB-3	Paradigm Homes Charitabl Senior Secured	1	40,912,520	27,264,962
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		36,479,970	20,083,085	10/24/2022	11/28/2048	Currency Swap				G9308*-AA-1	University of Lancaster Senior Note Ser	1	36,479,970	20,083,085
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		13,896,240	8,189,114	10/24/2022	11/28/2048	Currency Swap				G9309#-AA-6	University of Durham Senior Unsecured Notes	1	13,896,240	8,189,114
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		91,934,689	56,930,513	10/24/2022	11/28/2048	Currency Swap				G9288#-AB-1	University of East Angli Senior Unsecured Notes	1	91,934,689	56,930,513
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		38,086,949	27,171,721	10/24/2022	11/28/2048	Currency Swap				G1870*-AB-4	Cambridge Housing Societ Senior Secured Notes Series B	2	38,086,949	27,171,721
57629*HR5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,399,050	19,714,896	10/24/2022	11/28/2048	Currency Swap				G1870*-AA-6	Cambridge Housing Societ Senior Secured Notes Series A	2	28,399,050	19,714,896
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	258,992,600	6,142,077	(10,905,879)	10/26/2022	08/15/2052	Currency Swap		(14,803,746)		G2269#-AA-9	College of Corpus Christ Senior Notes	1	6,142,077	3,897,867
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,054,720	11,457,834	10/26/2022	08/15/2052	Currency Swap				G5879#-AA-6	The Master, The Fellows Senior Notes	1	18,054,720	11,457,834
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		61,097,447	36,821,966	10/26/2022	08/15/2052	Currency Swap				G6428#-AM-2	Network Homes Ltd Senior Secured Note	1	61,097,447	36,821,966
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,927,523	7,147,680	10/26/2022	08/15/2052	Currency Swap				G2034#-AB-1	Duchy of Lancaster Senior Note Series A	2	11,927,523	7,147,680
57629*HT1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		177,560,782	97,786,561	10/26/2022	08/15/2052	Currency Swap				550044-CC-3	LORD MAYOR & CITIZENS CITY WESTMINSTER GBP TERM LN ISSUED AUG 2019	1	177,560,782	97,786,561
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	213,608,440	87,008,767	59,274,228	10/26/2022	10/12/2033	Currency Swap		(8,709,721)		Q0536E-ZZ-0	Aroundtown SA Senior Unsecured Notes	2	87,008,767	67,983,949
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,566,375	13,270,921	10/26/2022	10/12/2033	Currency Swap				G7996#-AE-0	Segro plc Senior Note Series B	1	17,566,375	13,270,921
57629*HS3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		151,423,326	97,250,228	10/26/2022	10/12/2033	Currency Swap				G1847#-AB-0	Capital Investors Europe PBI Limited - Series B Senior Note	1	151,423,326	97,250,228
57629*HUB	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	108,755,400	41,291,215	19,877,605	10/27/2022	11/27/2043	Currency Swap		(6,210,714)		G5560*-AB-0	London School Of Economi Senior Note Ser	1	41,291,215	26,088,319
57629*HUB	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		10,197,033	5,753,724	10/27/2022	11/27/2043	Currency Swap				G18198-AA-8	Canal & River Trust Senior Note Ser	1	10,197,033	5,753,724
57629*HUB	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		27,519,325	17,743,411	10/27/2022	11/27/2043	Currency Swap				G9302*-AD-1	University of Stirling Senior Note Ser	1	27,519,325	17,743,411
57629*HUB	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		53,268,382	32,500,805	10/27/2022	11/27/2043	Currency Swap				G4R1JK-AY-7	Heathrow Funding Limited Senior Secured Notes Class A	2	53,268,382	32,500,805
57629*HV6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	61,752,000	65,937,740	43,336,213	10/27/2022	02/22/2050	Currency Swap		2,226,868		B1401#-AE-7	Brussels Airport Company Senior Secured Notes	2	65,937,740	41,109,345

S105.37

STATEMENT AS OF MARCH 31, 2023 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*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	207,703,020	10,758,578	(1,184,512)	10/27/2022	12/19/2028	Currency Swap	(9,759,430)		G5264#-AII-9	Kingspan Securities 2017 Gtd Senior Note	2	10,758,578	8,574,918
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,100,826	31,100,826	25,413,864	10/27/2022	12/19/2028	Currency Swap			N5084#-AB-7	Koole Terminals Subholdr Senior Secured	2	31,100,826	25,413,864
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	28,780,454	28,780,454	25,324,339	10/27/2022	12/19/2028	Currency Swap			399452-ZZ-7	Groupe Holder S.A.S. Bank Loan	2	28,780,454	25,324,339
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	95,929,230	95,929,230	78,887,684	10/27/2022	12/19/2028	Currency Swap			F8494#-AB-2	Sodiaal International S. Senior Unsecured Notes	2	95,929,230	78,887,684
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,436,672	31,436,672	26,562,042	10/27/2022	12/19/2028	Currency Swap			62973*-ZZ-9	NSI N V EURO LN FAC	2	31,436,672	26,562,042
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	15,560,859	15,560,859	13,290,642	10/27/2022	12/19/2028	Currency Swap			479142-E*-8	Johnson Matthey PLC Senior Note Series C	1	15,560,859	13,290,642
57629*HII4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	26,417,382	26,417,382	22,545,902	10/27/2022	12/19/2028	Currency Swap			N2319#-AD-7	Corbion N.V. Senior Subordinated Debt	2	26,417,382	22,545,902
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	241,672,900	12,704,134	(7,142,050)	10/27/2022	09/12/2030	Currency Swap	(16,107,903)		G1744#-AT-5	Cadogan Estates Ltd Gtd Senior Note	2	12,704,134	8,965,853
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	27,643,323	27,643,323	20,778,295	10/27/2022	09/12/2030	Currency Swap			G5304*-AA-3	Knowsley Housing Trust Senior Secured	2	27,643,323	20,778,295
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	99,990,381	99,990,381	70,937,302	10/27/2022	09/12/2030	Currency Swap			G7496*-AC-3	RIT Capital Partners plc Senior Note Ser	2	99,990,381	70,937,302
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	30,154,863	30,154,863	22,837,346	10/27/2022	09/12/2030	Currency Swap			G9302#-AC-9	University of West Londo Senior Secured	2	30,154,863	22,837,346
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	7,254,714	7,254,714	5,555,542	10/27/2022	09/12/2030	Currency Swap			G7737#-AC-8	SGN MidCo Limited Gtd Senior Secu	2	7,254,714	5,555,542
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	10,434,770	10,434,770	8,011,005	10/27/2022	09/12/2030	Currency Swap			G2685#-AH-2	Great Portland Estates Senior Note Ser	2	10,434,770	8,011,005
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	59,164,148	59,164,148	49,628,528	10/27/2022	09/12/2030	Currency Swap			G9720#-AA-7	Wireless Infrastructure Senior Secured Notes	2	59,164,148	49,628,528
57629*HX2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	46,188,524	46,188,524	37,426,639	10/27/2022	09/12/2030	Currency Swap			756570-ZZ-3	Red Funnel Ferry Senior Term Loa	2	46,188,524	37,426,639
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	337,502,600	30,907,162	8,585,596	10/28/2022	10/26/2041	Currency Swap	(11,658,655)		G8302#-AB-3	University of Edinburgh Senior Note Ser	1	30,907,162	20,244,251
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	31,162,363	31,162,363	20,503,187	10/28/2022	10/26/2041	Currency Swap			G1128*-AC-2	BIRMINGHAM ARPT FIN PLC SR NT	2	31,162,363	20,503,187
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	40,444,237	40,444,237	23,360,052	10/28/2022	10/26/2041	Currency Swap			G7896*-AA-3	Scottish Oriental Smaller Senior Unsecured Notes	1	40,444,237	23,360,052
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	43,762,663	43,762,663	31,782,656	10/28/2022	10/26/2041	Currency Swap			G2493#-AA-7	Crail Meters Limited - Term Loan	2	43,762,663	31,782,656
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	13,275,115	13,275,115	8,054,899	10/28/2022	10/26/2041	Currency Swap			G9000#-AG-5	Tottenham Hotspur Stadiu Gtd Senior Secured Note Series C	2	13,275,115	8,054,899
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	101,948,282	101,948,282	54,180,500	10/28/2022	10/26/2041	Currency Swap			G0892#-AB-6	Bazalgette Tunnel Limite Senior Secured Notes	2	101,948,282	54,180,500
57629*HY0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	134,814,124	134,814,124	79,742,152	10/28/2022	10/26/2041	Currency Swap			G9160#-AB-4	UK Power Networks Servc Senior Unsecured Notes	2	134,814,124	79,742,152
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	174,033,900	34,253,682	16,875,237	10/28/2022	12/02/2040	Currency Swap	(6,308,506)		G5304*-AC-9	Knowsley Housing Trust Senior Secured	2	34,253,682	23,183,743
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	66,494,343	66,494,343	39,929,462	10/28/2022	12/02/2040	Currency Swap			G5258#-AB-3	King's College, London Senior Note Ser	1	66,494,343	39,929,462
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	15,133,277	15,133,277	9,193,306	10/28/2022	12/02/2040	Currency Swap			G7228#-AB-6	PPRES & SCHOLARS ST MARY MAGDALEN SR NT SER B	1	15,133,277	9,193,306
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,188,964	20,188,964	13,710,782	10/28/2022	12/02/2040	Currency Swap			G6853#-AC-0	Oxford Brookes Universit Senior Note Ser	2	20,188,964	13,710,782
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	12,249,862	12,249,862	8,313,165	10/28/2022	12/02/2040	Currency Swap			G9000#-AB-6	Tottenham Hotspur Limite Senior Secured Note Series B	2	12,249,862	8,313,165
57629*HZ7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	63,791,770	63,791,770	36,265,812	10/28/2022	12/02/2040	Currency Swap			G7895*-AH-9	Scottish Mortgage Invest Senior Unsecured Notes	1	63,791,770	36,265,812
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	294,033,600	14,132,016	3,083,073	10/27/2022	06/27/2029	Currency Swap	(9,423,155)		G294A#-AH-2	Dyson Finance Limited Gtd Senior Note	1	14,132,016	12,506,228
57629*JAO	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	17,564,424	17,564,424	15,498,886	10/27/2022	06/27/2029	Currency Swap			B1401#-AB-3	Brussels Airport Company Senior Secured	2	17,564,424	15,498,886

S105.38

STATEMENT AS OF MARCH 31, 2023 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		25,689,095	21,773,337	10/27/2022	06/27/2029	Currency Swap				48021P-A8-7	Jones Lang LaSalle Finan Gtd Senior Note	2	25,689,095	21,773,337
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		45,166,284	39,174,945	10/27/2022	06/27/2029	Currency Swap				09146#-ZZ-8	Van Oord NW - EUR Term Loan	2	45,166,284	39,174,945
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		133,274,877	118,667,335	10/27/2022	06/27/2029	Currency Swap				F2977#-AA-3	Elis S.A. Senior Note Series A	2	133,274,877	118,667,335
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		67,005,864	55,744,872	10/27/2022	06/27/2029	Currency Swap				F8568#-AF-6	Sonepar S.A. Senior Note Series C	2	67,005,864	55,744,872
57629*JA0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		18,582,289	16,175,444	10/27/2022	06/27/2029	Currency Swap				G1267*-AB-5	Bidcorp Foodservice Inte Senior Unsecured Notes	2	18,582,289	16,175,444
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	144,459,719	21,076,693	10,511,729	10/28/2022	09/27/2042	Currency Swap		(4,969,670)		G7137#-AC-4	Plymouth Community Homes Senior Secured	1	21,076,693	15,481,399
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		50,062,676	30,559,560	10/28/2022	09/27/2042	Currency Swap				G9303#-AC-8	University of Glasgow Senior Note Ser	1	50,062,676	30,559,560
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		30,285,562	18,732,164	10/28/2022	09/27/2042	Currency Swap				G9304*-AA-5	University of Birmingham Senior Unsecure	1	30,285,562	18,732,164
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,978,109	18,506,977	10/28/2022	09/27/2042	Currency Swap				G9306#-AB-7	University of Keele Senior Note Ser	1	26,978,109	18,506,977
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		17,466,865	11,920,428	10/28/2022	09/27/2042	Currency Swap				G8279#-AB-4	South East Water Limited Gtd Senior Secured Note Series 2	2	17,466,865	11,920,428
57629*JB8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		12,910,216	8,624,809	10/28/2022	09/27/2042	Currency Swap				G5383*-AD-1	Last Mile Infrastructure Senior Secured Notes	2	12,910,216	8,624,809
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	116,031,600	11,219,749	1,693,333	10/31/2022	03/31/2034	Currency Swap		(5,886,248)		G4622#-AP-4	Howard De Walden Estates Senior Unsecured Notes Series B	1	11,219,749	7,579,581
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		52,871,199	37,344,124	10/31/2022	03/31/2034	Currency Swap				G1608#-AA-1	Bromford Housing Group L Senior Secured Notes	1	52,871,199	37,344,124
57629*JD4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		62,106,594	45,529,795	10/31/2022	03/31/2034	Currency Swap				G6043#-AF-2	Metropolitan Housing Tru Senior Secured Notes	1	62,106,594	45,529,795
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	123,989,250	72,558,466	55,245,154	10/31/2022	06/28/2039	Currency Swap		(3,059,134)		G9006#-AD-8	Transmission Finance DAC Senior Secured	2	72,558,466	58,304,288
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		9,158,777	6,419,738	10/31/2022	06/28/2039	Currency Swap				D5472#-AQ-3	Molkerei Alois Muller GM Senior Note Series M	2	9,158,777	6,419,738
57629*JC6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		54,974,067	43,559,227	10/31/2022	06/28/2039	Currency Swap				D7002#-AB-3	Rheinkalk Holding GmbH Senior Note Series A-2034	2	54,974,067	43,559,227
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	166,457,590	27,643,323	14,554,550	10/31/2022	12/02/2035	Currency Swap		(5,247,563)		G5304*-AB-1	Knowsley Housing Trust Senior Secured	2	27,643,323	19,802,113
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		66,766,134	43,529,262	10/31/2022	12/02/2035	Currency Swap				G0746*-AA-0	Bankers Investment Trust Senior Note	1	66,766,134	43,529,262
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,133,277	9,766,437	10/31/2022	12/02/2035	Currency Swap				G7228#-AA-8	PRES & SCHOLARS ST MARY MAGDALEN SR NT SER A	1	15,133,277	9,766,437
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		20,188,964	14,270,624	10/31/2022	12/02/2035	Currency Swap				G6853#-AB-2	Oxford Brookes Universit Senior Note Ser	2	20,188,964	14,270,624
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,124,931	4,560,250	10/31/2022	12/02/2035	Currency Swap				G9000#-AA-8	Tottenham Hotspur Limite Senior Secured Note Series A	2	6,124,931	4,560,250
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,397,539	22,585,273	10/31/2022	12/02/2035	Currency Swap				G3122#-AD-0	ESPUG Finance Limited Senior Secured Notes	2	32,397,539	22,585,273
57629*JE2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,108,037	22,302,932	10/31/2022	12/02/2035	Currency Swap				G2685#-AL-3	Great Portland Estates P Senior Unsecured Notes	2	33,108,037	22,302,932
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	173,400,000	37,627,572	20,122,430	11/01/2022	12/14/2036	Currency Swap		(7,125,009)		G1512#-AA-8	AVI Global Trust PLC - Senior Note Series A GBP	1	37,627,572	27,247,439
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		22,673,903	16,367,009	11/01/2022	12/14/2036	Currency Swap				G8302*-AB-5	University of Stirling Senior Note Ser	1	22,673,903	16,367,009
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		20,679,860	13,518,905	11/01/2022	12/14/2036	Currency Swap				G4622#-AM-1	Howard De Walden Estates Gtd Senior Note	1	20,679,860	13,518,905
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		34,042,467	26,004,351	11/01/2022	12/14/2036	Currency Swap				G4410*-AB-5	Heriot Watt University Senior Unsecure	2	34,042,467	26,004,351
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		6,637,558	4,287,541	11/01/2022	12/14/2036	Currency Swap				G9000#-AF-7	Tottenham Hotspur Stadiu Gtd Senior Secured Note Series B	2	6,637,558	4,287,541
57629*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		18,230,328	13,474,148	11/01/2022	12/14/2036	Currency Swap				G4569#-AB-0	Hightown Housing Association Limited	1	18,230,328	13,474,148

S105.39

STATEMENT AS OF MARCH 31, 2023 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*JF9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		60,725,239	43,689,901	11/01/2022	12/14/2036	Currency Swap				G4378*-AL-3	Heathrow Airport Limited Senior Secured Notes	2	60,725,239	43,689,901
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	191,094,020	17,383,434	5,937,818	11/01/2022	07/14/2032	Currency Swap	(7,408,067)			G1591#-BJ-0	Britvic PLC Senior Notes Series 0	2	17,383,434	13,345,885
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,177,876	25,492,876	11/01/2022	07/14/2032	Currency Swap				D5472#-AP-5	Molkerei Alois Muller GM Senior Note Series L	2	34,177,876	25,492,876
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		37,961,030	29,241,253	11/01/2022	07/14/2032	Currency Swap				F3152*-AJ-3	Ermewa Holding SAS Senior Secured Notes	2	37,961,030	29,241,253
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,381,356	12,894,507	11/01/2022	07/14/2032	Currency Swap				G2687*-AB-5	Dawsongroup plc Senior Note Series B	2	16,381,356	12,894,507
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,636,327	27,971,727	11/01/2022	07/14/2032	Currency Swap				N7660#-AY-3	SHV Holdings NV Guaranteed Notes	2	31,636,327	27,971,727
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		30,882,447	25,814,632	11/01/2022	07/14/2032	Currency Swap				479142-F#-3	Johnson Matthey PLC Senior Notes Sustainability-Linked Series A	1	30,882,447	25,814,632
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		14,873,597	14,419,796	11/01/2022	07/14/2032	Currency Swap				F4832#-AC-0	Groupe Holder S.A.S. Senior Unsecured Notes	2	14,873,597	14,419,796
57629*JG7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,870,881	20,802,669	11/01/2022	07/14/2032	Currency Swap				243435-B*-4	Dechra Pharmaceuticals P Senior Unsecured Notes	2	19,870,881	20,802,669
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	128,662,800	18,380,279	8,962,352	11/01/2022	10/06/2032	Currency Swap	(6,458,119)			G6774*-AD-6	Origin Housing Limited Senior Secured	1	18,380,279	15,420,471
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		60,668,178	47,016,934	11/01/2022	10/06/2032	Currency Swap				G0892#-AA-8	Bazalgette Tunnel Limite Senior Secured	2	60,668,178	47,016,934
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,510,681	25,493,631	11/01/2022	10/06/2032	Currency Swap				G3122#-AB-4	ESPUG Finance Limited Gtd Senior Secu	2	32,510,681	25,493,631
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,876,576	9,624,753	11/01/2022	10/06/2032	Currency Swap				G6970*-AX-4	Peel Ports PP Finance Lt Senior Secured Notes	2	11,876,576	9,624,753
57629*JH5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,451,453	18,198,967	11/01/2022	10/06/2032	Currency Swap				G2283#-NN-9	Colombo BidCo Limited Senior Secured Notes	2	17,451,453	18,198,967
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	310,627,067	17,366,970	86,848	11/01/2022	10/06/2037	Currency Swap	(12,778,008)			G5676#-AA-9	Lowland Investment Compa Senior Note	1	17,366,970	12,864,856
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		138,268,797	109,186,419	11/01/2022	10/06/2037	Currency Swap				G7304#-AD-9	Quadgas Midco Limited Fixed Rate Guar	2	138,268,797	109,186,419
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,512,234	16,947,451	11/01/2022	10/06/2037	Currency Swap				G7137#-AB-6	Plymouth Community Homes Senior Secured	1	21,512,234	16,947,451
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,535,600	19,884,916	11/01/2022	10/06/2037	Currency Swap				G9306#-AA-9	University of Keele Senior Note Ser	1	27,535,600	19,884,916
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		61,921,860	47,926,793	11/01/2022	10/06/2037	Currency Swap				G3620#-AA-1	ForCapital Limited Senior Secured	2	61,921,860	47,926,793
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,182,500	23,818,366	11/01/2022	10/06/2037	Currency Swap				G3122#-AC-2	ESPUG Finance Limited Gtd Senior Secu	2	33,182,500	23,818,366
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,177,000	9,379,417	11/01/2022	10/06/2037	Currency Swap				G5383*-AC-3	Last Mile Infrastructure Senior Secured Notes	2	13,177,000	9,379,417
57629*JJ1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,958,581	2,933,337	11/01/2022	10/06/2037	Currency Swap				G2711*-AA-7	Curo Places Ltd. Senior Secured Notes	1	4,958,581	2,933,337
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	160,260,800	20,542,821	7,382,492	11/02/2022	11/24/2051	Currency Swap	(5,068,354)			G8303#-AB-0	University of Glasgow Senior Note Ser	1	20,542,821	12,450,846
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		74,147,768	35,535,552	11/02/2022	11/24/2051	Currency Swap				G9312*-AB-3	Vale of Aylesbury Housin Senior Secured Notes	1	74,147,768	35,535,552
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		2,643,595	1,483,970	11/02/2022	11/24/2051	Currency Swap				G6260#-AB-7	MORhones plc Senior Secured Notes	2	2,643,595	1,483,970
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		11,704,599	5,874,186	11/02/2022	11/24/2051	Currency Swap				G5744#-AA-7	Magna Housing Limited Senior Secured Notes	1	11,704,599	5,874,186
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		40,987,236	19,160,588	11/02/2022	11/24/2051	Currency Swap				G5695*-AA-0	The MDS Estates Limited Senior Unsecured Notes	1	40,987,236	19,160,588
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		31,938,720	16,324,806	11/02/2022	11/24/2051	Currency Swap				G5695*-AD-4	The MDS Estates Limited Senior Note Series D	1	31,938,720	16,324,806
57629*JK8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		127,035	75,150	11/02/2022	11/24/2051	Currency Swap				G2711*-AA-7	Curo Places Ltd. Senior Secured Notes	1	127,035	75,150
57629*JL6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	90,275,000	35,457,290	13,831,857	11/02/2022	11/17/2050	Currency Swap	(2,704,615)			G2034#-AA-3	Duchy of Lancaster Senior Unsecured Notes	2	35,457,290	16,536,472

S105.40

STATEMENT AS OF MARCH 31, 2023 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*JL6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		65,942,036	28,961,886	11/02/2022	11/17/2050	Currency Swap				G66588-AB-9	Northumberland Estates L Senior Unsecured Notes	1	65,942,036	28,961,886
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	56,197,920	39,615,938	30,943,033	11/02/2022	12/15/2035	Currency Swap		(2,018,092)		A86888-AC-3	TIWAG-Tiroler Wasserkrft Senior Note	1	39,615,938	32,961,125
57629*KM2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,692,017	15,695,755	11/02/2022	12/15/2035	Currency Swap				F3152*-AK-0	Ernewa Holding SAS Senior Secured Notes	2	21,692,017	15,695,755
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	73,143,945	29,461,636	22,413,116	11/02/2022	06/08/2036	Currency Swap		(2,366,201)		G15128-AB-6	AVI Global Trust PLC - Senior Note Series B EUR	1	29,461,636	24,779,317
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		28,828,525	17,428,676	11/02/2022	06/08/2036	Currency Swap				F1000#-AC-2	Akiem Holding SAS Green Senior Notes Series A	2	28,828,525	17,428,676
57629*JN2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		26,559,171	15,661,998	11/02/2022	06/08/2036	Currency Swap				G1847#-AC-8	Capital Investors Europe PBI Limited - Series C Senior Note	1	26,559,171	15,661,998
57629*KL4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	34,573,000	22,957,352	15,936,430	11/02/2022	11/01/2037	Currency Swap		(1,116,060)		G15128-AC-4	British Empire Securitie Senior Unsecure	1	22,957,352	17,052,490
57629*KL4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		16,269,013	11,379,896	11/02/2022	11/01/2037	Currency Swap				F3152*-AL-8	Ernewa Holding SAS Senior Secured Notes	2	16,269,013	11,379,896
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	139,919,000	43,395,785	24,874,963	11/03/2022	11/14/2034	Currency Swap		(6,556,164)		G2479#-AB-3	Coventry University Senior Note Ser	1	43,395,785	31,431,127
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,466,387	9,368,461	11/03/2022	11/14/2034	Currency Swap				G4622#-AN-9	Howard De Walden Estates Senior Unsecured Notes Series A	1	12,466,387	9,368,461
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,279,469	16,956,072	11/03/2022	11/14/2034	Currency Swap				G6750*-AF-9	1887 Company Ltd Senior Secured Note Series F	2	21,279,469	16,956,072
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		10,064,031	7,420,749	11/03/2022	11/14/2034	Currency Swap				G4622#-AS-8	Howard De Walden Estates Senior Unsecured Notes Series E	1	10,064,031	7,420,749
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		62,538,410	46,584,647	11/03/2022	11/14/2034	Currency Swap				G6300#-AB-9	Moto Investments Limited Senior Secured Notes	2	62,538,410	46,584,647
57629*KK6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,876,576	9,206,681	11/03/2022	11/14/2034	Currency Swap				G6970*-AY-2	Peel Ports PP Finance Lt Senior Secured Notes	2	11,876,576	9,206,681
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	278,348,060	21,386,287	5,551,074	11/02/2022	11/30/2031	Currency Swap		(12,256,572)		X2145*-AD-8	Elenia Verkko Oyj Gtd Senior Note Americold Realty Trust Senior	2	21,386,287	17,807,646
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		42,224,144	29,699,814	11/02/2022	11/30/2031	Currency Swap				O3063#-AD-6	Unsecured Notes	2	42,224,144	29,699,814
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,883,687	16,931,113	11/02/2022	11/30/2031	Currency Swap				D5472#-AL-4	Molkerei Alois Muller GM Senior Unsecured Notes	2	23,883,687	16,931,113
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		37,646,273	28,952,570	11/02/2022	11/30/2031	Currency Swap				F8494#-AC-0	Sodiaal International S. Senior Unsecured Notes	2	37,646,273	28,952,570
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,298,411	21,835,848	11/02/2022	11/30/2031	Currency Swap				L8367#-AG-8	Shurgard Self Storage S. Senior Unsecured Notes	2	31,298,411	21,835,848
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		55,767,365	44,523,860	11/02/2022	11/30/2031	Currency Swap				F9768#-AB-9	Vilmorin & Cie SA Senior Unsecured Notes	2	55,767,365	44,523,860
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		88,768,676	70,483,976	11/02/2022	11/30/2031	Currency Swap				F20008-AA-6	C2 Developpement Senior Unsecured Notes	2	88,768,676	70,483,976
57629*KJ9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		25,326,563	19,133,403	11/02/2022	11/30/2031	Currency Swap				F9731#-AJ-6	Vicat SA Senior Unsecured Notes	2	25,326,563	19,133,403
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	250,562,150	38,715,217	16,741,658	11/03/2022	12/22/2031	Currency Swap		(11,815,966)		G41338-AA-1	Grosvenor Limited Senior Note Ser Porterbrook Rail Finance Senior	2	38,715,217	28,557,624
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,953,615	10,956,928	11/03/2022	12/22/2031	Currency Swap				G7178*-AD-6	Secured	2	13,953,615	10,956,928
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		11,632,421	8,658,112	11/03/2022	12/22/2031	Currency Swap				G4622#-AL-3	Howard De Walden Estates Gtd Senior Note	1	11,632,421	8,658,112
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		35,055,875	28,234,801	11/03/2022	12/22/2031	Currency Swap				G82798-AA-6	South East Water Limited Gtd Senior Secured Note Series 1	2	35,055,875	28,234,801
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,197,811	25,112,454	11/03/2022	12/22/2031	Currency Swap				L0808#-AC-1	Beacon Finco S.a.r.l Senior Secured Note Series B	2	31,197,811	25,112,454
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,810,104	16,119,259	11/03/2022	12/22/2031	Currency Swap				G1151#-AB-0	Bellway Plc Senior Note Series B TP REIT Propco 2 Limited Senior	2	21,810,104	16,119,259
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		59,019,958	41,362,479	11/03/2022	12/22/2031	Currency Swap				G8655#-AA-8	Secured Notes	1	59,019,958	41,362,479
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,134,994	15,209,583	11/03/2022	12/22/2031	Currency Swap				G1320*-AB-0	Breedon Group Plc Senior Note Series B	2	21,134,994	15,209,583

S105.41

STATEMENT AS OF MARCH 31, 2023 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*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		38,081,923	29,542,180	11/03/2022	12/22/2031	Currency Swap			781837-YY-9	SOUTH STAFFORDSHIRE PLC GBP FAC A LN - ISSUED DEC 2021	2	38,081,923	29,542,180
57629*KH3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,502,228	30,023,318	11/03/2022	12/22/2031	Currency Swap				DP World Ltd-SENIOR UNSECURED	2	33,502,228	30,023,318
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	234,948,546	69,249,586	47,834,220	11/04/2022	12/11/2031	Currency Swap		(10,400,416)	F3152*-AG-9	ERMEDIA HLDG SECD SR INITIAL PP NTS 2019-2	2	69,249,586	58,234,636
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		139,138,580	97,630,509	11/04/2022	12/11/2031	Currency Swap			N52698-AB-4	Lineage Treasury Europe Senior Unsecured Notes Series D	2	139,138,580	97,630,509
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		29,169,517	24,801,198	11/04/2022	12/11/2031	Currency Swap			E5444*-AF-1	Futbol Club Barcelona Senior Secured Note Series B1 (Amortizing)	2	29,169,517	24,801,198
57629*KG5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		33,336,256	26,864,983	11/04/2022	12/11/2031	Currency Swap			E5444*-AG-9	Futbol Club Barcelona Senior Secured Note Series B2 (Bullet)	2	33,336,256	26,864,983
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	197,737,711	5,769,377	(4,993,078)	11/04/2022	12/07/2029	Currency Swap		(9,853,770)	24906P-C#-4	DENTSPLY Sirona Inc. Senior Note Ser	2	5,769,377	4,860,692
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		17,308,131	14,582,075	11/04/2022	12/07/2029	Currency Swap			D8286*-AD-2	Sirona Dental Services G Senior Note Ser	2	17,308,131	14,582,075
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		63,640,869	51,941,323	11/04/2022	12/07/2029	Currency Swap			B95508-AB-7	Unicore SA Senior Note Ser	2	63,640,869	51,941,323
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,087,829	11,234,791	11/04/2022	12/07/2029	Currency Swap			F5662*-AA-6	Laurent-Perrier Group Senior Unsecured	2	13,087,829	11,234,791
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		37,743,735	32,717,976	11/04/2022	12/07/2029	Currency Swap			B95508-AD-3	Unicore SA Senior Note Series B	2	37,743,735	32,717,976
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,567,063	15,826,154	11/04/2022	12/07/2029	Currency Swap			F1000*-AB-4	Akiem Holding SAS Senior Secured Notes (Bullet)	2	19,567,063	15,826,154
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		5,514,879	4,666,500	11/04/2022	12/07/2029	Currency Swap			285295-B#-7	Electrocomponents plc Senior Notes Series C	2	5,514,879	4,666,500
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		43,946,290	37,393,172	11/04/2022	12/07/2029	Currency Swap			N3527*-AA-7	Getec Infra NL BV Term Fac	2	43,946,290	37,393,172
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,707,742	12,406,551	11/04/2022	12/07/2029	Currency Swap			D30028-AA-4	GETEC INFRA NLBV-2021 EUR Fixed Incremental Term Loan	2	15,707,742	12,406,551
57629*KF7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		1,484,566	1,413,502	11/04/2022	12/07/2029	Currency Swap			U74079-AP-6	Netflix Inc-SENIOR UNSECURED	2	1,484,566	1,413,502
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	292,527,085	42,295,738	19,139,415	11/04/2022	08/19/2030	Currency Swap		(14,990,913)	592688-B#-1	Mettler-Toledo Internati Senior Note	2	42,295,738	34,130,328
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		69,469,985	61,691,235	11/04/2022	08/19/2030	Currency Swap			X2145*-AC-0	Elenia Verkko Oyj Gtd Senior Note Envol Investments Limite Senior	2	69,469,985	61,691,235
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		34,243,862	28,362,032	11/04/2022	08/19/2030	Currency Swap			G3076*-AE-6	Secured Notes	2	34,243,862	28,362,032
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		36,460,563	30,759,421	11/04/2022	08/19/2030	Currency Swap			556069-ZZ-8	MacqPisto SAS Senior Term Loa	2	36,460,563	30,759,421
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		27,450,167	21,490,004	11/04/2022	08/19/2030	Currency Swap			G49408-AA-4	Irish Residential Proper Senior Secured Notes	2	27,450,167	21,490,004
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		15,626,550	12,877,974	11/04/2022	08/19/2030	Currency Swap			G3301*-AB-9	FIL Limited Senior Unsecured Notes	2	15,626,550	12,877,974
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		46,815,969	44,483,019	11/04/2022	08/19/2030	Currency Swap			G294A8-AK-5	Dyson Finance Limited Guaranteed Series A Senior Notes	1	46,815,969	44,483,019
57629*KE0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		55,333,761	46,843,380	11/04/2022	08/19/2030	Currency Swap			F7754*-AC-7	Safran Group Senior Unsecured Notes	2	55,333,761	46,843,380
57629*KD2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	58,747,500	13,627,229	4,195,051	11/07/2022	04/05/2046	Currency Swap		(4,452,362)	G83028-AC-1	University of Edinburgh Senior Note Ser	1	13,627,229	8,647,413
57629*KD2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		59,394,557	40,033,015	11/07/2022	04/05/2046	Currency Swap			X3204*-AB-4	Gibraltar Capital Assets Senior Secured	2	59,394,557	40,033,015
57629* KC4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	159,348,640	14,309,242	2,981,642	11/07/2022	11/29/2030	Currency Swap		(9,649,345)	F5662*-AB-4	Laurent-Perrier Group Senior Unsecured Notes	2	14,309,242	12,630,987
57629* KC4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		175,417,385	140,944,335	11/07/2022	11/29/2030	Currency Swap			F3806Z-MM-5	FFP SA Senior Unsecured Notes	1	175,417,385	140,944,335
57629*KB6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	41,179,875	15,133,277	5,316,753	11/07/2022	12/08/2045	Currency Swap		(3,497,547)	G7228*-AC-4	PREES & SCHOLARS ST MARY MAGDALEN SR NT SER C	1	15,133,277	8,814,300

S105.42

STATEMENT AS OF MARCH 31, 2023 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*KB6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1		39,483,260	24,018,481	11/07/2022	12/08/2045	Currency Swap				G2867#-AA-5	Dunedin Income Growth In Senior Secured	1	39,483,260	24,018,481
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	174,986,912	31,521,496	9,315,686	11/07/2022	12/31/2029	Currency Swap	(13,604,314)			G0566*-AC-3	Argiva PP Financing plc Gtd Senior Secu	2	31,521,496	22,920,000
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		19,779,613	13,744,966	11/07/2022	12/31/2029	Currency Swap				G1745*-AM-3	BUJK Infrastructure Issuer PLC - Senior Note Series B	2	19,779,613	13,744,966
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		51,012,416	35,097,534	11/07/2022	12/31/2029	Currency Swap				G0176#-AA-7	ALLIANCE TR PLC	1	51,012,416	35,097,534
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,587,138	4,553,499	11/07/2022	12/31/2029	Currency Swap				G0566*-AD-1	Argiva Financing No 1 Li Gtd Senior FI R	2	4,587,138	4,553,499
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,381,400	22,953,833	11/07/2022	12/31/2029	Currency Swap				G8472#-AE-1	STERIS Corporation Senior Note Ser	2	26,381,400	22,953,833
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		21,529,816	18,498,623	11/07/2022	12/31/2029	Currency Swap				G6750*-AE-2	1887 Company Ltd Senior Secured Note Series E	2	21,529,816	18,498,623
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		26,391,354	21,931,528	11/07/2022	12/31/2029	Currency Swap				L0808#-AB-3	Beacon Finco S.a.r.l Senior Secured Note Series A	2	26,391,354	21,931,528
57629*KA8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		59,543,901	44,728,482	11/07/2022	12/31/2029	Currency Swap				781837-ZZ-5	SOUTH STAFFORDSHIRE PLC GBP FAC B LN - ISSUED DEC 2021	2	59,543,901	44,728,482
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	34,605,300	36,137,484	24,050,225	11/07/2022	12/11/2033	Currency Swap	(2,916,144)			G6774*-AC-8	Origin Finance 2 plc Senior Secured	1	36,137,484	26,966,369
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		6,844,070	5,002,033	11/07/2022	12/11/2033	Currency Swap				G7737#-AD-6	SGN MidCo Limited Gtd Senior Secu	2	6,844,070	5,002,033
57629*JZ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,565,212	3,350,462	11/07/2022	12/11/2033	Currency Swap				G1591#-BF-8	Britvic PLC Senior Notes Se	2	4,565,212	3,350,462
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	61,834,505	21,495,499	11,732,261	11/07/2022	08/14/2029	Currency Swap	(4,435,199)			Q7794#-AF-0	OPH Finance Co. Pty. Ltd Gtd Senior Secu	2	21,495,499	16,167,460
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,415,500	28,834,486	11/07/2022	08/14/2029	Currency Swap				Q8458*-AA-0	Servco Australia Pty Ltd Senior Note Ser	2	31,415,500	28,834,486
57629*JY8	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		24,181,920	19,946,278	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	19,946,278
57629*JX0	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	48,513,122	70,302,724	37,909,370	11/07/2022	11/15/2049	Currency Swap	(4,869,201)			J3891#-AC-6	Lilly Japan Financing Go Senior Note Series C	1	70,302,724	42,778,571
57629*JI2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	65,036,160	40,435,200	31,151,775	11/08/2022	07/17/2034	Currency Swap	(1,776,372)			Q0846#-AA-4	Australian Laboratory Se Senior Unsecured Notes	2	40,435,200	32,928,147
57629*JI2	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		31,091,040	23,387,682	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	23,387,682
57629*JV4	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	64,370,000	69,642,480	52,755,725	11/08/2022	06/25/2031	Currency Swap	(2,133,871)			74726M-A*-0	Qantas Airways Limited Senior Secured Notes	2	69,642,480	54,889,596
57629*JU6	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	64,738,386	83,201,824	63,282,326	11/09/2022	05/11/2032	Currency Swap	(3,312,071)			L2289#-AB-7	DH Japan Finance SA Senior Note Ser	2	83,201,824	66,594,397
57629*JT9	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1	20,044,000	23,160,357	13,946,557	11/09/2022	10/14/2040	Currency Swap	(46,872)			A5791*-AA-9	OBB Produktion GmbH Senior Unsecured Notes	1	23,160,357	13,993,429
57629*JS1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	46,466,369	29,294,169	17,012,064	11/09/2022	06/04/2038	Currency Swap	(2,040,606)			G7895*-AE-6	Scottish Mortgage Invest Senior Note Ser	1	29,294,169	19,052,670
57629*JS1	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		23,974,269	16,786,914	11/09/2022	06/04/2038	Currency Swap				G6260#-AA-9	MORhomes plc Senior Secured Notes	2	23,974,269	16,786,914
57629*JR3	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	39,645,360	47,124,000	29,567,463	11/09/2022	06/15/2041	Currency Swap	(901,585)			Q9609*-AD-0	WestConnex Finance Compa Senior Secured Notes	2	47,124,000	30,469,048
57629*JQ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	52,547,512	61,059,259	48,471,648	11/09/2022	11/30/2027	Currency Swap	(2,620,717)			G2735*-AA-9	Great Rolling Stock Co PLC/The ...	2	61,059,259	51,092,365
57629*JQ5	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		4,173,444	4,141,746	11/09/2022	11/30/2027	Currency Swap				00N066-FW-1	Newcastle Estate A2	2	4,173,444	4,141,746
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2	329,572,593	13,009,494	(5,420,792)	11/10/2022	12/11/2028	Currency Swap	(15,161,013)			G6774*-AB-0	Origin Finance 2 plc Senior Secured	1	13,009,494	9,740,221
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		59,073,252	46,156,034	11/10/2022	12/11/2028	Currency Swap				G1745*-AJ-0	BUJK Infrastructure Issuer PLC - Senior Note Series H	2	59,073,252	46,156,034
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		32,429,234	26,729,505	11/10/2022	12/11/2028	Currency Swap				G7178*-AB-0	Porterbrook Rail Finance Senior Secured	2	32,429,234	26,729,505
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		2,217,389	1,802,866	11/10/2022	12/11/2028	Currency Swap				G1591#-BC-5	Britvic PLC Senior Notes Se	2	2,217,389	1,802,866

S105.43

STATEMENT AS OF MARCH 31, 2023 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*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		12,260,855	9,838,874	11/10/2022	12/11/2028	Currency Swap			G2685@-AG-4	Great Portland Estates Senior Note Ser	2	12,260,855	9,838,874
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		8,460,605	6,878,826	11/10/2022	12/11/2028	Currency Swap			G4133@-AE-3	Grosvenor Limited Senior Notes Series A	2	8,460,605	6,878,826
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		68,942,904	56,502,029	11/10/2022	12/11/2028	Currency Swap			G9075*-AA-2	Tritax Big Box REIT plc Senior Note Series A	2	68,942,904	56,502,029
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		13,631,315	10,712,731	11/10/2022	12/11/2028	Currency Swap			G1151#-AA-2	Bellway Plc Senior Note Series A	2	13,631,315	10,712,731
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		43,792,644	33,340,656	11/10/2022	12/11/2028	Currency Swap			B1000#-AA-0	Aedifica SA Senior Unsecured Notes	2	43,792,644	33,340,656
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		59,941,338	57,964,180	11/10/2022	12/11/2028	Currency Swap			22982*-AA-4	Cubitt Global LLC Senior Secured Notes	1	59,941,338	57,964,180
57629*JP7	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2		58,760,735	57,868,968	11/10/2022	12/11/2028	Currency Swap			22982*-AB-2	Cubitt Global LLC Senior Secured Notes Series 6	1	58,760,735	57,868,968
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	299,132,448	46,382,035	22,127,581	11/10/2022	10/31/2034	Currency Swap		(11,890,760)	G2686@-AB-4	Great Rolling Stock Comp Senior Secured	2	46,382,035	34,018,341
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		56,868,804	48,404,526	11/10/2022	10/31/2034	Currency Swap			00183F-AA-3	Anno 2017 Joint Holding Senior Secured	2	56,868,804	48,404,526
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		224,726	202,571	11/10/2022	10/31/2034	Currency Swap			E6732@-AA-3	ITEMOSA 3.40%	2	224,726	202,571
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		13,637,953	11,281,682	11/10/2022	10/31/2034	Currency Swap			G2854#-AA-0	Dudgeon Offshore Wind Lt Senior Secured Notes	1	13,637,953	11,281,682
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		59,672,356	47,754,551	11/10/2022	10/31/2034	Currency Swap			X2313#-AA-6	Eruca Investments Limite Senior Secured Notes	2	59,672,356	47,754,551
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		28,140,425	22,437,605	11/10/2022	10/31/2034	Currency Swap			L0808#-AG-2	Beacon Finco S.a.r.l Senior Secured Note Series F	2	28,140,425	22,437,605
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		126,283,897	92,356,374	11/10/2022	10/31/2034	Currency Swap			G6954#-AD-4	Peabody Trust Senior Secured Notes	1	126,283,897	92,356,374
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		36,798,573	27,618,629	11/10/2022	10/31/2034	Currency Swap			G3646#-AB-9	Forth Ports Finance plc Senior Secured	2	36,798,573	27,618,629
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	299,999,655	26,578,213	2,403,220	11/14/2022	12/12/2027	Currency Swap		(17,471,367)	G3461@-AA-5	VIVID Housing Limited	1	26,578,213	19,874,587
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		45,219,489	32,673,159	11/14/2022	12/12/2027	Currency Swap			G6462*-AA-9	Newlon Housing Trust Senior Secured	1	45,219,489	32,673,159
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		7,506,874	5,568,594	11/14/2022	12/12/2027	Currency Swap			G294A@-AC-3	Dyson Finance Limited Senior Note Ser	1	7,506,874	5,568,594
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		27,139,376	20,941,798	11/14/2022	12/12/2027	Currency Swap			G8302#-AB-1	University of West Londo Senior Secured	2	27,139,376	20,941,798
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		92,707,597	76,250,985	11/14/2022	12/12/2027	Currency Swap			G8056*-AB-5	Severn Trent Water Limit Senior Note Ser	2	92,707,597	76,250,985
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		20,455,418	17,881,111	11/14/2022	12/12/2027	Currency Swap			G6970*-AJ-5	Peel Ports PP Finance Lt Senior Secured	2	20,455,418	17,881,111
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		24,706,804	21,264,163	11/14/2022	12/12/2027	Currency Swap			G9766#-AE-4	Workspace Group plc Senior Note Ser	2	24,706,804	21,264,163
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		114,871,039	99,175,625	11/14/2022	12/12/2027	Currency Swap			636012-AB-5	National Express Group P Senior Note Series A	2	114,871,039	99,175,625
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	227,988,789	35,935,709	12,810,625	11/14/2022	07/31/2039	Currency Swap		(11,279,889)	G9288#-AA-1	University of Brighton Senior Secured	2	35,935,709	24,090,514
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		18,571,528	16,714,534	11/14/2022	07/31/2039	Currency Swap			G3087#-AA-7	EQUITIX SOLAR FINCO 4 LTD GBP TERM LN	2	18,571,528	16,714,534
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		79,290,716	68,344,250	11/14/2022	07/31/2039	Currency Swap			G8408#-AA-8	St. James's Oncology Sr Note	1	79,290,716	68,344,250
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		29,146,686	24,138,852	11/14/2022	07/31/2039	Currency Swap			302500-ZZ-9	FCC Energy Limited Senior Secured GIP III Jupiter LTD Senior Secured	2	29,146,686	24,138,852
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		43,784,636	37,675,854	11/14/2022	07/31/2039	Currency Swap			G3426#-AB-5	Notes	2	43,784,636	37,675,854
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		43,224,750	34,068,617	11/14/2022	07/31/2039	Currency Swap			G1093*-AC-3	Blif Bidco Limited Senior Secured Notes	2	43,224,750	34,068,617
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		8,987,527	7,030,674	11/14/2022	07/31/2039	Currency Swap			G5383*-AA-7	Last Mile Infrastructure Senior Secured Notes (Delayed Tranche)	2	8,987,527	7,030,674

S105.44

STATEMENT AS OF MARCH 31, 2023 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	
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		6,425,225	3,757,488	11/14/2022	07/31/2039	Currency Swap				G2711*-AB-5	Curro Places Ltd. Senior Secured Notes	1	6,425,225	3,757,488
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	159,288,575	13,251,721	4,501,683	11/14/2022	10/30/2027	Currency Swap	(7,379,455)			L8367*-AE-3	Shurgard Luxembourg Sarl Gtd Senior Note	2	13,251,721	11,881,138
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		22,803,935	20,862,541	11/14/2022	10/30/2027	Currency Swap				G294A*-AG-4	Dyson Finance Limited Gtd Senior Note	1	22,803,935	20,862,541
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		13,230,435	11,592,288	11/14/2022	10/30/2027	Currency Swap				48021P*-A*-9	Jones Lang LaSalle Finan Gtd Senior Note	2	13,230,435	11,592,288
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		64,290,292	53,461,668	11/14/2022	10/30/2027	Currency Swap				G7996*-AA-8	Segro Plc Senior Unsecured	1	64,290,292	53,461,668
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		14,073,886	12,114,158	11/14/2022	10/30/2027	Currency Swap				X0827*-AA-3	Budapest Airport Zrt. Tranche 2 Origi	2	14,073,886	12,114,158
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		21,537,602	18,538,584	11/14/2022	10/30/2027	Currency Swap				X0032*-AA-4	Airport Hungary Krt. Tranche 2 Origi	2	21,537,602	18,538,584
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		4,372,303	3,926,010	11/14/2022	10/30/2027	Currency Swap				G1267*-AA-7	Bidcorp Foodservice Inte Senior Unsecured Notes	2	4,372,303	3,926,010
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		22,070,928	25,854,308	11/14/2022	10/30/2027	Currency Swap				T0149*-AA-7	ASR Media and Sponsorshi Senior Secured Notes	2	22,070,928	25,854,308
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	53,114,700	59,356,425	39,617,046	11/07/2022	01/15/2049	Currency Swap	(3,399,860)			G6428*-AD-2	Network Homes Limited Senior Secured Notes	1	59,356,425	43,016,906
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	152,804,597	92,902,154	67,308,618	11/15/2022	12/31/2047	Currency Swap	(2,312,138)			G7612*-AA-2	Rock Rail Southwestern p Senior Secured	2	92,902,154	69,620,756
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		73,015,476	45,579,440	11/15/2022	12/31/2047	Currency Swap				G2018*-AA-7	Enfinium Holding Limited Senior Secured Notes	2	73,015,476	45,579,440
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	23,217,790	26,362,541	15,716,072	11/16/2022	04/13/2041	Currency Swap		623,282		F1000*-AD-0	Akiem Holding SAS Green Senior Notes Series B	2	26,362,541	15,092,790
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	26,465,280	28,207,269	19,516,961	11/16/2022	04/30/2044	Currency Swap		999,469		G4460*-AB-4	Henderson International Senior Unsecured Notes	1	28,207,269	18,517,492
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	240,989,723	29,359,978	24,690,601	11/16/2022	08/31/2043	Currency Swap	(13,812)			D878A2*-AA-3	Via Solutions Nord GmbH Senior Secured	1	29,359,978	24,704,413
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		27,354,752	22,923,725	11/16/2022	08/31/2043	Currency Swap				25461C*-AA-0	DirectRoute (Tuam) Limit Senior Secured	2	27,354,752	22,923,725
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		44,890,038	37,806,148	11/16/2022	08/31/2043	Currency Swap				382879*-AA-2	Gorey To Ennisorchy M11 Senior Secured	2	44,890,038	37,806,148
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		37,464,725	33,771,150	11/16/2022	08/31/2043	Currency Swap				E6732*-AA-3	ITEMOSA 3.40%	2	37,464,725	33,771,150
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		67,156,404	64,572,771	11/16/2022	08/31/2043	Currency Swap				K7784*-AA-3	P/F Eystur-og Sandoyartu Senior Secured	1	67,156,404	64,572,771
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		44,318,322	33,194,233	11/16/2022	08/31/2043	Currency Swap				B7000*-AB-5	Puratos NV Senior Note Series B	2	44,318,322	33,194,233
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		5,379,733	5,026,429	11/16/2022	08/31/2043	Currency Swap				U74079*-AR-2	Netflix Inc-SENIOR UNSECURED	2	5,379,733	5,026,429
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	123,383,920	151,043,922	119,632,693	11/16/2022	06/30/2050	Currency Swap		6,432,904		G2044*-AA-5	Channel Link Enterprises Senior Secured	2	151,043,922	113,199,789
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	150,220,554	45,418,250	34,883,967	11/16/2022	12/31/2027	Currency Swap	(3,200,202)			B9550*-AA-9	Unicore SA Senior Note Ser	2	45,418,250	38,084,169
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		99,024,570	83,627,337	11/16/2022	12/31/2027	Currency Swap				372460*-D8-1	Genuine Parts Company Senior Note Ser	2	99,024,570	83,627,337
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		21,862,650	18,880,703	11/16/2022	12/31/2027	Currency Swap				031100*-N*-7	AMETEK, Inc. Senior Secured Series T	2	21,862,650	18,880,703
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	152,175,310	68,052,396	59,625,576	11/17/2022	06/27/2026	Currency Swap	(4,589,896)			G2037*-AE-6	Chanel Ltd EURO SR NT SER A	1	68,052,396	64,215,472
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		39,641,639	36,150,666	11/17/2022	06/27/2026	Currency Swap				K2162*-AG-1	Danish Crown A/S Senior Unsecured Note	2	39,641,639	36,150,666
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		16,316,315	14,851,840	11/17/2022	06/27/2026	Currency Swap				227047*-A8-6	Croda International plc Senior Note Ser	2	16,316,315	14,851,840
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		16,260,124	13,320,832	11/17/2022	06/27/2026	Currency Swap				G5264*-AV-1	Kingspan Securities 2017 Gtd Senior Note	2	16,260,124	13,320,832
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		21,514,919	19,143,703	11/17/2022	06/27/2026	Currency Swap				G0488*-AA-2	Atlantica Yield Plc Senior Secured Notes	2	21,514,919	19,143,703

S105.45

STATEMENT AS OF MARCH 31, 2023 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
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	259,433,524	27,585,445	20,166,646	11/18/2022	11/30/2026	Currency Swap		(5,070,221)		TanQuid GmbH & Co. KG Senior Secured	1	27,585,445	25,236,867
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		38,480,130	34,787,632	11/18/2022	11/30/2026	Currency Swap			031100-H8-2	AMETEK, Inc. Senior Note	2	38,480,130	34,787,632
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		43,211,840	40,588,296	11/18/2022	11/30/2026	Currency Swap			G5264#-AS-8	Kingspan Group PLC Gtd Senior Note	2	43,211,840	40,588,296
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		38,781,250	36,244,242	11/18/2022	11/30/2026	Currency Swap			833792-MM-0	Sodlaal International S. Senior Note	2	38,781,250	36,244,242
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		11,380,720	10,369,651	11/18/2022	11/30/2026	Currency Swap			B9550#-AC-5	Unicore SA Senior Note Series A	2	11,380,720	10,369,651
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		9,436,780	8,491,105	11/18/2022	11/30/2026	Currency Swap			285295-B*-1	Electrocomponents plc Senior Notes Series A	2	9,436,780	8,491,105
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		83,898,000	75,538,599	11/18/2022	11/30/2026	Currency Swap			D2R140-ZZ-2	GLOBAL TIP FIN B V EUR FAC B LN 17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan	2	83,898,000	75,538,599
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		20,204,685	20,000,000	11/18/2022	11/30/2026	Currency Swap			81809#-MM-6	Facility	1	20,204,685	20,000,000
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	85,151,655	3,858,760	626,308	11/18/2022	12/16/2026	Currency Swap		(2,206,451)	G2479#-AB-5	Covent Garden Group Holdings Limited Senior Note Series B	1	3,858,760	2,832,759
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		12,704,134	9,362,885	11/18/2022	12/16/2026	Currency Swap			G1744#-AS-7	Cadogan Estates Ltd Gtd Senior Note	2	12,704,134	9,362,885
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		14,468,230	11,627,386	11/18/2022	12/16/2026	Currency Swap			40637C-C*-9	HALMA PLC GBP SER G SR NT	2	14,468,230	11,627,386
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		30,747,859	26,878,425	11/18/2022	12/16/2026	Currency Swap			227047-B*-7	Croda International plc Senior Note Ser	2	30,747,859	26,878,425
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		33,061,400	29,152,502	11/18/2022	12/16/2026	Currency Swap			G2479#-AC-3	Covent Garden Group Hold Senior Note Ser	1	33,061,400	29,152,502
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	50,040,690	51,315,000	32,896,087	11/21/2022	12/04/2044	Currency Swap		(627,668)	Q0832*-AK-2	Australian Pacific Airpo Gtd Senior Secured Note Series 2019D	2	51,315,000	33,523,755
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	46,391,010	48,186,969	42,662,174	11/22/2022	07/07/2030	Currency Swap		(37,468)	Q9749#-AN-5	Westrac Pty Ltd Senior Unsecured Notes	2	48,186,969	42,699,642
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	14,696,148	15,856,602	11,003,573	11/22/2022	03/15/2052	Currency Swap		194,500	Q8059#-AC-7	Registry Finance Pty Ltd Gtd Senior Secured Note Series C	1	15,856,602	10,809,073
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	247,511,274	97,003,465	62,981,565	11/22/2022	10/31/2049	Currency Swap		2,523,111	G2451*-AA-1	Cottsway Housing Associa Senior Secured Notes	1	97,003,465	60,458,454
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	85,476,661	48,847,338	48,847,338	11/22/2022	10/31/2049	Currency Swap			G2711*-AC-3	Curro Places Ltd. Senior Secured Note Series C	1	85,476,661	48,847,338
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	62,301,524	48,461,413	48,461,413	11/22/2022	10/31/2049	Currency Swap			G3029#-AA-0	Eastlands Arena Limited Senior Secured Notes	2	62,301,524	48,461,413
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	21,461,194	15,997,559	15,997,559	11/22/2022	10/31/2049	Currency Swap			G1128*-AA-6	BIRMINGHAM ARPT FIN PLC-SER A SR NOTE GBP	2	21,461,194	15,997,559
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	94,480,000	53,572,938	27,051,727	11/23/2022	09/17/2050	Currency Swap		1,183,154	G9143#-AB-4	Two Rivers Housing Senior Secured Note Series B	2	53,572,938	25,868,573
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	50,864,899	25,868,573	25,868,573	11/23/2022	09/17/2050	Currency Swap			G9143#-AA-6	Two Rivers Housing Senior Secured Notes	2	50,864,899	25,868,573
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	17,724,000	17,202,000	11,125,360	11/23/2022	11/01/2052	Currency Swap		313,457	G7150*-AA-4	Plus Dane Housing Limite Senior Secured Notes	1	17,202,000	10,811,903
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	9,759,475	10,000,000	10,000,000	11/23/2022	11/01/2052	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	9,759,475	10,000,000
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	268,753,262	45,865,039	29,823,724	11/23/2022	06/30/2046	Currency Swap		(816,256)	G9288#-AC-9	University of East Angli Senior Secured	1	45,865,039	30,639,980
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	53,308,636	38,772,883	38,772,883	11/23/2022	06/30/2046	Currency Swap			G7611*-AA-7	Rock Rail East Anglia pl Senior Secured	2	53,308,636	38,772,883
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	36,500,846	26,619,693	26,619,693	11/23/2022	06/30/2046	Currency Swap			G6853#-AE-6	Oxford Brookes Universit Senior Note Series E	2	36,500,846	26,619,693
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	105,814,900	66,085,837	66,085,837	11/23/2022	06/30/2046	Currency Swap			G2564*-AA-5	Cross London Trains Limi Senior Secured Notes	2	105,814,900	66,085,837

S105.46

STATEMENT AS OF MARCH 31, 2023 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	Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		60,137,684	39,154,411	11/23/2022	06/30/2046	Currency Swap			G9369*-AA-7	Viridor Energy Group Lim Senior Secured Note	2	60,137,684	39,154,411
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		889,244	526,048	11/23/2022	06/30/2046	Currency Swap			G2711*-AA-7	Curio Places Ltd. Senior Secured Notes	1	889,244	526,048
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	53,370,000	55,124,378	37,793,464	11/25/2022	01/15/2050	Currency Swap		184,532	G9000#-AD-2	Tottenham Hotspur Limite Senior Secured Note Series D	2	55,124,378	37,608,932
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	13,285,912	14,421,443	10,173,047	11/25/2022	03/15/2047	Currency Swap		(42,499)	Q80598-AB-9	Registry Finance Pty Ltd Gtd Senior Secured Note Series B	1	14,421,443	10,215,546
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	523,384,695	16,433,744	8,400,292	11/25/2022	12/31/2038	Currency Swap		(7,123,256)	B0R0HP-XX-8	Alpha Trains Finance S.A Term Loan	2	16,433,744	15,523,548
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		12,550,898	11,404,000	11/25/2022	12/31/2038	Currency Swap				VELA ENERGY FINANCE SA-SECURED	2	12,550,898	11,404,000
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		14,517,421	13,245,645	11/25/2022	12/31/2038	Currency Swap			9991DM-TP-6	ITEPESA 3.34%	2	14,517,421	13,245,645
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		15,165,691	12,886,381	11/25/2022	12/31/2038	Currency Swap				Sonnedix Espana Finance -SENIOR UNSECURED	2	15,165,691	12,886,381
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		30,933,795	27,753,606	11/25/2022	12/31/2038	Currency Swap			K8808*-AA-3	SIKUKI NUUK HARBOR A/S SR SEC ND	1	30,933,795	27,753,606
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		73,020,563	53,584,244	11/25/2022	12/31/2038	Currency Swap			G7605#-AD-5	Roadster Finance DAC Senior Secured Notes	2	73,020,563	53,584,244
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		2,607,984	2,268,702	11/25/2022	12/31/2038	Currency Swap				Sonnedix Espana Finance -SENIOR UNSECURED	2	2,607,984	2,268,702
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		48,466,831	38,295,709	11/25/2022	12/31/2038	Currency Swap			F1000#-AA-6	Akiem Holding SAS Senior Secured Notes (Amortizing)	2	48,466,831	38,295,709
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		31,389,412	25,507,576	11/25/2022	12/31/2038	Currency Swap			067325-ZZ-6	Linia Nou Tram Dos S.A. EUR Term Loan	2	31,389,412	25,507,576
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		37,916,800	37,184,458	11/25/2022	12/31/2038	Currency Swap				Bothwell Spain SA-SECURED	2	37,916,800	37,184,458
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		30,962,411	26,695,999	11/25/2022	12/31/2038	Currency Swap				Eliantus Finco Duo, S.A. 2.20 31/12/2038	2	30,962,411	26,695,999
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		23,014,591	19,689,537	11/25/2022	12/31/2038	Currency Swap			L05270-ZZ-6	BEIP S.a.r.l - EUR Term Loan	2	23,014,591	19,689,537
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		34,052,904	27,268,334	11/25/2022	12/31/2038	Currency Swap			E6168#-AA-4	Hypesol Solar Inversione Senior Secured Notes	1	34,052,904	27,268,334
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		48,815,363	36,997,328	11/25/2022	12/31/2038	Currency Swap				Renovables Atlasol SA-SECURED	2	48,815,363	36,997,328
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		27,894,868	24,333,844	11/25/2022	12/31/2038	Currency Swap			F2839H-AA-8	Dunkerque LNG Holding SA Senior Secured Notes	2	27,894,868	24,333,844
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		35,224,000	31,927,204	11/25/2022	12/31/2038	Currency Swap			F2000#-AB-4	C2 Developpement Senior Unsecured Notes	2	35,224,000	31,927,204
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		28,396,145	27,890,694	11/25/2022	12/31/2038	Currency Swap			L05270-YY-0	BEIP S.a.r.l - 2022 EUR Fixed Senior Term Loan	2	28,396,145	27,890,694
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		16,298,596	14,256,278	11/25/2022	12/31/2038	Currency Swap			T06552-YY-2	Autostrada Wielkopolska Senior Secured	1	16,298,596	14,256,278
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	69,616,475	69,665,611	61,732,644	11/25/2022	12/31/2036	Currency Swap		1,678,652	66815P-AB-6	Northwestern Hydro Acqui Senior Secured Notes	2	69,665,611	60,053,992
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	11,580,492	15,064,869	10,283,539	11/25/2022	11/15/2034	Currency Swap		(527,749)	J3891#-AB-8	Lilly Japan Financing Go Senior Note Series B	1	15,064,869	10,811,288
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	29,864,118	30,687,687	26,000,696	11/29/2022	11/25/2030	Currency Swap		517,149	C3298#-AC-4	ALS Canada Limited Senior Unsecured Notes	2	30,687,687	25,483,547
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	10,311,589	12,612,823	10,667,532	11/29/2022	01/07/2032	Currency Swap		195,595	763169-D8-5	Richardson International Senior Secured Debentures Series 2021-2 (CAD)	2	12,612,823	10,471,937
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	77,746,500	84,846,190	37,993,018	11/30/2022	11/24/2056	Currency Swap		1,014,912	G5695*-AB-8	The MDS Estates Limited Senior Unsecured Notes	1	84,846,190	36,978,106
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	203,114,651	4,638,505	2,288,955	12/07/2022	06/30/2032	Currency Swap		(2,372,813)	R6236T-YY-0	Norspan LNG AS Fixed Rate Loan	1	4,638,505	4,661,768
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		38,882,674	35,292,742	12/07/2022	06/30/2032	Currency Swap			F1068#-AG-2	Bonduelle SCA Gtd Senior Note	2	38,882,674	35,292,742

S105.47

STATEMENT AS OF MARCH 31, 2023 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	
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		57,068,354	50,985,042	12/07/2022	06/30/2032	Currency Swap				K8553*-AA-0	Scandlines ApS Senior Secured	2	57,068,354	50,985,042
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		83,333,167	69,960,181	12/07/2022	06/30/2032	Currency Swap				189471-ZZ-1	Club Atletico de Madrid Euro Fac A Ln	2	83,333,167	69,960,181
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		6,851,874	7,109,426	12/07/2022	06/30/2032	Currency Swap				X7760Y-AB-6	Sisu Industrial Energy Solutions Oy	2	6,851,874	7,109,426
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		10,122,757	8,238,621	12/07/2022	06/30/2032	Currency Swap				189471-YY-5	Club Atletico de Madrid - 2022 EUR Fixed Senior Term Loan	2	10,122,757	8,238,621
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		6,688,825	5,625,750	12/07/2022	06/30/2032	Currency Swap				T06552-ZZ-8	AUTOSTRADA WIELKOPOLSKA TERM LOAN	1	6,688,825	5,625,750
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	48,089,172	47,510,640	46,062,584	12/08/2022	08/15/2028	Currency Swap		102,495		24906P-B*-9	DENTSPLY SIRONA Inc. Senior Note Ser	2	47,510,640	45,960,089
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	21,552,182	21,290,640	21,084,170	12/08/2022	08/15/2026	Currency Swap		(104,597)		24906P-A*-0	DENTSPLY SIRONA Inc. Senior Note Ser	2	21,290,640	21,188,767
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	16,711,867	18,548,650	15,907,585	12/09/2022	09/20/2027	Currency Swap		(80,923)		C4931*-BC-6	Keyera Partnership Gtd Senior Note	2	18,548,650	15,988,508
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	43,621,500	45,031,300	41,509,175	12/09/2022	06/30/2026	Currency Swap		4,120		Q3973*-AB-5	GPC Asia Pacific Holding Senior Unsecured Notes	2	45,031,300	41,505,055
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	156,371,780	30,476,160	27,469,880	12/09/2022	12/19/2025	Currency Swap		(2,103,959)		G4691*-AD-7	IMI PLC Senior Note	2	30,476,160	29,573,839
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	26,139,440	23,930,413	23,930,413	12/09/2022	12/19/2025	Currency Swap				F8568*-AE-9	Sonepar S.A. Senior Note Ser	2	26,139,440	23,930,413
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	13,111,020	12,115,419	12,115,419	12/09/2022	12/19/2025	Currency Swap				L8367*-AD-5	Shurgard Luxembourg Sarl Gtd Senior Note	2	13,111,020	12,115,419
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	65,869,790	64,961,369	64,961,369	12/09/2022	12/19/2025	Currency Swap				N7660Z-TT-0	SHV NEDERLAND BV EURO TERM LN	2	65,869,790	64,961,369
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	25,673,600	22,947,141	22,947,141	12/09/2022	12/19/2025	Currency Swap				47914Z-D8-7	Johnson Matthey PLC Senior Note Series A	1	25,673,600	22,947,141
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	3,985,450	4,246,230	3,297,749	12/12/2022	01/12/2032	Currency Swap		(783)		Q2600*-AE-0	Coates Group Pty Ltd Senior Note Series 2022-E (AUD)	2	4,246,230	3,298,532
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	16,574,646	19,568,676	14,810,959	12/12/2022	09/30/2033	Currency Swap		487,836		W9792*-AB-0	Vartan Gas AB - 12 Year Fixed Rate	2	19,568,676	14,323,123
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	5Z	29,639,898	19,568,676	15,358,443	12/12/2022	12/17/2031	Currency Swap		770,077		W9792*-AA-2	Vartan Gas AB - 10 Year Fixed Rate	2	19,568,676	14,588,366
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	5Z	14,823,111	11,505,459	11,505,459	12/12/2022	12/17/2031	Currency Swap				X7552*-AA-7	SISU Industrial Energy Solutions OY-SEK Fixed Term Loan	5	14,823,111	11,505,459
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	36,170,441	34,208,870	34,092,767	12/13/2022	12/11/2029	Currency Swap		516,499		116794-B8-6	Bruker Corporation Senior Unsecured Notes	2	34,208,870	33,576,268
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	56,021,899	17,818,107	16,686,564	12/13/2022	11/17/2026	Currency Swap		(4,719)		C4931*-BA-0	Keyera Corp Senior Note Ser	2	17,818,107	16,691,283
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	39,041,704	37,281,542	37,281,542	12/13/2022	11/17/2026	Currency Swap				C3346*-AA-8	FA MGT Limited Partnrsh Senior Secured	2	39,041,704	37,281,542
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	51,446,945	49,646,400	51,014,324	12/13/2022	10/08/2025	Currency Swap		(115,399)		Q1297*-AJ-7	CSL Finance Pty Ltd-GTD SENIOR NOTE SERIES B CHF	1	49,646,400	51,129,723
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	42,388,280	44,939,300	40,955,912	12/14/2022	08/27/2025	Currency Swap		(452,685)		K3752*-AH-1	Copenhagen Airports A/S-SENIOR NOTE	2	44,939,300	41,408,597
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	15,496,055	19,219,425	15,170,287	12/14/2022	03/15/2027	Currency Swap		(532,548)		G294A*-AD-1	Dyson Finance Limited Gtd Senior Note	1	19,219,425	15,702,835
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	3Z	24,566,000	22,659,175	24,616,714	12/14/2022	05/02/2025	Currency Swap		44,194		104974-ZZ-6	Arqiva Broadcast Parent Limited - GBP Subordinated Term Loan	3	22,659,175	24,572,520
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	3Z		508,140	300,599	12/14/2022	05/02/2025	Currency Swap				G2711*-AA-7	Curo Places Ltd. Senior Secured Notes	1	508,140	300,599
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	3Z		9,759,475	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	9,759,475	10,000,000
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z	100,581,390	32,559,717	25,040,263	12/14/2022	08/28/2025	Currency Swap		139,700		G6750*-AC-6	1887 CO LTD GBP SER C SR SECND NT Ser	2	32,559,717	24,900,563
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		25,973,783	20,015,338	12/14/2022	08/28/2025	Currency Swap				G294A*-AA-7	Dyson Finance Limited Senior Note Ser	1	25,973,783	20,015,338

S105.48

STATEMENT AS OF MARCH 31, 2023 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	
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		24,726,987	19,313,969	12/14/2022	08/28/2025	Currency Swap				G9302#-AA-3	University of West Londo Senior Secured	2	24,726,987	19,313,969
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		19,502,195	16,471,698	12/14/2022	08/28/2025	Currency Swap				G1696#-BK-1	Bunzl Finance plc-GTD SENIOR NOTE SERIES C -GBP	2	19,502,195	16,471,698
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		14,692,545	14,421,635	12/14/2022	08/28/2025	Currency Swap				G3301*-AA-1	FIL Limited Senior Unsecured Notes	2	14,692,545	14,421,635
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		20,000,000	26,392,430			Currency Swap			(1,035,026)	G8356*-AA-4	Spirax-Sarco Engineering Senior Unsecured	2	26,392,430	23,780,187
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		18,445,000	14,704,639	06/27/2023	06/27/2030	Currency Swap		450,537		877409-AA-1	Taylor Wimpey PLC Senior Notes	2	14,704,639	14,379,077
Awaiting PPN	Evergreen basket of USD Fixed Rate ABS Bank Loans and Corporate Bonds	2Z		15,948,967	11,730,922	06/27/2023	06/27/2030	Currency Swap				Z03502-21-3	Perusahaan Listrik Negar-SENIOR UNSECURED	2	15,948,967	11,730,922
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z	82,552,141	39,225,449	42,740,097	02/24/2023	02/26/2025	TRS Bond Index		3,416,937		48661C-AA-0	Rad CLO 7 Ltd-RAD 2020-7A A1	1	39,225,449	39,323,160
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		29,677,967	29,280,840	02/24/2023	02/26/2025	TRS Bond Index				14316W-AA-7	Carlyle Global Market St-CGMS 2021-7A A1	1	29,677,967	29,280,840
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		24,935,460	24,960,850	02/24/2023	02/26/2025	TRS Bond Index				40639G-AA-7	Halseypoint Clo 6 Ltd-HLSY 2022-6A A1	1	24,935,460	24,960,850
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		13,310,000	13,950,681	02/22/2024	02/22/2034	Currency Swap		133,256		912810-QK-7	US TREASURY N/B-BOND	1	13,950,681	15,391,407
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		2,097,333	2,790,136	04/04/2023	03/05/2038	Currency Swap		27,568		912810-QK-7	US TREASURY N/B-BOND	1	2,790,136	3,078,281
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		38,045,000	39,061,907	05/31/2023	06/30/2043	Currency Swap		(158,357)		912810-QK-7	US TREASURY N/B-BOND	1	39,061,907	43,095,940
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		27,175,000	27,901,362	05/31/2023	06/30/2047	Currency Swap		(170,967)		912810-QK-7	US TREASURY N/B-BOND	1	27,901,362	30,782,814
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		52,420,800	51,569,940	02/08/2023	10/01/2052	Currency Swap		1,879,297		09778P-AA-6	Bon Secours Mercy Health Senior Secured Notes	1	51,569,940	52,604,788
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		5,051,171	5,000,000	02/08/2023	10/01/2052	Currency Swap				81809#-MN-6	17 Capital Fund 5 Partners Fund Borrower Limited - Term Loan Facility	1	5,051,171	5,000,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		30,085,000	30,815,000	02/08/2023	02/01/2053	Currency Swap		(747,520)		G7150*-AB-2	Plus Dane Housing Limite Senior Secured Notes (Delayed Tranche)	1	30,815,000	18,107,817
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		17,952,000	18,600,908	05/22/2023	05/22/2033	Currency Swap		194,878		912810-QK-7	US TREASURY N/B-BOND	1	18,600,908	20,521,876
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		36,630,000	37,158,000	03/31/2023	03/31/2033	Currency Swap		(222,576)			Wireless Infrastructure Senior Secured Notes	2	37,158,000	37,044,000
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		58,888,836	59,651,975	03/21/2023	04/24/2023	Currency Forward		490,325		91282C-FP-1	United States Treasury N-UNSECURED	1	59,651,975	60,468,750
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		169,165	994,200	03/24/2023	04/24/2023	Currency Forward		(1,550)		91282C-FP-1	United States Treasury N-UNSECURED	1	994,200	1,007,813
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corporate Bonds	1Z		69,201,121	70,683,451	03/21/2023	03/27/2026	Currency Forward		(195,933)		912810-QK-7	US TREASURY N/B-BOND	1	70,683,451	77,983,129
999999999 - Totals				39,052,997,821	29,893,060,372	XXX	XXX	XXX	(597,900)	(4,850,565,371)	XXX	XXX	XXX	XXX	39,053,595,721	34,743,625,743

S105.49

STATEMENT AS OF MARCH 31, 2023 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	187	31,264,152,520							187	31,264,152,520
2. Add: Opened or Acquired Transactions.....	15	488,526,396							15	488,526,396
3. Add: Increases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
4. Less: Closed or Disposed of Transactions.....	2	60,000,000							2	60,000,000
5. Less: Positions Disposed of for Failing Effectiveness Criteria.....										
6. Less: Decreases in Replication (Synthetic Asset) Transactions Statement Value	XXX	16,274,052	XXX		XXX		XXX		XXX	16,274,052
7. Ending Inventory	200	31,676,404,864							200	31,676,404,864

STATEMENT AS OF MARCH 31, 2023 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.....	7,493,111,294
2. Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance.....	.....
3. Total (Line 1 plus Line 2)	7,493,111,294
4. Part D, Section 1, Column 6	19,323,197,338
5. Part D, Section 1, Column 7	(11,728,372,525)
6. Total (Line 3 minus Line 4 minus Line 5)	(101,713,519)
	Fair Value Check
7. Part A, Section 1, Column 16	3,424,053,985
8. Part B, Section 1, Column 13	101,713,519
9. Total (Line 7 plus Line 8)	3,525,767,504
10. Part D, Section 1, Column 9	19,463,611,031
11. Part D, Section 1, Column 10	(15,937,843,527)
12. Total (Line 9 minus Line 10 minus Line 11) .....	.....
	Potential Exposure Check
13. Part A, Section 1, Column 21	5,203,880,070
14. Part B, Section 1, Column 20	146,849,766
15. Part D, Section 1, Column 12	5,350,729,836
16. Total (Line 13 plus Line 14 minus Line 15) .....	.....

STATEMENT AS OF MARCH 31, 2023 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE E - PART 2 - VERIFICATION

(Cash Equivalents)

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	4,623,151,857	1,774,108,873
2. Cost of cash equivalents acquired	66,960,134,660	208,610,013,923
3. Accrual of discount	64,510,474	
4. Unrealized valuation increase (decrease)	4,563	46,497,527
5. Total gain (loss) on disposals	(366,398)	(4,778,566)
6. Deduct consideration received on disposals	67,381,283,479	205,808,809,317
7. Deduct amortization of premium		
8. Total foreign exchange change in book/adjusted carrying value		6,119,417
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)	4,266,151,676	4,623,151,857
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	4,266,151,676	4,623,151,857