

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSETS

	Current Year			Prior Year
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	4 Net Admitted Assets
1. Bonds (Schedule D)	101,906,630,889		101,906,630,889	97,079,123,131
2. Stocks (Schedule D):				
2.1 Preferred stocks	748,884,136		748,884,136	744,092,065
2.2 Common stocks	18,155,813,032	189,047	18,155,623,985	12,827,375,153
3. Mortgage loans on real estate (Schedule B):				
3.1 First liens	27,472,894,866		27,472,894,866	23,623,807,529
3.2 Other than first liens				
4. Real estate (Schedule A):				
4.1 Properties occupied by the company (less \$	209,287,678		209,287,678	195,523,677
encumbrances)				
4.2 Properties held for the production of income (less				
\$924,379,045 encumbrances)	148,924,938		148,924,938	272,704,758
4.3 Properties held for sale (less \$				
encumbrances)				20,078,118
5. Cash (\$205,877,895, Schedule E - Part 1), cash equivalents				
(\$2,428,048,838, Schedule E - Part 2) and short-term				
investments (\$1,159,172,265, Schedule DA)	3,793,098,998		3,793,098,998	4,318,003,746
6. Contract loans (including \$ premium notes)	14,725,436,175	529,101	14,724,907,074	13,873,247,826
7. Derivatives (Schedule DB)	12,063,706,294		12,063,706,294	8,741,308,632
8. Other invested assets (Schedule BA)	9,072,179,122	60,352,690	9,011,826,432	8,599,455,873
9. Receivables for securities	2,037,001,924		2,037,001,924	941,182,855
10. Securities lending reinvested collateral assets (Schedule DL)				
11. Aggregate write-ins for invested assets				
12. Subtotals, cash and invested assets (Lines 1 to 11)	190,333,858,052	61,070,838	190,272,787,214	171,235,903,363
13. Title plants less \$ charged off (for Title insurers				
only)				
14. Investment income due and accrued	2,695,604,061	9,061,926	2,686,542,135	3,018,299,945
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	169,242,091	2,756,900	166,485,191	164,205,761
15.2 Deferred premiums and agents' balances and installments booked but				
deferred and not yet due (including \$				
earned but unbilled premiums)	848,612,345		848,612,345	732,697,836
15.3 Accrued retrospective premiums (\$) and				
contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	39,232,872	2,092,606	37,140,266	72,095,690
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	40,267,993		40,267,993	31,016,552
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon				611,902,202
18.2 Net deferred tax asset	1,108,192,574		1,108,192,574	982,725,684
19. Guaranty funds receivable or on deposit	16,042,391		16,042,391	17,736,925
20. Electronic data processing equipment and software	239,550,795	223,033,867	16,516,928	15,645,327
21. Furniture and equipment, including health care delivery assets				
(\$)	67,229,638	67,229,638		
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	80,437,664		80,437,664	81,873,078
24. Health care (\$) and other amounts receivable				
25. Aggregate write-ins for other than invested assets	3,856,021,777	1,110,459,769	2,745,562,008	2,204,643,872
26. Total assets excluding Separate Accounts, Segregated Accounts and				
Protected Cell Accounts (Lines 12 to 25)	199,494,292,253	1,475,705,544	198,018,586,709	179,168,746,235
27. From Separate Accounts, Segregated Accounts and Protected Cell				
Accounts	70,230,699,186		70,230,699,186	64,478,100,585
28. Total (Lines 26 and 27)	269,724,991,439	1,475,705,544	268,249,285,895	243,646,846,820
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page				
1199. Totals (Lines 1101 thru 1103 plus 1198)(Line 11 above)				
2501. Corporate owned life insurance	2,289,698,680		2,289,698,680	2,115,001,571
2502. Fully refundable deposits, prepayments and miscellaneous assets	467,378,442	80,304,461	387,073,981	22,091,419
2503. Employee insurance plan advances	41,130,504	13,617	41,116,887	40,908,972
2598. Summary of remaining write-ins for Line 25 from overflow page	1,057,814,151	1,030,141,691	27,672,460	26,641,910
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)	3,856,021,777	1,110,459,769	2,745,562,008	2,204,643,872

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LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Year	2 Prior Year
1. Aggregate reserve for life contracts \$127,404,910,418 (Exh. 5, Line 9999999) less \$ included in Line 6.3 (including \$137,653,712 Modco Reserve)	127,404,910,418	119,010,301,284
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	3,074,252,813	2,967,573,431
3. Liability for deposit-type contracts (Exhibit 7, Line 14, Col. 1) (including \$ Modco Reserve)	15,296,773,875	14,369,907,287
4. Contract claims:		
4.1 Life (Exhibit 8, Part 1, Line 4.4, Col. 1 less sum of Cols. 9, 10 and 11)	395,457,118	408,860,759
4.2 Accident and health (Exhibit 8, Part 1, Line 4.4, sum of Cols. 9, 10 and 11)	28,571,378	27,487,143
5. Policyholders' dividends/refunds to members \$5,418,002 and coupons \$ due and unpaid (Exhibit 4, Line 10)	5,418,002	7,952,382
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)	1,678,330,958	1,704,768,185
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 \$11,937,645 accident and health premiums (Exhibit 1, Part 1, Col. 1, sum of lines 4 and 14)	38,780,694	32,700,041
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	10,737,816	10,424,232
9.3 Other amounts payable on reinsurance, including \$16,974,134 assumed and \$15,458,286 ceded	32,432,419	17,212,429
9.4 Interest maintenance reserve (IMR, Line 6)	438,181,103	
10. Commissions to agents due or accrued-life and annuity contracts \$17,401,523 accident and health \$307,411 and deposit-type contract funds \$13,558,284	31,267,218	7,506,755
11. Commissions and expense allowances payable on reinsurance assumed	3,509,387	4,994,328
12. General expenses due or accrued (Exhibit 2, Line 12, Col. 7)	1,213,851,888	1,095,534,762
13. Transfers to Separate Accounts due or accrued (net) (including \$(123,457,757) accrued for expense allowances recognized in reserves, net of reinsured allowances)	(134,499,953)	(146,648,819)
14. Taxes, licenses and fees due or accrued, excluding federal income taxes (Exhibit 3, Line 9, Col. 6)	74,722,727	50,761,771
15.1 Current federal and foreign income taxes, including \$291,106,056 on realized capital gains (losses)	22,586,267	3,434
15.2 Net deferred tax liability		
16. Unearned investment income	194,435,521	175,081,674
17. Amounts withheld or retained by reporting entity as agent or trustee	38,020,441	35,906,971
18. Amounts held for agents' account, including \$ agents' credit balances	392,163,578	333,630,886
19. Remittances and items not allocated	777,472,078	890,822,640
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above	198,284,548	179,825,843
22. Borrowed money \$249,869,729 and interest thereon \$	249,869,729	249,786,188
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve (AVR, Line 16, Col. 7)	4,670,184,316	3,306,820,067
24.02 Reinsurance in unauthorized and certified (\$) companies	162,371	189,342
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers		
24.04 Payable to parent, subsidiaries and affiliates	32,575	(17,130,060)
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance	4,252,254,372	4,098,648,265
24.08 Derivatives	9,608,418,011	4,911,983,117
24.09 Payable for securities		81,963,034
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	9,129,094,870	9,742,092,195
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	179,125,676,538	163,558,959,566
27. From Separate Accounts Statement	70,230,699,186	64,478,100,585
28. Total liabilities (Lines 26 and 27)	249,356,375,724	228,037,060,151
29. Common capital stock		
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds		
32. Surplus notes	2,235,399,709	2,268,096,211
33. Gross paid in and contributed surplus (Page 3, Line 33, Col. 2 plus Page 4, Line 51.1, Col. 1)		
34. Aggregate write-ins for special surplus funds	3,256,298	3,250,000
35. Unassigned funds (surplus)	16,654,254,164	13,338,440,458
36. Less treasury stock, at cost:		
36.1 shares common (value included in Line 29 \$)		
36.2 shares preferred (value included in Line 30 \$)		
37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement)	18,892,910,171	15,609,786,669
38. Totals of Lines 29, 30 and 37 (Page 4, Line 55)	18,892,910,171	15,609,786,669
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	268,249,285,895	243,646,846,820
DETAILS OF WRITE-INS		
2501. Repurchase agreements	3,845,289,040	4,803,587,340
2502. Derivative collateral	3,285,024,061	2,945,652,368
2503. Derivative accrued interest	1,894,857,257	1,898,874,859
2598. Summary of remaining write-ins for Line 25 from overflow page	103,924,512	93,977,628
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)	9,129,094,870	9,742,092,195
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page		
3199. Totals (Lines 3101 thru 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. Miscellaneous	6,298	
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 thru 3403 plus 3498)(Line 34 above)	3,256,298	3,250,000

SUMMARY OF OPERATIONS

	1 Current Year	2 Prior Year
1. Premiums and annuity considerations for life and accident and health contracts (Exhibit 1, Part 1, Line 20.4, Col. 1, less Col. 11)	22,752,212,483	22,905,684,993
2. Considerations for supplementary contracts with life contingencies	28,590,209	23,694,419
3. Net investment income (Exhibit of Net Investment Income, Line 17)	7,682,463,670	7,709,838,336
4. Amortization of Interest Maintenance Reserve (IMR, Line 5)	10,699,953	63,947,853
5. Separate Accounts net gain from operations excluding unrealized gains or losses	20	20
6. Commissions and expense allowances on reinsurance ceded (Exhibit 1, Part 2, Line 26.1, Col. 1)	287,604,065	183,575,292
7. Reserve adjustments on reinsurance ceded	(33,004,043)	(120,338,587)
8. Miscellaneous Income:		
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	402,141,262	393,312,833
8.2 Charges and fees for deposit-type contracts		
8.3 Aggregate write-ins for miscellaneous income	724,320,590	561,716,288
9. Total (Lines 1 to 8.3)	31,855,028,189	31,721,431,447
10. Death benefits	2,032,965,426	1,801,487,193
11. Matured endowments (excluding guaranteed annual pure endowments)	17,173,120	15,155,252
12. Annuity benefits (Exhibit 8, Part 2, Line 6.4, Cols. 4 + 8)	2,198,346,477	2,004,550,137
13. Disability benefits and benefits under accident and health contracts	373,206,297	369,893,030
14. Coupons, guaranteed annual pure endowments and similar benefits		
15. Surrender benefits and withdrawals for life contracts	19,529,326,111	18,213,757,819
16. Group conversions		
17. Interest and adjustments on contract or deposit-type contract funds	416,137,455	426,166,626
18. Payments on supplementary contracts with life contingencies	17,210,071	14,836,103
19. Increase in aggregate reserves for life and accident and health contracts	8,429,331,327	7,507,800,736
20. Totals (Lines 10 to 19)	33,013,696,284	30,353,646,896
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only) (Exhibit 1, Part 2, Line 31, Col. 1)	995,608,854	978,144,683
22. Commissions and expense allowances on reinsurance assumed (Exhibit 1, Part 2, Line 26.2, Col. 1)	71,517,738	83,452,865
23. General insurance expenses and fraternal expenses (Exhibit 2, Line 10, Cols. 1, 2, 3, 4 and 6)	2,387,273,112	2,366,077,039
24. Insurance taxes, licenses and fees, excluding federal income taxes (Exhibit 3, Line 7, Cols. 1 + 2 + 3 + 5)	271,331,349	257,788,721
25. Increase in loading on deferred and uncollected premiums	(11,544,534)	(27,564,856)
26. Net transfers to or (from) Separate Accounts net of reinsurance	(6,020,187,105)	(3,008,428,954)
27. Aggregate write-ins for deductions	(969,782,095)	(1,031,463,367)
28. Totals (Lines 20 to 27)	29,737,913,603	29,971,653,027
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	2,117,114,586	1,749,778,420
30. Dividends to policyholders and refunds to members	1,671,109,490	1,695,253,440
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	446,005,096	54,524,980
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	(14,965,399)	(168,384,146)
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)	460,970,495	222,909,126
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$51,344,206 (excluding taxes of \$64,426,605 transferred to the IMR)	(36,723,981)	(1,044,256,266)
35. Net income (Line 33 plus Line 34)	424,246,514	(821,347,140)
CAPITAL AND SURPLUS ACCOUNT		
36. Capital and surplus, December 31, prior year (Page 3, Line 38, Col. 2)	15,609,786,669	15,705,216,653
37. Net income (Line 35)	424,246,514	(821,347,140)
38. Change in net unrealized capital gains (losses) less capital gains tax of \$(257,496,856)	3,433,085,448	1,778,861,989
39. Change in net unrealized foreign exchange capital gain (loss)	282,236,801	(594,081,445)
40. Change in net deferred income tax	(55,178,457)	289,824,267
41. Change in nonadmitted assets	747,091,623	(716,309,297)
42. Change in liability for reinsurance in unauthorized and certified companies	26,971	15,137
43. Change in reserve on account of change in valuation basis, (increase) or decrease		
44. Change in asset valuation reserve	(1,363,364,249)	(99,750,481)
45. Change in treasury stock (Page 3, Lines 36.1 and 36.2, Col. 2 minus Col. 1)		
46. Surplus (contributed to) withdrawn from Separate Accounts during period		3,153
47. Other changes in surplus in Separate Accounts Statement		(3,153)
48. Change in surplus notes	(32,696,502)	468,924
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	(152,324,647)	66,888,062
54. Net change in capital and surplus for the year (Lines 37 through 53)	3,283,123,502	(95,429,984)
55. Capital and surplus, December 31, current year (Lines 36 + 54) (Page 3, Line 38)	18,892,910,171	15,609,786,669
DETAILS OF WRITE-INS		
08.301. Management and administrative fees	296,192,756	284,985,025
08.302. Change in corporate owned life insurance	174,697,108	10,599,028
08.303. Experience refunds on reinsurance contracts	139,598,736	132,207,033
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	113,831,990	133,925,202
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398)(Line 8.3 above)	724,320,590	561,716,288
2701. Change in reserves due to reinsurance agreement	(1,271,061,635)	(1,221,343,804)
2702. Reinsurance ceded adjustment	(13,812,078)	(14,545,497)
2703. Market value adjustment transfer	(8,147,124)	(2,947,226)
2798. Summary of remaining write-ins for Line 27 from overflow page	323,238,742	207,373,160
2799. Totals (Lines 2701 thru 2703 plus 2798)(Line 27 above)	(969,782,095)	(1,031,463,367)
5301. Other changes in surplus	(70,447,207)	(46,534,072)
5302. Change in minimum pension liability	(68,071,660)	127,967,631
5303. Reinsurance ceded adjustment	(13,812,078)	(14,545,497)
5398. Summary of remaining write-ins for Line 53 from overflow page	6,298	
5399. Totals (Lines 5301 thru 5303 plus 5398)(Line 53 above)	(152,324,647)	66,888,062

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CASH FLOW

	1	2
	Current Year	Prior Year
Cash from Operations		
1. Premiums collected net of reinsurance	21,735,866,524	22,608,709,332
2. Net investment income	8,303,151,927	6,761,697,857
3. Miscellaneous income	1,243,499,726	1,015,740,250
4. Total (Lines 1 through 3)	31,282,518,177	30,386,147,439
5. Benefit and loss related payments	24,526,302,847	22,915,622,389
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(5,814,454,588)	(3,090,655,493)
7. Commissions, expenses paid and aggregate write-ins for deductions	2,545,220,039	2,702,636,293
8. Dividends paid to policyholders	1,700,081,097	1,588,224,238
9. Federal and foreign income taxes paid (recovered) net of \$ 38,236,967 tax on capital gains (losses)	(551,870,216)	(162,241,559)
10. Total (Lines 5 through 9)	22,405,279,179	23,953,585,868
11. Net cash from operations (Line 4 minus Line 10)	8,877,238,998	6,432,561,571
Cash from Investments		
12. Proceeds from investments sold, matured or repaid:		
12.1 Bonds	22,233,455,081	19,213,999,109
12.2 Stocks	844,400,761	2,708,586,089
12.3 Mortgage loans	2,418,102,264	2,330,683,301
12.4 Real estate	191,891,888	275,807,610
12.5 Other invested assets	1,206,661,774	2,155,259,323
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	(12,802,156)	13,072,429
12.7 Miscellaneous proceeds	12,959,009	71,696,828
12.8 Total investment proceeds (Lines 12.1 to 12.7)	26,894,668,621	26,769,104,689
13. Cost of investments acquired (long-term only):		
13.1 Bonds	25,866,569,075	26,525,627,843
13.2 Stocks	1,647,109,000	895,103,810
13.3 Mortgage loans	6,210,548,424	3,698,401,345
13.4 Real estate	119,647,233	(233,372,268)
13.5 Other invested assets	1,368,483,874	1,652,995,507
13.6 Miscellaneous applications	384,097,084	724,893,581
13.7 Total investments acquired (Lines 13.1 to 13.6)	35,596,454,690	33,263,649,818
14. Net increase (decrease) in contract loans and premium notes	851,895,379	545,869,329
15. Net cash from investments (Line 12.8 minus Line 13.7 minus Line 14)	(9,553,681,448)	(7,040,414,458)
Cash from Financing and Miscellaneous Sources		
16. Cash provided (applied):		
16.1 Surplus notes, capital notes	(39,146,661)	
16.2 Capital and paid in surplus, less treasury stock		
16.3 Borrowed funds	187,979	(234,576)
16.4 Net deposits on deposit-type contracts and other insurance liabilities	867,590,741	86,596,125
16.5 Dividends to stockholders		
16.6 Other cash provided (applied)	(677,094,357)	1,259,929,462
17. Net cash from financing and miscellaneous sources (Lines 16.1 to 16.4 minus Line 16.5 plus Line 16.6)	151,537,702	1,346,291,011
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)	(524,904,748)	738,438,124
19. Cash, cash equivalents and short-term investments:		
19.1 Beginning of year	4,318,003,746	3,579,565,622
19.2 End of year (Line 18 plus Line 19.1)	3,793,098,998	4,318,003,746

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

20.0001. Bonds received as consideration for group annuity contract	1,241,901,840	292,360,873
20.0002. Premium income recognized for a group annuity contracts	916,910,574	292,360,873
20.0003. Bond conversions and refinancing	1,025,338,604	1,113,351,521
20.0004. Change in market value of COLI	175,204,250	11,073,742
20.0005. Transfer of mortgage loans to other than invested assets	96,116,616	244,153,148
20.0006. Stock conversion	67,534,530	128,169,724
20.0007. Net investment income payment in-kind bonds	5,399,567	9,227,709
20.0008. Dividend reinvestment	2,891,602	11,434,061
20.0009. Stock distributions to other than invested assets	268,168	
20.0010. Net investment income payment in-kind stocks	78,219	460,873
20.0011. Transfer of common stocks - subsidiaries and affiliated to other than invested assets	52,176	1,333,718,935
20.0012. Other than invested assets contributed to insurance road LLC		476,114,707
20.0013. Transfers from bonds to other than invested assets		199,694,466

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

20.0014. Transfer of bonds to other than invested assets		81,111,847
20.0015. Bonds and common stock contributed to EM Opportunities LLC		74,063,408
20.0016. Transfer of other than invested assets to real estate		56,615,096
20.0017. Return of capital		105,953

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - SUMMARY

	1	2	3	4	5	6	7	8	9
	Total	Individual Life	Group Life	Individual Annuities	Group Annuities	Accident and Health	Fraternal	Other Lines of Business	YRT Mortality Risk Only
1. Premiums and annuity considerations for life and accident and health contracts	22,752,212,483	8,167,988,203	67,707,664	1,804,124,366	12,039,080,644	673,311,606			
2. Considerations for supplementary contracts with life contingencies	28,590,209	XXX	XXX	28,590,209		XXX	XXX		XXX
3. Net investment income	7,682,463,670	4,222,117,417	536,034,195	821,391,223	1,872,573,935	230,346,900			
4. Amortization of Interest Maintenance Reserve (IMR)	10,699,953	17,451,384	(198,553)	571,463	(9,314,249)	2,189,908			
5. Separate Accounts net gain from operations excluding unrealized gains or losses							XXX		
6. Commissions and expense allowances on reinsurance ceded	287,604,065	201,936,379		47,992,747	24,909,175	12,765,764	XXX		
7. Reserve adjustments on reinsurance ceded	(33,004,043)	(42,091,179)	9,087,136				XXX		
8. Miscellaneous Income:									
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	402,141,262	46,721,758	19,601,836	188,963,212	146,854,456		XXX		
8.2 Charges and fees for deposit-type contracts						XXX	XXX		
8.3 Aggregate write-ins for miscellaneous income	724,320,590	294,472,260	(1,634,231)	39,805,888	388,805,152	2,871,521			
9. Totals (Lines 1 to 8.3)	31,855,028,189	12,908,596,222	630,598,047	2,931,439,108	14,462,909,113	921,485,699			
10. Death benefits	2,032,964,463	1,879,761,714	153,202,749			XXX	XXX		
11. Matured endowments (excluding guaranteed annual pure endowments)	17,173,120	17,173,120				XXX	XXX		
12. Annuity benefits	2,198,346,477	XXX	XXX	686,819,514	1,511,526,963	XXX	XXX		XXX
13. Disability benefits and benefits under accident and health contracts	373,207,260	26,752,304	180,107			346,274,849	XXX		
14. Coupons, guaranteed annual pure endowments and similar benefits							XXX		
15. Surrender benefits and withdrawals for life contracts	19,529,326,111	1,594,453,389	107,353,960	1,880,495,006	15,947,023,756	XXX	XXX		
16. Group conversions							XXX		
17. Interest and adjustments on contract or deposit-type contract funds	416,137,455	28,728,736	604,957	71,366,768	315,433,091	3,903	XXX		
18. Payments on supplementary contracts with life contingencies	17,210,071			17,210,071		XXX	XXX		
19. Increase in aggregate reserves for life and accident and health contracts	8,429,331,327	5,745,703,691	314,787,360	549,288,725	1,712,872,168	106,679,383	XXX		
20. Totals (Lines 10 to 19)	33,013,696,284	9,292,572,954	576,129,133	3,205,180,084	19,486,855,978	452,958,135	XXX		
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	995,608,854	683,396,480	15,101,223	123,627,676	89,927,664	83,555,811			XXX
22. Commissions and expense allowances on reinsurance assumed	71,517,738	8,252,759	6,105,609	57,159,370			XXX		
23. General insurance expenses and fraternal expenses	2,387,273,112	1,333,021,402	51,776,051	191,406,533	610,570,470	200,498,656			
24. Insurance taxes, licenses and fees, excluding federal income taxes	271,331,349	230,247,692	2,106,976	645,425	18,633,174	19,698,082			
25. Increase in loading on deferred and uncollected premiums	(11,544,534)	(11,449,613)				(94,921)	XXX		
26. Net transfers to or (from) Separate Accounts net of reinsurance	(6,020,187,105)	10,748,742	(32,654,726)	(1,008,485,926)	(4,989,795,195)		XXX		
27. Aggregate write-ins for deductions	(969,782,095)	286,113,969	2,267,733	2,962,282	(1,262,296,490)	1,170,411			
28. Totals (Lines 20 to 27)	29,737,913,603	11,832,904,385	620,831,999	2,515,336,074	14,011,054,971	757,786,174			
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	2,117,114,586	1,075,691,837	9,766,048	416,103,034	451,854,142	163,699,525			
30. Dividends to policyholders and refunds to members	1,671,109,490	1,644,479,275	1,335,530	1,440,923		23,853,762	XXX		
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	446,005,096	(568,787,438)	8,430,518	414,662,111	451,854,142	139,845,763			
32. Federal income taxes incurred (excluding tax on capital gains)	(14,965,399)	(168,010,268)	(10,358,704)	115,802,091	19,783,700	27,817,782			
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)	460,970,495	(400,777,170)	18,789,222	298,860,020	432,070,442	112,027,981			
34. Policies/certificates in force end of year	3,396,539	1,808,292	77,906	196,379	974,298	339,664	XXX		
DETAILS OF WRITE-INS									
08.301. Management and administrative fees	296,192,756	4,422,728	(2,285,899)	50,500	293,985,353	20,074			
08.302. Change in corporate owned life insurance	174,697,108	142,633,008	184,743	19,891,371	9,595,285	2,392,701			
08.303. Experience refunds on reinsurance contract	139,598,736	139,598,736							
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	113,831,990	7,817,788	466,925	19,864,017	85,224,514	458,746			
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	724,320,590	294,472,260	(1,634,231)	39,805,888	388,805,152	2,871,521			
2701. Change in reserves due to reinsurance agreement	(1,271,061,635)				(1,271,061,635)				
2702. Reinsurance ceded adjustment	(13,812,078)	(13,812,078)							
2703. Market value adjustment transfer	(8,147,124)				(8,147,124)				
2798. Summary of remaining write-ins for Line 27 from overflow page	323,238,742	299,926,047	2,267,733	2,962,282	16,912,269	1,170,411			
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	(969,782,095)	286,113,969	2,267,733	2,962,282	(1,262,296,490)	1,170,411			

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - INDIVIDUAL LIFE INSURANCE (b)

	1	2	3	4	5	6	7	8	9	10	11	12
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life With Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life (c)	Other Individual Life	YRT Mortality Risk Only
1. Premiums for life contracts (a)	8,167,988,203		6,436,777,629	77,609,111		1,287,463,985	220,523,300	125,527	53,263,402		92,225,249	
2. Considerations for supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3. Net investment income	4,222,117,417		3,318,057,796	(33,451,986)		623,686,743	212,908,320	(814,471)	6,834,469		94,896,546	
4. Amortization of Interest Maintenance Reserve (IMR)	17,451,384		13,060,572	179,675		5,373,816	(817,616)	5,571	23,732		(374,366)	
5. Separate Accounts net gain from operations excluding unrealized gains or losses												
6. Commissions and expense allowances on reinsurance ceded	201,936,379		56,484,863	133,029,735		6,265,082	3,201,837		2,954,740		122	
7. Reserve adjustments on reinsurance ceded	(42,091,179)		(1,099,260)			(2,333,777)			(38,658,142)			
8. Miscellaneous Income:												
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	46,721,758							107,794	46,613,964			
8.2 Charges and fees for deposit-type contracts												
8.3 Aggregate write-ins for miscellaneous income	294,472,260		172,431,227	(495,144)		115,833,252	3,478,465	(10,402)	1,407,393		1,827,469	
9. Totals (Lines 1 to 8.3)	12,908,596,222		9,995,712,827	176,871,391		2,036,289,101	439,294,306	(585,981)	72,439,558		188,575,020	
10. Death benefits	1,879,761,714		1,602,011,039	28,783,908		66,593,537	163,035,912	223,130	18,937,398		176,790	
11. Matured endowments (excluding guaranteed annual pure endowments)	17,173,120		1,173,120									
12. Annuity benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13. Disability benefits and benefits under accident and health contracts	26,752,304		1,211,150	9,949		66,439	111,638	5,076	214,705		25,133,347	
14. Coupons, guaranteed annual pure endowments and similar benefits												
15. Surrender benefits and withdrawals for life contracts	1,594,453,389		1,499,986,733	392,214		52,661,651	25,356,428	96,078	15,960,285			
16. Group conversions												
17. Interest and adjustments on contract or deposit-type contract funds	28,728,736		26,988,010	459,403		451,582	711,492	579	(51,662)		169,332	
18. Payments on supplementary contracts with life contingencies			9,645	(9,645)								
19. Increase in aggregate reserves for life and accident and health contracts	5,745,703,691		3,813,885,395	19,426,720		1,525,562,129	318,486,345	97,850	19,410,339		48,834,913	
20. Totals (Lines 10 to 19)	9,292,572,954		6,961,265,092	49,062,549		1,645,335,338	507,701,815	422,713	54,471,065		74,314,382	
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	683,396,480		553,780,582	42,411,025		47,220,572	21,559,660	72	7,433,584		10,990,985	XXX
22. Commissions and expense allowances on reinsurance assumed	8,252,759						8,252,759					
23. General insurance expenses	1,333,021,402		1,026,253,260	219,953,366		67,246,166	4,194,864	192,935	16,275,027		(1,094,216)	
24. Insurance taxes, licenses and fees, excluding federal income taxes	230,247,692		176,556,475	16,561,047		26,234,900	6,732,784	(2,006)	2,023,216		2,141,276	
25. Increase in loading on deferred and uncollected premiums	(11,449,613)		7,228,392	(19,803,141)				(27)			1,125,163	
26. Net transfers to or (from) Separate Accounts net of reinsurance	10,748,742							(148,152)	10,896,894			
27. Aggregate write-ins for deductions	286,113,969		109,367,792	(9,072,269)		193,234,356	(7,986,639)	(48,828)	(3,801,111)		4,420,668	
28. Totals (Lines 20 to 27)	11,832,904,385		8,834,451,593	299,112,577		1,979,271,332	540,455,243	416,707	87,298,675		91,898,258	
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	1,075,691,837		1,161,261,234	(122,241,186)		57,017,769	(101,160,937)	(1,002,688)	(14,859,117)		96,676,762	
30. Dividends to policyholders and refunds to members	1,644,479,275		1,643,104,762	1,373,998		620					(105)	
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	(568,787,438)		(481,843,528)	(123,615,184)		57,017,149	(101,160,937)	(1,002,688)	(14,859,117)		96,676,867	
32. Federal income taxes incurred (excluding tax on capital gains)	(168,010,268)		(227,303,756)	(4,119,492)		(6,903,280)	64,409,914	83,541	11,111,954		(5,289,149)	
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)	(400,777,170)		(254,539,772)	(119,495,692)		63,920,429	(165,570,851)	(1,086,229)	(25,971,071)		101,966,016	
34. Policies/certificates in force end of year	1,808,292		1,220,720	449,495		67,957	42,060	55	28,005			
DETAILS OF WRITE-INS												
08.301. Change in corporate owned life insurance	142,633,008		105,898,175	(121,306)		31,707,373	3,872,521	714	484,189		791,342	
08.302. Experience refunds on reinsurance contract	139,598,736		53,992,852			85,605,884						
08.303. Miscellaneous	6,159,354		8,018,892	(373,838)		(1,480,005)	(452,861)	(11,116)	(577,845)		1,036,127	
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	6,081,162		4,521,308				58,805		1,501,049			
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	294,472,260		172,431,227	(495,144)		115,833,252	3,478,465	(10,402)	1,407,393		1,827,469	
2701. Ceded income on funds withheld	204,914,037		2,975,420			201,938,617						
2702. Change in liability for employee/agent benefit plans	78,261,772		78,262,217			(417)	(17)				(11)	
2703. Miscellaneous charges to operations	16,750,238		28,130,155	(1,735,584)		(8,703,844)	(2,788,306)	(48,828)	(2,544,034)		4,420,679	
2798. Summary of remaining write-ins for Line 27 from overflow page	(13,812,078)		(7,336,685)			(7,336,685)	(5,218,316)		(1,257,077)			
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	286,113,969		109,367,792	(9,072,269)		193,234,356	(7,986,639)	(48,828)	(3,801,111)		4,420,668	

(a) Include premium amounts for preneed plans included in Line 1

(b) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

(c) Individual and Group Credit Life are combined and included on page. (Indicate whether included with Individual or Group.)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - GROUP LIFE INSURANCE (c)

	1	2	3	4	5	6	7	8	9
	Total	Whole Life	Term Life	Universal Life	Variable Life	Variable Universal Life	Credit Life (d)	Other Group Life (a)	YRT Mortality Risk Only
1. Premiums for life contracts ^(b)	67,707,664	35,786,617		5,664,072		25,624,155		632,820	
2. Considerations for supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3. Net investment income	536,034,195	515,316,136		7,363,317		13,354,742			
4. Amortization of Interest Maintenance Reserve (IMR)	(198,553)	(95,060)		(21,092)		(82,401)			
5. Separate Accounts net gain from operations excluding unrealized gains or losses									
6. Commissions and expense allowances on reinsurance ceded									
7. Reserve adjustments on reinsurance ceded	9,087,136					9,087,136			
8. Miscellaneous Income:									
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	19,601,836					19,601,836			
8.2 Charges and fees for deposit-type contracts									
8.3 Aggregate write-ins for miscellaneous income	(1,634,231)	150,834		157,174		(1,942,239)			
9. Totals (Lines 1 to 8.3)	630,598,047	551,158,527		13,163,471		65,643,229		632,820	
10. Death benefits	153,202,749	104,652,671		5,596,427		42,953,651			
11. Matured endowments (excluding guaranteed annual pure endowments)									
12. Annuity benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13. Disability benefits and benefits under accident and health contracts	180,107	74,182		48,504		55,403		2,018	
14. Coupons, guaranteed annual pure endowments and similar benefits									
15. Surrender benefits and withdrawals for life contracts	107,353,960	76,809,855		1,578,576		28,965,529			
16. Group conversions									
17. Interest and adjustments on contract or deposit-type contract funds	604,957	332,674		41,369		230,914			
18. Payments on supplementary contracts with life contingencies									
19. Increase in aggregate reserves for life and accident and health contracts	314,787,360	317,852,854		(1,900,649)		(1,349,845)		185,000	
20. Totals (Lines 10 to 19)	576,129,133	499,722,236		5,364,227		70,855,652		187,018	
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	15,101,223	10,045,204		1,365,229		3,395,945		294,845	XXX
22. Commissions and expense allowances on reinsurance assumed	6,105,609					6,105,609			
23. General insurance expenses	51,776,051	36,363,680		707,787		14,704,584			
24. Insurance taxes, licenses and fees, excluding federal income taxes	2,106,976	183,811		441,714		1,470,476		10,975	
25. Increase in loading on deferred and uncollected premiums									
26. Net transfers to or (from) Separate Accounts net of reinsurance	(32,654,726)					(32,654,726)			
27. Aggregate write-ins for deductions	2,267,733	1,341,108		333,412		593,213			
28. Totals (Lines 20 to 27)	620,831,999	547,656,039		8,212,369		64,470,753		492,838	
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	9,766,048	3,502,488		4,951,102		1,172,476		139,982	
30. Dividends to policyholders and refunds to members	1,335,530	1,335,530							
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	8,430,518	2,166,958		4,951,102		1,172,476		139,982	
32. Federal income taxes incurred (excluding tax on capital gains)	(10,358,704)	(6,382,229)		(841,699)		(3,177,667)		42,891	
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)	18,789,222	8,549,187		5,792,801		4,350,143		97,091	
34. Policies/certificates in force end of year	77,906	43,373		6,843		27,690			
DETAILS OF WRITE-INS									
08.301. Management and administrative fees	(2,285,899)					(2,285,899)			
08.302. Miscellaneous	292,109	90,893		72,154		129,062			
08.303. Change in corporate owned life insurance	184,743	59,941		85,020		39,782			
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	174,816					174,816			
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	(1,634,231)	150,834		157,174		(1,942,239)			
2701. Miscellaneous charges to operations	2,267,733	1,341,108		333,412		593,213			
2702.									
2703.									
2798. Summary of remaining write-ins for Line 27 from overflow page									
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	2,267,733	1,341,108		333,412		593,213			

(a) Includes the following amounts for FEGLI/SGLI: Line 1 _____, Line 10 _____, Line 16 _____, Line 23 _____, Line 24 _____

(b) Include premium amounts for preneed plans included in Line 1 _____

(c) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected. _____

(d) Individual and Group Credit Life are combined and included on _____ page. (Indicate whether included with Individual or Group.)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - INDIVIDUAL ANNUITIES (a)

	1 Total	Deferred				6 Life Contingent Payout (Immediate and Annuities)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities with Guarantees	5 Variable Annuities Without Guarantees		
1. Premiums for individual annuity contracts	1,804,124,366	855,081,255		437,154,731	825,023	511,063,357	
2. Considerations for supplementary contracts with life contingencies	28,590,209	XXX	XXX	XXX	XXX	28,590,209	XXX
3. Net investment income	821,391,223	291,059,442		77,461,066	(3,984,964)	326,868,913	129,986,766
4. Amortization of Interest Maintenance Reserve (IMR)	571,463	(1,602,562)		(373,062)	27,010	2,520,077	
5. Separate Accounts net gain from operations excluding unrealized gains or losses							
6. Commissions and expense allowances on reinsurance ceded	47,992,747	47,992,747					
7. Reserve adjustments on reinsurance ceded							
8. Miscellaneous Income:							
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	188,963,212			188,558,997	747,652	(343,437)	
8.2 Charges and fees for deposit-type contracts							
8.3 Aggregate write-ins for miscellaneous income	39,805,888	3,618,943		20,390,865	217,964	15,578,116	
9. Totals (Lines 1 to 8.3)	2,931,439,108	1,196,149,825		723,192,597	(2,167,315)	884,277,235	129,986,766
10. Death benefits							
11. Matured endowments (excluding guaranteed annual pure endowments)							
12. Annuity benefits	686,819,514	89,077,987		115,230,282	2,437,699	480,073,546	
13. Disability benefits and benefits under accident and health contracts							
14. Coupons, guaranteed annual pure endowments and similar benefits							
15. Surrender benefits and withdrawals for life contracts	1,880,495,006	470,485,682		1,400,397,215	9,906,500	(294,391)	
16. Group conversions							
17. Interest and adjustments on contract or deposit-type contract funds	71,366,768	396,511		153,773	(4,184)	635,837	70,184,831
18. Payments on supplementary contracts with life contingencies	17,210,071					17,210,071	
19. Increase in aggregate reserves for life and accident and health contracts	549,288,725	409,414,702		(205,794,165)	274,920	345,393,268	
20. Totals (Lines 10 to 19)	3,205,180,084	969,374,882		1,309,987,105	12,614,935	843,018,331	70,184,831
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	123,627,676	53,197,722		33,497,924	25,808	36,906,222	
22. Commissions and expense allowances on reinsurance assumed							
23. General insurance expenses	191,406,533	33,315,333		84,226,795	1,073,289	72,791,116	
24. Insurance taxes, licenses and fees, excluding federal income taxes	645,425	1,785,868		(7,314,220)	(12,356)	6,186,133	
25. Increase in loading on deferred and uncollected premiums							
26. Net transfers to or (from) Separate Accounts net of reinsurance	(1,008,485,926)	890,339		(991,787,102)	(12,108,683)	(5,480,480)	
27. Aggregate write-ins for deductions	2,962,282	(3,597,408)		2,720,748	(166,571)	4,005,513	
28. Totals (Lines 20 to 27)	2,515,336,074	1,054,966,736		431,331,250	1,426,422	957,426,835	70,184,831
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	416,103,034	141,183,089		291,861,347	(3,593,737)	(73,149,600)	59,801,935
30. Dividends to policyholders and refunds to members	1,440,923	1,380,181				60,742	
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	414,662,111	139,802,908		291,861,347	(3,593,737)	(73,210,342)	59,801,935
32. Federal income taxes incurred (excluding tax on capital gains)	115,802,091	23,857,208		83,227,281	656,770	14,639,045	(6,578,213)
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)	298,860,020	115,945,700		208,634,066	(4,250,507)	(87,849,387)	66,380,148
34. Policies/certificates in force end of year	196,379	68,219		119,038	1,875	7,247	
DETAILS OF WRITE-INS							
08.301. Revenue sharing	20,326,743			19,976,942	267,489	82,312	
08.302. Change in corporate owned life insurance	19,891,371	3,340,599		1,400,662	4,081	15,146,029	
08.303. Management and administrative fees	50,500					50,500	
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	(462,726)	278,344		(986,739)	(53,606)	299,275	
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	39,805,888	3,618,943		20,390,865	217,964	15,578,116	
2701. Miscellaneous charges to operations	2,962,352	(3,597,408)		2,720,748	(166,571)	4,005,583	
2702. Change in liability for employee/agent benefit plans	(70)					(70)	
2703.							
2798. Summary of remaining write-ins for Line 27 from overflow page							
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	2,962,282	(3,597,408)		2,720,748	(166,571)	4,005,513	

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - GROUP ANNUITIES (a)

	1 Total	Deferred				6 Life Contingent Payout (Immediate and Annuityizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities with Guarantees	5 Variable Annuities Without Guarantees		
1. Premiums for group annuity contracts	12,039,080,644	714,592,616		1,892,122,785	7,146,448,153	1,966,760,113	319,156,977
2. Considerations for supplementary contracts with life contingencies		XXX	XXX	XXX	XXX		XXX
3. Net investment income	1,872,573,935	318,017,689		702,990,921	(10,085,524)	519,082,939	342,567,910
4. Amortization of Interest Maintenance Reserve (IMR)	(9,314,249)	5,325,371		(19,159,138)	65,203	2,819,007	1,635,308
5. Separate Accounts net gain from operations excluding unrealized gains or losses							
6. Commissions and expense allowances on reinsurance ceded	24,909,175					24,909,175	
7. Reserve adjustments on reinsurance ceded							
8. Miscellaneous Income:							
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	146,854,456			98,594,212			48,260,244
8.2 Charges and fees for deposit-type contracts							
8.3 Aggregate write-ins for miscellaneous income	388,805,152	(1,549,546)		255,107,270	94,342,922	9,542,307	31,362,199
9. Totals (Lines 1 to 8.3)	14,462,909,113	1,036,386,130		2,929,656,050	7,230,770,754	2,523,113,541	742,982,638
10. Death benefits							
11. Matured endowments (excluding guaranteed annual pure endowments)							
12. Annuity benefits	1,511,526,963	47,265,055		434,144,636	(21,483)	1,030,138,755	
13. Disability benefits and benefits under accident and health contracts							
14. Coupons, guaranteed annual pure endowments and similar benefits							
15. Surrender benefits and withdrawals for life contracts	15,947,023,756	837,527,527		5,065,035,495	9,901,493,936	1,549,275	141,417,523
16. Group conversions							
17. Interest and adjustments on contract or deposit-type contract funds	315,433,091	72,907,044		(58,757,029)	79,897,063		221,386,013
18. Payments on supplementary contracts with life contingencies							
19. Increase in aggregate reserves for life and accident and health contracts	1,712,872,168	162,008,680		165,292,595		1,385,570,893	
20. Totals (Lines 10 to 19)	19,486,855,978	1,119,708,306		5,605,715,697	9,981,369,516	2,417,258,923	362,803,536
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	89,927,664	31,279,098		10,660,150	41,734,752		6,253,664
22. Commissions and expense allowances on reinsurance assumed	57,159,370	57,159,370					
23. General insurance expenses	610,570,470	41,126,016		50,928,075	480,815,151	27,022,530	10,678,698
24. Insurance taxes, licenses and fees, excluding federal income taxes	18,633,174	330,372		5,133,520	16,134,755	(2,626,953)	(338,520)
25. Increase in loading on deferred and uncollected premiums							
26. Net transfers to or (from) Separate Accounts net of reinsurance	(4,989,795,195)	(36,675,642)		(3,698,395,968)	(1,499,443,259)	139,051	244,580,623
27. Aggregate write-ins for deductions	(1,262,296,490)	(123,326,851)		10,351,089	(1,136,085,993)	(94,530)	(13,140,205)
28. Totals (Lines 20 to 27)	14,011,054,971	1,089,600,669		1,984,392,563	7,884,524,922	2,441,699,021	610,837,796
29. Net gain from operations before dividends to policyholders, refunds to members and federal income taxes (Line 9 minus Line 28)	451,854,142	(53,214,539)		945,263,487	(653,754,168)	81,414,520	132,144,842
30. Dividends to policyholders and refunds to members							
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	451,854,142	(53,214,539)		945,263,487	(653,754,168)	81,414,520	132,144,842
32. Federal income taxes incurred (excluding tax on capital gains)	19,783,700	(9,811,438)		44,551,862	(88,063,503)	53,084,862	20,021,917
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)	432,070,442	(43,403,101)		900,711,625	(565,690,665)	28,329,658	112,122,925
34. Policies/certificates in force end of year	974,298	205,927		137,703	361,439	269,229	
DETAILS OF WRITE-INS							
08.301. Management and administrative fees	293,985,353	6,558,027		167,200,007	89,001,832		31,225,487
08.302. Revenue sharing	48,539,729	(8,481,484)		27,138,957	28,521,625		1,360,631
08.303. Miscellaneous	36,684,785	373,911		60,768,306	(23,180,535)	(52,978)	(1,223,919)
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	9,595,285					9,595,285	
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	388,805,152	(1,549,546)		255,107,270	94,342,922	9,542,307	31,362,199
2701. Change in reserves due to reinsurance agreement	(1,271,061,635)	(121,785,820)			(1,136,498,749)	372,479	(13,149,545)
2702. Market value adjustment transfer	(8,147,124)	(1,322,155)		(6,824,969)			
2703. Miscellaneous charges to operations	16,912,269	(218,876)		17,176,058	412,756	(467,009)	9,340
2798. Summary of remaining write-ins for Line 27 from overflow page							
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	(1,262,296,490)	(123,326,851)		10,351,089	(1,136,085,993)	(94,530)	(13,140,205)

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - ACCIDENT AND HEALTH (a)

	1 Total	Comprehensive		4 Medicare Supplement	5 Vision Only	6 Dental Only	7 Federal Employees Health Benefits Plan	8 Title XVIII Medicare	9 Title XIX Medicaid	10 Credit A&H	11 Disability Income	12 Long-Term Care	13 Other Health
		2 Individual	3 Group										
1. Premiums for accident and health contracts	673,311,606			114,224							518,374,139	154,578,414	244,829
2. Considerations for supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
3. Net investment income	230,346,900			(285,330)							198,867,509	31,762,553	2,168
4. Amortization of Interest Maintenance Reserve (IMR)	2,189,908			1,760							1,660,734	527,427	(13)
5. Separate Accounts net gain from operations excluding unrealized gains or losses													
6. Commissions and expense allowances on reinsurance ceded	12,765,764			337,812								12,375,108	52,844
7. Reserve adjustments on reinsurance ceded													
8. Miscellaneous Income:													
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts													
8.2 Charges and fees for deposit-type contracts	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
8.3 Aggregate write-ins for miscellaneous income	2,871,521			(3,612)							2,473,087	402,221	(175)
9. Totals (Lines 1 to 8.3)	921,485,699			164,854							721,375,469	199,645,723	299,653
10. Death benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
11. Matured endowments (excluding guaranteed annual pure endowments)	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
12. Annuity benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13. Disability benefits and benefits under accident and health contracts	346,274,849			122,789							342,768,565	3,361,005	22,490
14. Coupons, guaranteed annual pure endowments and similar benefits													
15. Surrender benefits and withdrawals for life contracts	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
16. Group conversions													
17. Interest and adjustments on contract or deposit-type contract funds	3,903										3,933	(30)	
18. Payments on supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
19. Increase in aggregate reserves for life and accident and health contracts	106,679,383			(632)							(19,081,623)	125,761,638	
20. Totals (Lines 10 to 19)	452,958,135			122,157							323,690,875	129,122,613	22,490
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	83,555,811			25,692							69,694,846	13,698,705	136,568
22. Commissions and expense allowances on reinsurance assumed													
23. General insurance expensess	200,498,656			1,238,772							155,476,277	43,741,869	41,738
24. Insurance taxes, licenses and fees, excluding federal income taxes	19,698,082			7,021							14,410,046	5,244,456	36,559
25. Increase in loading on deferred and uncollected premiums	(94,921)										(94,921)		
26. Net transfers to or (from) Separate Accounts net of reinsurance													
27. Aggregate write-ins for deductions	1,170,411			(9,914)							1,754,230	(573,933)	28
28. Totals (Lines 20 to 27)	757,786,174			1,383,728							564,931,353	191,233,710	237,383
29. Net gain from operations before dividends to policyholders, and refunds to members and federal income taxes (Line 9 minus Line 28)	163,699,525			(1,218,874)							156,444,116	8,412,013	62,270
30. Dividends to policyholders and refunds to members	23,853,762										23,853,762		
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	139,845,763			(1,218,874)							132,590,354	8,412,013	62,270
32. Federal income taxes incurred (excluding tax on capital gains)	27,817,782			(170,202)							18,878,074	9,091,944	17,966
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)	112,027,981			(1,048,672)							113,712,280	(679,931)	44,304
34. Policies/certificates in force end of year	339,664			682							262,919	74,713	1,350
DETAILS OF WRITE-INS													
08.301. Change in corporate owned life insurance	2,392,701			(1,286)							1,920,290	473,678	19
08.302. Management and administrative fees	20,074											20,074	
08.303. Miscellaneous	458,746			(2,326)							552,797	(91,531)	(194)
08.398. Summary of remaining write-ins for Line 8.3 from overflow page													
08.399. Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	2,871,521			(3,612)							2,473,087	402,221	(175)
2701. Miscellaneous charges to operations	1,170,411			(9,914)							1,754,230	(573,933)	28
2702.													
2703.													
2798. Summary of remaining write-ins for Line 27 from overflow page													
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	1,170,411			(9,914)							1,754,230	(573,933)	28

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - INDIVIDUAL LIFE INSURANCE (a)

	1	2	3	4	5	6	7	8	9	10	11	12
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life With Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life ^(b) (N/A Fraternal)	Other Individual Life	YRT Mortality Risk Only
Involving Life or Disability Contingencies (Reserves) (Net of Reinsurance Ceded)												
1. Reserve December 31 of prior year	61,757,650,807		54,818,603,958	230,460,552		401,450,582	5,172,007,786	638,313	787,202,213		347,287,403	
2. Tabular net premiums or considerations	7,535,899,464		5,798,250,418	77,000,000		1,302,601,467	213,108,987	125,527	52,587,816		92,225,249	
3. Present value of disability claims incurred	328,415					328,415						
4. Tabular interest	3,423,326,417		2,616,366,682	8,436,187		561,815,639	207,918,787	21,000	28,768,122			
5. Tabular less actual reserve released	237,544					237,544						
6. Increase in reserve on account of change in valuation basis												
6.1 Change in excess of VM-20 deterministic/stochastic reserve over net premium reserve		XXX								XXX		
7. Other increases (net)	12,334,830,698		1,972,290,881	(13,921,669)		10,318,267,115	(17,277,465)	4,867	93,871,094		(18,404,125)	
8. Totals (Lines 1 to 7)	85,052,273,345		65,205,511,939	301,975,070		12,584,700,762	5,575,758,095	789,707	962,429,245		421,108,527	
9. Tabular cost	1,884,146,442		1,694,960,154	37,500,000		128,415,000	6,103,412	97,221	17,070,655			
10. Reserves released by death	1,321,505,701		1,182,943,324	1,294,630		62,252,186	48,253,309	104,691	26,657,561			
11. Reserves released by other terminations (net)	1,743,546,836		1,562,611,815	11,573,168		71,290,154	30,907,243	97,578	67,066,878			
12. Annuity, supplementary contract and disability payments involving life contingencies	24,986,211										24,986,211	
13. Net transfers to or (from) Separate Accounts	(35,055,869)							(245,946)	(34,809,923)			
14. Total Deductions (Lines 9 to 13)	4,939,129,321		4,440,515,293	50,367,798		261,957,340	85,263,964	53,544	75,985,171		24,986,211	
15. Reserve December 31 of current year	80,113,144,024		60,764,996,646	251,607,272		12,322,743,422	5,490,494,131	736,163	886,444,074		396,122,316	
Cash Surrender Value and Policy Loans												
16. CSV Ending balance December 31, current year	76,552,262,437		58,329,443,913			16,480,382,941	1,397,921,030	692,037	343,822,516			
17. Amount Available for Policy Loans Based upon Line 16 CSV	61,241,809,951		46,663,555,131			13,184,306,353	1,118,336,824	553,630	275,058,013			

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

(b) Individual and Group Credit Life are combined and included on _____ page. (Indicate whether included with Individual or Group.)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - GROUP LIFE INSURANCE (a)
(N/A Fraternal)

	1	2	3	4	5	6	7	8	9
	Total	Whole Life	Term Life	Variable Life	Universal Life	Variable Universal Life	Credit Life ^(b)	Other Group Life	YRT Mortality Risk Only
Involving Life or Disability Contingencies (Reserves) (Net of Reinsurance Ceded)									
1. Reserve December 31 of prior year	17,217,095,954	6,642,724,273			10,441,454,094	127,333,915		5,583,672	
2. Tabular net premiums or considerations	72,948,551	35,571,518			12,722,740	24,654,293			
3. Present value of disability claims incurred									
4. Tabular interest	473,057,896	473,136,245				(78,349)			
5. Tabular less actual reserve released									
6. Increase in reserve on account of change in valuation basis									
7. Other increases (net)	(12,520,510,563)	(2,040,998,063)			(10,394,871,759)	(79,392,069)		(5,248,672)	
8. Totals (Lines 1 to 7)	5,242,591,838	5,110,433,973			59,305,075	72,517,790		335,000	
9. Tabular cost	62,826,059	18,561,445			12,849,406	31,415,208			
10. Reserves released by death	96,308,431	84,725,680			1,063,029	10,519,722			
11. Reserves released by other terminations (net)	107,218,136	76,682,700			1,569,907	28,965,529			
12. Annuity, supplementary contract and disability payments involving life contingencies									
13. Net transfers to or (from) Separate Accounts	(44,535,218)					(44,535,218)			
14. Total Deductions (Lines 9 to 13)	221,817,408	179,969,825			15,482,342	26,365,241			
15. Reserve December 31 of current year	5,020,774,430	4,930,464,148			43,822,733	46,152,549		335,000	
Cash Surrender Value and Policy Loans									
16. CSV Ending balance December 31, current year	4,997,411,503	4,907,677,360			41,828,564	47,905,579			
17. Amount Available for Policy Loans Based upon Line 16 CSV	3,997,929,202	3,926,141,888			33,462,851	38,324,463			

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

(b) Individual and Group Credit Life are combined and included on _____ page. (Indicate whether included with Individual or Group.)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - INDIVIDUAL ANNUITIES (a)

	1 Total	Deferred				6 Life Contingent Payout (Immediate and Annuityizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities with Guarantees	5 Variable Annuities without Guarantees		
Involving Life or Disability Contingencies (Reserves) (Net of Reinsurance Ceded)							
1. Reserve December 31 of prior year	13,658,790,004	4,644,486,984		2,009,487,772	1,964,183	7,002,851,066	
2. Tabular net premiums or considerations	1,832,671,738	855,081,030		437,154,731	825,023	539,610,954	
3. Present value of disability claims incurred	XXX	XXX	XXX	XXX	XXX	XXX	XXX
4. Tabular interest	536,263,398	181,703,603		38,587,982	455	315,971,358	
5. Tabular less actual reserve released	(51,942,197)	(31,532,465)		15,621,235	(259,742)	(35,771,225)	
6. Increase in reserve on account of change in valuation basis							
7. Other increases (net)	(224,599,666)	(69,409,172)		(171,547,999)	(56,023)	16,413,527	
8. Totals (Lines 1 to 7)	15,751,183,277	5,580,329,979		2,329,303,721	2,473,896	7,839,075,681	
9. Tabular cost							
10. Reserves released by death	XXX	XXX	XXX	XXX	XXX	XXX	XXX
11. Reserves released by other terminations (net)	1,885,868,471	471,626,485		1,404,475,770	9,912,783	(146,567)	
12. Annuity, supplementary contract and disability payments involving life contingencies	708,472,992	94,620,579		114,131,106	2,437,699	497,283,608	
13. Net transfers to or (from) Separate Accounts	(1,012,683,489)			(995,087,322)	(12,115,688)	(5,480,480)	
14. Total Deductions (Lines 9 to 13)	1,581,657,973	566,247,063		523,519,554	234,794	491,656,562	
15. Reserve December 31 of current year	14,169,525,304	5,014,082,916		1,805,784,166	2,239,102	7,347,419,119	
Cash Surrender Value and Policy Loans							
16. CSV Ending balance December 31, current year	5,946,973,037	4,794,481,658		1,152,491,379			
17. Amount Available for Policy Loans Based upon Line 16 CSV	53,409,412			53,409,412			

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - GROUP ANNUITIES (a)
(N/A Fraternal)

	1 Total	Deferred			6 Life Contingent Payout (Immediate and Annuitizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities with Guarantees			5 Variable Annuities without Guarantees
Involving Life or Disability Contingencies (Reserves) (Net of Reinsurance Ceded)						
1. Reserve December 31 of prior year	26,376,764,518	5,476,343,220		50,694,001	9,658,700,811	11,191,026,486
2. Tabular net premiums or considerations	12,034,468,130	1,771,853,499		1,532,310,492	6,770,376,791	1,959,927,348
3. Present value of disability claims incurred	XXX	XXX	XXX	XXX	XXX	XXX
4. Tabular interest	949,993,014	194,281,463		2,283,014	262,133,891	491,294,647
5. Tabular less actual reserve released						
6. Increase in reserve on account of change in valuation basis	(50,804,600)					(50,804,600)
7. Other increases (net)	(56,137,048)	(258,636)		(7,984,034)	(52,150,464)	4,256,086
8. Totals (Lines 1 to 7)	39,254,284,014	7,442,219,546		1,577,303,473	16,639,061,029	13,595,699,966
9. Tabular cost						
10. Reserves released by death	XXX	XXX	XXX	XXX	XXX	XXX
11. Reserves released by other terminations (net)	15,947,023,757	2,829,078,689		4,608,211,249	8,509,733,819	
12. Annuity, supplementary contract and disability payments involving life contingencies	1,466,650,425				434,123,153	1,032,527,272
13. Net transfers to or (from) Separate Accounts	(6,260,856,828)	(1,045,483,058)		(3,082,335,472)	(2,129,233,240)	(3,805,058)
14. Total Deductions (Lines 9 to 13)	11,152,817,354	1,783,595,631		1,525,875,777	6,814,623,732	1,028,722,214
15. Reserve December 31 of current year	28,101,466,660	5,658,623,915		51,427,696	9,824,437,297	12,566,977,752
Cash Surrender Value and Policy Loans						
16. CSV Ending balance December 31, current year	27,927,246,765	5,736,136,987		51,427,696	9,824,437,298	12,315,244,784
17. Amount Available for Policy Loans Based upon Line 16 CSV	22,191,109,778			51,427,696	9,824,437,298	12,315,244,784

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT OF NET INVESTMENT INCOME

	1 Collected During Year	2 Earned During Year
1. U.S. Government bonds	(a) 163,180,636	273,651,117
1.1 Bonds exempt from U.S. tax	(a)	
1.2 Other bonds (unaffiliated)	(a) 3,943,484,872	3,859,596,173
1.3 Bonds of affiliates	(a) 203,847,085	283,557,087
2.1 Preferred stocks (unaffiliated)	(b) 41,854,130	37,610,629
2.11 Preferred stocks of affiliates	(b)	
2.2 Common stocks (unaffiliated)	28,388,309	39,749,233
2.21 Common stocks of affiliates	952,500,000	502,500,000
3. Mortgage loans	(c) 1,068,237,841	1,083,717,664
4. Real estate	(d) 146,242,579	128,023,389
5. Contract loans	900,545,121	927,297,584
6. Cash, cash equivalents and short-term investments	(e) 81,865,874	81,865,874
7. Derivative instruments	(f) 360,887,697	334,893,342
8. Other invested assets	921,182,437	877,579,150
9. Aggregate write-ins for investment income	37,989,203	37,989,203
10. Total gross investment income	8,850,205,784	8,468,030,445
11. Investment expenses		(g) 370,388,178
12. Investment taxes, licenses and fees, excluding federal income taxes		(g) 21,742,063
13. Interest expense		(h) 302,139,939
14. Depreciation on real estate and other invested assets		(i) 91,296,595
15. Aggregate write-ins for deductions from investment income		
16. Total deductions (Lines 11 through 15)		785,566,775
17. Net investment income (Line 10 minus Line 16)		7,682,463,670
DETAILS OF WRITE-INS		
0901. Miscellaneous	37,989,203	37,989,203
0902.		
0903.		
0998. Summary of remaining write-ins for Line 9 from overflow page		
0999. Totals (Lines 0901 thru 0903 plus 0998) (Line 9, above)	37,989,203	37,989,203
1501.		
1502.		
1503.		
1598. Summary of remaining write-ins for Line 15 from overflow page		
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15, above)		

- (a) Includes \$ 255,360,217 accrual of discount less \$ 117,639,005 amortization of premium and less \$ 47,775,512 paid for accrued interest on purchases.
- (b) Includes \$ accrual of discount less \$ amortization of premium and less \$ paid for accrued dividends on purchases.
- (c) Includes \$ 8,298,786 accrual of discount less \$ 3,184,496 amortization of premium and less \$ paid for accrued interest on purchases.
- (d) Includes \$ 54,000 for company's occupancy of its own buildings; and excludes \$ 40,191,894 interest on encumbrances.
- (e) Includes \$ 71,189,286 accrual of discount less \$ 5,577 amortization of premium and less \$ 358 paid for accrued interest on purchases.
- (f) Includes \$ accrual of discount less \$ amortization of premium.
- (g) Includes \$ investment expenses and \$ investment taxes, licenses and fees, excluding federal income taxes, attributable to segregated and Separate Accounts.
- (h) Includes \$ 131,746,065 interest on surplus notes and \$ interest on capital notes.
- (i) Includes \$ 91,296,595 depreciation on real estate and \$ depreciation on other invested assets.

EXHIBIT OF CAPITAL GAINS (LOSSES)

	1	2	3	4	5
	Realized Gain (Loss) On Sales or Maturity	Other Realized Adjustments	Total Realized Capital Gain (Loss) (Columns 1 + 2)	Change in Unrealized Capital Gain (Loss)	Change in Unrealized Foreign Exchange Capital Gain (Loss)
1. U.S. Government bonds	1,223,291		1,223,291	141,873	
1.1 Bonds exempt from U.S. tax					
1.2 Other bonds (unaffiliated)	196,042,952	(141,555,775)	54,487,177	3,592,900	221,781,608
1.3 Bonds of affiliates		572,614	572,614		(709,286)
2.1 Preferred stocks (unaffiliated)				(192,614)	4,549,600
2.11 Preferred stocks of affiliates					
2.2 Common stocks (unaffiliated)	38,075,227	(7,795,831)	30,279,396	88,874,219	(722,182)
2.21 Common stocks of affiliates	1,848,906		1,848,906	4,408,488,170	
3. Mortgage loans	(422,433)	3,178,969	2,756,536		97,101,143
4. Real estate	74,240,741	(40,793,428)	33,447,313		
5. Contract loans	1,028		1,028		
6. Cash, cash equivalents and short-term investments	183,481	(12,985,637)	(12,802,156)		
7. Derivative instruments	932,209,045		932,209,045	(1,303,350,167)	(2,285,080)
8. Other invested assets	131,291,852	(91,175,851)	40,116,001	(30,528,191)	69,826,426
9. Aggregate write-ins for capital gains (losses)		14,624,056	14,624,056		(21,891,521)
10. Total capital gains (losses)	1,374,694,090	(275,930,883)	1,098,763,207	3,167,026,190	367,650,708
DETAILS OF WRITE-INS					
0901. Miscellaneous gains (losses)		14,624,056	14,624,056		(21,891,521)
0902.					
0903.					
0998. Summary of remaining write-ins for Line 9 from overflow page					
0999. Totals (Lines 0901 thru 0903 plus 0998) (Line 9, above)		14,624,056	14,624,056		(21,891,521)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT - 1 PART 1 - PREMIUMS AND ANNUITY CONSIDERATIONS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

	Insurance											
	1 Total	2 Industrial Life	3 Ordinary		5 Credit Life (Group and Individual)	6 Group		8 Accident and Health			11 Aggregate of All Other Lines of Business	12 Fraternal (Fraternal Benefit Societies Only)
			Life Insurance	4 Individual Annuities		Life Insurance	7 Annuities	9 Group	9 Credit (Group and Individual)	10 Other		
FIRST YEAR (other than single)												
1. Uncollected	2,171,205		1,984,524								186,681	
2. Deferred and accrued	150,299,499		150,328,696					(1,504)			(27,693)	
3. Deferred, accrued and uncollected:												
3.1 Direct	154,612,690		152,313,219								2,299,471	
3.2 Reinsurance assumed												
3.3 Reinsurance ceded	2,141,987							1,504			2,140,483	
3.4 Net (Line 1 + Line 2)	152,470,703		152,313,219					(1,504)			158,988	
4. Advance												
5. Line 3.4 - Line 4	152,470,703		152,313,219					(1,504)			158,988	
6. Collected during year:												
6.1 Direct	3,899,494,864		718,554,371	519,030,219		15,220,906	2,592,125,215	180,744			54,383,409	
6.2 Reinsurance assumed	1,085,203,630		19				1,085,203,611					
6.3 Reinsurance ceded	64,952,498		64,139,734			372,193		41,482			399,089	
6.4 Net	4,919,745,996		654,414,656	519,030,219		14,848,713	3,677,328,826	139,262			53,984,320	
7. Line 5 + Line 6.4	5,072,216,699		806,727,875	519,030,219		14,848,713	3,677,328,826	137,758			54,143,308	
8. Prior year (uncollected + deferred and accrued - advance)	151,990,772		151,714,617					(6,244)			282,399	
9. First year premiums and considerations:												
9.1 Direct	3,900,107,156		719,152,974	519,030,219		15,220,906	2,592,125,215	180,744			54,397,098	
9.2 Reinsurance assumed	1,085,203,630		19				1,085,203,611					
9.3 Reinsurance ceded	65,084,857		64,139,734			372,193		36,742			536,188	
9.4 Net (Line 7 - Line 8)	4,920,225,929		655,013,259	519,030,219		14,848,713	3,677,328,826	144,002			53,860,910	
SINGLE												
10. Single premiums and considerations:												
10.1 Direct	9,151,753,794		3,329,613,059	3,020,754,449		176,501	2,768,033,558				33,176,227	
10.2 Reinsurance assumed	340						340					
10.3 Reinsurance ceded	2,886,358,209			2,014,623,192			871,735,017					
10.4 Net	6,265,395,925		3,329,613,059	1,006,131,257		176,501	1,896,298,881				33,176,227	
RENEWAL												
11. Uncollected	168,427,242		160,326,718			421,883					7,678,641	
12. Deferred and accrued	701,831,410		709,545,673	(5,150,276)		(557,547)	7,358,443	(5,938)			(9,358,945)	
13. Deferred, accrued and uncollected:												
13.1 Direct	1,049,927,371		1,048,734,790			(6,487,351)					7,679,932	
13.2 Reinsurance assumed	13,214,631		9,530,880			(3,674,692)	7,358,443					
13.3 Reinsurance ceded	192,883,349		188,393,278	5,150,276		(10,026,379)		5,938			9,360,236	
13.4 Net (Line 11 + Line 12)	870,258,653		869,872,392	(5,150,276)		(135,664)	7,358,443	(5,938)			(1,680,304)	
14. Advance	38,780,694		26,843,049								11,937,645	
15. Line 13.4 - Line 14	831,477,959		843,029,343	(5,150,276)		(135,664)	7,358,443	(5,938)			(13,617,949)	
16. Collected during year:												
16.1 Direct	12,256,050,921		5,128,346,385	236,412,183		87,520,904	6,128,075,733	166,735			675,528,981	
16.2 Reinsurance assumed	379,228,885		47,710,429				331,518,456					
16.3 Reinsurance ceded	1,170,909,196		1,045,759,225	5,761,286		33,808,205		62,922			85,517,558	
16.4 Net	11,464,370,610		4,130,297,589	230,650,897		53,712,699	6,459,594,189	103,813			590,011,423	
17. Line 15 + Line 16.4	12,295,848,569		4,973,326,932	225,500,621		53,577,035	6,466,952,632	97,875			576,393,474	
18. Prior year (uncollected + deferred and accrued - advance)	728,070,952		788,778,058	(53,462,270)		894,585	1,499,696	(2,951)			(9,636,166)	
19. Renewal premiums and considerations:												
19.1 Direct	12,326,772,582		5,200,680,888	236,412,183		87,534,241	6,128,075,733	166,735			673,902,802	
19.2 Reinsurance assumed	382,453,418		45,558,507			(482,292)	337,377,203					
19.3 Reinsurance ceded	1,194,475,041		1,061,690,522	10,475,949		34,369,499		65,909			87,873,162	
19.4 Net (Line 17 - Line 18)	11,514,750,959		4,184,548,873	225,936,234		52,682,450	6,465,452,936	100,826			586,029,640	
TOTAL												
20. Total premiums and annuity considerations:												
20.1 Direct	25,378,633,532		9,249,446,921	3,776,196,851		102,931,648	11,488,234,506	347,479			761,476,127	
20.2 Reinsurance assumed	1,467,657,388		45,558,526			(482,292)	1,422,581,154					
20.3 Reinsurance ceded	4,145,918,107		1,125,830,256	2,025,099,141		34,741,692	871,735,017	102,651			88,409,350	
20.4 Net (Lines 9.4 + 10.4 + 19.4)	22,700,372,813		8,169,175,191	1,751,097,710		67,707,664	12,039,080,643	244,828			673,066,777	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT - 1 PART 2 - POLICYHOLDERS' DIVIDENDS, REFUNDS TO MEMBERS AND COUPONS APPLIED, REINSURANCE COMMISSIONS AND EXPENSE ALLOWANCES AND COMMISSIONS INCURRED (Direct Business Only)

	Insurance											11 Aggregate of All Other Lines of Business	12 Fraternal (Fraternal Benefit Societies Only)
	1 Total	2 Industrial Life	3 Ordinary		5 Credit Life (Group and Individual)	6 Group		8 Accident and Health					
			3 Life Insurance	4 Individual Annuities		6 Life Insurance	7 Annuities	8 Group	9 Credit (Group and Individual)	10 Other			
POLICYHOLDERS' DIVIDENDS, REFUNDS TO MEMBERS AND COUPONS APPLIED (included in Part 1)													
21. To pay renewal premiums	124,448,402		124,258,646	4,624		29					185,103		
22. All other	1,427,810,298		1,425,865,420	1,768,383		176,495							
REINSURANCE COMMISSIONS AND EXPENSE ALLOWANCES INCURRED													
23. First year (other than single):													
23.1 Reinsurance ceded	70,623,253		59,744,628	10,689,815				36,699			152,111		
23.2 Reinsurance assumed													
23.3 Net ceded less assumed	70,623,253		59,744,628	10,689,815				36,699			152,111		
24. Single:													
24.1 Reinsurance ceded	62,124,812			37,248,256				24,876,556					
24.2 Reinsurance assumed													
24.3 Net ceded less assumed	62,124,812			37,248,256				24,876,556					
25. Renewal:													
25.1 Reinsurance ceded	154,855,998		142,191,750	54,676				32,619	16,145		12,560,808		
25.2 Reinsurance assumed	71,517,738		8,252,759			6,105,609	57,159,370						
25.3 Net ceded less assumed	83,338,260		133,938,991	54,676		(6,105,609)	(57,126,751)	16,145			12,560,808		
26. Totals:													
26.1 Reinsurance ceded (Page 6, Line 6)	287,604,063		201,936,378	47,992,747				24,909,175	52,844		12,712,919		
26.2 Reinsurance assumed (Page 6, Line 22)	71,517,738		8,252,759			6,105,609	57,159,370						
26.3 Net ceded less assumed	216,086,325		193,683,619	47,992,747		(6,105,609)	(32,250,195)	52,844			12,712,919		
COMMISSIONS INCURRED (direct business only)													
27. First year (other than single)	368,484,290		292,047,048	28,569,892		10,018,185	13,102,812	125,332			24,621,021		
28. Single	106,235,687		28,739,607	69,708,304			6,253,664				1,534,112		
29. Renewal	520,888,877		362,609,827	25,349,479		5,083,038	70,571,188	11,236			57,264,109		
30. Deposit-type contract funds													
31. Totals (to agree with Page 6, Line 21)	995,608,854		683,396,482	123,627,675		15,101,223	89,927,664	136,568			83,419,242		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 2 - GENERAL EXPENSES

	Insurance				5 Investment	6 Fraternal	7 Total
	1 Life	2 Accident and Health		4 All Other Lines of Business			
		2 Cost Containment	3 All Other				
1. Rent	95,416,684		7,392,764		1,589,582		104,399,030
2. Salaries and wages	1,102,473,795	3,036,813	82,381,461		18,366,519		1,206,258,588
3.11 Contributions for benefit plans for employees	171,527,923	1,515	13,288,251		2,857,547		187,675,236
3.12 Contributions for benefit plans for agents	122,161,832		9,464,944		2,035,139		133,661,915
3.21 Payments to employees under non-funded benefit plans							
3.22 Payments to agents under non-funded benefit plans							
3.31 Other employee welfare	9,221,565		714,475		153,625		10,089,666
3.32 Other agent welfare							
4.1 Legal fees and expenses	16,772,711	453,313	846,215		279,423		18,351,662
4.2 Medical examination fees	21,954,869		1,701,035		365,754		24,021,659
4.3 Inspection report fees							
4.4 Fees of public accountants and consulting actuaries	4,477,807		346,935		74,597		4,899,339
4.5 Expense of investigation and settlement of policy claims	4,299,624	3,032,308			71,629		7,403,562
5.1 Traveling expenses	26,730,973		2,071,082		445,321		29,247,376
5.2 Advertising	63,065,584		4,886,242		1,050,633		69,002,458
5.3 Postage, express, telegraph and telephone	31,847,198		2,467,481		530,554		34,845,233
5.4 Printing and stationery	22,110,976		1,713,130		368,355		24,192,461
5.5 Cost or depreciation of furniture and equipment	33,068,682		2,562,120		550,903		36,181,705
5.6 Rental of equipment	45,286,766		3,508,761		754,449		49,549,976
5.7 Cost or depreciation of EDP equipment and software	101,884,277		7,893,865		1,697,328		111,475,470
6.1 Books and periodicals	10,545,151		817,025		175,676		11,537,852
6.2 Bureau and association fees	6,412,736		496,851		106,832		7,016,419
6.3 Insurance, except on real estate	7,821,086		605,968		130,294		8,557,348
6.4 Miscellaneous losses	11,382,703		881,917		189,629		12,454,249
6.5 Collection and bank service charges	7,412,608		574,319		123,489		8,110,417
6.6 Sundry general expenses	1,028,096		79,656		17,127		1,124,879
6.7 Group service and administration fees	352,925,273		24,645,025		5,879,513		383,449,811
6.8 Reimbursements by uninsured plans							
7.1 Agency expense allowance	259,823,762		20,130,816		4,328,500		284,283,078
7.2 Agents' balances charged off (less \$ recovered)							
7.3 Agency conferences other than local meetings	24,641,116		1,909,162		410,505		26,960,784
8.1 Official publication (Fraternal Benefit Societies Only)	XXX	XXX	XXX	XXX	XXX		
8.2 Expense of supreme lodge meetings (Fraternal Benefit Societies Only)	XXX	XXX	XXX	XXX	XXX		
9.1 Real estate expenses					28,947,558		28,947,558
9.2 Investment expenses not included elsewhere					312,824,900		312,824,900
9.3 Aggregate write-ins for expenses	(367,505,711)		2,581,580		(13,937,207)		(378,861,338)
10. General expenses incurred	2,186,788,084	6,523,949	193,961,080		370,388,178	(b)	(a) 2,757,661,291
11. General expenses unpaid Dec. 31, prior year	1,002,803,465	2,818,196	77,261,660		12,651,441		1,095,534,762
12. General expenses unpaid Dec. 31, current year	1,109,413,778	2,797,079	83,158,896		18,482,135		1,213,851,888
13. Amounts receivable relating to uninsured plans, prior year							
14. Amounts receivable relating to uninsured plans, current year							
15. General expenses paid during year (Lines 10+11-12-13+14)	2,080,177,771	6,545,066	188,063,844		364,557,484		2,639,344,165
DETAILS OF WRITE-INS							
09.301. Management services income	(400,825,565)				(14,492,295)		(415,317,860)
09.302. Miscellaneous	33,319,854		2,581,580		555,088		36,456,522
09.303.							
09.398. Summary of remaining write-ins for Line 9.3 from overflow page							
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)	(367,505,711)		2,581,580		(13,937,207)		(378,861,338)

(a) Includes management fees of \$ 245,081,339 to affiliates and \$ to non-affiliates.

(b) Show the distribution of this amount in the following categories (Fraternal Benefit Societies Only):

1. Charitable \$; 2. Institutional \$; 3. Recreational and Health \$; 4. Educational \$; 5. Religious \$; 6. Membership \$; 7. Other \$; 8. Total \$

EXHIBIT 3 - TAXES, LICENSES AND FEES (EXCLUDING FEDERAL INCOME TAXES)

	Insurance			4 Investment	5 Fraternal	6 Total
	1 Life	2 Accident and Health	3 All Other Lines of Business			
1. Real estate taxes				20,353,396		20,353,396
2. State insurance department licenses and fees	3,065,792	286,274				3,352,066
3. State taxes on premiums	131,929,023	12,559,529				144,488,552
4. Other state taxes, including \$ for employee benefits	24,549,353	36,675				24,586,028
5. U.S. Social Security taxes	89,016,664	6,537,899		1,388,667		96,943,229
6. All other taxes	3,064,031	286,109				3,350,141
7. Taxes, licenses and fees incurred	251,624,864	19,706,486		21,742,063		293,073,412
8. Taxes, licenses and fees unpaid Dec. 31, prior year	42,391,702	4,296,050		4,074,019		50,761,771
9. Taxes, licenses and fees unpaid Dec. 31, current year	64,154,902	5,024,415		5,543,410		74,722,727
10. Taxes, licenses and fees paid during year (Lines 7 + 8 - 9)	229,861,664	18,978,121		20,272,671		269,112,456

EXHIBIT 4 - DIVIDENDS OR REFUNDS

	1 Life	2 Accident and Health
	1. Applied to pay renewal premiums	124,263,298	185,103
2. Applied to shorten the endowment or premium-paying period		
3. Applied to provide paid-up additions	1,426,041,915	
4. Applied to provide paid-up annuities	1,768,383	
5. Total Lines 1 through 4	1,552,073,596	185,103
6. Paid in cash	64,409,140	24,862,273
7. Left on deposit	28,837,630	24,818
8. Aggregate write-ins for dividend or refund options	29,688,536	
9. Total Lines 5 through 8	1,675,008,902	25,072,194
10. Amount due and unpaid	5,371,582	46,420
11. Provision for dividends or refunds payable in the following calendar year	1,636,810,704	23,892,742
12. Terminal dividends	17,627,512	
13. Provision for deferred dividend contracts		
14. Amount provisionally held for deferred dividend contracts not included in Line 13		
15. Total Lines 10 through 14	1,659,809,798	23,939,162
16. Total from prior year	1,687,562,972	25,157,595
17. Total dividends or refunds (Lines 9 + 15 - 16)	1,647,255,728	23,853,761
DETAILS OF WRITE-INS		
0801. Applied to reduce policy indebtedness	29,688,536	
0802.		
0803.		
0898. Summary of remaining write-ins for Line 8 from overflow page		
0899. Totals (Lines 0801 thru 0803 plus 0898) (Line 8 above)	29,688,536	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 5 - AGGREGATE RESERVE FOR LIFE CONTRACTS

1	2	3	4	5	6
Valuation Standard	Total	Industrial	Ordinary	Credit (Group and Individual)	Group
0100001. AE 3.00% NLP CRF	31,079,521		31,079,521		
0100002. AE 4.00% NLP CRF	669,264		669,264		
0100003. 41 CSO 2.50% NLP	114,543,205		114,543,205		
0100004. 41 CSO 2.50% NLP CRF	521,920,591		521,920,591		
0100005. 41 CSO 2.75% NLP CRF	839		839		
0100006. 41 CSO 4.00% NLP	655,865		655,865		
0100007. 41 CSO 4.00% NLP CRF	304,201		304,201		
0100008. 58 CSO 2.50% NLP	1,526,766,064		1,526,766,064		
0100009. 58 CSO 2.75% NLP CRF	23,420,405		23,420,405		
0100010. 58 CSO 3.00% NLP	673,379,278		673,379,278		
0100011. 58 CSO 3.50% CRVM	226,377,720		226,377,720		
0100012. 58 CSO 3.50% NLP	387,468,028		387,468,028		
0100013. 58 CSO 3.50%/20/2.50% NLP	1,089,548,603		1,089,548,603		
0100014. 58 CSO 4.00% CRVM	1,550,045,569		1,550,045,569		
0100015. 58 CSO 4.00% MOD CRVM	7,091,052		7,091,052		
0100016. 58 CSO 4.00% NLP	281,331,663		281,331,663		
0100017. 58 CSO 4.50% CRVM	3,862,095,978		3,862,095,978		
0100018. 58 CSO 4.50% MOD CRVM	1,301,540,800		1,301,540,800		
0100019. 58 CSO 4.50% NLP	17,212,313		17,212,313		
0100020. 58 CSO 6.00% CRVM	8,014,518		8,014,518		
0100021. 58 CET 2.50% NLP	218,453		218,453		
0100022. 58 CET 3.00% NLP	66,942		66,942		
0100023. 58 CET 3.50% NLP	118,637		118,637		
0100024. 58 CET 3.50%/20/2.50% NLP	211,914		211,914		
0100025. 58 CET 4.00% NLP	10,099,918		10,099,918		
0100026. 58 CET 4.50% NLP	626,399		626,399		
0100027. 80 CSO 3.50% CRVM	9,746		9,746		
0100028. 80 CSO 4.00% CRVM	4,122,029,914		4,122,029,914		
0100029. 80 CSO 4.00% NLP	312,046		312,046		
0100030. 80 CSO 4.25% CRVM CRF	83,179		83,179		
0100031. 80 CSO 4.50% CRVM	12,332,037,550		12,332,037,550		
0100032. 80 CSO 4.50% CRVM CRF	21,177,382		21,177,382		
0100033. 80 CSO 4.50% NLP	166,318,641		166,318,641		
0100034. 80 CSO 4.50% NLP CRF	78,134,303		78,134,303		
0100035. 80 CSO 5.00% CRVM	5,859,209,756		5,859,209,756		
0100036. 80 CSO 5.00% CRVM CRF	515,723,411		515,723,411		
0100037. 80 CSO 5.00% NLP	6,151,478		6,151,478		
0100038. 80 CSO 5.00% NLP CRF	931,496		931,496		
0100039. 80 CSO 5.50% CRVM	8,005,584,889		8,005,584,889		
0100040. 80 CSO 5.50% CRVM CRF	25,729		25,729		
0100041. 80 CSO 5.50% MOD CRF	131,588,986		131,588,986		
0100042. 80 CSO 5.50% NLP	837,075		837,075		
0100043. 80 CSO 5.50% NLP CRF	3,017,415		3,017,415		
0100044. 80 CSO 6.00% CRVM	678,421,284		678,421,284		
0100045. 80 CET 4.00% NLP	1,147,679		1,147,679		
0100046. 80 CET 4.50% NLP	2,479,917		2,479,917		
0100047. 80 CET 5.00% NLP	782,355		782,355		
0100048. 80 CET 5.50% NLP	1,914,773		1,914,773		
0100049. 80 CET 6.00% NLP	52,017		52,017		
0100050. 2001 CSO 3.50% NLP	794,297,470		794,297,470		
0100051. 2001 CSO 3.50% CRVM	11,934,697,584		11,934,697,584		
0100052. 2001 CSO 4.00% NLP	226,927,507		226,927,507		
0100053. 2001 CSO 4.00% CRVM	11,449,358,410		11,449,358,410		
0100054. 2001 CSO 4.50% CRVM	131,395,467		131,395,467		
0100055. 80 CSO 3.00%	4,888,311,632		4,846,417,571		41,894,061
0100056. 80 CSO 4.00%	7,245,752,767		2,337,851,272		4,907,901,495
0100057. 80 CSO 4.00% CALIFORNIA	628,753,070		628,753,070		
0100058. 80 CSO 4.50% CALIFORNIA	137,412,955		137,412,955		
0100059. 01 CSO 4.00%	2,600,701,188		2,550,159,866		50,541,322
0100060. 01 CSO 3.50%	7,763,332,635		7,762,576,635		756,000
0100061. 01 CSO ALB 3.50%	21,767,439				21,767,439
0100062. 41 CSO 2.50%	24,848				24,848
0100063. 58 CSO 3.00%	53,024				53,024
0100064. 58 CSO 3.50%	329,268				329,268
0100065. 58 CSO 4.00%	977,633				977,633
0100066. 70 INTCO GRP DIS 3.50%	6,388,110				6,388,110
0100067. T CSO 58 6.00%	636,779				636,779
0100068. 80 CSO 4.50%	4,574,385				4,574,385
0199997. Totals (Gross)	91,398,470,932		86,362,626,568		5,035,844,364
0199998. Reinsurance ceded	7,837,697,985		7,825,022,529		12,675,456
0199999. Life Insurance: Totals (Net)	83,560,772,947		78,537,604,039		5,023,168,908
0200001. 37 SA 2.50%	199,380	XXX	199,380	XXX	
0200002. 37 SA 3.00%	530	XXX	530	XXX	
0200003. 37 SA 3.50%	54,624	XXX	54,624	XXX	
0200004. a-1949 3.00%	71,610	XXX	71,610	XXX	
0200005. a-1949 3.50%	346,853	XXX	346,853	XXX	
0200006. 51 GAM 3.50%	3,684,315	XXX	3,684,315	XXX	
0200007. 71 IAM 3.50%	3,337	XXX	3,337	XXX	
0200008. 71 IAM 6.00%	94,166	XXX	94,166	XXX	
0200009. 71 IAM 7.50%	1,081,650	XXX	1,081,650	XXX	
0200010. 71 IAM 11.25%	1,388,681	XXX	1,388,681	XXX	
0200011. 71 GAM 3.50%	10,661,547	XXX	10,661,547	XXX	
0200012. 71 GAM 4.00%	1,770,153	XXX	1,770,153	XXX	
0200013. 83a 6.25%	2,740,787	XXX	2,740,787	XXX	
0200014. 83a 6.50%	2,002,319	XXX	2,002,319	XXX	
0200015. 83a 6.75%	4,298,980	XXX	4,298,980	XXX	
0200016. 83a 7.00%	1,183,406	XXX	1,183,406	XXX	
0200017. 83a 7.25%	2,293,052	XXX	2,293,052	XXX	
0200018. 83a 7.75%	1,441,405	XXX	1,441,405	XXX	
0200019. 83a 8.00%	2,162,616	XXX	2,162,616	XXX	
0200020. 83a 8.25%	5,516,899	XXX	5,516,899	XXX	
0200021. 83a 8.75%	2,353,486	XXX	2,353,486	XXX	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 5 - AGGREGATE RESERVE FOR LIFE CONTRACTS

1	2	3	4	5	6
Valuation Standard	Total	Industrial	Ordinary	Credit (Group and Individual)	Group
0200022. 83a 9.25%	483,391	XXX	483,391	XXX	
0200023. 83a 11.00%	409,319	XXX	409,319	XXX	
0200024. 83a CIF/No-FIG	300,404	XXX	300,404	XXX	
0200025. 94 MGDB Table IY / FIG	1,078,727,707	XXX	1,078,727,707	XXX	
0200026. 94 MGDB Table IY / NO FIG	74,592,885	XXX	74,592,885	XXX	
0200027. a-2000 CIF / NO FIG	325,881	XXX	325,881	XXX	
0200028. a-2000 IY / FIG	2,151,585,840	XXX	2,151,585,840	XXX	
0200029. a-2000 IY / No FIG	198,541,663	XXX	198,541,663	XXX	
0200030. a-2000 4.00%	945,791,220	XXX	945,791,220	XXX	
0200031. a-2000 4.25%	367,556,749	XXX	367,556,749	XXX	
0200032. a-2000 4.50%	992,051,448	XXX	992,051,448	XXX	
0200033. a-2000 5.00%	221,562,445	XXX	221,562,445	XXX	
0200034. a-2000 5.25%	254,133,477	XXX	254,133,477	XXX	
0200035. a-2000 5.50%	99,053,402	XXX	99,053,402	XXX	
0200036. a-2000 6.00%	171,082,367	XXX	171,082,367	XXX	
0200037. a-2000 6.25%	3,710,521	XXX	3,710,521	XXX	
0200038. a-2000 6.50%	25,385,475	XXX	25,385,475	XXX	
0200039. a-2000 6.75%	6,992,337	XXX	6,992,337	XXX	
0200040. a-2000 7.00%	4,988,751	XXX	4,988,751	XXX	
0200041. a-2012 CIF / NO FIG	207,012	XXX	207,012	XXX	
0200042. a-2012 IY / FIG	473,475,000	XXX	473,475,000	XXX	
0200043. a-2012 IY / No FIG	4,705,902,745	XXX	4,705,902,745	XXX	
0200044. a-2012 3.00%	252,304,101	XXX	252,304,101	XXX	
0200045. a-2012 3.50%	186,661,479	XXX	186,661,479	XXX	
0200046. a-2012 3.75%	25,556,284	XXX	25,556,284	XXX	
0200047. a-2012 4.00%	2,451,195,758	XXX	2,451,195,758	XXX	
0200048. a-2012 4.25%	247,153,104	XXX	247,153,104	XXX	
0200049. RA 2.50%	166,310	XXX	166,310	XXX	
0200050. RA 2.75%	5,586,272	XXX	5,586,272	XXX	
0200051. RA 3.00%	47,445	XXX	47,445	XXX	
0200052. RA 3.50%	20,217,263	XXX	20,217,263	XXX	
0200053. RA 4.00%	69,943,049	XXX	69,943,049	XXX	
0200054. 83a IY/FIG	36,112,845	XXX	36,112,845	XXX	
0200055. Other - Fund Balance Reserves	9,875,864,994	XXX		XXX	9,875,864,994
0200056. 71IAM @3.5%	5,035	XXX		XXX	5,035
0200057. 71IAM @4%	35,423	XXX		XXX	35,423
0200058. 71IAM @6%	127,265	XXX		XXX	127,265
0200059. 71IAM @6.5%	25,669	XXX		XXX	25,669
0200060. 71IAM @6.75%	926,499	XXX		XXX	926,499
0200061. 71IAM @7.5%	460,667	XXX		XXX	460,667
0200062. 83GAM @5%	377,794	XXX		XXX	377,794
0200063. 83GAM @5.25%	25,725	XXX		XXX	25,725
0200064. 83GAM @6%	1,237,774	XXX		XXX	1,237,774
0200065. 83GAM @6.25%	3,902,470	XXX		XXX	3,902,470
0200066. 83GAM @6.5%	1,620,432	XXX		XXX	1,620,432
0200067. 83GAM @6.75%	4,386,729	XXX		XXX	4,386,729
0200068. 83GAM @7%	850,166	XXX		XXX	850,166
0200069. 83GAM @7.25%	1,788,657	XXX		XXX	1,788,657
0200070. 83GAM @7.5%	3,170,229	XXX		XXX	3,170,229
0200071. 83GAM @7.75%	1,113,702	XXX		XXX	1,113,702
0200072. 83GAM @8%	2,101,269	XXX		XXX	2,101,269
0200073. 83GAM @8.25%	1,129,806	XXX		XXX	1,129,806
0200074. 83GAM @8.5%	32,339	XXX		XXX	32,339
0200075. 83GAM @8.75%	465,238	XXX		XXX	465,238
0200076. 83IAM @5%	10,218,966	XXX		XXX	10,218,966
0200077. 83IAM @6.25%	8,739,621	XXX		XXX	8,739,621
0200078. 83IAM @6.5%	8,854,553	XXX		XXX	8,854,553
0200079. 83IAM @6.75%	3,985,865	XXX		XXX	3,985,865
0200080. 83IAM @7%	11,727,860	XXX		XXX	11,727,860
0200081. 83IAM @7.25%	7,871,105	XXX		XXX	7,871,105
0200082. 83IAM @7.75%	6,731,486	XXX		XXX	6,731,486
0200083. 83IAM @8%	1,372,053	XXX		XXX	1,372,053
0200084. 83IAM @8.25%	10,472,353	XXX		XXX	10,472,353
0200085. 83IAM @8.75%	4,880,229	XXX		XXX	4,880,229
0200086. 83IAM @9.25%	775,939	XXX		XXX	775,939
0200087. 83IAM @9.5%	811,546	XXX		XXX	811,546
0200088. 94GAR @4.75%	73,443	XXX		XXX	73,443
0200089. 94GAR @5.25%	123,895	XXX		XXX	123,895
0200090. 94GAR @5.5%	75,711	XXX		XXX	75,711
0200091. 94GAR @6.25%	3,472,031	XXX		XXX	3,472,031
0200092. 94GAR @7%	28,590,350	XXX		XXX	28,590,350
0200093. Annuity 2000 @2.25%	10,460	XXX		XXX	10,460
0200094. Annuity 2000 @2.75%	16,949	XXX		XXX	16,949
0200095. Annuity 2000 @3%	193,315	XXX		XXX	193,315
0200096. Annuity 2000 @3.25%	833,205	XXX		XXX	833,205
0200097. Annuity 2000 @3.5%	270,061	XXX		XXX	270,061
0200098. Annuity 2000 @3.75%	2,498,716	XXX		XXX	2,498,716
0200099. Annuity 2000 @4%	4,448,355	XXX		XXX	4,448,355
0200100. Annuity 2000 @4.25%	3,491,605	XXX		XXX	3,491,605
0200101. Annuity 2000 @4.5%	2,953,964	XXX		XXX	2,953,964
0200102. Annuity 2000 @4.75%	102,125	XXX		XXX	102,125
0200103. Annuity 2000 @5%	9,104,694	XXX		XXX	9,104,694
0200104. Annuity 2000 @5.25%	18,717,007	XXX		XXX	18,717,007
0200105. Annuity 2000 @5.5%	17,344,710	XXX		XXX	17,344,710
0200106. Annuity 2000 @5.75%	878,450	XXX		XXX	878,450
0200107. Annuity 2000 @6%	28,606,465	XXX		XXX	28,606,465
0200108. Annuity 2000 @6.25%	2,062,208	XXX		XXX	2,062,208
0200109. Annuity 2000 @6.5%	18,644,370	XXX		XXX	18,644,370
0200110. Annuity 2000 @6.75%	8,727,196	XXX		XXX	8,727,196
0200111. Annuity 2000 @7%	269,217	XXX		XXX	269,217
0200112. Other - Fund Balance Reserves	5,519,294,810	XXX		XXX	5,519,294,810
0200113. 83 IAM 4.25%	1,154,197	XXX	1,154,197	XXX	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 5 - AGGREGATE RESERVE FOR LIFE CONTRACTS

1	2	3	4	5	6
Valuation Standard	Total	Industrial	Ordinary	Credit (Group and Individual)	Group
0200114. 83 IAM 4.5%	297,791	XXX	297,791	XXX	
0200115. 83 IAM 4.75%	2,169,316	XXX	2,169,316	XXX	
0200116. 83 IAM 5%	7,751,393	XXX	7,751,393	XXX	
0200117. 83 IAM 5.25%	424,974,723	XXX	424,974,723	XXX	
0200118. 83 IAM 5.5%	213,890,581	XXX	213,890,581	XXX	
0200119. 83 IAM 6%	102,924,367	XXX	102,924,367	XXX	
0200120. 83 IAM 6.5%	117,389,310	XXX	117,389,310	XXX	
0200121. 83 IAM 6.75%	83,362,138	XXX	83,362,138	XXX	
0200122. 83 IAM 7%	7,140,561	XXX	7,140,561	XXX	
0200123. 71 GAM 3.50%	219,527	XXX		XXX	219,527
0200124. 83 GAM 3.50%	713,989	XXX		XXX	713,989
0200125. 83 GAM 4.75%	128,865	XXX		XXX	128,865
0200126. 83 GAM 5.00%	258,694	XXX		XXX	258,694
0200127. 83 GAM 5.25%	760,097	XXX		XXX	760,097
0200128. 83 GAM 5.50%	671,310	XXX		XXX	671,310
0200129. 83 GAM 5.75%	87,028	XXX		XXX	87,028
0200130. 83 GAM 6.00%	30,718,614	XXX		XXX	30,718,614
0200131. 83 GAM 6.25%	28,029,154	XXX		XXX	28,029,154
0200132. 83 GAM 6.50%	27,582,326	XXX		XXX	27,582,326
0200133. 83 GAM 6.75%	8,594,662	XXX		XXX	8,594,662
0200134. 83 GAM 7.00%	16,155,798	XXX		XXX	16,155,798
0200135. 83 GAM 7.25%	18,928,807	XXX		XXX	18,928,807
0200136. 83 GAM 7.50%	173,711,763	XXX		XXX	173,711,763
0200137. 83 GAM 7.75%	17,385,673	XXX		XXX	17,385,673
0200138. 83 GAM 8.00%	30,036,040	XXX		XXX	30,036,040
0200139. 83 GAM 8.25%	16,840,646	XXX		XXX	16,840,646
0200140. 83 GAM 8.50%	5,125,123	XXX		XXX	5,125,123
0200141. 83 GAM 8.75%	33,027,112	XXX		XXX	33,027,112
0200142. 83 GAM 9.25%	14,149,584	XXX		XXX	14,149,584
0200143. 83 GAM 9.50%	46,719,109	XXX		XXX	46,719,109
0200144. 83 GAM 9.75%	29,461,880	XXX		XXX	29,461,880
0200145. 83 GAM 10.50%	12,707,748	XXX		XXX	12,707,748
0200146. 83 GAM 10.75%	7,606,431	XXX		XXX	7,606,431
0200147. 83 GAM 11.00%	14,097,747	XXX		XXX	14,097,747
0200148. 83 GAM 11.25%	11,487,538	XXX		XXX	11,487,538
0200149. 1994 GAR 2.00%	8,170,147	XXX		XXX	8,170,147
0200150. 1994 GAR 2.25%	47,701,148	XXX		XXX	47,701,148
0200151. 1994 GAR 2.50%	112,778,282	XXX		XXX	112,778,282
0200152. 1994 GAR 2.75%	186,266,000	XXX		XXX	186,266,000
0200153. 1994 GAR 3.00%	1,690,711,407	XXX		XXX	1,690,711,407
0200154. 1994 GAR 3.25%	737,106,348	XXX		XXX	737,106,348
0200155. 1994 GAR 3.50%	934,762,123	XXX		XXX	934,762,123
0200156. 1994 GAR 3.75%	2,320,031,005	XXX		XXX	2,320,031,005
0200157. 1994 GAR 4.00%	4,916,839,951	XXX		XXX	4,916,839,951
0200158. 1994 GAR 4.25%	389,857,133	XXX		XXX	389,857,133
0200159. 1994 GAR 4.50%	342,391,090	XXX		XXX	342,391,090
0200160. 1994 GAR 4.75%	47,749,217	XXX		XXX	47,749,217
0200161. 1994 GAR 5.00%	334,628,855	XXX		XXX	334,628,855
0200162. 1994 GAR 5.25%	89,837,846	XXX		XXX	89,837,846
0200163. 1994 GAR 5.50%	315,928,725	XXX		XXX	315,928,725
0200164. 1994 GAR 5.75%	18,934,846	XXX		XXX	18,934,846
0200165. 1994 GAR 6.00%	157,889,915	XXX		XXX	157,889,915
0200166. 1994 GAR 6.25%	428,359	XXX		XXX	428,359
0200167. 1994 GAR 6.50%	3,593,938	XXX		XXX	3,593,938
0200168. 1994 GAR 6.75%	6,356,903	XXX		XXX	6,356,903
0200169. a-2012 2.75%	138,810,236	XXX		XXX	138,810,236
0299997. Totals (Gross)	45,069,079,631	XXX	16,076,208,122	XXX	28,992,871,509
0299998. Reinsurance ceded	3,542,604,774	XXX	2,645,469,891	XXX	897,134,883
0299999. Annuities: Totals (Net)	41,526,474,857	XXX	13,430,738,231	XXX	28,095,736,626
0300001. 51 GA 3.00%	327,766				327,766
0300002. 37 SA 3.50%	128,897		128,897		
0300003. a-1949 3.50%	140,508		140,508		
0300004. 71 IAM 3.50%	51,747		51,747		
0300005. 71 IAM 6.00%	312,289		312,289		
0300006. 71 IAM 7.50%	1,425,037		1,425,037		
0300007. 83a 6.25%	504,054		504,054		
0300008. 83a 6.50%	576,504		576,504		
0300009. 83a 6.75%	724,133		724,133		
0300010. 83a 7.00%	403,679		403,679		
0300011. 83a 7.25%	334,516		334,516		
0300012. 83a 7.75%	432,744		432,744		
0300013. 83a 8.00%	197,249		197,249		
0300014. 83a 8.25%	1,077,551		1,077,551		
0300015. 83a 8.75%	698,949		698,949		
0300016. 83a 9.25%	182,386		182,386		
0300017. 83a 11.00%	229,867		229,867		
0300018. 71 IAM 11.25%	190,308				190,308
0300019. a-2000 4.00%	11,456,613		11,456,613		
0300020. a-2000 4.25%	10,054,765		10,054,765		
0300021. a-2000 4.50%	10,738,530		10,738,530		
0300022. a-2000 5.00%	8,260,803		8,260,803		
0300023. a-2000 5.25%	3,742,398		3,742,398		
0300024. a-2000 5.50%	4,087,855		4,087,855		
0300025. a-2000 6.00%	6,841,284		6,841,284		
0300026. a-2000 6.25%	573,840		573,840		
0300027. a-2000 6.50%	1,059,961		1,059,961		
0300028. a-2000 6.75%	623,160		623,160		
0300029. a-2000 7.00%	694,951		694,951		
0300030. a-2012 3.00%	2,365,346		2,365,346		
0300031. a-2012 3.50%	4,940,684		4,940,684		
0300032. a-2012 3.75%	20,786,784		20,786,784		
0300033. a-2012 4.00%	55,007,753		55,007,753		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 5 - AGGREGATE RESERVE FOR LIFE CONTRACTS

1	2	3	4	5	6
Valuation Standard	Total	Industrial	Ordinary	Credit (Group and Individual)	Group
0300034. a-2012 4.25%	5,545,250		5,545,250		
0399997. Totals (Gross)	154,718,161		154,390,395		327,766
0399998. Reinsurance ceded	327,766				327,766
0399999. SCWLC: Totals (Net)	154,390,395		154,390,395		
0400001. 110% INTERCO DI + AE 3.00%	123		123		
0400002. 110% INTERCO DI + 41 CSO 2.50%	1,831		1,831		
0400003. 59 ADB 3.00%	372,994		372,994		
0400004. 59 ADB + 58 CSO 2.50%	62,284		62,284		
0400005. 59 ADB + 58 CSO 3.50%	371,754		371,754		
0400006. 59 ADB + 58 CSO 4.50%	394,473		394,473		
0400007. 59 ADB + 80 CSO 4.50%	1,311,740		1,311,740		
0400008. 59 ADB + 2001 CSO 4.50%	15,179		15,179		
0400009. 59 ADB 3.00%	522,222				522,222
0499997. Totals (Gross)	3,052,600		2,530,378		522,222
0499998. Reinsurance ceded					
0499999. Accidental Death Benefits: Totals (Net)	3,052,600		2,530,378		522,222
0500001. 35-39 INTERCO + 46-49 2.50%	36		36		
0500002. 35-39 INTERCO + 58 CSO 2.50%	28,542		28,542		
0500003. 35-39 INTERCO + 58 CSO 3.50%	2,381,126		2,381,126		
0500004. 35-39 INTERCO + 58 CSO 4.00%	139		139		
0500005. 35-39 INTERCO + 58 CSO 4.50%	5		5		
0500006. 35-39 INTERCO + 80 CSO 4.50%	55,543,491		55,543,491		
0500007. 35-39 INTERCO + 2001 CSO 4.00%	66,934,826		66,934,826		
0500008. 120% 52 INTERCO DISA 2.50%	23,579		23,579		
0500009. 120% 52 INTERCO DISA 3.00%	33,703		33,703		
0500010. 120% 52 INTERCO DISA 3.50%	3,046,071		3,046,071		
0500011. 120% 52 INTERCO DISA 4.00%	111,640		111,640		
0500012. 1985 NHHS 80 CSO 4.50%	12,555,044		12,555,044		
0500013. 1958 CSO Benefit 5 2.50%	2,205		2,205		
0500014. 1985 CIDA 4.00%	457,618				457,618
0500015. MOD 52 DISAB TABLE BEN 5 4.00%	1,656				1,656
0500016. 35-39 INTERCO DISA + 58 CSO 4.50%	19,854		19,854		
0599997. Totals (Gross)	141,139,535		140,680,261		459,274
0599998. Reinsurance ceded					
0599999. Disability-Active Lives: Totals (Net)	141,139,535		140,680,261		459,274
0600001. 52 DISAB TABLE BEN 5 3.50%	1,759,387		1,759,387		
0600002. 52 DISAB TABLE BEN 5 4.00%	144,588,310		144,588,310		
0600003. 52 DISAB TABLE BEN 5 4.50%	92,697,193		92,697,193		
0600004. 52 DISAB TABLE BEN 5 5.00%	9,251,012		9,251,012		
0600005. 52 DISAB TABLE BEN 5 5.50%	21,854,253		21,854,253		
0600006. 52 DISAB TABLE BEN 5 6.00%	503,921		503,921		
0600007. 70 INTERCO DISA	162,371				162,371
0600008. 1985 NHHS 80 CSO 4.00%	2,365,659		2,365,659		
0600009. 1985 CIDA 4.00%	1,298,637				1,298,637
0600010. MOD 52 DISAB TABLE BEN 5 4.00%	536,556				536,556
0600011. 35-39 INTERCO DISA + 58 CSO 2.50%	111,061		111,061		
0699997. Totals (Gross)	275,128,360		273,130,796		1,997,564
0699998. Reinsurance ceded	162,371				162,371
0699999. Disability-Disabled Lives: Totals (Net)	274,965,989		273,130,796		1,835,193
0700001. PREMIUM DEFICIENCY	427,981,081		427,981,081		
0700002. APPORTIONABLE	8,638,699		8,638,699		
0700003. TERM COST RESERVE	44		44		
0700004. TERM CONVERSIONS	13,705,144		13,705,144		
0700005. POLICY LOANS	284,122		284,122		
0700006. MIN. DEATH BENEFIT	545,684,964		545,684,964		
0700007. CASH FLOW TESTING	202,397,854		202,397,854		
0700008. MISC	28,465		28,465		
0700009. Apportionable	194		194		
0700010. AG43 Reserve	170,765,566		170,765,566		
0700011. Asset Adequacy Reserve	413,500,000		413,500,000		
0700012. GMDB	9,945				9,945
0700013. VACARVM - direct	508,924				508,924
0799997. Totals (Gross)	1,783,505,002		1,782,986,133		518,869
0799998. Reinsurance ceded	39,390,907		39,390,907		
0799999. Miscellaneous Reserves: Totals (Net)	1,744,114,095		1,743,595,226		518,869
9999999. Totals (Net) - Page 3, Line 1	127,404,910,418		94,282,669,326		33,122,241,092

EXHIBIT 5 - INTERROGATORIES

- 1.1 Has the reporting entity ever issued both participating and non-participating contracts?..... Yes [X] No []
- 1.2 If not, state which kind is issued.
- 2.1 Does the reporting entity at present issue both participating and non-participating contracts?..... Yes [X] No []
- 2.2 If not, state which kind is issued.
- 3. Does the reporting entity at present issue or have in force contracts that contain non-guaranteed elements?..... Yes [X] No []
If so, attach a statement that contains the determination procedures, answers to the interrogatories and an actuarial opinion as described in the instructions.
- 4. Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X]
If so, state:
4.1 Amount of insurance? \$
4.2 Amount of reserve? \$
4.3 Basis of reserve:
4.4 Basis of regular assessments:
4.5 Basis of special assessments:
4.6 Assessments collected during the year \$
- 5. If the contract loan interest rate guaranteed in any one or more of its currently issued contracts is less than 5%, not in advance, state the contract loan rate guarantees on any such contracts.
- 6. Does the reporting entity hold reserves for any annuity contracts that are less than the reserves that would be held on a standard basis? Yes [] No [X]
6.1 If so, state the amount of reserve on such contracts on the basis actually held: \$
6.2 That would have been held (on an exact or approximate basis) using the actual ages of the annuitants; the interest rate(s) used in 6.1; and the same mortality basis used by the reporting entity for the valuation of comparable annuity benefits issued to standard lives. If the reporting entity has no comparable annuity benefits for standard lives to be valued, the mortality basis shall be the table most recently approved by the state of domicile for valuing individual annuity benefits: \$
Attach statement of methods employed in their valuation.
- 7. Does the reporting entity have any Synthetic GIC contracts or agreements in effect as of December 31 of the current year? Yes [X] No []
7.1 If yes, state the total dollar amount of assets covered by these contracts or agreements \$ 15,374,881,858
7.2 Specify the basis (fair value, amortized cost, etc.) for determining the amount:
Fair Value
7.3 State the amount of reserves established for this business: \$
7.4 Identify where the reserves are reported in the blank:
- 8. Does the reporting entity have any Contingent Deferred Annuity contracts or agreements in effect as of December 31 of the current year? Yes [] No [X]
8.1 If yes, state the total dollar amount of account value covered by these contracts or agreements: \$
8.2 State the amount of reserves established for this business: \$
8.3 Identify where the reserves are reported in the blank:
- 9. Does the reporting entity have any Guaranteed Lifetime Income Benefit contracts, agreements or riders in effect as of December 31 of the current year? Yes [X] No []
9.1 If yes, state the total dollar amount of any account value associated with these contracts, agreements or riders: \$ 3,623,834,258
9.2 State the amount of reserves established for this business: \$ 4,208,099,824
9.3 Identify where the reserves are reported in the blank:

EXHIBIT 5A - CHANGES IN BASES OF VALUATION DURING THE YEAR

1 Description of Valuation Class	Valuation Basis		4 Increase in Actuarial Reserve Due to Change
	2 Changed From	3 Changed To	
NONE			
9999999 - Total (Column 4, only)			

EXHIBIT 6 - AGGREGATE RESERVES FOR ACCIDENT AND HEALTH CONTRACTS (a)

	1 Total	Comprehensive		4 Medicare Supplement	5 Vision Only	6 Dental Only	7 Federal Employees Health Benefits Plan	8 Title XVIII Medicare	9 Title XIX Medicaid	10 Credit A&H	11 Disability Income	12 Long-Term Care	13 Other Health
		2 Individual	3 Group										
ACTIVE LIFE RESERVE													
1. Unearned premium reserves	82,334,048			29,505							44,308,777	37,995,766	
2. Additional contract reserves (b)	2,667,815,429			911							533,694,565	2,134,119,952	
3. Additional actuarial reserves-Asset/Liability analysis	1,884,000,000											1,884,000,000	
4. Reserve for future contingent benefits													
5. Reserve for rate credits													
6. Aggregate write-ins for reserves													
7. Totals (Gross)	4,634,149,477			30,416							578,003,343	4,056,115,719	
8. Reinsurance ceded	3,384,939,508			28,194								3,384,911,314	
9. Totals (Net)	1,249,209,969			2,222							578,003,343	671,204,405	
CLAIM RESERVE													
10. Present value of amounts not yet due on claims	2,061,253,809										1,828,068,543	232,606,998	578,268
11. Additional actuarial reserves-Asset/Liability analysis													
12. Reserve for future contingent benefits													
13. Aggregate write-ins for reserves													
14. Totals (Gross)	2,061,253,809										1,828,068,543	232,606,998	578,268
15. Reinsurance ceded	236,210,964										22,628,182	213,004,515	578,268
16. Totals (Net)	1,825,042,844										1,805,440,361	19,602,483	
17. TOTAL (Net)	3,074,252,813			2,222							2,383,443,703	690,806,888	
18. TABULAR FUND INTEREST	117,407,474			39							97,659,097	19,748,338	
DETAILS OF WRITE-INS													
0601.													
0602.													
0603.													
0698. Summary of remaining write-ins for Line 6 from overflow page													
0699. TOTALS (Lines 0601 thru 0603 plus 0698) (Line 6 above)													
1301.													
1302.													
1303.													
1398. Summary of remaining write-ins for Line 13 from overflow page													
1399. TOTALS (Lines 1301 thru 1303 plus 1398) (Line 13 above)													

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.
 (b) Attach statement as to valuation standard used in calculating this reserve, specifying reserve bases, interest rates and methods.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT 7 - DEPOSIT TYPE CONTRACTS

	1	2	3	4	5	6
	Total	Guaranteed Interest Contracts	Annuities Certain	Supplemental Contracts	Dividend Accumulations or Refunds	Premium and Other Deposit Funds
1. Balance at the beginning of the year before reinsurance	11,840,796,775	7,905,894,804	1,837,589,078	639,182,631	509,062,362	949,067,900
2. Deposits received during the year	5,937,808,163	2,553,207,448	436,942,044	172,596,767	28,862,447	2,746,199,457
3. Investment earnings credited to the account	225,992,386	175,822,355	(6,816,924)	23,494,841	14,463,953	19,028,161
4. Other net change in reserves	61,884,587	21,891,521	825,215	38,887,670	371,359	(91,178)
5. Fees and other charges assessed	58,805					58,805
6. Surrender charges						
7. Net surrender or withdrawal payments	4,129,456,877	1,851,013,277	327,817,742	172,119,574	59,829,963	1,718,676,321
8. Other net transfers to or (from) Separate Accounts	956,118,312					956,118,312
9. Balance at the end of current year before reinsurance (Lines 1+2+3+4-5-6-7-8)	12,980,847,917	8,805,802,851	1,940,721,671	702,042,335	492,930,158	1,039,350,902
10. Reinsurance balance at the beginning of the year	2,529,110,512					2,529,110,512
11. Net change in reinsurance assumed	(213,184,554)					(213,184,554)
12. Net change in reinsurance ceded						
13. Reinsurance balance at the end of the year (Lines 10+11-12)	2,315,925,958					2,315,925,958
14. Net balance at the end of current year after reinsurance (Lines 9 + 13)	15,296,773,875	8,805,802,851	1,940,721,671	702,042,335	492,930,158	3,355,276,860

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
EXHIBIT 8 - CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

PART 1 - Liability End of Current Year

	1 Total	2 Industrial Life	Ordinary			6 Credit Life (Group and Individual)	Group		Accident and Health		
			3 Life Insurance	4 Individual Annuities	5 Supplementary Contracts		7 Life Insurance	8 Annuities	9 Group	10 Credit (Group and Individual)	11 Other
1. Due and unpaid:											
1.1 Direct	19,165,229			592,082				1,618,742			16,954,405
1.2 Reinsurance assumed	7,027,498							7,027,498			
1.3 Reinsurance ceded	4,616,571										4,616,571
1.4 Net	21,576,156			592,082				8,646,240			12,337,834
2. In course of settlement:											
2.1 Resisted											
2.11 Direct	1,258,000		1,258,000								
2.12 Reinsurance assumed											
2.13 Reinsurance ceded											
2.14 Net	1,258,000		(b) 1,258,000	(b)	(b)	(b)	(b)				
2.2 Other											
2.21 Direct	509,261,171		440,342,514	719,842			56,090,399				12,108,416
2.22 Reinsurance assumed	21,934,437		21,511,313				423,124				
2.23 Reinsurance ceded	159,808,778		151,499,898				8,288,488				20,392
2.24 Net	371,386,830		(b) 310,353,929	(b) 719,842	(b)	(b)	(b) 48,225,035	(b)	(b)	(b)	(b) 12,088,024
3. Incurred but unreported:											
3.1 Direct	48,031,219		34,009,750				8,405,900				5,615,569
3.2 Reinsurance assumed	1,962,040		1,962,040								
3.3 Reinsurance ceded	20,185,750		13,593,800				5,121,900				1,470,050
3.4 Net	29,807,509		(b) 22,377,990	(b)	(b)	(b)	(b) 3,284,000	(b)	(b)	(b)	(b) 4,145,519
4. TOTALS											
4.1 Direct	577,715,619		475,610,264	1,311,924			64,496,299	1,618,742			34,678,390
4.2 Reinsurance assumed	30,923,975		23,473,353				423,124	7,027,498			
4.3 Reinsurance ceded	184,611,099		165,093,698				13,410,388				6,107,013
4.4 Net	424,028,495	(a)	(a) 333,989,919	1,311,924			(a) 51,509,035	8,646,240			28,571,377

(a) Including matured endowments (but not guaranteed annual pure endowments) unpaid amounting to \$ in Column 2, \$1,967,129 in Column 3 and \$ in Column 7.

(b) Include only portion of disability and accident and health claim liabilities applicable to assumed "accrued" benefits. Reserves (including reinsurance assumed and net of reinsurance ceded) for unaccrued benefits for Ordinary Life Insurance \$7,174,862
 Individual Annuities \$, Credit Life (Group and Individual) \$, and Group Life \$, are included in Page 3, Line 1, (See Exhibit 5, Section on Disability Disabled Lives); and for Group Accident and Health \$
 Credit (Group and Individual) Accident and Health \$, and Other Accident and Health \$ are included in Page 3, Line 2 (See Exhibit 6, Claim Reserve).

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
EXHIBIT 8 - CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

PART 2 - Incurred During the Year

	1 Total	2 Industrial Life (a)	Ordinary			6 Credit Life (Group and Individual)	Group		Accident and Health		
			3 Life Insurance (b)	4 Individual Annuities	5 Supplementary Contracts		7 Life Insurance (c)	8 Annuities	9 Group	10 Credit (Group and Individual)	11 Other
1. Settlements During the Year:											
1.1 Direct	5,180,657,663		2,411,203,011	692,079,979	17,210,071		225,646,759	1,433,970,964	72,490		400,474,389
1.2 Reinsurance assumed	174,299,784		86,779,005	177,029			12,083,878	75,259,872			
1.3 Reinsurance ceded	742,811,390		632,526,992	5,618,039			46,062,004	3,797,174	64,000		54,743,181
1.4 Net	(d) 4,612,146,057		1,865,455,024	686,638,969	17,210,071		191,668,633	1,505,433,662	8,490		345,731,208
2. Liability December 31, current year from Part 1:											
2.1 Direct	577,715,619		475,610,264	1,311,924			64,496,299	1,618,742			34,678,390
2.2 Reinsurance assumed	30,923,975		23,473,353				423,124	7,027,498			
2.3 Reinsurance ceded	184,611,099		165,093,698				13,410,388				6,107,013
2.4 Net	424,028,495		333,989,919	1,311,924			51,509,035	8,646,240			28,571,377
3. Amounts recoverable from reinsurers December 31, current year	39,232,872		34,144,291				4,384,800				703,781
4. Liability December 31, prior year:											
4.1 Direct	533,875,115		396,995,531	1,208,249			101,318,902	1,115,852	50,000		33,186,581
4.2 Reinsurance assumed	34,171,382		28,487,898				4,247,820	1,435,664			
4.3 Reinsurance ceded	131,698,595		110,497,536				15,451,621		50,000		5,699,438
4.4 Net	436,347,902		314,985,893	1,208,249			90,115,101	2,551,516			27,487,143
5. Amounts recoverable from reinsurers December 31, prior year	78,307,613		72,630,992	75,447			5,446,477		14,000		140,697
6. Incurred Benefits											
6.1 Direct	5,224,498,167		2,489,817,744	692,183,654	17,210,071		188,824,156	1,434,473,854	22,490		401,966,198
6.2 Reinsurance assumed	171,052,377		81,764,460	177,029			8,259,182	80,851,706			
6.3 Reinsurance ceded	756,649,153		648,636,453	5,542,592			42,959,094	3,797,174			55,713,840
6.4 Net	4,638,901,391		1,922,945,751	686,818,091	17,210,071		154,124,244	1,511,528,386	22,490		346,252,358

- (a) Including matured endowments (but not guaranteed annual pure endowments) amounting to \$ in Line 1.1, \$ in Line 1.4.
 \$ in Line 6.1, and \$ in Line 6.4.
- (b) Including matured endowments (but not guaranteed annual pure endowments) amounting to \$16,392,049 in Line 1.1, \$16,392,049 in Line 1.4.
 \$17,173,120 in Line 6.1, and \$17,173,120 in Line 6.4.
- (c) Including matured endowments (but not guaranteed annual pure endowments) amounting to \$ in Line 1.1, \$ in Line 1.4.
 \$ in Line 6.1, and \$ in Line 6.4.
- (d) Includes \$39,938,115 premiums waived under total and permanent disability benefits.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT OF NON-ADMITTED ASSETS

	1	2	3
	Current Year Total Nonadmitted Assets	Prior Year Total Nonadmitted Assets	Change in Total Nonadmitted Assets (Col. 2 - Col. 1)
1. Bonds (Schedule D)			
2. Stocks (Schedule D):			
2.1 Preferred stocks			
2.2 Common stocks	189,047		(189,047)
3. Mortgage loans on real estate (Schedule B):			
3.1 First liens			
3.2 Other than first liens.....			
4. Real estate (Schedule A):			
4.1 Properties occupied by the company			
4.2 Properties held for the production of income.....			
4.3 Properties held for sale			
5. Cash (Schedule E - Part 1), cash equivalents (Schedule E - Part 2) and short-term investments (Schedule DA)			
6. Contract loans	529,101	462,724	(66,377)
7. Derivatives (Schedule DB)			
8. Other invested assets (Schedule BA)	60,352,690	43,866,156	(16,486,534)
9. Receivables for securities			
10. Securities lending reinvested collateral assets (Schedule DL)			
11. Aggregate write-ins for invested assets			
12. Subtotals, cash and invested assets (Lines 1 to 11)	61,070,838	44,328,880	(16,741,958)
13. Title plants (for Title insurers only)			
14. Investment income due and accrued	9,061,926	6,582,488	(2,479,438)
15. Premiums and considerations:			
15.1 Uncollected premiums and agents' balances in the course of collection	2,756,900	2,411,627	(345,273)
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due ..			
15.3 Accrued retrospective premiums and contracts subject to redetermination			
16. Reinsurance:			
16.1 Amounts recoverable from reinsurers	2,092,606	6,211,923	4,119,317
16.2 Funds held by or deposited with reinsured companies			
16.3 Other amounts receivable under reinsurance contracts			
17. Amounts receivable relating to uninsured plans			
18.1 Current federal and foreign income tax recoverable and interest thereon			
18.2 Net deferred tax asset			
19. Guaranty funds receivable or on deposit			
20. Electronic data processing equipment and software	223,033,867	191,559,787	(31,474,080)
21. Furniture and equipment, including health care delivery assets	67,229,638	55,965,309	(11,264,329)
22. Net adjustment in assets and liabilities due to foreign exchange rates			
23. Receivables from parent, subsidiaries and affiliates			
24. Health care and other amounts receivable			
25. Aggregate write-ins for other than invested assets	1,110,459,769	1,915,737,153	805,277,384
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	1,475,705,544	2,222,797,167	747,091,623
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts			
28. Total (Lines 26 and 27)	1,475,705,544	2,222,797,167	747,091,623
DETAILS OF WRITE-INS			
1101.			
1102.			
1103.			
1198. Summary of remaining write-ins for Line 11 from overflow page			
1199. Totals (Lines 1101 thru 1103 plus 1198)(Line 11 above)			
2501. Pension plan asset	642,321,439	727,193,552	84,872,113
2502. Disallowed interest maintenance reserve		562,688,196	562,688,196
2503. Cash advances to agents	238,573,733	245,007,193	6,433,460
2598. Summary of remaining write-ins for Line 25 from overflow page	229,564,597	380,848,212	151,283,615
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)	1,110,459,769	1,915,737,153	805,277,384

NOTES TO FINANCIAL STATEMENTS

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NOTES TO FINANCIAL STATEMENTS

Note 1 – Summary of Significant Accounting Policies and Going Concern

a. Accounting practices:

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

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

	SSAP #	F/S Page	F/S Line #	2019	2018
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 2)	XXX	XXX	XXX	\$ 424,246,514	\$ (821,347,140)
(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	<u>\$ 424,246,514</u>	<u>\$ (821,347,140)</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 18,892,910,171	\$ 15,609,786,669
(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	<u>\$ 18,892,910,171</u>	<u>\$ 15,609,786,669</u>

b. Use of estimates in the preparation of the financial statements:

The preparation of financial statements requires management to make estimates and assumptions that impact the reported amounts of assets and liabilities, the disclosure of assets and liabilities as of the date of the statutory financial statements and the reported amounts of revenues and expenses during the reporting periods. The most significant estimates include those used in determining the carrying values of investments including the amount of mortgage loan investment valuation reserves, other-than-temporary impairment(s) (OTTI), the value of the investment in MassMutual Holding LLC (MMHLLC), the liabilities for policyholders' reserves, the determination of admissible deferred tax assets (DTAs), and the liability for taxes and litigation contingencies. Future events including, but not limited to, changes in the level of mortality, morbidity, interest rates, persistency, asset valuations and defaults could cause results to differ from the estimates used in the statutory financial statements. Although some variability is inherent in these estimates, management believes the amounts presented are appropriate.

c. Accounting policy:

Life insurance premium revenue is generally recognized annually on the anniversary date of the policy. However, premium for flexible products, primarily universal life and variable universal life contracts, is recognized as revenue when received. Annuity premium is recognized as revenue when received. Disability income and long-term care premium is recognized as revenue when due. Expenses incurred in connection with acquiring new insurance business, including certain acquisition costs, such as commissions, are charged to current operations as incurred. Policy loans are carried at the outstanding loan balance less amounts unsecured by the cash surrender value of the policy. Unsecured amounts can occur when subsequent charges are incurred on the underlying policy without the receipt of additional premium. Where applicable, the values of invested assets have been adjusted for impairments considered OTTI.

Investment real estate, which the Company has the intent to hold for the production of income, and real estate occupied by the Company, are carried at depreciated cost, less encumbrances. Depreciation is calculated using the straight-line method over the estimated useful life of the real estate holding, not to exceed 40 years. Depreciation expense is included in net investment income. Real estate held for sale is initially carried at the lower of depreciated cost or fair value less estimated selling costs and is no longer depreciated. Adjustments to carrying value, including for further declines in fair value, are recorded in a valuation reserve, which is included in realized capital losses.

In addition, the Company uses the following accounting policies:

- (1) Short-term investments, which are carried at amortized cost, consist of all highly liquid investments purchased with maturities of greater than three months and less than or equal to 12 months. Investments in short-term bonds and money market mutual funds are classified as short-term investments.
- (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.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (3) Unaffiliated common stocks are carried at fair value, which is based on quoted market prices when available. If quoted market prices are not available, values provided by third-party organizations are used. If values from third parties are unavailable, fair values are determined by management using estimates based upon internal models. The Company's internal models include estimates based upon comparable company analysis, review of financial statements, broker quotes and last traded price. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

The Company held unaffiliated common stocks, for which the transfer of ownership was restricted by contractual requirements, with carrying values of \$112,490,238 as of December 31, 2019 and \$158,761,525 as of December 31, 2018.

- (4) Preferred stocks in good standing, those that are rated Categories 1 through 3 by the Securities Valuation Office (SVO) of the

NOTES TO FINANCIAL STATEMENTS

NAIC, are generally valued at amortized cost. Preferred stocks not in good standing, those that are rated Categories 4 through 6 by the SVO of the NAIC, are valued at the lower of amortized cost or fair value. Fair values are based on quoted market prices, when available. If quoted market prices are not available, values provided by third-party organizations are used. If values provided by third-party organizations are unavailable, fair value is estimated using internal models. These models use inputs not directly observable or correlated with observable market data. Typical inputs integrated into the Company's internal discounted expected earnings models include, but are not limited to, earnings before interest, taxes, depreciation and amortization estimates. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

The Company held preferred stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$684,414,002 as of December 31, 2019 and \$680,779,390 as of December 31, 2018.

- (5) Mortgage loans are valued at the unpaid principal balance of the loan, net of unamortized premium, discount, mortgage origination fees and valuation allowances. Interest income earned on impaired loans is accrued on the outstanding principal balance of the loan based on the loan's contractual coupon rate. Interest is not accrued for (a) impaired loans more than 60 days past due, (b) delinquent loans more than 90 days past due, or (c) loans that have interest that is not expected to be collected. The Company continually monitors mortgage loans where the accrual of interest has been discontinued, and will resume the accrual of interest on a mortgage loan when the facts and circumstances of the borrower and property indicate that the payments will continue to be received according to the terms of the original or modified mortgage loan agreement.

Mortgage loans comprised commercial mortgage loans and residential mortgage loans. The Company holds commercial mortgage loans for which it is the primary lender or a participant or co-lender in a mortgage loan agreement and mezzanine loans that are subordinate to senior secured first liens. The Company's loan agreements with the senior lender contain negotiated provisions that are designed to maximize the Company's influence with the objective of mitigating the Company's risks as the secondary lender for mezzanine loans. Commercial mortgage loans have varying risk characteristics including, among others, the borrower's liquidity, the underlying percentage of completion of a project, the returns generated by the collateral, the refinancing risk associated with maturity of the loan and deteriorating collateral value. Residential mortgage loans include seasoned pools of homogeneous residential mortgage loans substantially backed by Federal Housing Administration (FHA) and Veterans Administration (VA) guarantees.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (6) For loan-backed and structured securities, such as asset-backed securities (ABS), mortgage-backed securities (MBS), including RMBS and CMBS, and structured securities, including collateralized debt obligations (CDOs), 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.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (7) Common stocks of unconsolidated subsidiaries, primarily C.M. Life Insurance Company (C.M. Life), MML Bay State Life Insurance Company (MML Bay State), and MassMutual Holding LLC (MMHLLC), are accounted for using the statutory equity method. The Company accounts for the value of MMHLLC at its underlying U.S. GAAP equity value less an adjustment of \$732,992,622 as of December 31, 2019 for a portion of its noncontrolling interests (NCI). Operating results, less dividends declared, for MMHLLC is reflected as net unrealized capital gains (losses) in the Statutory Statements of Changes in Surplus. Dividends declared from MMHLLC are recorded in net investment income when declared and are limited to MMHLLC's U.S. GAAP retained earnings. The cost basis of common stocks – subsidiaries and affiliates is adjusted for impairments deemed to be other than temporary.

MassMutual International LLC (MMI) was classified as common stocks – subsidiaries and affiliates as of December 31, 2017 and as partnerships and LLCs as of December 31, 2018 and December 31, 2019. MMI was accounted for using the statutory equity method in both years. Prior to December 31, 2018, the Company accounts for the value of MMI at its underlying U.S. GAAP equity value adjusted to remove certain nonadmitted and intangible assets. At December 31, 2018, the value of MMI was recorded at its underlying U.S. GAAP equity value. The change in the value of MMI is reflected as net unrealized capital gains (losses) in the Statutory Statements of Changes in Surplus.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

The Company held affiliated common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$5,694,011 as of December 31, 2019 and \$5,444,260 as of December 31, 2018.

- (8) Partnerships and limited liability companies (LLCs), except for partnerships that generate and realize low income housing tax credits (LIHTCs), are accounted for using the equity method with the change in the equity value of the underlying investment recorded in surplus. Distributions received are recognized as net investment income to the extent the distribution does not exceed previously recorded accumulated undistributed earnings.

Investments in partnerships that generate LIHTCs are carried at amortized cost unless considered impaired. Under the amortized cost method, the excess of the carrying value of the investment over its estimated residual value is amortized into income during the period in which tax benefits are recognized.

The equity method is suspended if the carrying value of the investment is reduced to zero due to losses from the investment. Once the equity method is suspended, losses are not recorded until the investment returns to profitability and the equity method is resumed. However, if the Company has guaranteed obligations of the investment or is otherwise committed to provide further financial support for the investment, losses will continue to be reported up to the amount of those guaranteed obligations or commitments.

NOTES TO FINANCIAL STATEMENTS

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (9) Interest rate swaps and credit default swaps associated with replicated assets are valued at amortized cost and all other derivative types are carried at fair value, which is based primarily upon quotations obtained from counterparties and independent sources. These quotations are compared to internally derived prices and a price challenge is lodged with the counterparties and independent sources 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 on an internal valuation process using market observable inputs that other market participants would use. Changes in the fair value of these instruments other than interest rate swaps and credit default swaps associated with replicated assets are recorded as unrealized capital gains (losses) in surplus. Gains and losses realized on settlement, termination, closing or assignment of contracts are recorded as realized capital gains (losses). Amounts receivable and payable are accrued as net investment income.
- (10) The Company does not utilize anticipated investment income as a factor in the premium deficiency calculation in accordance with Statement of Statutory Accounting Principles (SSAP) No. 54 "Individual and Group Accident and Health Contracts."
- (11) Unpaid claims and claim expense reserves are related to disability and long-term care claims. Unpaid disability claim liabilities are projected based on the average of the last three disability payments. Long-term care unpaid claim liabilities are projected using policy specific daily benefit amounts and aggregate utilization factors. Claim expense reserves are based on an analysis of the unit expenses related to the processing and examination of new and ongoing claims. Interest accrued on reserves is calculated by applying NAIC prescribed interest rates to the average reserves by year incurred.
- (12) The Company has not modified its capitalization policy from the prior period.
- (13) The Company did not issue any business that would give rise to pharmaceutical rebates or risk sharing receivables.
- (14) The book values of investments are written down when declines in values are considered to be other than temporary.

Bonds - general

The Company employs a systematic methodology to evaluate OTTI by conducting a quarterly analysis of bonds. OTTI is evaluated in a manner consistent with market participant assumptions. The Company considers the following factors, where applicable depending on the type of securities, in the evaluation of whether a decline in value is other than temporary: (a) the likelihood that the Company will be able to collect all amounts due according to the contractual terms of the debt security; (b) the present value of the expected future cash flows of the security; (c) the characteristics, quality and value of the underlying collateral or issuer securing the position; (d) collateral structure; (e) the length of time and extent to which the fair value has been below amortized cost; (f) the financial condition and near-term prospects of the issuer; (g) adverse conditions related to the security or industry; (h) the rating of the security; (i) the Company's ability and intent to hold the investment for a period of time sufficient to allow for an anticipated recovery to amortized cost; and (j) other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes in value.

In addition, if the Company has the intent to sell, or the inability, or lack of intent to retain the investment for a period sufficient to recover the amortized cost basis, an OTTI is recognized as a realized loss equal to the entire difference between the investment's amortized cost basis and its fair value at the balance sheet date.

When a bond is other-than-temporarily impaired, a new cost basis is established.

Bonds - corporate

For corporate securities, if it is determined that a decline in the fair value of a bond is other than temporary, OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and, generally, its fair value at the balance sheet date.

Bonds - loan-backed and structured securities

For loan-backed and structured securities, if the present value of cash flows expected to be collected is less than the amortized cost basis of the security, an OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and the present value of cash flows expected to be collected. The expected cash flows are discounted at the security's effective interest rate. Internal inputs used in determining the amount of the OTTI on structured securities include collateral performance, prepayment speeds, default rates, and loss severity based on borrower and loan characteristics, as well as deal structure including subordination, over-collateralization and cash flow priority.

ABS and MBS are evaluated for OTTI using scenarios and assumptions based on the specifics of each security including collateral type, loan type, vintage and subordination level in the structure. Cash flow estimates are based on these assumptions and inputs obtained from external industry sources along with internal analysis and actual experience. Where applicable, assumptions include prepayment speeds, default rates and loss severity, weighted average maturity and changes in the underlying collateral values.

The Company has a review process for determining if CDOs are at risk for OTTI. For the senior, mezzanine and junior debt tranches, cash flows are modeled using multiple scenarios based on the current ratings and values of the underlying corporate credit risks and incorporating prepayment and default assumptions that vary according to collateral attributes of each CDO. The prepayment and default assumptions are varied within each model based upon rating (base case), historical expectations (default), rating change improvement (optimistic), rating change downgrade (pessimistic) and fair value (market). The default rates produced by these multiple scenarios are assigned an expectation weight according to current market and economic conditions and fed into a final scenario. OTTI is recorded if this final scenario results in the loss of any principal or interest payments due.

For the most subordinated junior CDO tranches, the present value of the projected cash flows in the final scenario is measured using an effective yield. If the current book value of the security is greater than the present value measured using an effective yield, an OTTI is taken in an amount sufficient to produce its effective yield. Certain CDOs cannot be modeled using all of the scenarios because of limitations on the data needed for all scenarios. The cash flows for these CDOs, including foreign currency denominated CDOs, are projected using a customized scenario management believes is reasonable for the applicable collateral pool.

For loan-backed and structured securities, any difference between the new amortized cost basis and any increased present value of future cash flows expected to be collected is accreted into net investment income over the expected remaining life of the bond.

NOTES TO FINANCIAL STATEMENTS

Common and preferred stock

The cost basis of common and preferred stocks is adjusted for impairments deemed to be other than temporary. The Company considers the following factors in the evaluation of whether a decline in value is other than temporary: (a) the financial condition and near-term prospects of the issuer; (b) the Company's ability and intent to retain the investment for a period sufficient to allow for a near-term recovery in value; and (c) the period and degree to which the value has been below cost. The Company conducts a quarterly analysis of issuers whose common or preferred stock is not-in-good standing or valued below 80% of cost. The Company also considers other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes in value.

Mortgage loans

The Company performs internal reviews at least annually to determine if individual mortgage loans are performing or nonperforming. The fair values of performing mortgage loans are estimated by discounting expected future cash flows using current interest rates for similar loans with similar credit risk. For nonperforming loans, the fair value is the estimated collateral value of the underlying real estate. If foreclosure is probable, the Company will obtain an external appraisal.

Mortgage loans are considered to be impaired when, based upon current available information and events, it is probable that the Company will be unable to collect all amounts of principal and interest due according to the contractual terms of the mortgage loan agreement. A valuation allowance is recorded on a loan-by-loan basis in net unrealized capital losses for the excess of the carrying value of the mortgage loan over the fair value of its underlying collateral. Such information or events could include property performance, capital budgets, future lease roll, a property inspection as well as payment trends. Collectability and estimated decreases in collateral values are also assessed on a loan-by-loan basis considering all events and conditions relevant to the loan. This evaluation is inherently subjective as it requires estimates that are susceptible to significant revisions as more information becomes available, as changes occur in the market or as negotiations with the borrowing entity evolve. If there is a change in the fair value of the underlying collateral or the estimated loss on the loan, the valuation allowance is adjusted accordingly. An OTTI occurs upon the realization of a credit loss, typically through foreclosure or after a decision is made to accept a discounted payoff, and is recognized in realized capital losses. The previously recorded valuation allowance is reversed from unrealized capital losses. When an OTTI is recorded, a new cost basis is established reflecting estimated value of the collateral.

Real estate

For real estate held for the production of income, depreciated cost is adjusted for impairments whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable, with the impairment being included in realized capital losses. An impairment is recorded when the property's estimated future net operating cash flows over ten years, undiscounted and without interest charges, is less than book value.

Adjustments to the carrying value of real estate held for sale are recorded in a valuation reserve as realized capital losses when the fair value less estimated selling costs is less than the carrying value.

Partnerships and LLCs

When it is probable that the Company will be unable to recover the outstanding carrying value of an investment based on undiscounted cash flows, or there is evidence indicating an inability of the investee to sustain earnings to justify the carrying value of the investment, OTTI is recognized in realized capital losses reflecting the excess of the carrying value over the estimated fair value of the investment. The estimated fair values of limited partnership interests are generally based on the Company's share of the net asset value (NAV) as provided in the financial statements of the investees. In certain circumstances, management may adjust the NAV by a premium or discount when it has sufficient evidence to support applying such adjustments.

For determining impairments in partnerships that generate LIHTCs, the Company uses the present value of all future benefits, the majority of which are tax credits, discounted at a risk-free rate for future benefits of ten or more years and compares the results to its current book value. Impairments are recognized in realized capital losses reflecting the excess of the carrying value over the estimated fair value of the investment.

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 year ended December 31, 2019, 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
Contract claims and other benefits	(5,200,429)	(5,200,429)	5,200,429
Liabilities for deposit-type contracts	42,188,338	42,188,338	(42,188,338)
Other than invested assets	\$ (12,485,827)	\$ 106,014,173	\$ 106,014,173
Policyholders' reserves	(87,278,353)	(87,278,353)	87,278,353
Other liabilities	(7,282,586)	(7,282,586)	7,282,586
Total	\$ (70,058,857)	\$ 48,441,143	

Of the \$48,441,143 increase to surplus for prior years' errors, \$70,058,857 was recorded as prior period adjustments with an additional amount of \$118,500,000 that was recorded as a change in nonadmitted assets, net of taxes.

NOTES TO FINANCIAL STATEMENTS

For the year ended December 31, 2018, corrections of prior years' errors were recorded in capital and surplus, net of tax:

	Increase (Decrease) to:		
	Prior Years' Net Income	Current Year Surplus	Asset or Liability Balances
Partnerships and limited liability companies	\$ -	\$ (58,641,016)	\$ (58,641,016)
Deferred income taxes	-	(36,021,141)	(36,021,141)
Other than invested assets	(12,901,373)	(12,901,373)	12,901,373
Other liabilities	(2,343,609)	(2,343,609)	2,343,609
Policyholders' reserves	(27,892,090)	(27,892,090)	27,892,090
Policyholders' dividends	(3,397,000)	(3,397,000)	3,397,000
Total	\$ (46,534,072)	\$ (141,196,229)	

Of the \$141,196,229 decrease to surplus for prior years' errors, \$46,534,072 was recorded as prior period adjustments with offsets of \$58,641,016 that was recorded as a change in nonadmitted assets, net of taxes and \$36,021,141 that was recorded as a change in net deferred income taxes in the Summary of Operations.

b. Adoption of new accounting standards:

In June 2016, the NAIC adopted modifications to Statements of Statutory Accounting Principles (SSAP) No. 51R, *Life Contracts*, to incorporate references to the Valuation Manual and to facilitate the implementation of principles-based reserving (PBR), which were effective on January 1, 2017. The adoption of PBR only applies to new life insurance policies issued after January 1, 2017, however the Company plans to adopt these revisions to SSAP No. 51R using the 3-year phased in approach by no later than January 1, 2020. The Company currently uses formulas and assumptions to determine reserves as prescribed by state laws and regulations. Under PBR, the Company will be required to hold the higher of (a) the reserve using prescribed factors and (b) the PBR reserve which considers a wide range of future economic conditions, computed using justified company experience factors, such as mortality, policyholder behavior and expenses. At the time of adoption, the modifications are not expected to have a material effect on the Company's total life reserves and surplus in the financial statements.

In October 2018, the NAIC issued modifications to SSAP No. 86, *Derivatives*, effective January 1, 2019. This guidance permits the use of the Overnight Index Swap (OIS) rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate in addition to the U.S. Treasury rate, the LIBOR swap rate, the OIS rate based on the Fed Funds Effective Rate, and the SIFMA Municipal Swap Rate. The Company has not elected to apply hedge accounting, therefore adoption of this guidance did not have an impact on the Company's financial statements.

In November 2018, the NAIC issued SSAP No. 30R, *Unaffiliated Common Stock*, effective January 1, 2019. The modification included a clarification to the scope for unaffiliated common stock including Securities Exchange Commission registered investment companies, such as closed-end mutual funds and unit investment trusts. The modification also includes public stock warrants, while nonpublic stock warrants would be classified as derivative instruments. The modifications did not have a material effect on the Company's financial statements.

In November 2018, the NAIC adopted modifications to the liquidity risk disclosure requirements of SSAP No. 51R, *Life Contracts*, No. 52, *Deposit-Type Contracts*, and No. 61R, *Life, Deposit-Type and Accident and Health Reinsurance*, effective December 31, 2019. The modifications require the Company to provide additional liquidity risk information such as current surrender charges, amount of account value, cash value and reserves breakouts by withdrawal characteristics for certain general and separate account products and groups of products. Additionally, a reconciliation of amounts of total reserves disclosed to the applicable annual statement exhibits, and the corresponding financial statement line items is required. The modifications did not have a material effect on the Company's financial statements.

In April 2019, the NAIC adopted modifications to SSAP No. 16R, *Electronic Data Processing Equipment and Software*, effective January 1, 2020, the Company elected to early adopt effective April 1, 2019. This guidance aligns and clarifies the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract, with the requirement for capitalizing implementation costs incurred to develop or obtain internal-use software. Costs for implementation activities in the application development stage is capitalized, depending on the nature of the costs and would be nonadmitted, while costs incurred during preliminary project or post implementation stages are expensed as incurred. The amendments also require the entity to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the lesser of the expected term of the hosting arrangement or five years. The Company adopted this guidance on a prospective basis and the adoption did not have a material impact to its financial statements.

In April 2019, the NAIC adopted modifications to SSAP Nos. 26R, *Bonds*, 43R, *Loan-Backed and Structured Securities*, and 86, *Derivatives*, reclassifying structured notes as specifically defined that expose the investor to the risk of principal loss as derivative instruments, effective December 31, 2019. These types of structured notes where there is an embedded derivative wrapped by a bond include underlying risks that are not linked to the issuer's credit. Structured notes are currently reported as long-term bonds valued at amortized cost; while as derivative instruments, structured notes would be carried at fair value. The adoption of these modifications did not have a material impact on the Company's financial statements.

Note 3 – Business Combinations and Goodwill

- The Company did not have any business combinations accounted for using the statutory purchase method.
- There were no business combinations taking the form of a statutory merger.
- The Company did not enter into any assumption reinsurance agreements.
- The Company did not recognize an impairment loss on the transactions described above.

Note 4 – Discontinued Operations

The Company did not have any discontinued operations.

NOTES TO FINANCIAL STATEMENTS

Note 5 - Investments

a. Mortgage loans, including mezzanine real estate loans:

- (1) The maximum and minimum lending rates for new mortgage loans during 2019 were: Commercial mortgage loans 8.7% and 3.0% and residential mortgage loans 6.1% and 4.2%. The Company did not originate any new mezzanine real estate loans.

The maximum and minimum lending rates for new mortgage loans during 2018 were:

Commercial mortgage loans 8.9% and 3.7% and residential mortgage loans 4.6% and 3.7%, both the maximum and the minimum.

- (2) The maximum percentage of any one commercial mortgage loan to the estimated value of secured collateral at the time the loan was originated, exclusive of mezzanine, insured, guaranteed or purchase money mortgages, was 51% as of December 31, 2019 and 2018. No mezzanine loans were originated in 2019.
- (3) As of December 31, 2019 and 2018, the Company did not have any taxes, assessments and amounts advanced and not included in the mortgage loan total.
- (4) Age analysis of mortgage loans and identification of mortgage loans in which the insurer is a participant or co-lender in a mortgage loan agreement:

	Residential			Commercial		Mezzanine	Total
	Farm	Insured	All Other	Insured	All Other		
a. 2019							
1. Recorded investment (all)							
(a) Current	\$	- \$ 2,590,046,415	\$ 720,140,704	\$	- \$ 24,162,347,747		- \$ 27,472,534,866
(b) 30-59 days past due		-	-		-		-
(c) 60-89 days past due		-	-		-		-
(d) 90-179 days past due		-	-		-		-
(e) 180+ days past due		-	-		-		-
2. Accruing interest 90-179 days past due							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Interest accrued		-	-		-	-	-
3. Accruing interest 180+ days past due							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Interest accrued		-	-		-	-	-
4. Interest reduced							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Number of loans		-	-		-	-	-
(c) Percent reduced		-	-		-	-	-
5. Participant or co-lender in a mortgage loan agreement							
(a) Recorded investment	\$	- \$	- \$	- \$	656,820,752	- \$	656,820,752
b. 2018							
1. Recorded investment (all)							
(a) Current	\$	- \$ 1,263,118,614	\$ 3,570,038	\$	- \$ 22,287,149,476	69,969,401	\$ 23,623,807,529
(b) 30-59 days past due		-	-		-	-	-
(c) 60-89 days past due		-	-		-	-	-
(d) 90-179 days past due		-	-		-	-	-
(e) 180+ days past due		-	-		-	-	-
2. Accruing interest 90-179 days past due							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Interest accrued		-	-		-	-	-
3. Accruing interest 180+ days past due							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Interest accrued		-	-		-	-	-
4. Interest reduced							
(a) Recorded investment	\$	- \$	- \$	- \$	- \$	- \$	-
(b) Number of loans		-	-		-	-	-
(c) Percent reduced		-	-		-	-	-
5. Participant or co-lender in a mortgage loan agreement							
(a) Recorded investment	\$	- \$	- \$	- \$	664,807,549	- \$	664,807,549

NOTES TO FINANCIAL STATEMENTS

- (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. 2019							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
2. No allowance for credit losses	-	-	-	-	-	-	-
3. Total (1+2)	-	-	-	-	-	-	-
4. Subject to a participant or co-lender mortgage loan agreement for which the reporting entity is restricted from unilaterally foreclosing on the mortgage loan	-	-	-	-	-	-	-
b. 2018							
1. With allowance for credit losses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
2. No allowance for credit losses	-	-	-	-	-	-	-
3. Total (1+2)	-	-	-	-	-	-	-
4. Subject to a participant or co-lender mortgage loan agreement for which the reporting entity is restricted from unilaterally foreclosing on the mortgage loan	-	-	-	-	-	-	-

- (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. 2019							
1. Average recorded investment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
2. Interest income recognized	-	-	-	-	-	-	-
3. Recorded investment on nonaccrual status	-	-	-	-	-	-	-
4. Amount of interest income recognized using a cash-basis method of accounting	-	-	-	-	-	-	-
b. 2018							
1. Average recorded investment	-	-	-	-	-	-	-
2. Interest income recognized	-	-	-	-	-	-	-
3. Recorded investment on nonaccrual status	-	-	-	-	-	-	-
4. Amount of interest income recognized using a cash-	-	-	-	-	-	-	-

	Years Ended December 31,	
	2019	2018
(7) Allowance for credit losses:		
a. Balance at beginning of period	\$ -	\$ -
b. Additions charged to operations	-	-
c. Direct write-downs charged against the allowances	-	-
d. Recoveries of amounts previously charged off	-	-
e. Balance at end of period	<u>\$ -</u>	<u>\$ -</u>

- (8) As of December 31, 2019, the Company did not have any mortgage loans derecognized as a result of foreclosure.

- (9) Interest income earned on impaired loans is accrued on the outstanding principal balance of the loan based on the loan's contractual coupon rate. Interest is not accrued for (a) impaired loans more than 60 days past due, (b) delinquent loans more than 90 days past due, or (c) loans that have interest that is not expected to be collected. The Company continually monitors mortgage loans where the accrual of interest has been discontinued, and will resume the accrual of interest on a mortgage loan when the facts and circumstances of the borrower and property indicate that the payments will continue to be received according to the terms of the original or modified mortgage loan agreement.

- b. Debt restructuring:

As of December 31, 2019 and 2018, the Company did not have any restructured debt.

NOTES TO FINANCIAL STATEMENTS

c. Reverse mortgages:

As of December 31, 2019, the Company did not have any reverse mortgages.

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:

	(1) Amortized Cost Basis Before OTTI	(2) OTTI Recognized in Loss		(3) Fair Value 1-(2a+2b)
		(2a) Interest	(2b) 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	7,791,000	-	156,363	7,634,637
c. Total first quarter	<u>\$ 7,791,000</u>	<u>\$ -</u>	<u>\$ 156,363</u>	<u>\$ 7,634,637</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	6,980,030	-	793,001	6,187,029
f. Total second quarter	<u>\$ 6,980,030</u>	<u>\$ -</u>	<u>\$ 793,001</u>	<u>\$ 6,187,029</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	16,909,029	-	1,717,097	15,191,932
i. Total third quarter	<u>\$ 16,909,029</u>	<u>\$ -</u>	<u>\$ 1,717,097</u>	<u>\$ 15,191,932</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	3,992,400	-	453,119	3,539,281
l. Total fourth quarter	<u>\$ 3,992,400</u>	<u>\$ -</u>	<u>\$ 453,119</u>	<u>\$ 3,539,281</u>
m. Annual aggregate total		<u>\$ -</u>	<u>\$ 3,119,580</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
61750MAB1	\$ 5,275	\$ 4,933	\$ (341)	\$ 4,933	\$ 4,989	March 31, 2019
65106FAG7	232,843	215,726	(17,118)	215,726	6,316	March 31, 2019
18974BAA7	285,889	270,801	(15,088)	270,801	278,616	March 31, 2019
18974BAN9	149,774	139,333	(10,441)	139,333	148,234	March 31, 2019
22541QQR6	1,569	-	(1,569)	-	1	March 31, 2019
32051GCF0	22,786	(6,720)	(29,507)	(6,720)	17,553	March 31, 2019
761118FM5	3,259,303	3,218,368	(40,935)	3,218,368	3,244,154	March 31, 2019
17309FAE8	200,512	200,501	(11)	200,501	208,828	March 31, 2019
466247UG6	467,713	452,359	(15,354)	452,359	459,812	March 31, 2019
57643QAE5	3,114,325	3,109,376	(4,949)	3,109,376	3,256,107	March 31, 2019
US74951PBV94	51,011	29,960	(21,051)	29,960	58,411	March 31, 2019
61750MAB1	4,942	4,899	(42)	4,899	4,344	June 30, 2019
18974BAN9	143,913	143,911	(2)	143,911	141,999	June 30, 2019
761118FM5	3,338,972	3,276,460	(62,512)	3,276,460	3,468,889	June 30, 2019
79548KXQ6	335,309	321,864	(13,445)	321,864	218,663	June 30, 2019
55274SAM3	114,173	79,608	(34,565)	79,608	119,029	June 30, 2019
57643QAE5	3,042,722	2,360,287	(682,436)	2,360,287	3,180,695	June 30, 2019
12667F2A2	642,800	484,346	(158,455)	484,346	68,241	September 30, 2019
32053LAA0	47,447	40,280	(7,167)	40,280	47,846	September 30, 2019
761118FM5	2,843,393	2,789,133	(54,260)	2,789,133	2,918,992	September 30, 2019
79548KXQ6	297,379	277,239	(20,140)	277,239	60,979	September 30, 2019
23332UBW3	78,084	76,934	(1,151)	76,934	43,636	September 30, 2019
576433H33	1,579,401	1,448,247	(131,155)	1,448,247	1,448,863	September 30, 2019
12669GWN7	1,037,688	957,205	(80,484)	957,205	936,853	September 30, 2019
17309FAE8	161,243	129,536	(31,707)	129,536	159,357	September 30, 2019
36298XAA0	10,097,887	8,887,246	(1,210,641)	8,887,246	8,841,272	September 30, 2019
92990GAE3	86,314	85,680	(634)	85,680	87,117	September 30, 2019
US74951PBV94	37,392	16,087	(21,305)	16,087	26,602	September 30, 2019
24763LFY1	182,113	160,832	(21,281)	160,832	200,613	December 31, 2019
05535DAN4	1,930,918	1,855,207	(75,711)	1,855,207	1,598,238	December 31, 2019
07384YPP5	187,700	39,691	(148,009)	39,691	71,760	December 31, 2019
17307GRU4	164,558	133,524	(31,034)	133,524	229,670	December 31, 2019
18974BAN9	134,619	125,398	(9,221)	125,398	126,170	December 31, 2019
65535VRK6	797,949	712,007	(85,942)	712,007	774,700	December 31, 2019
79548KXQ6	207,254	192,282	(14,972)	192,282	113,588	December 31, 2019
85554NAG5	194,730	158,214	(36,515)	158,214	187,575	December 31, 2019
12669FXR9	117,999	114,307	(3,692)	114,307	101,165	December 31, 2019
23332UBW3	74,561	47,819	(26,742)	47,819	35,659	December 31, 2019
Totals	\$ 35,672,459	\$ 32,552,879	\$ (3,119,579)	\$ 32,552,879	\$ 32,895,535	

(4) As of December 31, 2019, 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	\$ (23,726,149)
2. 12 months or longer	\$ (92,015,835)
b. The aggregate related fair value of securities with unrealized losses:	
1. Less than 12 months	\$ 2,268,046,789
2. 12 months or longer	\$ 5,227,862,754

(5) No additional information.

e. Dollar repurchase agreements and/or securities lending transactions: The Company did not have any dollar repurchase agreements and/or securities lending transactions.

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 assets as repurchase agreements approximates the fair value.

NOTES TO FINANCIAL STATEMENTS

(2) Type of Repo Trades Used

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

(3) Original (Flow) & Residual Maturity

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Open – No Maturity	-	-	-	-
2. Overnight	-	-	-	-
3. 2 Days to 1 Week	-	-	-	-
4. > 1 Week to 1 Month	478,331,250	-	519,900,713	-
5. > 1 Month to 3 Months	2,443,289,210	1,289,114,357	2,407,597,213	3,258,633,062
6. > 3 Months to 1 Year	4,217,378,750	3,937,000,995	3,824,405,038	2,934,910,502
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	478,331,250	-	2,241,552,238	926,468,750
5. > 1 Month to 3 Months	1,381,711,232	726,494,338	1,670,697,126	2,907,453,002
6. > 3 Months to 1 Year	3,009,547,950	3,795,019,538	-	-
7. > 1 Year	-	-	-	-

(4) The company did not have any repurchase agreements where securities sold and/or acquired resulted in default as of December 31, 2019.

(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	\$ 6,685,780,461	\$ 5,010,738,932	\$ 4,906,823,857	\$ 4,213,875,157

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
b. Ending Balance				
1. BACV	\$ 4,869,590,432	\$ 4,521,513,876	\$ 3,912,249,364	\$ 3,833,921,752
2. Nonadmitted - Subset of BACV	\$ -	\$ -	\$ -	\$ -
3. Fair Value	\$ 4,869,590,432	\$ 4,521,513,876	\$ 3,912,249,364	\$ 3,833,921,752

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

ENDING BALANCE

	1 NONE	2 NAIC 1	3 NAIC 2	4 NAIC 3
a. Bonds - BACV	\$ -	\$ 3,833,921,752	\$ -	\$ -
b. Bonds - FV	-	3,833,921,752	-	-
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	\$ -	\$ 3,833,921,752	\$ -	\$ -
q. Total Assets - FV	\$ -	\$ 3,833,921,752	\$ -	\$ -

ENDING BALANCE

	5 NAIC 4	6 NAIC 5	7 NAIC 6	8 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

NOTES TO FINANCIAL STATEMENTS

(7) Collateral Received – Secured Borrowing

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Cash	\$ 23,884,197	\$ 15,771,687	\$ 33,088,152	\$ 27,661,152
2. Securities (FV)	\$ 4,903,138,950	\$ 4,562,749,659	\$ 4,668,551,075	\$ 3,946,872,286
b. Ending Balance				
1. Cash	\$ 14,619,197	\$ 14,996,687	\$ 18,223,152	\$ 8,243,000
2. Securities (FV)	\$ 4,407,590,406	\$ 4,562,749,659	\$ 3,926,023,623	\$ 3,845,577,140

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

ENDING BALANCE

	1 NONE	2 NAIC 1	3 NAIC 2	4 NAIC 3
a. Cash	\$ 8,243,000	\$ -	\$ -	\$ -
b. Bonds - FV	-	3,845,577,140	-	-
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)	\$ 8,243,000	\$ 3,845,577,140	-	-

ENDING BALANCE

	5 NAIC 4	6 NAIC 5	7 NAIC 6	8 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	\$ 1,979,632,721
c. 31 to 90 Days	\$ 1,854,289,032
d. > 90 Days	\$ -

(10) The company did not have any repurchase agreements where cash collateral received was reinvested as of December 31, 2019.

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

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
a. Maximum Amount				
1. Cash (Collateral – All)	\$ 23,884,197	\$ 15,771,687	\$ 33,088,152	\$ 27,661,152
2. Securities Collateral (FV)	\$ 4,903,138,950	\$ 4,562,749,659	\$ 4,668,551,075	\$ 3,946,872,286
b. Ending Balance				
1. Cash (Collateral – All)	\$ 14,619,197	\$ 14,996,687	\$ 18,223,152	\$ 8,243,000
2. Securities Collateral (FV)	\$ 4,407,590,406	\$ 4,562,749,659	\$ 3,926,023,623	\$ 3,845,577,140

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.

h. Repurchase agreements transactions accounted for as a sale: The Company did not have any repurchase agreements transactions accounted for as a sale.

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.

j. Real estate:

(1) There were no impairments on real estate for the years ended December 31, 2019 and 2018. Fair value is generally estimated using the present value of expected future cash flows discounted at a rate commensurate with the underlying risks. The Company also obtains external appraisals for a rotating selection of properties annually. If an external appraisal is not obtained, an internal appraisal is performed.

(2) Properties are acquired and managed for net income growth and increasing value. Upon management's approval for the sale of a property it is classified as held for sale.

a. Refer to Note 5f. "Real estate" (2)b. for information on the Company's real estate investments.

b. Gains or losses recognized on the sale of real estate are presented in the Summary of Operations, line 34. Net realized capital gains (losses).

In 2019, two hotels, one apartment and one office property were transferred to held for sale and sold in 2019, with proceeds of \$194,972,101 and a net gain of \$33,447,313. As of December 31, 2019, the Company did not hold any single family residences classified as held for sale.

NOTES TO FINANCIAL STATEMENTS

In 2018, five hotels, one apartment and one office property were transferred to held for sale and sold in 2019 including the one property that was transferred in 2018, with proceeds of \$274,414,910 and a gain of \$167,933,741. Additionally, two single family residences were acquired and classified as held for sale under an employee relocation program for a total of four properties. Of these residences, four were sold for a net loss of \$403,431. As of December 31, 2018, the Company did not hold any single family residences classified as held for sale.

- (3) The Company did not experience changes to a plan of sale in 2019 or 2018.
- (4) The Company did not engage in retail land sales in 2019 or 2018.
- (5) The Company did not hold real estate investments with participating mortgage loan features in 2019 or 2018.
- k. Low income housing tax credit properties:
- (1) LIHTC investments currently have unexpired tax credits which range from one to thirteen years and have an initial 15-year holding period requirement.
- (2) There are no LIHTC investments subject to regulatory review for the years ended December 31, 2019 or 2018.
- (3) Aggregate LIHTC investments did not exceed 10% of total admitted assets for the years ended December 31, 2019 or 2018.
- (4) LIHTC investments had a carrying value of \$241,573,376 as of December 31, 2019 and \$286,715,752 as of December 31, 2018.
- (5) The Company recognized tax benefits from LIHTC investments of \$45,233,061 in 2019 and \$46,544,843 in 2018.
- (6) For determining impairments in partnerships that generate LIHTC, the Company uses the present value of all future benefits, the majority of which are tax credits, discounted at a risk-free rate ranging from 1.5% for future benefits of two years to 1.8% for future benefits of ten or more years, and compares the result to current carrying value. OTTI for LIHTC investments for the years ended December 31, 2019 and 2018 were as follows:

	Years Ended	
	December 31,	
	2019	2018
30 Federal Co-Investment Fund I LLC	\$ 331,885	\$ -
Alliant Tax Credit Fund XXIV A LP	6,485	22,084
Boston Capital Commonwealth Tax Credit Fund II	-	68,875
Boston Capital Commonwealth Tax Credit Fund III A LP	-	333,596
Boston Financial MassMutual Fund III LP	-	487,431
Boston Financial MassMutual Fund IV LP	-	2,497,753
Citi Guaranteed Tax Credit Fund	80,280.60	44,383
Countryside Corporate Tax Credits X LP	-	68,235
MassMutual-Guilford Fund A LP	36,818	7,245
NHT XVI Tax Credit Fund LP	-	663,197
NHT XX Tax Credit Fund LP	-	55,463
NHT XXV Tax Credit Fund LP	14,760.33	47,329
Raymond James XXVII LP	8,815.80	399,798
The Estates at Northampton Ltd	1,761,505	-
Total	<u>\$ 2,240,548</u>	<u>\$ 4,695,389</u>

- (7) There were no write-downs or reclassifications made during the years ended December 31, 2019 or 2018 due to forfeiture, ineligibility of tax credits or similar issues.

NOTES TO FINANCIAL STATEMENTS

I. Restricted assets:

(1) Restricted assets (including pledged):

Restricted Asset Category	Gross (Admitted & Nonadmitted) Restricted						
	Current Year					6 Total From Prior Year	7 Increase/ (Decrease) (5 minus 6)
	1 Total General Account (G/A)	2 G/A Supporting S/A Activity (a)	3 Total Separate Account (S/A) Restricted Assets	4 S/A Assets Supporting G/A Activity (b)	5 Total (1 plus 3)		
a. Subject to contractual obligation for which liability is not shown	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
b. Collateral held under security lending agreements	-	-	-	-	-	-	-
c. Subject to repurchase agreements	3,845,577,140	-	-	-	3,845,577,140	4,787,600,007	(942,022,867)
d. Subject to reverse repurchase agreements	-	-	-	-	-	-	-
e. Subject to dollar repurchase agreements	-	-	-	-	-	-	-
f. Subject to dollar reverse repurchase agreements	-	-	-	-	-	-	-
g. Placed under option contracts	-	-	-	-	-	-	-
h. Letter stock or securities restricted as to sale - excluding FHLB capital stock	758,718,250	-	-	-	758,718,250	787,285,175	(28,566,925)
i. FHLB capital stock	59,880,000	-	-	-	59,880,000	73,700,000	(13,820,000)
j. On deposit with states	9,539,498	-	-	-	9,539,498	8,784,414	755,084
k. On deposit with other regulatory bodies	-	-	-	-	-	-	-
l. Pledged collateral to FHLB (including assets backing funding agreements)	1,686,811,491	-	-	-	1,686,811,491	1,509,010,539	177,800,952
m. Pledged as collateral not captured in other categories	3,350,291,660	-	-	-	3,350,291,660	1,813,256,287	1,537,035,373
n. Other restricted assets	-	-	-	-	-	-	-
o. Total Restricted Assets	\$ 9,710,818,039	\$ -	\$ -	\$ -	\$ 9,710,818,039	\$ 8,979,636,422	\$ 731,181,617

(a) Subset of column 1

(b) Subset of column 3

NOTES TO FINANCIAL STATEMENTS

Restricted Asset Category	Current Year			
	8 Total Nonadmitted Restricted	9 Total Admitted Restricted (5 minus 8)	Percentage	
			10 Gross (Admitted & Nonadmitted) Restricted to Total Assets (c)	11 Admitted Restricted to Total Admitted Assets (d)
a. Subject to contractual obligation for which liability is not shown	\$ -	\$ -	-%	-%
b. Collateral held under security lending agreements	-	-	-	-
c. Subject to repurchase agreements	-	3,845,577,140	1.426	1.434
d. Subject to reverse repurchase agreements	-	-	-	-
e. Subject to dollar repurchase agreements	-	-	-	-
f. Subject to dollar reverse repurchase agreements	-	-	-	-
g. Placed under option contracts	-	-	-	-
h. Letter stock or securities restricted as to sale - excluding FHLB capital stock	-	758,718,250	0.281	0.283
i. FHLB capital stock	-	59,880,000	0.020	0.022
j. On deposit with states	-	9,539,498	0.004	0.004
k. On deposit with other regulatory bodies	-	-	-	-
l. Pledged collateral to FHLB (including assets backing funding agreements)	-	1,686,811,491	0.625	0.629
m. Pledged as collateral not captured in other categories	-	3,350,291,660	1.242	1.249
n. Other restricted assets	-	-	-	-
O. Total Restricted Assets	\$ -	\$ 9,710,818,039	3.600%	3.620%

(c) Column 5 divided by Asset Page, Column 1, Line 28

(d) Column 9 divided by Asset Page, Column 3, Line 28

(2) Detail of Assets Pledged as Collateral Not Captured in Other Categories (Contracts that Share Similar Characteristics, Such as Reinsurance and Derivatives Are Reported in the Aggregate)

Description of Assets	Gross (Admitted & Nonadmitted) Restricted							8 Total Current Year Admitted Restricted	Percentage	
	Current Year					6 Total from Prior Year	7 Increase/ (Decrease) (5 minus 6)		9 Gross (Admitted & Nonadmitted) Restricted to Total Assets	10 Admitted Restricted Total Admitted Assets
	1 Total General Account (G/A)	2 G/A Supporting S/A Activity (a)	3 Total Separate Account (S/A) Restricted Assets	4 S/A Assets Supporting G/A Activity (b)	5 Total (1 plus 3)					
Derivatives	\$ 3,028,326,649	\$ -	\$ -	\$ -	\$ 3,028,326,649	\$ 1,643,270,922	\$ 1,385,055,727	\$ 3,028,326,649	1.232%	1.243%
Futures	282,925,391	-	-	-	282,925,391	163,059,281	119,866,110	282,925,391	0.115%	0.116%
MBS Forwards	1,897,716	-	-	-	1,897,716	-	1,897,716	1,897,716	0.001%	0.001%
Repurchase Margin	37,141,904	-	-	-	37,141,904	6,926,084	30,215,820	37,141,904	0.015%	0.015%
Total (c)	\$ 3,350,291,660	\$ -	\$ -	\$ -	\$ 3,350,291,660	\$ 1,813,256,287	\$ 1,537,035,373	\$ 3,350,291,660	1.363%	1.375%

(a) Subset of column 1

(b) Subset of column 3

(c) Total Line for Column 1 through 7 should equal 5L (1) in Columns 1 through 7 respectively and Total Line for Columns 8 through 10 should equal 5L (1) Columns 9 through 11 respectively

NOTES TO FINANCIAL STATEMENTS

(3) Detail of Other Restricted Assets (Contracts that Share Similar Characteristics, Such as Reinsurance and Derivatives, Are Reported in the Aggregate)

Description of Assets	Gross (Admitted & Nonadmitted) Restricted					8	Percentage			
	Current Year						6	7	9	10
	1	2	3	4	5					
	Total General Account (G/A)	G/A Supporting S/A Activity (a)	Total Separate Account (S/A) Restricted Assets	S/A Assets Supporting G/A Activity (b)	Total (1 plus 3)		Total from Prior Year	Increase/ (Decrease) (5 minus 6)	Total Current Year Admitted Restricted to Total Assets	Admitted Restricted Total Assets
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	% -	
	-	-	-	-	-	-	-	-	% -	
	-	-	-	-	-	-	-	-	% -	
*Total (c)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	% -	

- (a) Subset of column 1
- (b) Subset of column 3
- (c) Total Line for Columns 1 through 7 should equal 5L(1) in Columns 1 through 7 respectively and Total Line for Columns 8 through 10 should equal 5L(1) in Columns 9 through 11 respectively

(4) Collateral Received and Reflected as Assets Within the Reporting Entity's Financial Statements

Collateral Assets	1 Book/Adjusted Carrying Value (BACV)	2 Fair Value	3 % of BACV Total Assets (Admitted and Nonadmitted)*	4 % of BACV to Total Admitted Assets **
General Account:				
a. Cash, Cash Equivalents and Short-Term Investments	\$ 3,285,024,061	\$ 3,285,024,061	1.647 %	1.659 %
b. Schedule D, Part 1	-	-	- %	- %
c. Schedule D, Part 2, Section 1	-	-	- %	- %
d. Schedule D, Part 2, Section 2	-	-	- %	- %
e. Schedule B	-	-	- %	- %
f. Schedule A	-	-	- %	- %
g. Schedule BA, Part 1	-	-	- %	- %
h. Schedule DL, Part 1	-	-	- %	- %
i. Other	-	-	- %	- %
j. Total Collateral Assets (a+b+c+d+e+f+g+h+i)	\$ 3,285,024,061	\$ 3,285,024,061	1.647 %	1.659 %
Separate Account:				
k. Cash, Cash Equivalents and Short-Term Investments	\$ -	\$ -	- %	- %
l. Schedule D, Part 1	-	-	- %	- %
m. Schedule D, Part 2, Section 1	-	-	- %	- %
n. Schedule D, Part 2, Section 2	-	-	- %	- %
o. Schedule B	-	-	- %	- %
p. Schedule A	-	-	- %	- %
q. Schedule BA, Part 1	-	-	- %	- %
r. Schedule DL, Part 1	-	-	- %	- %
s. Other	-	-	- %	- %
t. Total Collateral Assets (k+l+m+n+o+p+q+r+s)	\$ -	\$ -	- %	- %

* j=Column 1 divided by Asset Page, Line 26 (Column 1)
t=Column 1 divided by Asset Page, Line 27 (Column 1)

** j=Column 1 divided by Asset Page, Line 26 (Column 3)
t=Column 1 divided by Asset Page, Line 27 (Column 3)

	1 Amount	2 % of Liability to Total Liabilities*
u. Recognized Obligation to Return Collateral Asset (General Account)	\$ -	- %
v. Recognized Obligation to Return Collateral Asset (Separate Account)	\$ -	- %

* u=Column 1 divided by Liability Page, Line 26 (Column 1)
v=Column 1 divided by Liability Page, Line 27 (Column 1)

m. Working capital finance investments: The Company did not invest in working capital finance investments.

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.

NOTES TO FINANCIAL STATEMENTS

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	97	92	759,073,078	669,688,836	757,268,976	651,777,531
(2) LB&SS - AC	2	-	13,654,948	-	12,071,185	-
(3) Preferred Stock - AC	3	4	12,685,809	15,232,649	19,827,090	19,902,853
(4) Preferred Stock - FV	1	-	598,111	-	598,111	-
(5) Total (1+2+3+4)	103	96	\$786,011,946	\$684,921,485	\$789,765,362	\$671,680,384

AC - Amortized Cost FV - Fair Value

p. Short Sales - The Company does not engage in short sale transactions.

q. Prepayment Penalty and Acceleration Fees:

	Year Ended December 31, 2019	
	General Account	Separate Account
1. Number of CUSIPS	87	14
2. Aggregate Amount of Investment Income	\$ 62,270,989	\$ 4,263,438

Note 6 - Joint Ventures, Partnerships and Limited Liability Companies

a. The Company has one individual investment in joint ventures, partnerships or LLCs which exceeds 10% of admitted assets for the years ended December 31, 2019 and December 31, 2018.

MM International LLC is owned 100% by the Company and is accounted for using the equity method with the change in the equity value of the underlying investment recorded in surplus. Distributions received are recognized as net investment income to the extent the distribution does not exceed previously recorded accumulated undistributed earnings. The carry value of MM International LLC is \$956,625,306 as of December 31, 2019 and \$997,506,405 as of December 31, 2018.

b. The accumulated unrealized losses are realized when they are not expected to be recovered. The Company recognized \$86,073,365 in 2019 and \$61,918,108 in 2018 in impairments on its investments in joint ventures, partnerships and LLCs.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

Note 7 - Investment Income

a. Accrued investment income consists primarily of interest and dividends. Interest is recognized on an accrual basis and dividends are recorded as earned on the ex-dividend date.

b. The total amount of due and accrued investment income excluded from surplus was \$9,061,926 for the year ended December 31, 2019 and \$6,582,488 for the year ended December 31, 2018.

Note 8 - Derivative Instruments

a. Derivatives accounted for under SSAP no 86

The Company's principal derivative exposures to market risk are interest rate risk, which includes inflation and credit risk. Interest rate risk pertains to the change in fair value of the derivative instruments as a result of changes in market interest rates. The Company is exposed to credit-related losses in the event of nonperformance by counterparties to derivative financial instruments. The Company regularly monitors counterparty credit ratings, derivative positions, valuations and the value of collateral posted to ensure counterparties are credit-worthy and the concentration of exposure is minimized, and monitors its derivative credit exposure as part of its overall risk management program.

The Company enters derivative transactions through bilateral derivative agreements with counterparties, or through over the counter cleared derivatives with a counterparty and the use of a clearinghouse. To minimize credit risk for bilateral transactions, the Company and its counterparties generally enter into master netting agreements based on agreed upon requirements that outline the framework for how collateral is to be posted in the amount owed under each transaction, subject to certain minimums. For over the counter cleared derivative transactions between the Company and a counterparty, the parties enter into a series of master netting and other agreements that govern, among other things, clearing and collateral requirements. These transactions are cleared through a clearinghouse and each derivative counterparty is only exposed to the default risk of the clearinghouse. Certain interest rate swaps and credit default swaps are considered cleared transactions. These cleared transactions require initial and daily variation margin collateral postings. These agreements allow for contracts in a positive position, in which amounts are due to the Company, to be offset by contracts in a negative position. This right of offset, combined with collateral obtained from counterparties, reduces the Company's credit exposure.

b. The Company uses derivative financial instruments in the normal course of business to manage risks, primarily to reduce currency, interest rate and duration imbalances determined in asset/liability analyses. The Company also uses a combination of derivatives and fixed income investments to create synthetic investments. These synthetic investments are created when they are economically more attractive than the actual instrument or when similar instruments are unavailable. Synthetic investments are created either to hedge and reduce the Company's credit and foreign currency exposure or to create an investment in a particular asset. The Company held synthetic investments with a notional amount of \$17,979,050,000 as of December 31, 2019 and \$15,521,672,879 as of December 31, 2018. These notional amounts included replicated asset transaction values of, \$16,039,000,000 as of December 31, 2019 and \$13,581,622,879 as of December 31, 2018, as defined under statutory accounting practices as the result of pairing of a long derivative contract with cash instruments.

The Company's derivative strategy employs a variety of derivative financial instruments, including: interest rate, currency, equity, bond, and credit default swaps; options; forward contracts and financial futures. Investment risk is assessed on a portfolio basis and individual derivative financial instruments are not generally designated in hedging relationships; therefore, as allowed by statutory accounting practices, the Company intentionally has not applied hedge accounting.

NOTES TO FINANCIAL STATEMENTS

Interest rate swaps are primarily used to more closely match the cash flows of assets and liabilities. Interest rate swaps are also used to mitigate changes in the value of assets anticipated to be purchased and other anticipated transactions and commitments. A net realized gain on closed contracts of \$171,679,097 and a net unrealized loss on the mark-to-market of open contracts of \$533,569,698 was recorded for the year ended December 31, 2019. A net realized loss on closed contracts of \$104,875,621 and a net unrealized loss on the mark-to-market of open contracts of \$389,658,110 was recorded for the year ended December 31, 2018.

The Company uses currency swaps for the purpose of managing currency exchange risks in its assets and liabilities.

The Company does not sell credit default swaps as a participant in the credit insurance market. The Company does, however, use credit default swaps as part of its investment management process. The Company buys credit default swaps as an efficient means to reduce credit exposure to particular issuers or sectors in the Company's investment portfolio. The Company sells credit default swaps in order to create synthetic investment positions that enhance the return on its investment portfolio by providing comparable exposure to fixed income securities that might not be available in the primary market. A net realized gain on closed contracts of \$13,025,022 and a net unrealized gain on mark-to-market of open contracts of \$76,130 was recorded for the year ended December 31, 2019. A net realized gain on closed contracts of \$12,141,449 and a net unrealized gain on mark-to-market of open contracts of \$2,379,742 was recorded for the year ended December 31, 2018.

Options grant the purchaser the right to buy or sell a security or enter a derivative transaction at a stated price within a stated period. The Company's option contracts have terms of up to 15 years. A swaption is an option to enter an interest rate swap to either receive or pay a fixed rate at a future date. The Company purchases these options for the purpose of managing interest rate risks in its assets and liabilities.

The Company adopted a clearly defined hedging strategy (CDHS) to enable the Company to incorporate currently held hedges in RBC calculations. The CDHS is used to significantly mitigate the impact that movements in capital markets have on the liabilities associated with annuity guarantees. The hedge portfolio consists mainly of interest rate swaps, equity swaps, interest rate swaptions and equity futures, and provides protection in the stress scenarios under which RBC is calculated. The hedge portfolio has offsetting impacts relative to the total asset requirement for RBC and surplus for guaranteed minimum death benefits (GMDB) and variable annuity guaranteed living benefits.

The Company utilizes certain other agreements including forward contracts and financial futures. Currency forwards are contracts in which the Company agrees with other parties to exchange specified amounts of identified currencies at a specified future date. Typically, the exchange rate is agreed upon at the time of the contract. In addition, the Company also uses "to be announced" forward contracts (TBAs) to hedge interest rate risk and participate in the MBS market in an efficient and cost effective way. Typically, the price is agreed upon at contract inception and payment is made at a specified future date. The Company usually does not purchase TBAs with settlement by the first possible delivery date and thus accounts for these TBAs as derivatives. TBAs that settle on the first possible delivery date are accounted for as bonds. The Company's futures contracts are exchange traded and have credit risk. Margin requirements are met with the deposit of securities. Futures contracts are generally settled with offsetting transactions. Forward contracts and financial futures are used by the Company to reduce exposures to various risks including interest rates and currency rates.

Net collateral pledged by the counterparties was \$2,269,917,464 as of December 31, 2019 and \$2,242,987,555 as of December 31, 2018. In the event of default the full market value exposure at risk in a net gain position, net of offsets and collateral, was \$50,813,894 as of December 31, 2019 and \$146,189,321 as of December 31, 2018. The statutory net amount at risk, defined as net collateral pledged and statement values excluding accrued interest, was \$412,398,540 as of December 31, 2019 and \$695,286,723 as of December 31, 2018.

The Company had the right to rehypothecate or repledge securities totaling \$1,126,049,832 of the \$2,269,917,464 as of December 31, 2019 and \$709,423,839 of the \$2,242,987,555 as of December 31, 2018 of net collateral pledged by counterparties. There were no securities rehypothecated to other counterparties as of December 31, 2019 or December 31, 2018.

- c. Changes in the fair value of these contracts other than interest rate swaps associated with replicated assets are recorded as unrealized gains or losses in surplus. Gains and losses realized on the termination, closing, or assignment of contracts are recorded as realized capital gains or losses. Amounts receivable and payable are accrued.
- d. No unrealized gains or losses recognized on derivatives were excluded from the assessment of effectiveness for the years ended December 31, 2019 or 2018, since the Company has decided not to apply hedge accounting. The Company uses portfolio hedging as a risk mitigation factor. The Company assesses the derivatives' effectiveness to hedge the sensitivity of the net asset and liability portfolio to interest and volatility movements in the context of the current market environment.
- e. The Company uses portfolio hedging as a risk mitigation factor, which does not qualify for hedge accounting.
- f. The Company does not account for derivatives as cash flow hedges of a forecasted transaction.

NOTES TO FINANCIAL STATEMENTS

Note 9 – Income Taxes

A. The Company provides for deferred income taxes based on an admissibility limitation of 15% of surplus and a three year reversal/realization period.

1. The net DTA or net deferred tax liability (DTL) recognized in the Company's assets, liabilities and surplus is as follows:

	December 31, 2019		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ 2,806,764,995	\$ 125,030,075	\$ 2,931,795,070
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	2,806,764,995	125,030,075	2,931,795,070
(d) DTAs nonadmitted	-	-	-
(e) Subtotal net admitted DTA	2,806,764,995	125,030,075	2,931,795,070
(f) Total gross DTLs	1,192,242,381	631,360,115	1,823,602,496
(g) Net admitted DTA(L)	<u>\$ 1,614,522,614</u>	<u>\$ (506,330,040)</u>	<u>\$ 1,108,192,574</u>

	December 31, 2018		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ 2,655,214,374	\$ 334,138,315	\$ 2,989,352,689
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	2,655,214,374	334,138,315	2,989,352,689
(d) DTAs nonadmitted	-	-	-
(e) Subtotal net admitted DTA	2,655,214,374	334,138,315	2,989,352,689
(f) Total gross DTLs	1,548,215,227	458,411,777	2,006,627,004
(g) Net admitted DTA(L)	<u>\$ 1,106,999,147</u>	<u>\$ (124,273,462)</u>	<u>\$ 982,725,685</u>

	Change		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ 151,550,621	\$ (209,108,240)	\$ (57,557,619)
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	151,550,621	(209,108,240)	(57,557,619)
(d) DTAs nonadmitted	-	-	-
(e) Subtotal net admitted DTA	151,550,621	(209,108,240)	(57,557,619)
(f) Total gross DTLs	355,972,846	(172,948,338)	183,024,508
(g) Net admitted DTA(L)	<u>\$ 507,523,467</u>	<u>\$ (382,056,578)</u>	<u>\$ 125,466,889</u>

NOTES TO FINANCIAL STATEMENTS

2. The amount of adjusted gross DTA admitted under each component of the guidance and the resulting change by tax character are as follows:

	December 31, 2019		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 68,114,390	\$ 68,114,390
(b) Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the threshold limitation (the lesser of 2(b)1 and 2(b)2 below)	1,078,706,004	-	1,078,706,004
1. Adjusted gross DTAs expected to be realized following the balance sheet date	1,078,706,004	-	1,078,706,004
2. Adjusted gross DTAs allowed per limitation threshold	2,662,570,492	-	2,662,570,492
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	1,728,058,991	56,915,685	1,784,974,676
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ 2,806,764,995</u>	<u>\$ 125,030,075</u>	<u>\$ 2,931,795,070</u>

	December 31, 2018		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 51,655,629	\$ 51,655,629
(b) Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the threshold limitation (the lesser of 2(b)1 and 2(b)2 below)	1,018,554,333	-	1,018,554,333
1. Adjusted gross DTAs expected to be realized following the balance sheet date	1,018,554,333	-	1,018,554,333
2. Adjusted gross DTAs allowed per limitation threshold	2,055,020,441	-	2,055,020,441
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	1,636,660,041	282,482,686	1,919,142,727
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ 2,655,214,374</u>	<u>\$ 334,138,315</u>	<u>\$ 2,989,352,689</u>

	Change		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 16,458,761	\$ 16,458,761
(b) Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the threshold limitation (the lesser of 2(b)1 and 2(b)2 below)	60,151,671	-	60,151,671
1. Adjusted gross DTAs expected to be realized following the balance sheet date	60,151,671	-	60,151,671
2. Adjusted gross DTAs allowed per limitation threshold	607,550,051	-	607,550,051
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	91,398,950	(225,567,001)	(134,168,051)
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ 151,550,621</u>	<u>\$ (209,108,240)</u>	<u>\$ (57,557,619)</u>

NOTES TO FINANCIAL STATEMENTS

3. The Company's total realization threshold limitations are as follows:

	December 31,	
	2019	2018
(a) Ratio percentage used to determine recovery period and threshold limitation amount	838%	861%
(b) Amount of adjusted capital and surplus used to determine recovery period and threshold limitation in 2(b)2 above.	\$ 18,351,087,779	\$ 13,700,136,271

4. The ultimate realization of DTAs depends on the generation of future taxable income during the periods in which the temporary differences are deductible. Management considers the scheduled reversal of DTLs (including the impact of available carryback and carryforward periods), projected taxable income and tax-planning strategies in making this assessment. The impact of tax-planning strategies is as follows:

	December 31, 2019	
	Ordinary	Capital
(a) Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.		
1. Adjusted Gross DTAs amount from Note 9A1(c)	\$ 2,806,764,995	\$ 125,030,075
2. Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies	-%	-%
3. Net admitted DTAs amount from Note 9A1(e)	\$ 2,806,764,995	\$ 123,030,075
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	46%	0%

	December 31, 2018	
	Ordinary	Capital
(a) Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.		
1. Adjusted Gross DTAs amount from Note 9A1(c)	\$ 2,655,214,374	\$ 334,138,315
2. Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies	-%	-%
3. Net admitted DTAs amount from Note 9A1(e)	\$ 2,655,214,374	\$ 334,138,315
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	77%	0%

	Change	
	Ordinary	Capital
(a) Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.		
1. Adjusted Gross DTAs amount from Note 9A1(c)	\$ 151,550,621	\$ (209,108,240)
2. Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies	-%	-%
3. Net admitted DTAs amount from Note 9A1(g)	\$ 151,550,621	\$ (209,108,240)
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	-31%	0%
(b) Does the Company's tax planning strategies include the use of reinsurance?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

- B. The Company does not have any deferred tax liabilities not recognized.

NOTES TO FINANCIAL STATEMENTS

C. The provision for current tax (benefit) expense on earnings is as follows:

	Years Ended December 31,		
	2019	2018	Change
(a) Federal	\$ (17,524,554)	\$ (169,154,501)	\$ 151,629,947
(b) Foreign	2,559,155	770,354	1,788,801
(c) Subtotal	(14,965,399)	(168,384,147)	153,418,748
(d) Federal income tax on net capital gains	115,770,811	(48,168,368)	163,939,179
(e) Utilization of capital loss carry-forwards	-	-	-
(f) Other	-	-	-
(g) Federal and foreign income taxes incurred	<u>\$ 100,805,412</u>	<u>\$ (216,552,515)</u>	<u>\$ 317,357,927</u>

The tax effects of temporary differences that give rise to significant portions of the DTAs and DTLs are as follows:

	December 31,		
	2019	2018	Change
2. Deferred Tax Assets:			
(a) Ordinary			
(1) Discounting of unpaid losses	\$ -	\$ -	\$ -
(2) Unearned premium reserve	-	-	-
(3) Policyholder reserves	1,238,076,025	1,141,286,745	96,789,280
(4) Investments	143,917,555	136,680,131	7,237,424
(5) Deferred acquisition costs	571,597,049	505,281,560	66,315,489
(6) Policyholder dividends accrual	191,559,719	195,920,393	(4,360,674)
(7) Fixed assets	-	-	-
(8) Compensation and benefits accrual	-	-	-
(9) Pension accrual	204,298,968	184,413,913	19,885,055
(10) Receivables - nonadmitted	-	-	-
(11) Net operating loss carry-forward	-	-	-
(12) Tax credit carry-forward	-	-	-
(13) Other	457,315,680	491,631,632	(34,315,952)
(14) Subtotal	<u>2,806,764,996</u>	<u>2,655,214,374</u>	<u>151,550,622</u>
(b) Statutory valuation allowance adjustment	-	-	-
(c) Nonadmitted	-	-	-
(d) Admitted ordinary DTAs (2a14 - 2b - 2c)	<u>2,806,764,996</u>	<u>2,655,214,374</u>	<u>151,550,622</u>
(e) Capital			
(1) Investments	125,030,075	334,138,315	(209,108,240)
(2) Net capital loss carry-forward	-	-	-
(3) Real estate	-	-	-
(4) Other	-	-	-
(5) Subtotal	<u>125,030,075</u>	<u>334,138,315</u>	<u>(209,108,240)</u>
(f) Statutory valuation allowance adjustment	-	-	-
(g) Nonadmitted	-	-	-
(h) Admitted capital DTAs (2e5 - 2f - 2g)	<u>125,030,075</u>	<u>334,138,315</u>	<u>(209,108,240)</u>
(i) Admitted DTAs (2d + 2h)	<u>2,931,795,071</u>	<u>2,989,352,689</u>	<u>(57,557,618)</u>

NOTES TO FINANCIAL STATEMENTS

3. Deferred Tax Liabilities:

(a) Ordinary

(1) Investments	109,134,946	416,196,933	(307,061,987)
(2) Fixed Assets	35,141,097	38,404,080	(3,262,983)
(3) Deferred and uncollected premium	240,679,317	227,406,063	13,273,254
(4) Policyholder reserves	424,428,372	493,958,934	(69,530,562)
(5) Other	382,858,650	372,249,217	10,609,433
(6) Subtotal	<u>1,192,242,382</u>	<u>1,548,215,227</u>	<u>(355,972,845)</u>

(b) Capital

(1) Investments	631,360,115	457,411,777	172,948,338
(2) Real estate	-	-	-
(3) Other	-	-	-
(4) Subtotal	<u>631,360,115</u>	<u>457,411,777</u>	<u>172,948,338</u>

(c) Total DTLs (3a6 + 3b4)

	<u>1,823,602,497</u>	<u>2,006,627,004</u>	<u>(183,024,507)</u>
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4. Net DTA(L) (2i - 3c)

	<u>\$ 1,108,192,575</u>	<u>\$ 982,725,685</u>	<u>\$ 125,466,889</u>
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The change in net deferred income taxes is comprised of the following:

	Years Ended December 31,	
	2019	2018
(1) Net DTA(L)	\$ 125,033,710	\$ 221,669,436
Less: Items not recorded in the change in net deferred income taxes:	-	-
(2) Tax-effect of unrealized gains/(losses)	<u>(180,212,168)</u>	<u>68,154,831</u>
(4) Change in net deferred income taxes	<u>\$ (55,178,457)</u>	<u>\$ 289,824,267</u>

D. The components of federal and foreign income tax on operating items are recorded on the Summary of Operations and Capital and Surplus Account and are different from that which would be obtained by applying the prevailing federal income tax rate to operating income before taxes. The significant items causing this difference are as follows:

	Years Ended December 31,	
	2019	2018
(1) Provision computed at statutory rate	\$ 324,401,343	\$ (298,797,284)
(2) Nonadmitted assets	38,724,720	(55,538,630)
(3) Foreign governmental income taxes	2,559,155	770,354
(4) Expense items	5,303,249	1,526,325
(5) Investment items	(183,105,735)	(20,844,100)
(6) Tax credits	(47,833,084)	(47,353,542)
(7) Change in reserve valuation basis	(23,200,575)	(7,414,353)
(8) Other	<u>39,134,796</u>	<u>(78,725,551)</u>
Total statutory income tax expense (benefit)	<u>\$ 155,983,869</u>	<u>\$ (506,376,781)</u>
(9) Federal and foreign income tax benefit	\$ 100,805,412	\$ (216,552,514)
(10) Change in net deferred income taxes	<u>55,178,457</u>	<u>(289,824,267)</u>
Total statutory income tax expense (benefit)	<u>\$ 155,983,869</u>	<u>\$ (506,376,781)</u>

E. (1) As of December 31, 2019, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has no tax credit carryforwards included in deferred taxes.

(2) The Company received refunds of federal income taxes of \$551,869,641 in 2019 and \$162,238,125 in 2018.

(3) As of December 31, 2019 and 2018, the Company did not recognize any protective deposits as admitted assets.

F. (1) The Company and its eligible U.S. subsidiaries are included in a consolidated U.S. federal income tax return. The Company and its subsidiaries and affiliates also file income tax returns in various states and foreign jurisdictions.

(2) The Company and its eligible subsidiaries and certain affiliates (the Parties) have executed and are subject to a written tax allocation agreement (the Agreement). The Agreement sets forth the manner in which the total combined federal income tax is allocated among the Parties. The Agreement provides the Company with the enforceable right to recoup federal income taxes paid in prior years in the event of future net losses, which it may incur. Further, the Agreement provides the Company with the enforceable right to utilize its net losses carried forward as an offset to future net income subject to federal income taxes.

G. (1) Companies are generally required to disclose unrecognized tax benefits, which are the tax effect of positions taken on their tax returns that may be challenged by the various taxing authorities, in order to provide users of financial statements more information regarding potential liabilities. The Company recognizes tax benefits and related reserves in accordance with existing SAP for liabilities, contingencies and impairments of assets.

NOTES TO FINANCIAL STATEMENTS

- (2) On December 22, 2017, the president signed into law H.R. 1/Public Law 115-97, commonly known as the Act. The Act contains several key provisions that have significant financial statement effects in both the current and prior reporting periods. Effective January 1, 2018, the Act reduced the corporate tax rate to 21 percent, eliminated the corporate alternative tax, increased the capitalization rates for determining deferred acquisition costs and extended the amortization period, modified the life company proration rules, reduced the dividends received deduction applicable to corporate shareholders, and modified the net operating loss deduction applicable to corporate taxpayers.
- (3) The Act revised the computation of life insurance tax reserves to be the greater of the net surrender value of a contract and 92.81 percent of statutory reserves, effective for taxable years beginning after December 31, 2017. A transition rule requires life insurers to evenly spread the difference between the prior year end reserves computed on the old basis and those computed on the new basis over eight years as either income or a deduction. The transition amount, as adjusted, was a net increase to the deferred tax asset of \$454,720,306, offset by a corresponding increase in its deferred tax liability.
- (4) The Internal Revenue Service (IRS) has completed its examination of the tax returns filed for years 2013 and prior. The IRS commenced its exam of years 2014-2016 in September 2017. The adjustments resulting from the examinations are not expected to materially affect the position or liquidity of the Company.

H. (1) The Company elected to fully remit the repatriation transition tax in 2018.

I. (1) The Company does not have an alternative minimum tax credit.

Note 10 – Information Concerning Parent, Subsidiaries and Affiliates

a-c. MMHLLC declared \$500,000,000 in dividends, of which \$300,000,000 was paid to MassMutual for the year ended December 31, 2019 and declared \$900,000,000 of dividends, of which \$250,000,000 was paid for the year ended year ended December 31, 2018.

On May 24, 2019, an indirectly wholly owned subsidiary of MassMutual, MM Asset Management Holding LLC (MMAMH) executed the sale of its retail asset management affiliate, Oppenheimer Acquisition Corp. (OAC), to Invesco Ltd (Invesco), a global asset manager. Under the terms of the sale, MMAMH and OAC employee shareholders received 81.8 million of Invesco common shares and \$4,010,412,000 in perpetual, non-cumulative preference shares with a fixed cash dividend rate of 5.9%. MMAMH is a directly wholly owned subsidiary of MMHLLC. In turn, MMAMH received a 15.7% common equity interest in post transaction Invesco and MMAMH entered into a shareholder agreement pursuant to which MMAMH has customary minority shareholder rights, including the appointment of a director to Invesco's board of directors. MassMutual's investment in MMHLLC was increased from the impact of this sale through change in unrealized capital gains of \$3,361,000,000, with an approximate net increase to surplus of \$2,500,000,000.

MMI, a wholly-owned subsidiary of the Company, includes investments in international life insurance companies. On December 31, 2018, MMI was transferred from Common stocks - subsidiaries and affiliates to Partnerships and limited liability companies due to the sale of majority interests in two international life insurance operating subsidiaries in 2018.

MMI completed the sale of MassMutual Asia Limited (MM Asia) to Yunfeng Financial Group (Yunfeng FG) and several Asia-based investors. Under the terms of the agreement, MMI received \$1,011,783,113 in cash and 800 million shares of Yunfeng FG, which represented approximately 24.8% ownership at the time of the close. In turn, Yunfeng FG held, at the time of closing, a 60% interest in MM Asia and the other investors held the remainder. The transaction was signed and announced in August 2017.

In March 2018, MassMutual and MMI entered into an agreement to sell 85.1% of MassMutual Life Insurance Company in Japan (MM Japan), a wholly-owned life insurance and wealth management subsidiary of MMI, to Nippon Life. MMI estimated the fair value of the retained portion of MM Japan based upon an internal valuation model. The sale of MM Japan closed in May 2018. MMI received \$960,126,929 in cash proceeds from the sale.

The amount of the proceeds from the sale of MM Japan and MM Asia was less than MMI's book value. As such, MMI's book value was reduced to an estimated fair value of \$2,700,000,000 and an impairment of \$1,257,307,000 was recorded in net realized capital gains (losses) in 2018.

MassMutual contributed additional capital of \$214,267,226 to MMI during the year ended December 31, 2018. During the year ended December 31, 2018, MassMutual received \$1,583,000,000 as a return of capital from MMI.

d. The Company reported amounts due from subsidiaries and affiliates of \$80,437,664 as of December 31, 2019 and \$99,003,139 as of December 31, 2018. The Company reported amounts due to subsidiaries and affiliates of less than \$1,000,000 as of December 31, 2019 and 2018. Terms generally require settlement of these amounts within 30 to 90 days.

e. The Company has reinsurance agreements with its subsidiary, C.M. Life, and its indirect subsidiary, MML Bay State, including stop-loss, modified coinsurance (Modco) and yearly renewable term agreements on life insurance products. The Company also has coinsurance agreements with C.M. Life where the Company assumes substantially all of the premium on certain universal life policies.

The net amounts due to C.M. Life and MML Bay State were \$38,524,116 as of December 31, 2019 and \$39,702,346 as of December 31, 2018. These outstanding balances are due and payable with terms ranging from monthly to annually, depending on the agreement in effect.

The following summarizes the reinsurance transactions for these agreements:

	Years Ended December 31,	
	2019	2018
Premium assumed	\$ 45,360,132	\$ 49,077,954
Modco adjustments, included in fees and other income	9,087,136	11,932,442
Expense allowances on reinsurance assumed, included in commissions	(14,358,368)	(20,013,092)
Policyholders' benefits	(100,877,449)	(138,536,910)
Experience refunds paid	(635,184)	(2,997,489)

f. The Company has management and service contracts and cost-sharing arrangements with various subsidiaries and affiliates where the Company, for a fee, will furnish a subsidiary or affiliate, as required, operating facilities, human resources, computer software development and managerial services. Fees from C.M. Life accounted for \$133,538,443 in 2019 and \$135,598,508 in 2018. Fees from MML Bay State accounted for \$11,211,359 in 2019 and \$11,303,040 in 2018.

NOTES TO FINANCIAL STATEMENTS

The Company has agreements with its subsidiaries and affiliates, including Barings LLC (Barings), and MM Investment Advisers, LLC, where the Company receives revenue for certain recordkeeping and other services that the Company provides to customers who select, as investment options, mutual funds managed by these affiliates.

The Company has agreements with its subsidiaries, MM Copper Hill LLC, Insurance Road LLC (IRLLC), Barings, MML Investment Advisers LLC and MSI Financial Services, Inc., which provide investment advisory services to the Company.

In 2018, the Company contributed \$476,113,707 in private equity investments and \$81,111,847 in bonds to its subsidiary IRLLC. In December 2019, IRLLC declared a distribution to the Company of \$150,000,000. In 2018, IRLLC declared a distribution of \$749,254,863.

In December 2019 and 2018, MassMutual Trust Co. declared and paid \$2,500,000 to the Company.

The following table summarizes the transactions between the Company and the related parties:

	Years Ended December 31,	
	2019	2018
Fee income:		
Management and service contracts and cost-sharing arrangements	\$ 426,984,655	\$ 439,909,558
Investment advisory income	23,043,284	23,793,013
Recordkeeping and other services	20,514,281	22,033,760
Fee expenses:		
Investment advisory services	276,881,339	269,990,791
Royalty and licensing fees	58,200,000	56,000,000

The Company's indirectly wholly owned subsidiary, Barings, invests a portion of their nonqualified compensation plan in guaranteed interest contracts with the Company. For the year ended December 31, 2019, the Company credited interest on deposits of \$3,167,495 to the Barings contract. For the year ended December 31, 2018, the Company credited interest on deposits of (\$578,708) to the Barings contract.

In the normal course of business, the Company provides specified guarantees and funding to MMHLLC and certain of its subsidiaries. Refer to Note 14 "Liabilities, Contingencies and Assessments" for information on the Company's accounting policies regarding these related party commitments and information on the guarantees.

- g. Subsidiaries of MMHLLC and MMI 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 and is not directly or indirectly controlled by any other entity.

- h. The Company does not have an upstream intermediate entity or ultimate parent. Therefore, no amounts were deducted from the value of an upstream intermediate entity or ultimate parent owned, either directly or indirectly, via a downstream subsidiary, controlled or affiliated entity.
- i. As of December 31, 2019, the Company did not have an investment in SCAs exceeding 10% of admitted assets.
- j. In 2019, the Company did not have impairment write-downs on its investments in affiliated bonds. The Company recognized \$23,179,923 in impairment write-downs on its investments in affiliated joint ventures, including partnerships and LLCs of SCAs. OTTI were determined based on internally developed models.

In 2018, the Company did not have impairment write-downs on its investments in affiliated bonds. The Company recognized \$6,346,276 in impairment write-downs on its investments in affiliated joint ventures, including partnerships and LLCs of SCAs. OTTI were determined based on internally developed models.

In 2019 and 2018, the Company did not have any impairment write-downs on its investments in common stock of affiliates.

- k. The Company has no foreign insurance subsidiary whose value is calculated by adjusting annuity GAAP account value reserves using the Commissioners' Annuity Reserve Valuation Method and the related Actuarial Guidelines.
- l. The Company obtains audited financial statements of its downstream noninsurance holding company, MMHLLC.

NOTES TO FINANCIAL STATEMENTS

m. The following presents certain information for the Company's noninsurance SCA investments:

All SCA Investments

(1) Balance Sheet Value (Admitted and Nonadmitted) All SCAs (Except 8bi Entities):

SCA Entity	Percentage of SCA Ownership	Gross Amount	Admitted Amount	Nonadmitted Amount
a. SSAP No. 97 8a Entities				
None	-	\$ -	\$ -	\$ -
b. SSAP No. 97 8b(ii) Entities				
MassMutual Holding LLC (57543#-11-8)	100.0	\$ 13,868,446,336	\$ 13,868,446,336	\$ -
Cornerstone Global REIT Corp (21926@10-5)	92.3	189,271	-	189,271
Total SSAP No. 97 8b(ii) Entities	XXXXXX	\$ 13,868,635,607	\$ 13,868,446,336	\$ 189,271
c. SSAP No. 97 8b(iii) Entities				
The MassMutual Trust Co, FSB (57631@10-5)	100.0	26,960,085	26,960,085	-
MML Management Corporation (55338@-10-5)	100.0	1,083,253,682	1,083,253,682	-
Total SSAP No. 97 8b(iii) Entities	-	\$ 1,110,213,767	\$ 1,110,213,767	\$ -
d. SSAP No. 97 8b(iv) Entities				
None	-	\$ -	\$ -	\$ -
e. Total SSAP No. 97 8b Entities (except 8bi) (b+c+d)				
	-	\$ 14,978,849,374	\$ 14,978,660,103	\$ 189,271
f. Aggregate Total (a+e)				
	XXXXXX	\$ 14,978,849,374	\$ 14,978,660,103	\$ 189,271

(2) NAIC Filing Response :

SCA Entity (Should be same entities as shown in M(1) above)	Type of NAIC Filing*	Date of Filing to the NAIC	NAIC Valuation Amount	NAIC Response Received Y/N	NAIC Disallowed Entities Valuation Method. Resubmission Required Y/N	Code**
a. SSAP No. 97 8a Entities						
b. SSAP No. 97 8b(ii) Entities						
MassMutual Holding LLC (57543#-11-8)	S2	8/22/2019	\$ 9,337,733,346	Y	N	I
Cornerstone Global REIT Corp (21926@10-5)	S2	7/31/2018	172,758	Y	N	I
Total SSAP No. 97 8b(ii) Entities	XXXXXX	XXXXXX	\$ 9,337,906,104	XXXXXX	XXXXXX	XXXXXX
c. SSAP No. 97 8b(iii) Entities						
The MassMutual Trust Co, FSB (57631@10-5)	S2	5/28/2019	25,872,000	Y	N	I
MML Management Corporation (55338@-10-5)	S2	5/28/2019	1,008,788,000	Y	N	I
Total SSAP No. 97 8b(iii) Entities	XXXXXX	XXXXXX	\$ 1,034,660,000	XXXXXX	XXXXXX	XXXXXX
d. SSAP No. 97 8b(iv) Entities						
None	N/A	N/A	\$ -	N/A	N/A	N/A
e. Total SSAP No. 97 8b Entities (except 8bi) (b+c+d)						
	XXXXXX	XXXXXX	\$ 10,372,566,104	XXXXXX	XXXXXX	XXXXXX
f. Aggregate Total (a+e)						
	XXXXXX	XXXXXX	\$ 10,372,566,104	XXXXXX	XXXXXX	XXXXXX

* S1 - Sub-1, S2 - Sub-2 or RDF - Resubmission of Disallowed Filing

** I - Immaterial or M - Material

The U.S. GAAP equity value of MMHLLC is \$14,557,700,515 as of December 31, 2019, which is higher than the statutory carrying value, presented as gross value, in the preceding table, as portions of the equity value are nonadmitted under statutory accounting principles. The current fair value of MMHLLC remains significantly greater than its statutory carrying value.

Note 11 – Debt

a. The Company had commercial paper outstanding with a carrying value and face amount of \$249,869,729 as of December 31, 2019 and \$249,786,188 as of December 31, 2018. The commercial paper issued in 2019 had interest rates ranging from 1.68% to 2.60% with maturity dates ranging from 21 to 40 days. There are no collateral requirements on the Company's outstanding commercial paper. The commercial paper does not include terms for reverse repurchase agreements.

Interest expense for the commercial paper was \$5,867,472 for the year ended December 31, 2019 and \$5,145,583 for the year ended December 31, 2018.

The Company has a \$1,000,000,000 five-year credit facility, with a syndicate of lenders that can be used for general corporate purposes and to support commercial paper borrowings. During December 2018, the facility was renewed and the scheduled maturity is December

NOTES TO FINANCIAL STATEMENTS

2023. The facility includes two one-year extension options that may be exercised with proper notification as set forth in the agreement. The facility has an upside option for an additional \$500,000,000. The terms of the credit facility additionally provide for, among other provisions, covenants pertaining to liens, fundamental changes, transactions with affiliates and adjusted statutory surplus. As of and for the years ended December 31, 2019 and 2018, the Company was in compliance with all covenants under the credit facility. For the years ended December 31, 2019 and 2018, there were no draws on the credit facilities. Credit facility fees were less than \$1,000,000 for the years ended December 31, 2019 and 2018.

The Company held debt issued by MMHLLC that amounted to \$1,947,661,398 as of December 31, 2019 and 1,769,461,398 as of December 31, 2018. The Company recorded interest income on MMHLLC debt of \$79,822,702 in 2019 and \$74,321,689 in 2018.

The Company did not have any capital notes as of December 31, 2019 or 2018.

The Company did not have any debt that was considered to be extinguished by in-substance defeasance.

The Company did not set aside assets after the effective date of this statement solely for satisfying debt obligations.

The Company does not have any repurchase agreements as part of debt. See Note 5(E) for information on the Company's repurchase agreements.

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 \$2,000,000,000. The Company's unused capacity was \$895,905,900 as of December 31, 2019.

(2) FHLB Boston capital stock

a. Aggregate totals:

		December 31, 2019		
		1 Total 2+3	2 General Account	3 Separate Account
1. Current Year:				
(a) Membership stock - Class A	\$	-	-	-
(b) Membership stock - Class B		10,000,000	10,000,000	-
(c) Activity Stock		44,000,000	44,000,000	-
(d) Excess Stock		5,400,000	5,400,000	-
(e) Aggregate Total		<u>\$ 59,400,000</u>	<u>\$ 59,400,000</u>	<u>\$ -</u>
(f) Actual or Estimated Borrowing Capacity as Determined by the Insurer	\$	2,000,000,000	2,000,000,000	-
2. Prior Year-end:				
(a) Membership stock - Class A	\$	-	-	-
(b) Membership stock - Class B		25,000,000	25,000,000	-
(c) Activity Stock		48,700,000	48,700,000	-
(d) Excess Stock		-	-	-
(e) Aggregate Total		<u>\$ 73,700,000</u>	<u>\$ 73,700,000</u>	<u>\$ -</u>
(f) Actual or Estimated Borrowing Capacity as determined by the Insurer	\$	2,000,000,000	2,000,000,000	-

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

		Years Ended December 31, 2019				
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	10,000,000	10,000,000	-	-	-	-

NOTES TO FINANCIAL STATEMENTS

(3) Collateral pledged to FHLB:

a. Amount pledged as of December 31, 2019:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,671,947,715	\$ 1,301,089,185	\$ 1,104,094,100

2. Current year general account:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,671,947,715	\$ 1,301,089,185	\$ 1,104,094,100

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	\$ 1,585,921,118	\$ 1,217,470,617	\$ 1,103,750,455

b. Maximum amount pledged for the year ended December 31, 2019:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,707,233,260	\$ 1,328,588,172	\$ 1,108,636,992

2. Current year general account:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,707,233,260	\$ 1,328,588,172	\$ 1,108,636,992

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	\$ 1,635,548,627	\$ 1,246,429,701	\$ 1,103,750,455

NOTES TO FINANCIAL STATEMENTS

(4) Borrowing from FHLB:

a. Amount:

1. Current year:

December 31, 2019

	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	1,104,094,100	1,104,094,100	-	1,104,094,100
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,104,094,100</u>	<u>\$ 1,104,094,100</u>	<u>\$ -</u>	<u>\$ 1,104,094,100</u>

2. Prior Year-end:

December 31, 2018

	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	1,103,750,455	1,103,750,455	-	1,103,750,455
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,103,750,455</u>	<u>\$ 1,103,750,455</u>	<u>\$ -</u>	<u>\$ 1,103,750,455</u>

b. Maximum Amount:

Years Ended December 31, 2019

	1 Total 2+3	2 General Account	3 Separate Account
1. Debt	\$ -	\$ -	\$ -
2. Funding	1,108,636,992	1,108,636,992	-
3. Other	-	-	-
4. Aggregate	<u>\$ 1,108,636,992</u>	<u>\$ 1,108,636,992</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

The Company has funded and unfunded noncontributory defined benefit pension plans that cover substantially all employees, agents and retirees. The qualified defined benefit plan includes a defined benefit formula and a cash balance formula. Participants earn benefits under the plan based on the defined benefit formula, the cash balance formula or a combination of both formulas as determined by their date of hire or rehire. Under the defined benefit formula, benefits are calculated based on final average earnings and length of service. Benefits under the cash balance formula are determined based on age, service and salary during the participants' careers.

The Company's policy is to fund qualified pension costs in accordance with the Employee Retirement Income Security Act of 1974. The Company did not contribute to its qualified benefit plan in 2019. The Company contributed \$188,000,000 in 2018.

The determination of the discount rate is based upon rates commensurate with current yields on high quality corporate bonds as of a December 31 measurement date (The Measurement Date). A spot yield curve is developed from this data that is used to determine the present value for the obligation. The projected plan cash flows are discounted to the Measurement Date based on the spot yield curve. A single discount rate is utilized to ensure the present value of the benefits cash flow equals the present value computed using the spot yield curve. A 25 basis point change in the discount rate results in approximately a \$107,552,334 change in the projected pension benefit obligation. The methodology includes producing a cash flow of annual accrued benefits. See section 8 of this Note, "Assumptions" for details on the discount rate.

A summary of assets, obligations and assumptions of the pension benefits, postretirement benefits, and special or contractual termination benefits per SSAP No. 11 are as follows using a December 31 measurement date:

NOTES TO FINANCIAL STATEMENTS

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
(1) Change in benefit obligation:				
a. Pension Benefits				
1. Benefit obligation, beginning of year	\$ -	\$ -	\$ 2,850,002,566	\$ 3,036,125,481
2. Service cost	-	-	110,937,963	112,767,899
3. Interest cost	-	-	117,659,848	107,594,163
4. Contributions by plan participants	-	-	-	-
5. Actuarial (gains) losses	-	-	330,028,455	(264,086,628)
6. Foreign currency exchange rates	-	-	-	-
7. Benefits paid	-	-	(138,602,802)	(142,398,349)
8. Plan amendments	-	-	-	-
9. Business combinations, divestitures, curtailments, settlements, and special termination benefits	-	-	-	-
10. Benefit obligation, end of year	\$ -	\$ -	\$ 3,270,026,030	\$ 2,850,002,566

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
b. Postretirement Benefits				
1. Benefit obligation, beginning of year	\$ -	\$ -	\$ 340,518,432	\$ 353,900,998
2. Service cost	-	-	12,886,185	13,723,294
3. Interest cost	-	-	13,114,997	11,727,741
4. Contributions by plan participants	-	-	510,984	524,828
5. Actuarial (gains) losses	-	-	30,592,468	(25,343,103)
6. Foreign currency exchange rates	-	-	-	-
7. Benefits paid	-	-	(14,624,934)	(14,015,326)
8. Plan amendments	-	-	-	-
9. Business combinations, divestitures, curtailments, settlements, and special termination benefits	-	-	-	-
10. Benefit obligation, end of year	\$ -	\$ -	\$ 382,998,132	\$ 340,518,432

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
c. Special or contractual benefits per SSAP#11				
1. Benefit obligation, beginning of year	\$ -	\$ -	\$ -	\$ -
2. Service cost	-	-	-	-
3. Interest cost	-	-	-	-
4. Contributions by plan participants	-	-	-	-
5. Actuarial (gains) losses	-	-	-	-
6. Foreign currency exchange rates	-	-	-	-
7. Benefits paid	-	-	-	-
8. Plan amendments	-	-	-	-
9. Business combinations, divestitures, curtailments, settlements, and special termination benefits	-	-	-	-
10. Benefit obligation, end of year	\$ -	\$ -	\$ -	\$ -

NOTES TO FINANCIAL STATEMENTS

	December 31,					
	2019	2018	2019	2018	2019	2018
	Pension Benefits		Postretirement		Special or Contractual Benefits Per SSAP No 11	
(2) Change in plan assets:						
a. Fair value of plan assets, beginning of year	\$ 2,402,791,924	\$ 2,485,344,734	\$ 3,618,759	\$ 4,117,117	\$ -	\$ -
b. Actual return on plan assets	449,842,531	(147,815,399)	51,002	83,742	-	-
c. Foreign currency exchange rates changes	-	-	-	-	-	-
d. Contributions by reporting entity	24,309,355	207,660,938	13,607,867	12,908,400	-	-
e. Contributions by plan participants	-	-	510,986	524,826	-	-
f. Benefits paid	(138,602,802)	(142,398,349)	(14,624,934)	(14,015,326)	-	-
g. Business combinations, divestitures, curtailments, settlements, and special termination benefits	-	-	-	-	-	-
h. Fair value of plan assets, end of year	\$ 2,738,341,008	\$ 2,402,791,924	\$ 3,163,680	\$ 3,618,759	\$ -	\$ -

	December 31,			
	2019	2018	2019	2018
	Pension Benefits		Other Postretirement Benefits	
(3) Funded status				
a. Components:				
1. Prepaid benefit costs	\$ 642,321,439	\$ 727,193,552	\$ -	\$ -
2. Overfunded plan assets	-	-	-	-
3. Accrued benefit costs	289,118,469	272,715,746	385,359,237	379,614,571
4. Liability for pension benefits	242,566,553	174,494,896	(5,524,785)	(42,714,900)
b. Assets and liabilities recognized				
1. Assets (nonadmitted)	\$ 642,321,439	\$ 727,193,552	\$ -	\$ -
2. Liabilities recognized	531,685,022	447,210,642	379,834,452	336,899,671
c. Unrecognized liabilities	\$ -	\$ -	\$ -	\$ -

	Years Ended December 31,					
	2019	2018	2019	2018	2019	2018
	Pension Benefits		Postretirement Benefits		Special or Contractual Benefits per SSAP No 11	
(4) Components of net periodic benefit cost						
a. Service cost	\$ 110,937,963	\$ 112,767,899	\$ 12,886,185	\$ 13,723,294	\$ -	\$ -
b. Interest cost	117,659,848	107,594,163	13,114,997	11,727,741	-	-
c. Expected return on plan assets	(159,507,091)	(171,508,400)	(63,563)	(78,514)	-	-
d. Transition asset or obligation	-	-	-	-	-	-
e. Gains and losses	56,493,471	54,841,449	(1,065,586)	2,183,494	-	-
f. Prior service cost or (credit)	-	3,122,684	(5,519,500)	(5,519,500)	-	-
g. Gain or loss recognized due to settlement or curtailment	-	-	-	-	-	-
h. Total net periodic benefit cost	\$ 125,584,191	\$ 106,817,796	\$ 19,352,533	\$ 22,036,515	\$ -	\$ -

(5) The following sets forth the amounts in unassigned funds (surplus) recognized as components of net periodic benefit cost:

	December 31,			
	2019	2018	2019	2018
	Pension Benefits		Postretirement Benefits	
a. Items not yet recognized as a component of net periodic cost in prior year	\$ 901,688,448	\$ 904,415,410	\$ (42,694,900)	\$ (20,682,575)
b. Net transition asset or obligation recognized	-	-	-	-
c. Net prior service cost or credit arising during the period	-	-	-	-
d. Net prior service cost or credit recognized	-	(3,122,684)	5,519,500	5,519,500
e. Net gain and loss arising during the period	39,693,015	55,237,171	30,605,029	(25,348,331)
f. Net gain and loss recognized	(56,493,471)	(54,841,449)	1,065,586	(2,183,494)
g. Items not yet recognized as a component of net periodic cost in current year	\$ 884,887,992	\$ 901,688,448	\$ (5,504,785)	\$ (42,694,900)

NOTES TO FINANCIAL STATEMENTS

(6) The following sets forth the amounts in unassigned funds (surplus) that have not yet been recognized as components of net periodic benefit cost:

	December 31,			
	2019	2018	2019	2018
	Pension Benefits		Postretirement Benefits	
a. Net transition asset or obligation	\$ -	\$ -	\$ -	\$ -
b. Net prior service cost or credit	-	-	(35,466,000)	(40,985,500)
c. Net recognized gains and losses	884,887,992	901,688,448	29,941,215	(1,729,400)

(7) The assumptions the Company used to calculate the benefit obligations and to determine the benefit costs are as follows:

	December 31,			
	2019	2018	2019	2018
	Pension Benefits		Other Postretirement Benefits	
Weighted-average assumptions used to determine net periodic benefit cost as of December 31:				
a. Weighted-average discount rate	4.20 %	3.60 %	4.05 %	3.40 %
b. Expected long-term rate of return on plan assets	6.75 %	6.75 %	3.00 %	3.00 %
c. Rate of compensation increase	3.50 %	3.50 %	3.50 %	3.50 %
d. Interest crediting rate	6.00 %	6.00 %	4.05 %	3.40 %
Weighted-average assumptions used to determine projected benefit obligation as of December 31:				
e. Weighted-average discount rate	3.05 %	4.20 %	3.05 %	4.05 %
f. Rate of compensation increase	3.50 %	3.50 %	3.50 %	3.50 %
g. Interest crediting rate	5.00 %	6.00 %	3.05 %	4.05 %

(8) The amount of the accumulated benefit obligation for defined benefit pension plans was \$3,270,026,030 as of December 31, 2019 and \$2,739,168,171 as of December 31, 2018.

(9) The Company does not have any significant Postretirement Obligations subject to the Health Cost Trend rate.

(10) The expected future pension and other postretirement benefit payments, which reflect expected future service, are as follows:

	<u>Year(s)</u>	<u>Amount</u>
a.	2020	\$ 160,765,116
b.	2021	171,968,557
c.	2022	175,335,666
d.	2023	186,116,835
e.	2024	197,736,794
f.	2025 through 2029	1,122,734,929

(11) The Company intends to fund \$119,059,704 in 2020 to meet its expected current obligations under its qualified and non-qualified pension and other postretirement benefit plans.

(12) The Company's qualified pension plan assets managed by the Company and its indirectly wholly owned subsidiaries are as follows:

	December 31,	
	2019	2018
General Investment Account	\$ 245,288,061	\$ 246,655,740
Separate investment accounts:		
Barings Long Duration Bond Fund	326,165,511	289,413,077
Invesco Oppenheimer International Growth Fund	-	84,583,419
Alternative Investment Separate Account	-	118,584,314
Oppenheimer Large Core Fund	-	79,101,962
MM Select Large Cap Value Fund	-	54,713,535
MM Select Blue Chip Growth Fund	-	46,090,086
MM Select Growth Opportunities Fund	-	38,358,160
MM Premier Strategic Emerging Markets Fund	-	32,460,517
Oppenheimer Small Capitalization Core Fund	-	38,639,479
MM Select Small Cap Value Fund	-	19,528,817
MM Select Small Cap Growth Fund	-	21,498,690
	<u>\$ 571,453,572</u>	<u>\$ 1,069,627,796</u>

(13) The Company does not use alternative amortization methods.

NOTES TO FINANCIAL STATEMENTS

(14) The Company does not use any substantive commitments as the basis for accounting for the benefit obligation.

(15) The Company did not have any special contractual benefits recognized during the period.

(16) Significant actuarial gains and losses related to changes in the defined benefit obligations are summarized below.

Source of (Gain)/Loss	Pension Benefits		Postretirement Benefits	
	2019	2018	2019	2018
Change in Discount Rate	\$ 431,407,188	\$ (217,633,597)	\$ 33,734,592	\$ (21,155,101)
Change in Assumptions	(112,073,643)	(6,960,307)	6,114,782	(4,236,493)
Other (Gains)/ Losses	10,694,910	(39,492,724)	(9,256,906)	48,491
Total (Gains)/Losses	\$ 330,028,455	\$ (264,086,628)	\$ 30,592,468	\$ (25,343,103)

The gains and losses due to discount rate changes shown above are attributable to the discount rate changes shown in the assumption table under item (7). The 2019 gains for pension benefits due to assumption changes are primarily due to gains from lowering the interest crediting rate assumption for pension benefits from 6% to 5%, which were somewhat offset by losses from adopting the white collar version of the mortality table assumption.

(17) The following sets forth the accumulated benefit obligation funded status of the plans:

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
Pension:				
a. Accumulated benefit obligation	\$ -	\$ -	\$ 3,270,026,030	\$ 2,739,168,171
b. Less: Assets	-	-	2,738,341,008	2,402,791,924
c. Accumulated benefit obligation funded status	\$ -	\$ -	\$ 531,685,022	\$ 336,376,247

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
Postretirement:				
a. Accumulated benefit obligation	\$ -	\$ -	\$ 382,998,132	\$ 340,518,432
b. Less: Assets	-	-	3,163,680	3,618,759
c. Accumulated benefit obligation funded status	\$ -	\$ -	\$ 379,834,452	\$ 336,899,673

The following sets forth the projected benefit obligation funded status of the plans:

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
Pension:				
a. Projected benefit obligation	\$ -	\$ -	\$ 3,270,026,030	\$ 2,850,002,566
b. Less: fair value of plan assets	-	-	2,738,341,008	2,402,791,924
c. Projected benefit obligation funded status	\$ -	\$ -	\$ 531,685,022	\$ 447,210,642

	December 31,			
	2019	2018	2019	2018
	Overfunded		Underfunded	
Postretirement:				
a. Projected benefit obligation	\$ -	\$ -	\$ 382,998,132	\$ 340,518,432
b. Less: fair value of plan assets	-	-	3,163,680	3,618,759
c. Projected benefit obligation funded status	\$ -	\$ -	\$ 379,834,452	\$ 336,899,673

The qualified pension plan was underfunded by \$139,906,699 as of December 31, 2019 and by \$70,709,500 as of December 31, 2018. The nonqualified pension plans are not funded and have total projected benefit obligations of \$391,778,323 as of December 31, 2019 and \$376,501,142 as of December 31, 2018.

(18) The Company does not have a transition liability.

b. The target range allocations for the qualified pension plan assets are 12.5% to 22.5% domestic equity securities, 25% to 45% long duration bond securities, 5% to 15% GIA and aggregate bond assets, 12.5% to 22.5% international equity securities and 10% to 30% alternative investments. Domestic equities primarily include investments in large capitalization (large-cap) companies and small capitalization (small-cap) companies. Long duration bond securities invest in several long-duration bond exchange traded funds. International equities include investments in American Depository Receipts and limited partnerships that trade primarily in foreign markets in Europe, Latin America and Asia. The pension plan assets invested in the GIA through the unallocated group annuity contract earn a fixed interest. These assets comprised approximately 9% of the plan assets as of December 31, 2019 and 10% as of December 31, 2018.

NOTES TO FINANCIAL STATEMENTS

c. Fair value of plan assets

The assets of the qualified pension plan are invested in a Massachusetts Mutual Life Insurance Company group annuity contract and the following separate investment account options as well as certain private equity funds, hedge funds, private real estate funds and an all cap U.S. equity index exchange traded fund held in the MassMutual Pension Plan Trust (Pension Trust Assets). The group annuity contract invests in the General Investment Account (GIA) of the Company and separate investment accounts. The separate investment accounts are managed by the Company, the Company's indirectly wholly owned asset manager, subsidiaries, as well as unaffiliated asset managers.

The General Investment Account is designed to provide stable, long-term investment growth. The account value is maintained at a stable value (generally referred to as "book value") regardless of financial market fluctuations, however, if the plan sponsor initiates a full or partial termination, the amount liquidated is subject to an adjustment that could result in an increase or decrease in the book value of the plan's investment.

The majority of the assets of the qualified pension plan are invested in the following separate investment account options as well as certain private equity funds, hedge funds, private real estate funds and an all cap U.S. equity index exchange traded fund held in the MassMutual Pension Plan Trust (Pension Trust Assets):

Pacific Investment Management Company Long Duration Bond Fund is a separate investment account advised by Pacific Investment Management Company that invests in a diversified portfolio of fixed-income securities, including short-term, intermediate and long-term credit and government securities and cash. The specific performance objective is to outperform the total return of the Bloomberg Barclays U.S. Long Government/Credit Bond index.

Goldman Sachs Asset Management Long Duration Bond Fund is a separate investment account advised by Goldman Sachs Asset Management that invests in a diversified portfolio of fixed-income securities, including short-term, intermediate and long-term credit, government securities and cash. The specific performance objective is to outperform the total return of the Bloomberg Barclays U.S. Long Government/Credit Bond index.

Barings Long Duration Bond Fund is a separate investment account advised by Barings with a long duration bond strategy that invests in a diversified portfolio of fixed-income securities, including, short-term, intermediate and long-term credit, government securities and cash. The specific performance objective is to outperform the total return of the Bloomberg Barclays U.S. Long Government/Credit Bond index.

Oakmark International Collective Fund is a separate investment account advised by Harris Associates that invests primarily in developed market international large-cap equity securities, which may include common stocks, preferred stocks, securities that are convertible into common stocks, depositary receipts and rights and warrants to buy common stocks. This international equity strategy seeks out companies that it believes to be trading in the market at significant discounts to their underlying values.

Oppenheimer International Growth Fund is a separate investment account investing in a mutual fund sub-advised by OFI Institutional Asset Management (OFI Institutional) that invests in international large-cap securities, primarily in the developed international markets. This international equity strategy focuses on well-positioned, well-managed businesses that have strong revenue growth, sustainable profit margins, capital efficiency and/or business integrity.

MassMutual Pension Plan Trust is a trust account with a strategy of investing in alternative investments as directed by the Investment Fiduciary Committee. These investments include private equity, hedge funds, and private real estate, with allocations temporarily awaiting investment held in an all cap U.S. equity index exchange traded fund.

NOTES TO FINANCIAL STATEMENTS

The following presents the fair value hierarchy of the Company's pension plan assets by asset class:

	December 31, 2019			Total
	Level 1	Level 2	Level 3	
Investments in the qualified pension plan:				
Pooled separate accounts:				
Common stocks:				
U.S. large capitalization	\$ 176,241,876	-	-	176,241,876
International large capitalization	-	97,908,113	-	97,908,113
Total pooled separate accounts	176,241,876	97,908,113	-	274,149,989
Common stocks:				
U.S. large capitalization	315,165,810	-	-	315,165,810
U.S. small capitalization	18,105,006	-	-	18,105,006
U.S. mid-c pitalization	7,143,763	-	-	7,143,763
International large capitalization	-	231,212,882	-	231,212,882
Total common stocks	340,414,579	231,212,882	-	571,627,461
Debt instruments:				
Corporate and other bonds	-	481,775,894	-	481,775,894
Long-term bond mutual fund	124,889,394	-	-	124,889,394
Short-term bond mutual funds	13,595,852	-	-	13,595,852
Total debt instruments	138,485,246	481,775,894	-	620,261,140
Registered investment companies:				
Emerging markets	-	37,808,278	-	37,808,278
Total registered investment companies	-	37,808,278	-	37,808,278
Limited partnerships				
Other:				
Government securities	-	388,579,955	-	388,579,955
Collective investment trust	-	77,061,045	-	77,061,045
Other	-	62,582,889	-	62,582,889
Total other	-	528,223,889	-	528,223,889
Total separate investment accounts	655,141,701	1,376,929,055	-	2,032,070,757
Pension trust assets:				
Common stocks:				
Cash Equivalent	97,759,863	-	-	97,759,863
Collective investment trust	-	47,985,426	-	47,985,426
Hedge fund	-	-	24,552,297	24,552,297
Limited partnerships:				
Private equity/venture capital	-	-	142,336,698	142,336,698
Real Estate	-	-	122,341,497	122,341,497
Hedge	-	-	93,295,304	93,295,304
Total pension trust assets	97,759,863	47,985,426	382,525,796	528,271,085
Total General Investment Account option	-	-	245,288,061	245,288,061
Total	\$ 752,901,564	\$ 1,424,914,481	\$ 627,813,857	\$ 2,805,629,903

NOTES TO FINANCIAL STATEMENTS

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Investments in the qualified pension plan:				
Separate investment accounts:				
Common stocks:				
U.S. large capitalization	\$ 65,730,850	\$ 222,427,286	\$ -	\$ 288,158,136
U.S. small capitalization value	18,585,686	41,027,507	-	59,613,193
U.S. mid-capitalization	20,567,864	-	-	20,567,864
International small/mid capitalization	3,719,228	-	-	3,719,228
International large capitalization value	2,958,851	118,584,314	-	121,543,165
Total common stocks	<u>\$ 111,562,479</u>	<u>\$ 382,039,107</u>	<u>\$ -</u>	<u>\$ 493,601,586</u>
Debt Instruments:				
Corporate and other bonds	-	387,837,829	-	387,837,829
Long-term bond mutual fund	133,575,162	-	-	133,575,162
Short-term bond mutual funds	14,611,386	-	-	14,611,386
Total debt instruments	<u>\$ 148,186,548</u>	<u>\$ 387,837,829</u>	<u>\$ -</u>	<u>\$ 536,024,377</u>
Registered investment companies:				
Emerging markets	16,475,610	-	-	16,475,610
U.S. large capitalization	-	58,629,183	-	58,629,183
Total registered investment companies	<u>\$ 16,475,610</u>	<u>\$ 58,629,183</u>	<u>\$ -</u>	<u>\$ 75,104,793</u>
Limited partnerships:				
Private equity/venture capital	-	-	35,508,706	35,508,706
Total limited partnerships	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 35,508,706</u>	<u>\$ 35,508,706</u>
Other:				
Government securities	-	353,440,122	-	353,440,122
Other	2,032,634	18,384,203	-	20,416,837
Real Estate	-	-	32,599,103	32,599,103
Total other	<u>\$ 2,032,634</u>	<u>\$ 577,501,450</u>	<u>\$ 32,599,103</u>	<u>\$ 612,133,187</u>
Total separate investment accounts	<u>\$ 278,257,271</u>	<u>\$ 1,406,007,569</u>	<u>\$ 68,107,809</u>	<u>\$ 1,752,372,649</u>
Pension trust assets:				
Common stocks:				
U.S. large capitalization	82,792,404	-	-	82,792,404
Collective Investment Trust	-	46,633,853	-	46,633,853
Limited partnerships:				
Other	-	-	272,347,527	272,347,527
Other	(70)	1,989,822	-	1,989,752
Total pension trust assets	<u>82,792,334</u>	<u>48,623,675</u>	<u>272,347,527</u>	<u>403,763,536</u>
Total general investment account	<u>-</u>	<u>-</u>	<u>246,655,740</u>	<u>246,655,740</u>
Total	<u>\$ 361,049,605</u>	<u>\$ 1,454,631,244</u>	<u>\$ 587,111,076</u>	<u>\$ 2,402,791,924</u>

(3) Fair Value Measurements

The Company's fair value hierarchy is defined in Note 20 "Fair Value Measurements."

The following is a description of the valuation methodologies used to measure fair value for the investments in the qualified pension plan.

Separate Investment Accounts: There are two methods of determining unit value for the separate investment accounts. The portfolio method is used when the separate investment account invests in a portfolio of securities or two or more underlying mutual funds, bank collective trust funds or other investment vehicles (each an "Underlying fund"). Under this method, the unit value of a separate investment account is determined by dividing the market value of such separate investment account on any valuation date by the total number of units in the separate investment account. The net investment factor method ("NIF") is used when the separate investment account invests in shares or units of a single underlying fund. Under this method, the unit value of a separate investment account is determined by taking the unit value for the prior valuation day and multiplying it by the net investment factor for the current valuation day. Under both of these methods the separate investment accounts are therefore classified as Level 2. As of December 31, 2019, the Plan had no specific plans or intentions to sell investments at amounts other than NAV. These investments can be redeemed on a daily basis and have no lockups or funding commitments.

Corporate debt instruments: Valued using the closing price reported on the active market on which the individual securities are traded. If Level 1 valuations are not available, the fair value is determined using models such as matrix pricing and therefore, is classified as Level 2, which uses quoted market prices of debt securities with similar characteristics.

PIMCO bond funds: Valued using the closing price reported on the active market on which the individual securities are traded and therefore classified as Level 1.

Government securities: Marked to market daily based on values provided by third-party vendors or market makers to the extent available or based on model prices. Valuations furnished by a pricing service take into account factors such as institutional-size trading in similar securities, yield, quality, coupon rate, maturity, type of issue, trading characteristics, and other market data and are therefore classified as Level 2.

Common stocks: Valued using the closing price reported on the active market on which the individual securities are traded and therefore classified as Level 1.

Collective investment trust: Valued using the NAV per unit. The net asset value per unit of the Funds is calculated on each business day by dividing the total value of assets, less liabilities, by the number of units outstanding. Unit issuances and redemptions are based on the net asset value determined at the end of the current day and therefore classified as Level 2.

NOTES TO FINANCIAL STATEMENTS

Limited partnerships: The Plan utilizes the practical expedient to calculate fair value of its investments based on the Plan's pro rata interest in net assets of each underlying partnership. All valuations utilize financial information supplied by the partnership, including income, expenses, gains and losses. The underlying investments of the partnership are accounted for at fair value as described in the partnership's audited financial statements. The multi-strategy hedge fund can be redeemed semi-annually with 95 days notice. The remaining funds can be redeemed periodically with notice that generally ranges from 45 to 90 days. There are no lockups or funding commitments. These limited partnership investments are classified as Level 3.

Registered investment companies: There are two methods of determining the unit value for the registered investment companies. For the registered investment company that is valued at an unaffiliated company the investment is valued using the closing price reported on the active market on which the funds are traded and is therefore classified as Level 1. For the registered investment company that is valued in-house on the unival system the NIF method is used which takes the unit value for the prior valuation day and multiplies it by the NIF for the current valuation day and is therefore classified as Level 2.

Other: Valued using the closing price reported on the active market on which the individual securities are traded. If Level 1 valuations are not available, the fair value is determined using models such as matrix pricing and therefore, is classified as Level 2, which uses quoted market prices with similar characteristics. Investments included in this category include short term investments, real estate investment trusts, asset backed securities, mortgage backed securities, swaps, derivatives, futures and options. Investments in multi-strategy hedge fund and real estate are based on the Plan's pro rata interest in the net assets of the partnership and have a redemption period and are reported in the Level 3 column. The multi-strategy hedge fund is comprised of two funds, one of which has a quarterly redemption period and the other with a monthly redemption period. They both require 45 days notice. The real estate fund does not have a specific redemption period, but is dependent upon the liquidation of underlying assets. None of the funds have a lock up period or funding commitment.

Cash: Stated at cost, which is equal to fair value, and held by an unaffiliated bank.

General Investment Account option: Liquidation value based on an actuarial formula as defined under the terms of the contract.

- d. The Company employs a total return investment approach whereby a mix of equities and fixed-income investments are used to maximize the long-term return of plan assets with a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status and the Company's financial condition. The investment portfolio contains a diversified blend of equity and fixed-income investments. Alternative assets such as private equity funds, hedge funds, private real estate funds, equity index exchange traded funds and bond index exchange traded funds are used to improve portfolio diversification. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset and liability studies.

e. **Defined Contribution Plan:**

The Company sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for its employees, agents and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$3,384,961,369 as of December 31, 2019 and \$2,831,042,432 as of December 31, 2018. The Company match for the qualified 401(k) thrift savings plan is limited to 5% of eligible W-2 compensation. The Company's total matching thrift savings contributions included in general insurance expenses were \$53,679,720 for the year ended December 31, 2019 and \$50,768,968 for the year ended December 31, 2018.

The Company also maintains a defined contribution plan for agents, which was frozen in 2001. The net assets available for these benefits were \$173,673,258 as of December 31, 2019 and \$163,856,796 as of December 31, 2018.

- f. The Company did not participate in multi-employer plans.
- g. The Company did not participate in consolidated or holding company plans.
- h. The Company provides severance-related postemployment benefits for home office employees. The net accumulated liability for these benefits was \$54,406,437 as of December 31, 2019 and \$48,735,861 as of December 31, 2018.

The Company accrues postemployment benefits for the health benefits of agents who qualify for long-term disability and are not retired. The net accumulated liability for these benefits was \$7,294,041 as of December 31, 2019 and \$4,998,651 as of December 31, 2018.

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

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

- (1) The Company is a mutual company, and as such does not have any capital stock.
- (2) As a mutual company, the Company has not issued any preferred stocks.
- (3) The Company is a mutual company, and as such does not have any cumulative stockholders' dividends.
- (4) The Company is a mutual company, and as such does not pay stockholders' dividends.
- (5) The Company is a mutual company, and as such does not pay stockholders' dividends.
- (6) There are no restrictions on unassigned surplus, which is held for the benefit of all policyholders.

The Company has absolutely and irrevocably guaranteed that, of the \$1,678,330,958 total apportionment from its surplus funds for policyholder dividends for the period beginning January 1, 2019 and ending December 31, 2019, it will pay or cause to be applied during 2019, in all events, annual dividends for participating individual life and annuity policies issued after December 31, 1983, in an amount of not less than \$1,160,000,000. This guarantee covers policies in the aggregate only and does not confer a dividend guarantee on any specific policy.

- (7) The Company did not make any advances to surplus.
- (8) The Company is a mutual company, and as such does not have any capital stock held for special purposes.
- (9) There were no changes in the balances of special surplus funds.
- (10) The portion of unassigned funds (surplus) represented by net unrealized gains and losses (cumulative, net of deferred tax) was \$14,698,481,456 as of December 31, 2019 and \$10,141,194,299 as of December 31, 2018.

(11) Par Value

Unapproved

NOTES TO FINANCIAL STATEMENTS

Issue Date	Interest Rate	(Face Amount of Notes)	Carrying Value of Note*	Interest and/or Principal Paid Current Year	Total Interest and/or Principal Paid	Interest and/or Principal	Date of Maturity
11/15/1993	7.625%	\$ 250,000,000	\$ 250,000,000	\$ 19,062,500	\$ 495,625,000	\$ 2,382,813	11/15/2023
03/01/1994	7.500%	100,000,000	100,000,000	7,500,000	191,250,000	2,500,000	03/01/2024
05/12/2003	5.625%	193,184,000	192,639,964	12,464,550	230,550,488	1,358,325	05/15/2033
06/01/2009	8.875%	129,597,000	128,301,646	19,507,117	586,008,228	958,478	06/01/2039
01/17/2012	5.375%	263,369,000	262,729,787	17,828,042	165,580,820	1,179,674	12/01/2041
04/15/2015	4.500%	258,212,000	253,691,490	17,059,770	95,809,770	2,420,738	04/15/2065
03/20/2017	4.900%	475,000,000	470,906,718	23,275,000	58,704,722	5,818,750	04/01/2077
10/11/2019	3.729%	838,475,000	577,130,103	15,049,086	15,049,086	6,948,163	10/15/2070
Total		\$ 2,507,837,000	\$ 2,235,399,708	\$ 131,746,065	\$ 1,838,578,114	\$ 23,566,942	

These notes are unsecured and subordinate to all present and future indebtedness of the Company, all policy claims and all prior claims against the Company as provided by the Massachusetts General Laws. The surplus notes are all held by bank custodians for unaffiliated investors. All issuances were approved by the Division.

All payments of interest and principal are subject to the prior approval of the Division. Anticipated sinking fund payments are due for the notes issued in 1993 and 1994 as follows: \$62,500,000 in 2021, \$87,500,000 in 2022, \$150,000,000 in 2023 and \$50,000,000 in 2024. There are no sinking fund requirements for the notes issued in 2003, 2009, 2012 or 2015. Scheduled interest on the notes issued in 1993 and 2003 is payable on May 15 and November 15 of each year to holders of record on the preceding May 1 or November 1, respectively. Scheduled interest on the note issued in 1994 is payable on March 1 and September 1 of each year to holders of record on the preceding February 15 or August 15, respectively. Scheduled interest on the notes issued in 2009 and 2012 is payable on June 1 and December 1 of each year to holders of record on the preceding May 15 and November 15, respectively. Scheduled interest on the note issued in 2015 is payable on April 15 and October 15 of each year to holders of record on the preceding April 1 and October 1, respectively. Interest expense is not recorded until approval for payment is received from the Division. As of December 31, 2019, the unapproved interest was \$23,566,941. Through December 31, 2019, the Company paid cumulative interest of \$1,838,578,114 on surplus notes. Interest of \$131,746,065 was approved and paid during the twelve months ended December 31, 2019.

On October 11, 2019, MassMutual exchanged \$56,816,000 of its 5.625% surplus notes due 2033, \$180,403,000 of its 8.875% surplus notes due 2039, \$136,631,000 of its 5.375% surplus notes due 2041, \$241,788,000 of its 4.5% surplus notes due 2065 and \$39,146,661 cash for \$838,475,000 of 3.729% surplus notes due 2070. Interest on the 2070 surplus notes is payable semi-annually at a fixed rate of 3.729%.

(12) There were no restatements due to prior quasi-reorganizations.

(13) There were no quasi-reorganizations in the prior ten years.

Note 14 – Liabilities, Contingencies and Assessments

a. Contingent commitments:

- (1) In the normal course of business, the Company provides specified guarantees and funding to MMHLLC and certain of its subsidiaries. The Company had approximately \$621,800,000 of these unsecured funding commitments to its subsidiaries as of December 31, 2019 and \$386,605,000 as of December 31, 2018. The unsecured commitments are included in private placements in the table below. As of December 31, 2019 and 2018, the Company had not funded, nor had an outstanding balance due on these commitments.

In the normal course of business, the Company enters into letter of credit arrangements. The Company had approximately \$144,698,172 of outstanding letter of credit arrangements and \$191,724,148 as of December 31, 2018 of outstanding letter of credit arrangements. As of December 31, 2019 and 2018, the Company did not have a funding request attributable to these letter of credit arrangements.

The Company approved financing of \$4,228,875,000 as of December 31, 2019 and December 31, 2018, for MassMutual Asset Finance LLC that can be used to finance ongoing asset purchases and refinance existing Company provided lines of credit. Borrowings under the facility with the Company were \$3,370,663,662 as of December 31, 2019 and \$3,479,160,057 as of December 31, 2018. Interest expense for these borrowings was \$90,415,118 in 2019 and \$79,236,953 in 2018. The unfunded amount of the facility, totaling \$858,211,338 as of December 31, 2019, is included in private placements in the table below. The interest of this facility adjusts monthly based on the 30-day LIBOR.

The Company approved financing of \$225,000,000 as of December 31, 2019 and December 31, 2018, for Jefferies Finance LLC that can be used to finance ongoing asset purchases and refinance existing Company provided lines of credit. During 2019, Jefferies borrowed \$405,000,000 and repaid \$358,659,000 under this facility. During 2018, Jefferies borrowed \$360,742,500 and repaid \$585,742,500 under the credit facility. As of December 31, 2019, the outstanding borrowings under this facility were \$46,341,000. All outstanding interest due under the facility, as of December 31, 2019 had been paid. The interest of this facility is calculated based on a full pass through of interest accrued on the underlying loans purchased.

In the normal course of business, the Company enters into commitments to purchase certain investments. The majority of these commitments have funding periods that extend between one and five years. The Company is not required to fund commitments once the commitment period expires.

NOTES TO FINANCIAL STATEMENTS

As of December 31, 2019, the Company had the following commitments:

	2020	2021	2022	2023	2024	Thereafter	Total
Private placements	\$ 2,670,299,223	\$ 340,445,525	\$ 138,637,816	\$ 671,708,091	\$ 2,096,080	\$ 1,920,136,843	\$ 5,743,323,578
Mortgage loans	774,319,503	582,096,093	383,991,024	23,148,168	130,266,856	125,455,553	2,019,277,197
Real estate	1,319,716	-	-	-	-	-	1,319,716
Partnerships and LLC	287,661,267	168,241,107	983,165,468	388,071,674	145,626,181	518,348,262	2,491,113,959
LIHTCs (including equity contributions)	107,131,600	157,520,266	119,205,907	661,925	474,723	5,557,285	390,551,706
Total	\$3,840,731,309	\$1,248,302,991	\$1,625,000,215	\$1,083,589,858	\$278,463,840	\$2,569,497,943	\$10,645,586,156

In the normal course of business the Company enters into commitments related to property lease arrangements, certain indemnities, investments and other business obligations. As of December 31, 2019 and 2018, the Company had no outstanding obligations attributable to these commitments.

Certain commitments and guarantees of the Company provide for the maintenance of subsidiary regulatory capital and surplus levels and liquidity sufficient to meet certain obligations. These commitments and guarantees are not limited. As of December 31, 2019 and 2018, the Company had no outstanding obligations attributable to these commitments and guarantees.

NOTES TO FINANCIAL STATEMENTS

(2) The following details contingent guarantees that are made on behalf of the Company's subsidiaries and affiliates as of December 31, 2019:

(1)	(2)	(3)	(4)	(5)
Nature and circumstances of guarantee and key attributes, including date and duration of agreement	Liability recognition of guarantee. (Include amount recognized at inception. If no initial recognition, document exception allowed under SSAP No. 5R.)	Ultimate financial statement impact if action under the guarantee is required	Maximum potential amount of future payments (undiscounted) the guarantor could be required to make under the guarantee. If unable to develop an estimate, this should be specifically noted.	Current status of payment or performance risk of guarantee. Also provide additional discussion as warranted
The Company guarantees the payment of certain employee and retirement benefits for its wholly-owned subsidiary Barings, if the subsidiary is unable to pay.	-	If the Company were to recognize a liability, the financial statement impact would be to recognize either an expense or an investment in a SCA.	The liabilities for these plans of \$245,935,949 have been recorded on the subsidiaries' books and represent the Company's maximum obligation.	-
Certain guarantees of the Company provide for the maintenance of a subsidiary's regulatory capital, surplus levels and liquidity sufficient to meet certain obligations. These unlimited guarantees are made on behalf of certain wholly-owned subsidiaries. (C.M. Life and MML Bay State).	-	If the Company were to recognize a liability, the financial statement impact would be to recognize either an expense or an investment in a SCA.	These guarantees are not limited and cannot be estimated.	-
The Company guarantees the payment of various lease obligations on behalf of its subsidiaries and affiliates originating in 2004, 2007 and 2012 and some are in effect until 2023.	-	If the Company were to recognize a liability, the financial statement impact would be to recognize either an expense or an investment in a SCA.	The future maximum potential obligations are immaterial to the Company.	-
The Company issued a construction loan for a real estate development project. The land on which the property is to be built is subject to a ground lease. In conjunction with issuing this construction loan, the Company has also issued a completion guarantee to the landowner that pays only in the event the project is not completed. The project is expected to be completed by July 2020.	-	If the Company were to recognize a liability, the financial statement impact would be to recognize an expense.	\$350,000,000	-
The Company guarantees the capital contributions required to be made by a variable annuity separate account contract holder in the event the contract holder fails to payoff a subscription line utilized to deploy capital for the separate account.	-	If the Company were to recognize a liability, the financial statement impact would be to recognize an expense.	\$35,015,000 with the right to increase the line to \$60,000,000.	-
Total	-	-	\$630,950,949	-

NOTES TO FINANCIAL STATEMENTS

(3)

Year Ended December 31, 2019

a.	Aggregate maximum potential of future payments of all guarantees (undiscounted) the guarantor could be required to make under guarantees:	\$ 630,950,949
b.	Current liability recognized in the financial statements:	
	1. Noncontingent liabilities	-
	2. Contingent liabilities	-
c.	Ultimate financial statement impact if action under the guarantee is required:	
	1. Investments in SCA	\$ 245,935,949
	2. Joint venture	-
	3. Dividends to stockholders	-
	4. Expense	385,015,000
	5. Other	-
	6. Total	\$ 630,950,949

b. Assessments:

The Company is subject to insurance guaranty fund laws in the states in which it does business. These laws assess insurance companies' amounts to be used to pay benefits to policyholders and policy claimants of insolvent insurance companies. Many states allow these assessments to be credited against future premium taxes. The Company believes such assessments in excess of amounts accrued will not materially impact its financial position, results of operations or liquidity.

c. Gain contingencies:

No material gain contingencies were realized subsequent to December 31, 2019 through the filing date.

d. The Company did not have any claims related to extra contractual obligations in 2019.

e. Joint and several liabilities: The Company has no joint and several liabilities.

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

a.

(1) The Company leases office space and equipment in the normal course of business under various noncancelable operating lease agreements. Additionally, the Company, as lessee, has entered various sublease agreements with affiliates for office space, such as Barings. Total rental expense on net operating leases, recorded in general insurance expenses, was \$118,142,044 for the year ended December 31, 2019 and \$163,943,336 for the year ended December 31, 2018. Net operating leases are net of sublease receipts of \$9,728,670 for the year ended December 31, 2019 and \$11,391,018 for the year ended December 31, 2018.

(2) At December 31, 2019, the minimum aggregate rental commitments are as follows:

	Years Ended December 31,	Operating Leases
1.	2020	\$ 112,698,398
2.	2021	89,423,127
3.	2022	60,309,349
4.	2023	50,687,854
5.	2024	37,218,996
6.	Total	\$ 409,551,118

(3) The Company has entered into sale-leaseback transactions with unrelated parties to sell and leaseback certain fixed assets with book value of \$110,003,096 and \$99,796,951, which resulted in no gain or loss. The leases have five year terms which expire in 2020 and 2021 with annual lease payments of \$22,000,619 and \$19,959,390. At the end of the leases, the Company has the option to purchase the underlying assets at fair value

b. Leasing is not a significant part of the Company's business activities.

NOTES TO FINANCIAL STATEMENTS**Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With Concentrations of Credit Risk**

(1) The notional amounts of the company's financial instruments with off-balance sheet risk are as follows:

	December 31,			
	2019	2018	2019	2018
	Assets		Liabilities	
a. Swaps	\$ 102,982,028,652	\$ 104,966,501,139	\$ 126,750,215,586	\$ 93,855,256,896
b. Futures	291,124,150	3,036,124,950	-	-
c. Options	19,359,940,300	19,656,687,400	2,948,300	3,248,300
d. Total	<u>\$ 122,633,093,102</u>	<u>\$ 127,659,313,489</u>	<u>\$ 126,753,163,886</u>	<u>\$ 93,858,505,196</u>

See Schedule DB of the Company's Annual Statement for additional detail.

- (2) See Note 8 "Derivative Instruments" for a discussion of the credit and market risk of derivative financial instruments, and the cash requirements and accounting policies related to those instruments.
- (3) See Note 8 "Derivative Instruments" for a discussion of the amount of accounting losses the Company would incur if any party to the financial instrument failed completely to perform according to terms of the contract and the collateral due proved to be of no value to the Company.
- (4) See Note 8 "Derivative Instruments" for a discussion of the Company's policy of requiring collateral to support financial instruments subject to credit risk, information about the Company's access to that collateral and the nature and description of the collateral supporting those financial instruments.

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

- a. During 2019 and 2018, the Company did not transfer any receivables that were reported as sales.
- b. Transfer and Servicing of Financial Assets:
- (1) The Company did not participate in securities lending as of December 31, 2019 or 2018.
 - (2) The Company did not have any servicing assets or liabilities in 2019 or 2018.
 - (3) The Company did not have any servicing assets or liabilities in 2019 or 2018.
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2019 or 2018.
 - (5) The Company did not have any transfers of financial assets accounted for as secured borrowing in 2019 or 2018.
 - (6) The Company did not have any transfers of receivables with recourse in 2019 or 2018.
 - (7) See Note 5e1 "Repurchase Agreements".
- c. Wash sales:
- (1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days of the sale date 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, for the year ended December 31, 2019 or 2018, 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

The Company did not write any accident and health plans. Therefore, the Company did not have any uninsured accident and health plans.

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

The Company writes its remaining group life, accident and health business through a third party administrator. Pursuant to a 1994 reinsurance agreement, the Company cedes 100% of this business. Premium ceded was \$28,048 in 2019 and \$100,197 in 2018.

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

NOTES TO FINANCIAL STATEMENTS

benchmark yields such as the LIBOR, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

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

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

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

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

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

	December 31, 2019				
	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Financial assets:					
Bonds:					
Industrial and miscellaneous	\$ 10,059,967	\$ 143,325,225	\$ 110,728,451	\$ -	\$ 264,113,643
Preferred stocks	-	-	12,738,794	-	12,738,794
Common stock - subsidiaries and affiliates	162,056,329	-	119,810,155	-	281,866,484
Common stock - unaffiliated	916,943,969	-	267,976,515	-	1,184,920,484
Derivatives:					
Interest rate swaps	-	10,571,406,154	-	-	10,571,406,154
Options	40,446,258	534,068,767	-	-	574,515,025
Currency swaps	-	879,667,787	-	-	879,667,787
Forward contracts	-	11,413,071	-	-	11,413,071
Financial futures	5,333,000	-	-	-	5,333,000
Separate account assets	48,151,046,994	21,112,660,457	966,991,735	-	70,230,699,186
Total financial assets carried at fair value	<u>\$ 49,285,886,517</u>	<u>\$ 33,252,541,461</u>	<u>\$ 1,478,245,650</u>	<u>\$ -</u>	<u>\$ 84,016,673,628</u>
Financial liabilities:					
Interest rate swaps	\$ -	\$ 9,122,852,015	\$ -	\$ -	\$ 9,122,852,015
Options	2,121,215	-	-	-	2,121,215
Currency swaps	-	212,243,023	-	-	212,243,023
Forward contracts	-	157,870,365	-	-	157,870,365
Credit default swaps	-	41,515	-	-	41,515
Financial futures	113,113,033	-	-	-	113,113,033
Total financial liabilities carried at fair value	<u>\$ 115,234,248</u>	<u>\$ 9,493,006,918</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 9,608,241,166</u>

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 December 31, 2019, 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, 2018				
	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Financial assets:					
Bonds:					
Special revenue	\$ -	\$ 50,382	\$ -	\$ -	\$ 50,382
Industrial and miscellaneous	10,043,280	29,538,778	63,859,896	-	103,441,954
Parent, subsidiaries and affiliates	-	81,533,868	65,576,875	-	147,110,743
Preferred stocks	-	-	287,758	-	287,758
Common stock - subsidiaries and affiliates	233,070,805	-	164,920,846	-	397,991,651
Common stock - unaffiliated	194,455,569	-	305,537,860	-	499,993,429
Derivatives:					
Interest rate swaps	-	6,629,062,841	-	-	6,629,062,841
Options	-	910,876,374	-	-	910,876,374
Currency swaps	-	843,350,847	-	-	843,350,847
Forward contracts	-	106,021,420	-	-	106,021,420
Interest rate caps and floors	-	18,142,286	-	-	18,142,286
Financial futures	-	215,810,517	-	-	215,810,517
Separate account assets	41,358,963,395	22,568,484,678	550,652,512	-	64,478,100,585
Total financial assets carried at fair value	\$ 41,796,533,049	\$ 31,402,871,991	\$ 1,150,835,747	\$ -	\$ 74,350,240,787
Financial liabilities:					
Derivatives:					
Interest rate swaps	\$ -	\$ 4,646,939,586	\$ -	\$ -	\$ 4,646,939,586
Options	-	4,556,715	-	-	4,556,715
Currency swaps	-	231,601,523	-	-	231,601,523
Forward contracts	-	12,189,652	-	-	12,189,652
Credit default swaps	-	117,646	-	-	117,646
Financial futures	-	15,090,134	-	-	15,090,134
Total financial liabilities carried at fair value	\$ -	\$ 4,910,495,256	\$ -	\$ -	\$ 4,910,495,256

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

	Balance as of 01/01/2019	Transfers ⁽¹⁾	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Balance as of 12/31/2019
Financial assets:									
Bonds:									
Industrial and miscellaneous	\$ 63,859,896	\$ 25,906,103	\$ -	\$ (1,460,481)	\$ 28,413,133	\$ 867,449	\$ -	\$ (4,902,172)	\$ 110,728,451
Parent, subsidiaries and affiliates	65,576,875	(57,456,875)	-	-	-	-	-	-	-
Preferred stock	287,758	11,586,927	-	(666,240)	1,530,348	-	-	-	12,738,793
Common stock - subsidiaries and affiliates	164,920,846	-	824,411	(40,158,005)	534,966	-	-	(6,312,052)	119,810,156
Common stock - unaffiliated	305,537,860	-	18,461,974	9,072,337	4,344,119	-	(60,172,286)	(9,112,321)	267,976,515
Derivatives:									
Separate account assets	550,652,512	-	42,008,099	-	797,174,041	-	(422,641,710)	(201,208)	966,991,734
Total financial assets	\$ 1,150,835,747	\$ (19,963,845)	\$ (8,275,168)	\$ 59,834,003	\$ (33,707,385)	\$ 831,996,597	\$ 867,449	\$ (482,813,996)	\$ 1,478,245,649

⁽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 01/01/2018	Transfers ⁽¹⁾	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Balance as of 12/31/2018
Financial assets:									
Bonds:									
Industrial and miscellaneous	\$ 55,266,237	\$ 26,264,839	\$ -	\$ (4,286,686)	\$ 28,095	\$ 1,149,829	\$ -	\$ (9,467,821)	\$ 63,859,896
Parent, subsidiaries, and affiliates	60,662,659	4,823,319	4,095,453	(7,905,019)	9,443,000	-	-	(5,542,537)	65,576,875
Preferred Stock	1,510,480	-	(1,510,480)	(258,495)	-	546,253	-	-	287,758
Common stock - subsidiaries and affiliates	109,665,674	13,222,371	493,096	19,959,607	15,219,962	6,360,136	-	-	164,920,846
Common stock - unaffiliated	310,576,050	8	5,907,774	13,633,102	16,475,759	2,685,166	(133,809)	(43,606,190)	305,537,860
Derivatives:									
Currency swaps	1,255,252	-	(1,255,252)	-	-	-	-	-	-
Separate account assets	709,516,352	-	7,025,543	-	112,288,189	-	(277,950,548)	(227,024)	550,652,512
Total financial assets	\$ 1,248,452,704	\$ 44,310,537	\$ (2,765,732)	\$ 13,235,180	\$ 20,334,598	\$ 153,455,005	\$ 10,741,384	\$ (278,084,357)	\$ 1,150,835,747
Financial liabilities:									
Derivatives:									
Interest rate swaps	\$ 193,806	\$ -	\$ (193,806)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Currency swaps	8,432,028	-	(8,432,028)	-	-	-	-	-	-
Total financial liabilities	\$ 8,625,834	\$ -	\$ (8,625,834)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

⁽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.

NOTES TO FINANCIAL STATEMENTS

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

(4) *Valuation Techniques and Inputs*

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

	December 31, 2019						Net Asset Value (NAV)	Not Practicable (Carrying Value)
	Aggregate	Admitted						
	Fair Value	Assets	Level 1	Level 2	Level 3			
Financial assets:								
Bonds:								
U. S. government and agencies	\$ 4,944,813,863	\$ 4,361,446,504	\$ -	\$ 4,944,512,040	\$ 301,823	\$ -	\$ -	-
All other governments	1,761,768,394	1,588,793,740	-	1,692,560,006	69,208,388	-	-	-
States, territories and possessions	603,388,261	547,324,998	-	603,388,261	-	-	-	-
Political subdivisions	568,413,976	516,803,983	-	568,413,976	-	-	-	-
Special revenue	6,593,876,709	5,806,872,690	-	6,584,065,715	9,810,995	-	-	-
Industrial and miscellaneous	88,204,808,602	82,585,620,351	10,059,967	48,713,480,044	39,481,268,591	-	-	-
Parent, subsidiaries and affiliates	6,657,136,590	6,499,768,623	-	380,424,135	6,276,712,455	-	-	-
Preferred stocks	786,700,614	748,884,136	11,139,411	-	775,561,204	-	-	-
Common stocks - subsidiaries and affiliates ⁽¹⁾	281,866,483	281,866,483	162,056,328	-	119,810,155	-	-	-
Common stocks - unaffiliated	1,184,920,484	1,184,920,484	916,943,969	-	267,976,515	-	-	-
Mortgage loans - commercial	25,090,464,649	24,162,347,747	-	-	25,090,464,649	-	-	-
Mortgage loans - residential	3,304,250,994	3,310,547,119	-	-	3,304,250,994	-	-	-
Cash, cash equivalents and short-term investments	3,793,098,998	3,793,098,998	205,877,895	3,587,221,103	-	-	-	-
Derivatives:								
Interest rate swaps	11,983,096,154	10,571,406,154	-	11,983,096,154	-	-	-	-
Options	574,515,025	574,515,025	40,446,258	534,068,767	-	-	-	-
Currency swaps	879,667,787	879,667,787	-	879,667,787	-	-	-	-
Forward contracts	11,413,071	11,413,071	-	11,413,071	-	-	-	-
Credit default swaps	30,061,258	21,371,258	-	30,061,258	-	-	-	-
Financial futures	5,333,000	5,333,000	5,333,000	-	-	-	-	-
Separate account assets	70,230,699,186	70,230,699,186	48,151,046,994	21,112,660,457	966,991,735	-	-	-
Financial liabilities:								
Repurchase agreements	3,833,921,752	3,833,921,752	-	3,833,921,752	-	-	-	-
Commercial paper	249,869,729	249,869,729	-	249,869,729	-	-	-	-
Guaranteed interest contracts	9,909,448,856	9,815,338,001	-	-	9,909,448,856	-	-	-
Group annuity contracts and other deposits	18,600,168,805	17,962,775,303	-	-	18,600,168,805	-	-	-
Individual annuity contracts	10,317,102,621	8,337,781,385	-	-	10,317,102,621	-	-	-
Supplementary contracts	1,185,876,391	1,184,785,524	-	-	1,185,876,391	-	-	-
Derivatives:								
Interest rate swaps	9,970,742,015	9,122,852,015	-	9,970,742,015	-	-	-	-
Options	2,121,215	2,121,215	2,121,215	-	-	-	-	-
Currency swaps	212,243,023	212,243,023	-	212,243,023	-	-	-	-
Forward contracts	157,870,365	157,870,365	-	157,870,365	-	-	-	-
Credit default swaps	218,360	218,360	-	218,360	-	-	-	-
Financial futures	113,113,033	113,113,033	113,113,033	-	-	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had a statutory carrying value of \$14,953,800,748.

NOTES TO FINANCIAL STATEMENTS

December 31, 2018

	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Not Practicable (Carrying Value)
Financial assets:							
Bonds:							
U. S. government and agencies	\$ 6,193,428,890	\$ 5,854,233,662	\$ -	\$ 6,192,947,715	\$ 481,174	\$ -	\$ -
All other governments	1,480,982,279	1,486,656,995	-	1,414,689,011	66,293,268	-	-
States, territories and possessions	646,576,736	613,530,541	-	646,576,736	-	-	-
Political subdivisions	571,557,366	547,158,039	-	571,557,366	-	-	-
Special revenue	6,420,868,430	5,927,223,715	-	6,411,389,089	9,479,341	-	-
Industrial and miscellaneous	74,537,526,494	75,125,303,136	10,043,280	42,694,321,928	31,833,161,285	-	-
Parent, subsidiaries and affiliates	7,570,106,836	7,526,017,122	-	1,171,337,829	6,398,769,007	-	-
Preferred stocks	733,775,843	744,092,065	11,668,660	-	722,107,184	-	-
Common stock - subsidiaries and affiliates ⁽¹⁾	397,991,651	397,991,651	233,070,805	-	164,920,846	-	-
Common stock - unaffiliated	499,993,428	499,993,428	194,455,569	-	305,537,860	-	-
Mortgage loans - commercial	22,793,945,324	22,357,118,876	-	-	22,793,945,324	-	-
Mortgage loans - residential	1,210,675,405	1,266,688,652	-	-	1,210,675,405	-	-
Cash, cash equivalents and short-term investments	4,318,003,746	4,318,003,746	175,136,350	4,142,867,396	-	-	-
Derivatives:							
Interest rate swaps	6,858,304,938	6,629,062,841	-	6,858,304,938	-	-	-
Options	910,876,374	910,876,374	-	910,876,374	-	-	-
Currency swaps	843,350,847	843,350,847	-	843,350,847	-	-	-
Forward contracts	113,066,759	106,021,420	-	113,066,759	-	-	-
Credit default swaps	6,238,219	18,044,346	-	6,238,219	-	-	-
Financial futures	215,810,517	215,810,517	-	215,810,517	-	-	-
Separate account assets	64,478,100,585	64,478,100,585	41,358,963,394	22,568,484,678	550,652,512	-	-
Financial liabilities:							
Repurchase agreements	4,768,493,900	4,768,493,900	-	4,768,493,900	-	-	-
Commercial paper	249,786,188	249,786,188	-	249,786,188	-	-	-
Guaranteed investment contracts	8,728,933,859	8,824,880,908	-	-	8,728,933,859	-	-
Group annuity contracts and other deposits	17,950,757,186	17,863,326,686	-	-	17,950,757,186	-	-
Individual annuity contracts	8,925,311,575	8,130,925,013	-	-	8,925,311,575	-	-
Supplementary contracts	1,179,488,114	1,178,326,789	-	-	1,179,488,114	-	-
Derivatives:							
Interest rate swaps	5,111,389,729	4,646,939,586	-	5,111,389,729	-	-	-
Options	4,556,715	4,556,715	-	4,556,715	-	-	-
Currency swaps	231,601,523	231,601,523	-	231,601,523	-	-	-
Forward contracts	27,811,672	12,189,652	-	27,811,672	-	-	-
Credit default swaps	1,957,447	1,605,508	-	1,957,447	-	-	-
Financial futures	15,090,134	15,090,134	-	15,090,134	-	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had statutory carrying values of \$10,347,741,501.

d. As of December 31, 2019 and December 31, 2018, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

a. There were no unusual or infrequent items requiring disclosure.

b. There were no troubled debt restructurings that occurred during the period for which the financial statements are presented.

c. Other disclosures:

The Company had assets on deposit with government authorities or trustees, as required by law, in the amount of \$9,539,498 as of December 31, 2019 and \$8,784,415 as of December 31, 2018.

The Company holds corporate-owned life insurance (COLI) issued by unaffiliated third party insurers to cover the life of certain qualified senior employees. The primary purpose of the program is to offset future employee benefit expenses. The Company pays all premiums and is the beneficiary of these policies. The Company had recorded cash surrender values of these policies of \$2,289,698,680 as of December 31, 2019 and \$ 2,115,001,572 as of December 31, 2018.

NOTES TO FINANCIAL STATEMENTS

The cash surrender value is allocated by the following investment categories:

	December 31,	
	2019	2018
Bonds	32 %	38 %
Other Invested Assets	26	24
Cash and Short-Term Investments	21	19
Stocks	19	17
Real Estate	2	2
	100 %	100 %

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.

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.

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 investments and medium-term notes along with its indirect international operations. The Company mitigates 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 quality, 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.

Real estate markets are monitored continuously with attention on regional differences in price performance, absorption trends and supply and demand fundamentals that can impact the rate of foreclosures and delinquencies. Public sector strengths and weaknesses, job growth and macro-economic issues are factors that are closely monitored to identify any impact on the Company's real estate related investments.

The CMBS, RMBS and leveraged loan sectors are sensitive to evolving conditions that can impair the cash flows realized by investors and is subject to uncertainty. Management's judgment regarding OTTI and estimated fair value depends upon the evolving investment sector and economic conditions. It can also be affected by the market liquidity, a lack of which can make it difficult to obtain accurate market prices for RMBS and other investments, including CMBS and leveraged loans. Any deterioration in economic fundamentals, especially related to the housing sector could affect management's judgment regarding OTTI.

NOTES TO FINANCIAL STATEMENTS

The Company has investments in structured products exposed primarily to the credit risk of corporate bank loans, corporate bonds or credit default swap contracts referencing corporate credit risk. Most of these structured investments are backed by corporate loans and are commonly known as collateralized loan obligations that are classified as CDOs. The portfolios backing these investments are actively managed and diversified by industry and individual issuer concentrations. Due to the complex nature of CDOs and the reduced level of transparency to the underlying collateral pools for many market participants, the recovery in CDO valuations generally lags the overall recovery in the underlying assets. Management believes its scenario analysis approach, based primarily on actual collateral data and forward looking assumptions, does capture the credit and most other risks in each pool. However, in a rapidly changing economic environment, the credit and other risks in each collateral pool will be more volatile and actual credit performance of CDOs may differ from the Company's assumptions.

The Company continuously monitors its investments and assesses their liquidity and financial viability; however, the existence of the factors described above, as well as other market factors, could negatively impact the market value of the Company's investments. If the Company sells its investments prior to maturity or market recovery, these investments may yield a return that is less than the Company otherwise would have been able to realize.

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.

Market risk arises within the Company's employee benefit plans to the extent that the obligations of the plans are not fully matched by assets with determinable cash flows. Pension and postretirement obligations are subject to change due to fluctuations in the discount rates used to measure the liabilities as well as factors such as changes in inflation, salary increases and participants living longer. The risks are that such fluctuations could result in assets that are insufficient over time to cover the level of projected benefit obligations. In addition, increases in inflation and members living longer could increase the pension and postretirement obligations. Management determines the level of this risk using reports prepared by independent actuaries and takes action, where appropriate, in terms of setting investment strategy and determining contribution levels. In the event that the pension obligations arising under the Company's employee benefit plans exceed the assets set aside to meet the obligations, the Company may be required to make additional contributions or increase its level of contributions to these plans.

- d. The Company did not receive any business interruption recoveries in 2019.
- e. The Company did not have unused transferable or non-transferable state tax credits as of December 31, 2019.
- f. Subprime mortgage related risk exposure:
As of December 31, 2019 and 2018, the Company did not have any direct exposure through investments in subprime mortgage loans.

(1) Direct exposure through other investments

RMBS risk exposure:

Portfolios of ABS, including RMBS and CMBS, are evaluated on a periodic basis using scenarios customized by collateral type. The Company performs sensitivity analysis on defaults as loan-to-values change, and on defaults as prepayments change using default curves under various scenarios. The Company combines scenario analysis with a monthly surveillance process in which it compares actual delinquencies and defaults to expectations established at the time securities are acquired as well as expectations considering current market conditions, and performs a statistical review to determine potential losses relative to credit support of troubled loan exposures on a transaction-by-transaction basis.

Management used a combination of external vendor prices, broker quotations and internal models for purposes of deriving fair value. Internal inputs used in the determination of fair value included estimates of prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and results of 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 at the financial statement date.

The Company holds certain investments backed by pools of residential mortgages. The majority of these investments are included in bonds. The mortgages in these pools have varying risk characteristics and are commonly categorized as being of U.S. government agency, non-agency prime, Alt-A and subprime borrower quality. The Alt-A category includes option adjustable rate mortgages and the subprime category includes 'scratch and dent' or reperforming pools, high loan-to-value pools, and pools where the borrowers have very impaired credit but the average loan-to-value is low, typically 70% or below at origination. In identifying Alt-A and subprime exposure, management used a combination of qualitative and quantitative factors, including FICO scores and loan-to-value ratios.

NOTES TO FINANCIAL STATEMENTS

Residential mortgage loan pools are homogeneous residential mortgage loans substantially backed by FHA and VA guarantees. The Company purchases seasoned loan pools, most of which are FHA insured or VA guaranteed. The Company does not originate any residential mortgages but invests in residential mortgage loan pools which may contain mortgages of subprime credit quality. As of December 31, 2019 and 2018, the Company did not have any direct subprime exposure through purchases of unsecuritized whole-loan pools.

(2) Direct exposure through subprime mortgage loans

	December 31, 2019			Year Ended December 31, 2019
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 286,967,179	\$ 323,109,149	\$ 355,764,199	\$ 955,232
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	13,275,749	\$ 15,608,817	\$ 17,280,669	\$ 42,030
f. Other assets	-	-	-	-
g. Total	<u>\$ 300,242,928</u>	<u>\$ 338,717,966</u>	<u>\$ 373,044,868</u>	<u>\$ 997,262</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.

	December 31, 2018			Year Ended December 31, 2018
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 219,822,592	\$ 256,906,006	\$ 296,513,786	\$ 800,251
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	16,095,268	18,430,722	20,861,741	76,979
f. Other assets	-	-	-	-
g. Total	<u>\$ 235,917,860</u>	<u>\$ 275,336,728</u>	<u>\$ 317,375,527</u>	<u>\$ 877,230</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.

(3) The Company has no exposure to subprime mortgage risk through other investments.

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

g. Retained asset accounts:

- (1) The Company offers the use of retained asset accounts as one of the options available to beneficiaries. This option must be affirmatively elected and is not treated as a default. An unaffiliated third party provider services certain aspects of the retained asset accounts. Beneficiaries draw funds from retained asset accounts utilizing drafts. The Company funds those drafts through an unaffiliated bank. During the reporting year, the interest earned by beneficiaries ranged from 0.53% to 2.20%. There is no fee charged to the beneficiary to establish this account. There are no maintenance or service fees. A \$12 stop payment fee, a \$10 insufficient funds fee and a \$2 duplicate draft fee will apply. Assets and liabilities relating to retained asset accounts remain with the Company and are reported within the Company's financial statements as assets and supplemental contracts without life contingencies. The assets and liabilities reported relating to retained asset accounts also include amounts attributable to C.M. Life Retained Assets contracts issued prior to March 2011.

(2)

	Retained Asset Accounts In Force			
	December 31,			
	2019		2018	
	Number	Balance	Number	Balance
<u>Account aging categories:</u>				
a. Up to and including 12 months	160	\$ 31,902,988	128	\$ 20,386,882
b. 13 to 24 months	92	8,684,890	78	4,864,195
c. 25 to 36 months	66	3,650,525	48	2,587,404
d. 37 to 48 months	43	1,857,097	60	4,252,084
e. 49 to 60 months	52	3,756,073	67	3,890,086
f. Over 60 months	736	26,536,402	753	25,073,240
g. Total	<u>1,149</u>	<u>\$ 76,387,975</u>	<u>1,134</u>	<u>\$ 61,053,891</u>

NOTES TO FINANCIAL STATEMENTS

(3)	Individual		Group	
	Number	Balance	Number	Balance
a. Retained asset accounts as of January 1, 2019	1,134	\$ 61,053,891	-	-
b. Retained asset accounts issued	228	62,781,709	-	\$ -
c. Investment earnings credited to retained asset accounts	N/A	1,147,144	N/A	-
d. Fees and other charges assessed to retained asset accounts	N/A	(162)	N/A	-
e. Retained asset accounts transferred to state unclaimed property funds	(26)	(12,484)	-	-
f. Retained asset accounts closed/withdrawn	(187)	(48,582,122)	-	-
g. Retained asset accounts as of December 31, 2019	1,149	\$ 76,387,975	-	\$ -
h. Insurance-linked securities: The Company has not received any proceeds as the issuer, ceding insurer or counterparty of insurance-linked securities.				

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through February 24, 2020, 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 January 14, 2020, MassMutual issued a \$550,000,000 funding agreement with a 2.35% fixed rate and a 7-year maturity.

On January 15, 2020, MassMutual issued a \$540,000,000 funding agreement with a 3-month LIBOR rate and a 2-year maturity.

Note 23 – Reinsurance

- a. Ceded Reinsurance Report:
- Section 1 - General Interrogatories:
- (1) None of the reinsurers, listed in Schedule S as non-affiliated, are owned in excess of 10% or controlled, either directly or indirectly, by the company or by any representative, officer, trustee, or director of the company.
 - (2) The Company has not issued any policies that are reinsured with a company chartered in a country other than the United States (excluding U.S. Branches of such companies) that is owned in excess of 10% or controlled directly or indirectly by an insured, a beneficiary, a creditor or any other person not primarily engaged in the insurance business.
- Section 2 - Ceded Reinsurance Report - Part A:
- (1) There are no reinsurance agreements in effect under which the reinsurer may unilaterally cancel any reinsurance for reasons other than for nonpayment of premium or other similar credits.
 - (2) The Company has no reinsurance agreements in effect such that the amount of losses paid or accrued through the statement date may result in a payment to the reinsurer of amounts which, in aggregate and allowing for offset of mutual credits from other reinsurance agreements with the same reinsurer, exceed the total direct premium collected under the reinsured policies.
- Section 3 - Ceded Reinsurance Report - Part B:
- (1) If all reinsurance agreements were terminated by either party as of December 31, 2019, the resulting reduction in surplus due to loss of reinsurance reserve credits net of unearned premium would be \$5,538,364,073, assuming no return of the assets (excluding assets in trust) backing these reserves from the reinsurer to the Company.
 - (2) No new agreements have been executed or existing agreements amended, since January 1, 2019, to include policies or contracts that were in force or had existing reserves established by the Company as of the effective date of the agreement.
- b. The Company did not write off any reinsurance balances.
 - c. The Company did not commute any ceded reinsurance.
 - d. The Company did not reinsure any policies with a certified reinsurer whose rating was downgraded or status subject to revocation.
 - e. The Company does not have reinsurance of variable annuity contracts with an affiliated captive reinsurer.
 - f. The Company does not have reinsurance of variable annuity contracts with an affiliated captive reinsurer.

NOTES TO FINANCIAL STATEMENTS

- g. Ceding entities that utilize captive reinsurers to assume reserves subject to the XXX/AXXX captive framework.
- (1) Ceding reinsurers in which a risk-based capital shortfall exists per the risk-based capital XXX/AXXX captive reinsurance consolidated exhibit:
- a. Captives with risk-based capital shortfall

Cession ID	NAIC Company Code	ID Number	Name of Captive Insurer	Amount of risk-based capital shortfall
			None	\$ -
			None	\$ -
			None	\$ -
Total				<u>-</u>

- b. Effect of risk-based capital shortfall on total adjusted capital (TAC)

1. Total adjusted capital (TAC) (Five-Year Historical Line 30)	\$	-
2. Risk-based capital shortfall (Sum of g(1)a1 Column 5)	\$	-
3. Total adjusted capital (TAC) before risk-based capital shortfall (g(1)b1 + g(1)b2)	\$	-

- (2) Captive reinsurers for which a non-zero primary security shortfall is shown on the risk-based capital XXX/AXXX reinsurance primary security shortfall by cession exhibit:

Cession ID	NAIC Company Code	ID Number	Name of Captive Insurer	Amount of primary security shortfall
			None	\$ -
			None	\$ -
			None	\$ -
Total				<u>-</u>

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

The Company does not issue group health insurance and therefore did not issue retrospectively rated contracts or contracts subject to redetermination.

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2019 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

The Company did not have any intercompany pooling arrangements.

Note 27 – Structured Settlements

The Company did not enter into structured settlement agreements with other life insurers to resolve claims.

Note 28 – Health Care Receivables

The Company did not issue any business that would give rise to pharmaceutical rebates or risk sharing receivables.

Note 29 – Participating Policies

Participating policies issued by the Company represented 55% of the Company's policyholders' reserves and liabilities for deposit-type contracts as of December 31, 2019 and 56% as of December 31, 2018.

The allocation of these dividends to policyholders reflects the relative contribution of each group of participating policies to surplus and considers, among other factors, investment returns, mortality and morbidity experience, expenses and taxes. The Company reported dividends in the amount of \$1,671,109,490 for 2019 and did not allocate any additional income to such policyholders.

Note 30 – Premium Deficiency Reserves

The Company did not have any liability for premium deficiency on accident and health contracts or property/casualty contracts.

Note 31 – Reserves for Life Contracts and Annuity Contracts

- (1) The Company waives deduction of deferred fractional premium at death and returns any portion of the final premium beyond the date of death. Reserves are computed using continuous functions to reflect these practices. Surrender values were not promised in excess of the legally computed reserves.
- (2) The Company charges a higher premium on certain contracts that cover substandard mortality risk. For these policies, the reserve calculations are based on a substandard mortality rate, which is a multiple of the standard mortality tables.
- (3) The Company had \$46,228,098,527 of insurance in force as of December 31, 2019, for which the gross premium was less than the net premium according to the standard valuation set by the Division. Deficiency reserves to cover this insurance totaled \$425,274,459 as of December 31, 2019 and are reported in Exhibit 5.

NOTES TO FINANCIAL STATEMENTS

- (4) Tabular interest, tabular reserves less actual reserves released, and tabular cost for all life and annuity contracts and supplementary contracts involving life contingencies are determined in accordance with NAIC Annual Statement instructions. For tabular interest, whole life and term products use a formula that applies a weighted average interest rate determined from a serial valuation file to the mean average reserves. Universal life, variable life, group life, annuity and supplemental contracts use a formula that applies a weighted average credited rate to the mean account value. For contracts without an account value (e.g., a Single Premium Immediate Annuity), a weighted average statutory valuation rate is applied to the mean statutory reserve or accepted actuarial methods using applicable interest rates are applied.
- (5) Liabilities for funding agreements, dividend accumulations, premium deposit funds, investment-type contracts such as supplementary contracts not involving life contingencies and certain structured settlement annuities are based on account value or accepted actuarial methods using applicable interest rates. Refer to Note 20 a. "Fair Value Measurements" for information on the Company's policy for determining fair value.
- (6) The details for other changes:

ITEM	Total	Industrial Life	Ordinary			Credit Life Group and Individual	Group	
			Life Ins.	Individual Annuities	Supplementary Contracts		Life Ins.	Annuities
None	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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

The withdrawal characteristics of the Company's annuity actuarial reserves and deposit-type contracts as of December 31, 2019 are illustrated below:

A. INDIVIDUAL ANNUITIES:

	<u>General Account</u>	<u>Separate Account with Guarantees</u>	<u>Separate Account Nonquaranteed</u>	<u>Total</u>	<u>% of Total</u>
(1) Subject to discretionary withdrawal:					
a. With market value adjustment	\$ 29,260,104	\$ -	\$ -	\$ 29,260,104	-
b. At book value less current surrender charge of 5% or more	6,746,108,145	-	-	6,746,108,145	25
c. At fair value	-	-	11,132,068,904	11,132,068,904	41
d. Total with market value adjustment or at fair value (total of 1 through 3)	6,775,368,249	-	11,132,068,904	17,907,437,153	66
e. At book value without adjustment (minimal or no charge or adjustment)	3,868,572,840	-	-	3,868,572,840	14
(2) Not subject to discretionary withdrawal	5,587,014,674	-	-	5,587,014,674	20
(3) Total * (gross: direct + assumed)	16,230,955,763	-	11,132,068,904	27,363,024,667	100 %
(4) Reinsurance ceded	2,645,469,891	-	-	2,645,469,891	
(5) Total (net)* (3) - (4)	\$ 13,585,485,872	\$ -	\$ 11,132,068,904	\$ 24,717,554,776	
(6) Amount included A(1)b above that will move to A(1)e in the year after the statement date:	\$ 125,360,684	\$ -	\$ -	\$ 125,360,684	

* Reconciliation of total annuity actuarial reserves and deposit fund liabilities:

NOTES TO FINANCIAL STATEMENTS

B. GROUP ANNUITIES:

	<u>General Account</u>	<u>Separate Account with Guarantees</u>	<u>Separate Account Nonguaranteed</u>	<u>Total</u>	<u>% of Total</u>
(1) Subject to discretionary withdrawal:					
a. With market value adjustment	\$ 12,438,365,939	\$ -	\$ -	\$ 12,438,365,939	17 %
b. At book value less current surrender charge of 5% or more	569,029	-	-	569,029	-
c. At fair value	-	15,577,400,961	28,486,901,251	44,064,302,212	60
d. Total with market value adjustment or at fair value (total of 1 through 3)	12,438,934,968	15,577,400,961	28,486,901,251	56,503,237,180	77
e. At book value without adjustment (minimal or no charge or adjustment)	2,607,819,329	555,920,526	-	3,163,739,855	4
(2) Not subject to discretionary withdrawal	13,946,107,771	-	-	13,946,107,771	
(3) Total * (gross: direct + assumed)	28,992,862,068	16,133,321,487	28,486,901,251	73,613,084,806	19
(4) Reinsurance ceded	897,134,883	-	-	897,134,883	100 %
(5) Total (net)* (3) - (4)	\$ 28,095,727,185	16,133,321,487	28,486,901,251	72,715,949,923	
(6) Amount included B(1)b above that will move to B(1)e in the year after the statement date:	\$ -	\$ -	\$ -	\$ -	

C. DEPOSIT-TYPE CONTRACTS

(no life contingencies)

	<u>General Account</u>	<u>Separate Account with Guarantees</u>	<u>Separate Account Nonguaranteed</u>	<u>Total</u>	<u>% of Total</u>
(1) Subject to discretionary withdrawal:					
a. With market value adjustment	\$ 2,357,242,735	\$ -	\$ -	\$ 2,357,242,735	9 %
b. At book value less current surrender charge of 5% or more	-	-	-	-	-
c. At fair value	-	1,557,953,767	9,311,766,674	10,869,720,441	42
d. Total with market value adjustment or at fair value (total of 1 through 3)	2,357,242,735	1,557,953,767	9,311,766,674	13,226,963,176	51
e. At book value without adjustment (minimal or no charge or adjustment)	2,841,160,323	-	-	2,841,160,323	11
(2) Not subject to discretionary withdrawal	10,097,901,330	-	-	10,097,901,330	39
(3) Total * (gross: direct + assumed)	15,296,304,388	1,557,953,767	9,311,766,674	26,166,024,829	100 %
(4) Reinsurance ceded	-	-	-	-	
(5) Total (net)* (3) - (4)	\$ 15,296,304,388	\$ 1,557,953,767	\$ 9,311,766,674	\$ 26,166,024,829	
(6) Amount included C(1)b above that will move to C(1)e in the year after the statement date:	\$ -	\$ -	\$ -	\$ -	

D.

Life and Accident and Health Annual Statement:

	<u>Amount</u>
(1) Exhibit 5, Annuities Section, Total (net)	\$ 41,526,474,857
(2) Exhibit 5, Supplementary Contracts with Life Contingencies Section, Total (net)	154,390,395
(3) Exhibit 7, Deposit-Type Contracts, Line 14, Column 1	15,296,773,875
(4) Subtotal	<u>56,977,639,127</u>

Separate Accounts Annual Statement:

(5) Exhibit 3, Line 0299999, Column 2	55,752,169,960
(6) Exhibit 3, Line 0399999, Column 2	-
(7) Policyholders dividend and coupon accumulations	-
(8) Policyholder premiums	-
(9) Guaranteed interest contracts	-
(10) Other contract deposit funds	10,869,720,441
(11) Subtotal	<u>66,621,890,401</u>
(12) Combined Total	<u>\$ 123,599,529,528</u>

NOTES TO FINANCIAL STATEMENTS**Note 33 - Analysis of Life Actuarial Reserves by Withdrawal Characteristics**

The withdrawal characteristics of the Company's life actuarial reserves as of December 31, 2019 are illustrated below:

	General Account			Separate Account - Nonguaranteed		
	Account Value	Cash Value	Reserve	Account Value	Cash Value	Reserve
A. Subject to discretionary withdrawal, surrender values, or policy loans						
(1) Term Policies with Cash Value	-	-	-	-	-	-
(2) Universal Life	16,490,552,179	16,475,132,397	16,548,432,292	-	-	-
(3) Universal Life with Secondary Guarantees	2,064,973,099	1,738,273,571	5,880,913,674	-	-	-
(4) Indexed Universal Life	-	-	-	-	-	-
(5) Indexed Universal Life with Secondary Guarantees	-	-	-	-	-	-
(6) Indexed Life	-	-	-	-	-	-
(7) Other Permanent Cash Value Life Insurance	-	63,240,690,203	65,983,289,568	-	-	-
(8) Variable Life	692,037	692,037	432,497	1,447,026	1,447,026	2,300,167
(9) Variable Universal Life	400,467,437	391,728,095	436,621,054	2,875,069,406	2,854,212,608	2,871,473,251
(10) Miscellaneous Reserves	-	-	-	-	-	-
B. Not subject to discretionary withdrawal or no cash values						
(1) Term Policies without Cash Value	XXX	XXX	2,548,781,847	XXX	XXX	-
(2) Accidental Death Benefits	XXX	XXX	3,052,600	XXX	XXX	-
(3) Disability - Active Lives	XXX	XXX	141,139,535	XXX	XXX	-
(4) Disability - Disabled Lives	XXX	XXX	274,965,989	XXX	XXX	-
(5) Miscellaneous Reserves	XXX	XXX	1,744,114,095	XXX	XXX	-
C. Total (gross: direct + assumed)	18,956,684,752	81,846,516,303	93,003,396,840	2,876,516,432	2,855,659,634	2,873,773,418
D. Reinsurance Ceded	4,253,366,317	4,383,692,925	7,837,697,985	-	-	-
E. Total (net) (C) - (D)	14,703,318,435	77,462,823,378	85,724,045,166	2,876,516,432	2,855,659,634	2,873,773,418

	Amount
F. Life and Accident and Health Annual Statement:	
(1) Exhibit 5, Life Insurance Section, Total (net)	\$ 83,560,772,947
(2) Exhibit 5, Accidental Death Benefits Section, Total (net)	3,052,600
(3) Exhibit 5, Disability - Active Lives Section, Total (net)	141,139,535
(4) Exhibit 5, Disability - Disabled Lives Section, Total (net)	274,965,989
(5) Exhibit 5, Miscellaneous Reserves Section, Total (net)	1,744,114,095
(6) Subtotal	85,724,045,166
Separate Accounts Annual Statement:	
(7) Exhibit 3, Line 0199999, Column 2	2,873,773,418
(8) Exhibit 3, Line 0499999, Column 2	-
(9) Exhibit 3, Line 0599999, Column 2	-
(10) Subtotal (Lines (7) through (9))	2,873,773,418
(11) Combined Total ((6) and (10))	88,597,818,584

Note 34 - Premium and Annuity Considerations Deferred and Uncollected

a. Deferred and uncollected life insurance premiums and annuity considerations as of December 31, 2019, were as follows:

Type	Gross	Net of Loading
(1) Industrial	\$ -	\$ -
(2) Ordinary new business	151,758,141	43,715,252
(3) Ordinary renewal	866,488,074	956,238,324
(4) Credit life	-	-
(5) Group life	8,324,087	8,303,480
(6) Group annuity	-	-
(7) Totals	\$ 1,026,570,302	\$ 1,008,257,056

Note 35 - Separate Accounts

a. Separate account activity:

- (1) Separate accounts and sub-accounts are segregated funds administered and invested by the Company, the performance of which primarily benefits the policyholders/contract holders with an interest in the separate accounts. Group and individual variable annuity, variable life and other insurance policyholders/contract holders select from among the separate accounts and sub-accounts made available by the Company. The separate accounts and sub-accounts are offered as investment options under certain insurance contracts or policies. The returns produced by separate account assets increase or decrease separate account reserves. Separate account assets consist principally of marketable securities reported at fair value. Except for the Company's seed money, supplemental accounts and certain guaranteed separate accounts issued in Minnesota, separate account assets can only be used to satisfy separate account liabilities and are not available to satisfy the general obligations of the Company. Separate account administrative and investment advisory fees are included in miscellaneous income.

The separate account classification of all separate account products for the Company is supported by the following state statutes, by product identifier:

NOTES TO FINANCIAL STATEMENTS

State Statute Reference / Commissioner Approval / Guidance

Product/Transaction:	State Statute Reference / Commissioner Approval / Guidance
Corporate-Owned Life Insurance	Massachusetts General Laws Annotated Chapter 175, Section 132G
Group Variable Universal Life	Massachusetts General Laws Annotated Chapter 175, Section 132G
Individual Immediate Variable Annuity	Massachusetts General Laws Annotated Chapter 175, Section 132G
Individual Variable Annuity	Massachusetts General Laws Annotated Chapter 175, Section 132G
Individual Variable Universal Life	Massachusetts General Laws Annotated Chapter 175, Section 132G
Nonguaranteed Retirement Services Separate Accounts	Massachusetts General Laws Annotated Chapter 175, Section 132F
Separate Account Guaranteed Interest Contract	Massachusetts General Laws Annotated Chapter 175, Section 132F
Synthetic Guaranteed Interest Contract	Massachusetts General Laws Annotated Chapter 175, Section 132F
Stable Value Bank-Owned Life Insurance	Massachusetts General Laws Annotated Chapter 175, Section 132G
Supplemental Account	Massachusetts General Laws Annotated Chapter 175, Section 132F

- (2) In accordance with the products recorded within the separate accounts, some are considered legally insulated whereas others are not legally insulated from the general account. The legal insulation of the separate account products prevents assets other than seed money or amounts in a supplemental account from being generally available to satisfy claims resulting from the general account.

The Company's NAIC Separate Account Annual Statement included Separate Accounts with legally insulated products of \$70,137,027,701 as of December 31, 2019 and \$64,263,974,558 as of December 31, 2018. Assets backing products which are not legally insulated are available to satisfy general obligations of the Company. The assets backing legally insulated products from the general account as of December 31, 2019 are attributed to the following:

Product/Transaction:	Separate Account Assets	
	Legally	Not Legally
	Insulated	Insulated*
Nonguaranteed Retirement Services Separate Accounts	\$ 37,852,065,473	\$ -
Separate Account Guaranteed Interest Contract	18,070,083,919	91,842,907
Individual Variable Annuity	11,195,098,630	-
Stable Value Bank-Owned Life Insurance	1,601,307,591	-
Individual Variable Universal Life	1,175,265,480	-
Corporate-Owned Life Insurance	118,026,931	-
Group Variable Universal Life	67,040,862	-
Individual Immediate Variable Annuity	58,138,814	-
Supplemental Account	-	1,828,578
Total	\$ 70,137,027,700	\$ 93,671,485

* Exclusive of seed money and unsettled fees and expenses, there are 20 contracts totaling \$91,842,907 that are included as non-insulated. Total separate account assets of the Company are \$70,230,699,186 at December 31, 2019. These 20 non-insulated contracts represent 0.13% of the Company's separate account balance at December 31, 2019. Given the immateriality of the balances, we are disclosing the existence of these 20 non-insulated contracts, but are not preparing a separate green book blank.

- (3) In accordance with the products/transactions recorded within the separate accounts, some separate account liabilities are guaranteed by the general account. Reserves for guarantees covering death benefits or minimum rates of return are held in the general account. If the investment proceeds are insufficient to cover the rate of return guaranteed for the product or the guaranteed death benefit, the policyholder proceeds will be remitted by the general account.

To compensate the general account for the risk taken, the separate accounts have paid risk charges as follows for the past five years:

2019	\$ 104,346,980
2018	97,690,286
2017	91,538,349
2016	88,772,303
2015	89,035,421

For the year ended December 31, 2019, the general account of the Company had paid \$8,183,620 toward separate account guarantees. The total separate account guarantees paid by the general account for the preceding years ending December 31, 2018, 2017, 2016, and 2015 was \$6,161,058, \$7,568,186, \$4,619,165 and \$2,543,318, respectively.

NOTES TO FINANCIAL STATEMENTS

The following separate account products would be classified differently under GAAP than under statutory accounting principles:

Product Identifier:	Same as GAAP/Condition that Requires GAAP General Account Reporting
Separate Account Guaranteed Interest Contract	GAAP GIA classification/Investment Performance
Stable Value Bank-owned Life Insurance	GAAP GIA classification/Investment Performance
Supplemental Account	GAAP GIA classification/Investment Performance
Synthetic Guaranteed Interest Contract	GAAP GIA classification/Investment Performance

(4) The Company does not engage in securities lending transactions within the separate accounts.

b. General nature and characteristics of separate account business:

The Company has guaranteed separate accounts classified as the following: nonindexed, which have reserve interest rates at no greater than 4% and/or to fund a long-term interest guarantee in excess of a year that does not exceed 4%. The Company has nonguaranteed separate accounts that are variable accounts where the benefit is determined by the performance and/or market value of the investments held in the separate account with incidental risk, notional expense and minimum death benefit guarantees.

Information regarding the separate accounts of the Company as of and for the year ended December 31, 2019 is as follows:

	Indexed	Nonindexed Guarantee Less than/ Equal to 4%	Nonindexed Guarantee More than 4%	Nonguaranteed Separate Accounts	Total
(1) Premiums, considerations or deposits for the year ended December 31, 2019	\$ -	\$ -	\$ -	\$ 7,423,149,679	\$ 7,423,149,679
Reserves at December 31, 2019:					
(2) For accounts with assets at:					
a. Fair value	\$ -	\$ 17,691,275,254	\$ -	\$ 50,239,201,733	\$ 67,930,476,987
b. Nonpolicy liabilities	-	-	-	735,092,814	735,092,814
c. Amortized cost	-	1,565,534,364	-	-	1,565,534,364
d. Total Reserves*	\$ -	\$ 19,256,809,618	\$ -	\$ 50,974,294,547	\$ 70,231,104,165
(3) By withdrawal characteristics:					
a. Subject to discretionary withdrawal:	\$ -	\$ -	\$ -	\$ -	-
1. With market value adjustment	-	-	-	-	-
2. At book value without market value adjustment and with current surrender charge of 5% or more	-	-	-	-	-
3. At fair value	-	17,135,354,728	-	50,239,201,733	67,374,556,461
4. At book value, without market value adjustment and with current surrender charge of less than 5%	-	2,121,454,890	-	-	2,121,454,890
5. Nonpolicy liabilities	-	-	-	735,092,814	735,092,814
6. Subtotal	\$ -	\$ 19,256,809,618	\$ -	\$ 50,974,294,547	\$ 70,231,104,165
b. Not subject to discretionary withdrawal	-	-	-	-	-
c. Total	\$ -	\$ 19,256,809,618	\$ -	\$ 50,974,294,547	\$ 70,231,104,165
(4) Reserves for Assets Default Risk in Lieu of AVR	\$ -	\$ -	\$ -	\$ -	-

*Line 2(d) should equal Line 3(c)

NOTES TO FINANCIAL STATEMENTS

c. Reconciliation of net transfers (from) to separate accounts is as follows:

	<u>December 31, 2019</u>
(1) Transfers as reported in the Summary of Operations of the Separate Account Statement:	
(a) Transfers to separate accounts (Page 4, Line 1.4 and 2)	\$ 7,260,319,449
(b) Transfers from separate accounts (Page 4, Line 10)	<u>(12,313,211,789)</u>
(c) Net transfers to (from) separate accounts (a) - (b)	(5,052,892,340)
(2) Reconciling adjustments:	
(a) Net deposits on deposit-type liabilities	<u>(967,294,765)</u>
(3) Transfers as reported in the Summary of Operations of the Life, Accident & Health Annual Statement	
(1c) + (2) = (Page 4, Line 26)	<u>\$ (6,020,187,105)</u>

Note 36 – Loss/Claim Adjustment Expenses

The balance in the liability for unpaid accident and health claim adjustment expenses was \$25,055,343 as of December 31, 2019 and \$24,782,552 as of December 31, 2018. The Company incurred \$331,234,219 and paid \$352,117,250 of claim and claim adjustment expenses in the current year, of which \$339,309,573 of the paid amount was attributable to insured or covered events of prior years. The Company increased the provision for insured events of prior years by \$11,291,302. There is no salvage and subrogation associated with the Company's disability and long-term care businesses.

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES GENERAL

- 1.1 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, 1A and 2
- 1.2 If yes, did the reporting entity register and file with its domiciliary State Insurance Commissioner, Director or Superintendent, or with such regulatory official of the state of domicile of the principal insurer in the Holding Company System, a registration statement providing disclosure substantially similar to the standards adopted by the National Association of Insurance Commissioners (NAIC) in its Model Insurance Holding Company System Regulatory Act and model regulations pertaining thereto, or is the reporting entity subject to standards and disclosure requirements substantially similar to those required by such Act and regulations? Yes [X] No [] N/A []
- 1.3 State Regulating? Massachusetts
- 1.4 Is the reporting entity publicly traded or a member of a publicly traded group? Yes [] No [X]
- 1.5 If the response to 1.4 is yes, provide the CIK (Central Index Key) code issued by the SEC for the entity/group.
- 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 State as of what date the latest financial examination of the reporting entity was made or is being made. 12/31/2014
- 3.2 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. 12/31/2014
- 3.3 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). 06/30/2016
- 3.4 By what department or departments?
Commonwealth of Massachusetts Division of Insurance
- 3.5 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]
- 3.6 Have all of the recommendations within the latest financial examination report been complied with? Yes [X] No [] N/A []
- 4.1 During the period covered by this statement, did any agent, broker, sales representative, non-affiliated sales/service organization or any combination thereof under common control (other than salaried employees of the reporting entity), receive credit or commissions for or control a substantial part (more than 20 percent of any major line of business measured on direct premiums) of:
4.11 sales of new business? Yes [] No [X]
4.12 renewals? Yes [] No [X]
- 4.2 During the period covered by this statement, did any sales/service organization owned in whole or in part by the reporting entity or an affiliate, receive credit or commissions for or control a substantial part (more than 20 percent of any major line of business measured on direct premiums) of:
4.21 sales of new business? Yes [] No [X]
4.22 renewals? Yes [] No [X]
- 5.1 Has the reporting entity been a party to a merger or consolidation during the period covered by this statement? Yes [] No [X]
If yes, complete and file the merger history data file with the NAIC.
- 5.2 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

- 6.1 Has the 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]
- 6.2 If yes, give full information:
- 7.1 Does any foreign (non-United States) person or entity directly or indirectly control 10% or more of the reporting entity? Yes [] No [X]
- 7.2 If yes,
7.21 State the percentage of foreign control; %
7.22 State the nationality(s) of the foreign person(s) or entity(s) or if the entity is a mutual or reciprocal, the nationality of its manager or attorney-in-fact; and identify the type of entity(s) (e.g., individual, corporation or government, manager or attorney in fact).

1 Nationality	2 Type of Entity

GENERAL INTERROGATORIES

- 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
Baring International Investment Limited	London, UK				YES
Barings Global Advisers Limited	London, UK				YES
Barings Securities, LLC	Boston, MA				YES
MML Distributors, LLC	Enfield, CT				YES
MML Investment Advisers, LLC	Enfield, CT				YES
MML Investors Services, LLC	Springfield, MA				YES
MML Strategic Distributors, LLC	Springfield, MA				YES
MMLISI Financial Alliances, LLC	Springfield, MA				YES
The MassMutual Trust Company, FSB	Enfield, CT	YES			

9. What is the name and address of the independent certified public accountant or accounting firm retained to conduct the annual audit?
KPMG, LLP, One Financial Plaza, Hartford, CT 06103
- 10.1 Has the insurer been granted any exemptions to the prohibited non-audit services provided by the certified independent public accountant requirements as allowed in Section 7H of the Annual Financial Reporting Model Regulation (Model Audit Rule), or substantially similar state law or regulation? Yes [] No [X]
- 10.2 If the response to 10.1 is yes, provide information related to this exemption:
.....
- 10.3 Has the insurer been granted any exemptions related to the other requirements of the Annual Financial Reporting Model Regulation as allowed for in Section 18A of the Model Regulation, or substantially similar state law or regulation? Yes [] No [X]
- 10.4 If the response to 10.3 is yes, provide information related to this exemption:
.....
- 10.5 Has the reporting entity established an Audit Committee in compliance with the domiciliary state insurance laws? Yes [X] No [] N/A []
- 10.6 If the response to 10.5 is no or n/a, please explain
.....
11. What is the name, address and affiliation (officer/employee of the reporting entity or actuary/consultant associated with an actuarial consulting firm) of the individual providing the statement of actuarial opinion/certification?
Douglas W Taylor, FSA, MAAA, Vice President and Appointed Actuary, 1295 State Street, Springfield, MA 01111
- 12.1 Does the reporting entity own any securities of a real estate holding company or otherwise hold real estate indirectly? Yes [X] No []
- 12.11 Name of real estate holding company See 12.2
- 12.12 Number of parcels involved 188
- 12.13 Total book/adjusted carrying value \$ 6,627,208,943
- 12.2 If, yes provide explanation:
The Company held investments in debt and equity securities in 133 parcels, which own or hold real estate indirectly. The statement value at December 31, 2019 of debt and equity was \$5,442,725,335 and \$1,626,810, respectively. The Company also held 55 investments in LP and LLC entities that own real estate. These investments had a statement value of \$1,182,856,798 as of December 31, 2019.
- 13. FOR UNITED STATES BRANCHES OF ALIEN REPORTING ENTITIES ONLY:**
- 13.1 What changes have been made during the year in the United States manager or the United States trustees of the reporting entity?
.....
- 13.2 Does this statement contain all business transacted for the reporting entity through its United States Branch on risks wherever located? Yes [] No []
- 13.3 Have there been any changes made to any of the trust indentures during the year? Yes [] No []
- 13.4 If answer to (13.3) is yes, has the domiciliary or entry state approved the changes? Yes [] No [] N/A []
- 14.1 Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards? Yes [X] No []
- a. Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- b. Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity;
- c. Compliance with applicable governmental laws, rules and regulations;
- d. The prompt internal reporting of violations to an appropriate person or persons identified in the code; and
- e. Accountability for adherence to the code.
- 14.11 If the response to 14.1 is No, please explain:
.....
- 14.2 Has the code of ethics for senior managers been amended? Yes [X] No []
- 14.21 If the response to 14.2 is yes, provide information related to amendment(s).
The revision to the Code includes incorporating the new MassMutual logo and brand; clarity in how following the Code helps employees avoid unwanted business risk; heightens risk awareness and enhances ethical decision-making; and identifies multiple resources for raising concerns.
- 14.3 Have any provisions of the code of ethics been waived for any of the specified officers? Yes [] No [X]
- 14.31 If the response to 14.3 is yes, provide the nature of any waiver(s).
.....

GENERAL INTERROGATORIES

- 15.1 Is the reporting entity the beneficiary of a Letter of Credit that is unrelated to reinsurance where the issuing or confirming bank is not on the SVO Bank List? Yes [X] No []
- 15.2 If the response to 15.1 is yes, indicate the American Bankers Association (ABA) Routing Number and the name of the issuing or confirming bank of the Letter of Credit and describe the circumstances in which the Letter of Credit is triggered.

1 American Bankers Association (ABA) Routing Number	2 Issuing or Confirming Bank Name	3 Circumstances That Can Trigger the Letter of Credit	4 Amount
122240492	Boston Private Bank and Trust Company	Business obligation not fulfilled	128,214
011301798	Eastern Bank	Business obligation not fulfilled	23,839
021201383	Valley National Bank	Business obligation not fulfilled	70,000
600002006	Bank Hapoalim Israel	Business obligation not fulfilled	7,750,000

BOARD OF DIRECTORS

16. Is the purchase or sale of all investments of the reporting entity passed upon either by the board of directors or a subordinate committee thereof? Yes [X] No []
17. Does the reporting entity keep a complete permanent record of the proceedings of its board of directors and all subordinate committees thereof? Yes [X] No []
18. Has the reporting entity an established procedure for disclosure to its board of directors or trustees of any material interest or affiliation on the part of any of its officers, directors, trustees or responsible employees that is in conflict with the official duties of such person? Yes [X] No []

FINANCIAL

19. Has this statement been prepared using a basis of accounting other than Statutory Accounting Principles (e.g., Generally Accepted Accounting Principles)? Yes [] No [X]
- 20.1 Total amount loaned during the year (inclusive of Separate Accounts, exclusive of policy loans):
- 20.11 To directors or other officers \$
 - 20.12 To stockholders not officers \$
 - 20.13 Trustees, supreme or grand (Fraternal Only) \$
- 20.2 Total amount of loans outstanding at the end of year (inclusive of Separate Accounts, exclusive of policy loans):
- 20.21 To directors or other officers \$
 - 20.22 To stockholders not officers \$
 - 20.23 Trustees, supreme or grand (Fraternal Only) \$
- 21.1 Were any assets reported in this statement subject to a contractual obligation to transfer to another party without the liability for such obligation being reported in the statement? Yes [] No [X]
- 21.2 If yes, state the amount thereof at December 31 of the current year:
- 21.21 Rented from others \$
 - 21.22 Borrowed from others \$
 - 21.23 Leased from others \$
 - 21.24 Other \$
- 22.1 Does this statement include payments for assessments as described in the Annual Statement Instructions other than guaranty fund or guaranty association assessments? Yes [] No [X]
- 22.2 If answer is yes:
- 22.21 Amount paid as losses or risk adjustment \$
 - 22.22 Amount paid as expenses \$
 - 22.23 Other amounts paid \$
- 23.1 Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement? Yes [X] No []
- 23.2 If yes, indicate any amounts receivable from parent included in the Page 2 amount: \$

INVESTMENT

- 24.01 Were all the stocks, bonds and other securities owned December 31 of current year, over which the reporting entity has exclusive control, in the actual possession of the reporting entity on said date? (other than securities lending programs addressed in 24.03) Yes [X] No []
- 24.02 If no, give full and complete information relating thereto
- 24.03 For security lending programs, provide a description of the program including value for collateral and amount of loaned securities, and whether collateral is carried on or off-balance sheet. (an alternative is to reference Note 17 where this information is also provided)
N/A
- 24.04 Does the Company's security lending program meet the requirements for a conforming program as outlined in the Risk-Based Capital Instructions? Yes [] No [] N/A [X]
- 24.05 If answer to 24.04 is yes, report amount of collateral for conforming programs. \$
- 24.06 If answer to 24.04 is no, report amount of collateral for other programs. \$
- 24.07 Does your securities lending program require 102% (domestic securities) and 105% (foreign securities) from the counterparty at the outset of the contract? Yes [] No [] N/A [X]
- 24.08 Does the reporting entity non-admit when the collateral received from the counterparty falls below 100%? Yes [] No [] N/A [X]
- 24.09 Does the reporting entity or the reporting entity's securities lending agent utilize the Master Securities lending Agreement (MSLA) to conduct securities lending? Yes [] No [] N/A [X]

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GENERAL INTERROGATORIES

24.10 For the reporting entity's security lending program state the amount of the following as December 31 of the current year:

24.101 Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2	\$
24.102 Total book adjusted/carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2	\$
24.103 Total payable for securities lending reported on the liability page	\$

25.1 Were any of the stocks, bonds or other assets of the reporting entity owned at December 31 of the current year not exclusively under the control of the reporting entity, or has the reporting entity sold or transferred any assets subject to a put option contract that is currently in force? (Exclude securities subject to Interrogatory 21.1 and 24.03)..... Yes [X] No []

25.2 If yes, state the amount thereof at December 31 of the current year:

25.21 Subject to repurchase agreements	\$ 3,845,577,140
25.22 Subject to reverse repurchase agreements	\$
25.23 Subject to dollar repurchase agreements	\$
25.24 Subject to reverse dollar repurchase agreements	\$
25.25 Placed under option agreements	\$
25.26 Letter stock or securities restricted as to sale - excluding FHLB Capital Stock	\$ 758,718,250
25.27 FHLB Capital Stock	\$ 59,880,000
25.28 On deposit with states	\$ 9,539,498
25.29 On deposit with other regulatory bodies	\$
25.30 Pledged as collateral - excluding collateral pledged to an FHLB	\$ 3,350,291,660
25.31 Pledged as collateral to FHLB - including assets backing funding agreements	\$ 1,686,811,491
25.32 Other	\$

25.3 For category (25.26) provide the following:

1 Nature of Restriction	2 Description	3 Amount
Restricted by contractual agreements	Various	758,718,250

26.1 Does the reporting entity have any hedging transactions reported on Schedule DB?..... Yes [X] No []

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

LINES 26.3 through 26.5: FOR LIFE/FRATERNAL REPORTING ENTITIES ONLY:

26.3 Does the reporting entity utilize derivatives to hedge variable annuity guarantees subject to fluctuations as a result of interest rate sensitivity? .. Yes [X] No []

26.4 If the response to 26.3 is YES, does the reporting entity utilize:

26.41 Special accounting provision of SSAP No. 108	Yes [] No [X]
26.42 Permitted accounting practice	Yes [] No [X]
26.43 Other accounting guidance	Yes [X] No []

26.5 By responding YES to 26.41 regarding utilizing the special accounting provisions of SSAP No. 108, the reporting entity attests to the following:..... Yes [] No [X]

- The reporting entity has obtained explicit approval from the domiciliary state.
- Hedging strategy subject to the special accounting provisions is consistent with the requirements of VM-21.
- Actuarial certification has been obtained which indicates that the hedging strategy is incorporated within the establishment of VM-21 reserves and provides the impact of the hedging strategy within the Actuarial Guideline Conditional Tail Expectation Amount.
- Financial Officer Certification has been obtained which indicates that the hedging strategy meets the definition of a Clearly Defined Hedging Strategy within VM-21 and that the Clearly Defined Hedging Strategy is the hedging strategy being used by the company in its actual day-to-day risk mitigation efforts.

27.1 Were any preferred stocks or bonds owned as of December 31 of the current year mandatorily convertible into equity, or, at the option of the issuer, convertible into equity?..... Yes [X] No []

27.2 If yes, state the amount thereof at December 31 of the current year. \$ 189,941,855

28. 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 []

28.01 For agreements that comply with the requirements of the NAIC Financial Condition Examiners Handbook, complete the following:

1 Name of Custodian(s)	2 Custodian's Address
Citibank, N.A.	333 West 34th Street, New York, NY 10001
JP Morgan Chase Bank N.A.	1 Chase Manhattan Plaza, 19th Floor, New York, NY 10005
Northern Trust	50 South LaSalle Street, Chicago, IL 60603
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
GENERAL INTERROGATORIES

28.02 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)

28.03 Have there been any changes, including name changes, in the custodian(s) identified in 28.01 during the current year?..... Yes [] No [X]
 28.04 If yes, give full and complete information relating thereto:

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

28.05 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
Apollo Aviation Group Capital Markets LLC	U.....
Barings LLC	A.....
Franklin Advisers, Inc.	U.....
Tortoise Capital Advisors, L.L.C.	U.....
PIMCO- Pacific Investment Management Company LLC	U.....
Earnest Partners LLC	U.....
KA Fund Advisors LLC	U.....
IFM Investors Pty Ltd	U.....
Ashmore Investment Management Limited	U.....
Jefferies Finance LLC	A.....
20 Gates Management, LLC	U.....

28.0597 For those firms/individuals listed in the table for Question 28.05, 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]

28.0598 For firms/individuals unaffiliated with the reporting entity (i.e. designated with a "U") listed in the table for Question 28.05, does the total assets under management aggregate to more than 50% of the reporting entity's invested assets?..... Yes [] No [X]

28.06 For those firms or individuals listed in the table for 28.05 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
168456	Apollo Aviation Group Capital Markets LLC		SEC	NO.....
106006	Barings LLC	R6ZXX5P01NP6HXS1S07	SEC	DS.....
104517	Franklin Advisers, Inc.		SEC	NO.....
123711	Tortoise Capital Advisors, L.L.C.		SEC	NO.....
104559	PIMCO- Pacific Investment Management Company LLC		SEC	NO.....
107926	Earnest Partners LLC		SEC	NO.....
141037	KA Fund Advisors LLC		SEC	NO.....
162754	IFM Investors Pty Ltd		SEC	NO.....
185402	Ashmore Investment Management Limited	R6ZXX5P01NP6HXS1S07	SEC	NO.....
162264	Jefferies Finance LLC		SEC	DS.....
155480	20 Gates Management, LLC		SEC	NO.....

29.1 Does the reporting entity have any diversified mutual funds reported in Schedule D, Part 2 (diversified according to the Securities and Exchange Commission (SEC) in the Investment Company Act of 1940 [Section 5(b)(1)])? Yes [X] No []

29.2 If yes, complete the following schedule:

1 CUSIP #	2 Name of Mutual Fund	3 Book/Adjusted Carrying Value
G0819U-55-2	BARINGS UMBRELLA FUND PLC - BARINGS EMERGING MARKETS DEBT SHORT DURATION FUND	44,460,000
G0R5PL-85-1	Babson Capital Global Investment Funds PLC	51,495,509
G0756X-MM-5	Barings UK Ltd	45,784,400
G0756X-MM-5	Barings UK Ltd	7,650,782
G069E@-10-1	Babson Capital Global Investment Funds PLC	5,694,011
57630G-87-0	MassMutual RetireSMART 2060 Fund	9,670,169
57630G-86-2	MassMutual RetireSMART 2060 Fund	191,223
57630G-85-4	MassMutual RetireSMART 2060 Fund	191,023
57630G-84-7	MassMutual RetireSMART 2060 Fund	102,537
57630G-83-9	MassMutual RetireSMART 2060 Fund	190,762
57630G-82-1	MassMutual RetireSMART 2060 Fund	102,621
57630G-81-3	MassMutual RetireSMART 2060 Fund	102,188
57630G-59-9	MassMutual Select T Rowe Price Retirement 2005 Fund	104,067
57630E-81-8	MassMutual Select Diversified Value Fund	88,074
57630E-69-3	MassMutual Select Mid Cap Value Fund	183,997
57630E-58-6	MassMutual Select Small Company Value Fund	63,667
57630E-36-2	MassMutual RetireSMART 2035 Fund	89,100
57630E-29-7	MassMutual RetireSMART 2045 Fund	88,184
57630E-22-2	MassMutual RetireSMARTSM 2055 Fund	192,161
57630E-12-3	MassMutual RetireSMART In Retirement Fund	94,766
57630A-15-4	MassMutual RetireSMARTSM 2055 Fund	780,825
57629U-35-1	MassMutual Select Mid Cap Value Fund	105,247
57629U-34-4	MassMutual Select Mid Cap Value Fund	111,452
57629H-85-5	MassMutual Premier Main Street Fund	113,783
57629H-42-6	MassMutual Premier Strategic Emerging Markets Fund	99,792
55312G-71-3	MML Series Investment Fund II	30,169,888

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1 CUSIP #	2 Name of Mutual Fund	3 Book/Adjusted Carrying Value
55312G-66-3	MML Series Investment Fund II	31,459,385
55312G-65-5	MML Series Investment Fund II	156,702
55312G-64-8	MML Series Investment Fund II	27,146,394
55312G-63-0	MML Series Investment Fund II	135,149
	Invesco Global Focus Equity Fund	55,131,210
	Invesco Global Equity Fund/Luxembourg	114,414,673
	Invesco Emerging Markets Local Debt Fund	98,343,681
	Invesco Emerging Markets Innovators Equity Fund	9,825,685
	Invesco Developing Markets Equity Fund	288,817
	Invesco Developing Markets Equity Fund	106,813,420
46138J-62-7	Invesco ESG Revenue ETF	17,553,800
46138J-59-3	Invesco Russell 2000 Dynamic Multifactor ETF	11,636,600
46138G-83-9	Invesco Emerging Markets Revenue ETF	10,190,200
46138G-82-1	Invesco Emerging Markets Ultra Dividend Revenue ETF	1,561,027
46138G-81-3	Invesco Global ESG Revenue ETF	18,828,000
46138G-79-7	Invesco Global Revenue ETF	9,793,243
46138G-78-9	Invesco International Revenue ETF	7,854,665
46138G-77-1	Invesco International Ultra Dividend Revenue ETF	1,219,810
46138G-76-3	Invesco Russell 1000 R Low Volatility Factor ETF	5,934,803
46138G-75-5	Invesco Russell 1000 Momentum Factor ETF	5,761,982
46138G-74-8	Invesco Russell 1000 Quality Factor ETF	5,555,942
46138G-73-0	Invesco Russell 1000 Size Factor ETF	5,654,989
46138G-72-2	Invesco Russell 1000 Value Factor ETF	5,674,483
46138G-71-4	Invesco Russell 1000 Yield Factor ETF	4,466,015
29.2999 - Total		753,320,902

29.3 For each mutual fund listed in the table above, complete the following schedule:

1 Name of Mutual Fund (from above table)	2 Name of Significant Holding of the Mutual Fund	3 Amount of Mutual Fund's Book/Adjusted Carrying Value Attributable to the Holding	4 Date of Valuation
BARINGS UMBRELLA FUND PLC - BARINGS EMERGING MARKETS DEBT SHORT DURATION FUND	Kaisa Group Holdings Ltd.	4,422,583	12/31/2019
Babson Capital Global Investment Funds PLC	JBS	5,404,281	12/31/2019
Barings UK Ltd	Kaisa Group Holdings Ltd.	2,149,393	12/31/2019
Barings UK Ltd	Kaisa Group Holdings Ltd.	2,149,393	12/31/2019
Babson Capital Global Investment Funds PLC	Maxeda DIY	5,683,005	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,231,003	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual RetireSMART 2060 Fund	MM Select Equity Asset Fund Class I	3,180,579	12/31/2019
MassMutual Select T Rowe Price Retirement 2005 Fund	Class I	7,619,394	12/31/2019
MassMutual Select Diversified Value Fund	JPMorgan Chase & Co	17,173,801	12/31/2019
MassMutual Select Mid Cap Value Fund	iShares Russell Mid-Cap Value ETF	3,284,160	12/31/2019
MassMutual Select Small Company Value Fund	BankUnited Inc	3,671,648	12/31/2019
MassMutual RetireSMART 2035 Fund	MM Select Equity Asset Fund Class I	40,722,033	12/31/2019
MassMutual RetireSMART 2045 Fund	MM Select Equity Asset Fund Class I	30,378,955	12/31/2019
MassMutual RetireSMARTSM 2055 Fund	MM Select Equity Asset Fund Class I	13,245,248	12/31/2019
MassMutual RetireSMART In Retirement Fund	MassMutual Premier Core Bond Fund Class I	43,280,842	12/31/2019
MassMutual RetireSMARTSM 2055 Fund	MM Select Equity Asset Fund Class I	13,245,248	12/31/2019
MassMutual Select Mid Cap Value Fund	iShares Russell Mid-Cap Value ETF	3,284,160	12/31/2019
MassMutual Select Mid Cap Value Fund	iShares Russell Mid-Cap Value ETF	3,284,160	12/31/2019
MassMutual Premier Main Street Fund	Microsoft Corp	9,744,283	12/31/2019
MassMutual Premier Strategic Emerging Markets Fund	Wells Fargo & Co	18,830,000	12/31/2019
MML Series Investment Fund II	Vanguard Short-Term Bond ETF	6,610,020	12/31/2019
MML Series Investment Fund II	Apple, Inc.	2,208,248	12/31/2019
MML Series Investment Fund II	Apple, Inc.	2,208,248	12/31/2019
MML Series Investment Fund II	Keysight Technologies, Inc.	2,663,146	12/31/2019
MML Series Investment Fund II	Keysight Technologies, Inc.	2,663,146	12/31/2019
Invesco Global Focus Equity Fund	Facebook Inc Class A	3,324,948	12/31/2019
Invesco Global Equity Fund/Luxembourg	Alphabet Inc Class A	7,357,230	12/31/2019
Invesco Emerging Markets Local Debt Fund	Indonesia Treasury Bond	7,197,463	12/31/2019
Invesco Emerging Markets Innovators Equity Fund	Globant SA	868,654	12/31/2019
Invesco Developing Markets Equity Fund	Alibaba Group Holding Ltd - Depository Receipt	8,600,774	12/31/2019
Invesco Developing Markets Equity Fund	Alibaba Group Holding Ltd - Depository Receipt	8,600,774	12/31/2019
Invesco ESG Revenue ETF	Apple Inc	1,119,857	12/31/2019
Invesco Russell 2000 Dynamic Multifactor ETF	Stamps.com Inc	480,030	12/31/2019
Invesco Emerging Markets Revenue ETF	Invesco India Exchange - Traded Fund Trust	563,013	12/31/2019
Invesco Emerging Markets Ultra Dividend Revenue ETF	China Petroleum & Chemical Corp H Share	179,999	12/31/2019
Invesco Global ESG Revenue ETF	Walmart Inc	506,510	12/31/2019
Invesco Global Revenue ETF	Invesco India Exchange - Traded Fund Trust	291,489	12/31/2019
Invesco International Revenue ETF	TOYOTA motor Corp	253,761	12/31/2019
Invesco International Ultra Dividend Revenue ETF	Total SA	110,634	12/31/2019
Invesco Russell 1000 R Low Volatility Factor ETF	Apple Inc	537,849	12/31/2019
Invesco Russell 1000 Momentum Factor ETF	Apple Inc	664,925	12/31/2019
Invesco Russell 1000 Quality Factor ETF	Apple Inc	571,842	12/31/2019
Invesco Russell 1000 Size Factor ETF	DexCom Inc	28,663	12/31/2019
Invesco Russell 1000 Value Factor ETF	Apple Inc	657,936	12/31/2019
Invesco Russell 1000 Yield Factor ETF	JPMorgan Chase & Co	245,738	12/31/2019

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
GENERAL INTERROGATORIES

30. Provide the following information for all short-term and long-term bonds and all preferred stocks. Do not substitute amortized value or statement value for fair value.

	1 Statement (Admitted) Value	2 Fair Value	3 Excess of Statement over Fair Value (-), or Fair Value over Statement (+)
30.1 Bonds	105,494,362,187	112,921,937,693	7,427,575,506
30.2 Preferred stocks	748,884,136	786,700,614	37,816,478
30.3 Totals	106,243,246,323	113,708,638,307	7,465,391,984

30.4 Describe the sources or methods utilized in determining the fair values:

The Fair Value of securities is obtained using quoted market prices when available. If not available, estimated fair value is based on values provided by other third-party organizations. If values provided by other third-party organizations are unavailable, fair value is estimated using internal models by discounting 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 results of cash flow priority are also considered.

31.1 Was the rate used to calculate fair value determined by a broker or custodian for any of the securities in Schedule D? Yes [X] No []

31.2 If the answer to 31.1 is yes, does the reporting entity have a copy of the broker's or custodian's pricing policy (hard copy or electronic copy) for all brokers or custodians used as a pricing source? Yes [X] No []

31.3 If the answer to 31.2 is no, describe the reporting entity's process for determining a reliable pricing source for purposes of disclosure of fair value for Schedule D:

32.1 Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Investment Analysis Office been followed? Yes [] No [X]

32.2 If no, list exceptions:
 At 12/31/2019, 13 issues for 10 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 \$130,839,561 or 0.11% of all assets.

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

34. 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]

35. 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]

OTHER

36.1 Amount of payments to trade associations, service organizations and statistical or rating bureaus, if any? \$5,275,945

36.2 List the name of the organization and the amount paid if any such payment represented 25% or more of the total payments to trade associations, service organizations and statistical or rating bureaus during the period covered by this statement.

1 Name	2 Amount Paid
American Council of Life Insurers (ACLI)	1,588,954
US Chamber of Commerce	1,480,095

GENERAL INTERROGATORIES

37.1 Amount of payments for legal expenses, if any?\$5,572,575

37.2 List the name of the firm and the amount paid if any such payment represented 25% or more of the total payments for legal expenses during the period covered by this statement.

1 Name	2 Amount Paid
.....

38.1 Amount of payments for expenditures in connection with matters before legislative bodies, officers or departments of government, if any?\$2,287,339

38.2 List the name of the firm and the amount paid if any such payment represented 25% or more of the total payment expenditures in connection with matters before legislative bodies, officers or departments of government during the period covered by this statement.

1 Name	2 Amount Paid
.....

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #1

(1) Dates of Transactions:	start date:	10/29/2019
	maturity date:	1/29/2020
(2) Description of securities/collateral involved:		
	carry value:	\$25,394,059
	accrued interest:	87,687
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$25,306,373
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$25,378,244
(7) Form of collateral:	US Treasury #912828PX2	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #2

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/3/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$86,780,765
	accrued interest:	280,765
	maturity interest rates:	2.05%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$86,500,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$85,784,375
(7) Form of collateral:	US Treasury #912803BJ1	
(8) Collateral held by:	JP Morgan Chase	
(9) Names and addresses of all other persons involved in transaction:	JP Morgan Chase 50 Rowes Wharf, 4th Floor Boston, MA 02110	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #3

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/3/2020
(2) Description of securities/collateral involved:		
	carry value:	\$259,213,642
	accrued interest:	838,642
	maturity interest rates:	2.05%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$258,375,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$257,353,125
(7) Form of collateral:	US Treasury #912803BJ1	
(8) Collateral held by:	JP Morgan Chase	
(9) Names and addresses of all other persons involved in transaction:	JP Morgan Chase 50 Rowes Wharf, 4th Floor Boston, MA 02110	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #4

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	2/4/2020
(2) Description of securities/collateral involved:		
	carry value:	\$89,946,414
	accrued interest:	252,787
	maturity interest rates:	1.78%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$89,693,627
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$86,372,137
(7) Form of collateral:	US Treasury #912810QQ4	
(8) Collateral held by:	HSBC Securities, Inc.	
(9) Names and addresses of all other persons involved in transaction:	HSBC Securities, Inc. 452 5th Avenue New York, NY 10018	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #5

(1) Dates of Transactions:	start date:	11/8/2019
	maturity date:	2/7/2020
(2) Description of securities/collateral involved:		
	carry value:	\$233,046,730
	accrued interest:	633,005
	maturity interest rates:	1.85%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$232,413,725
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$233,073,792
(7) Form of collateral:	US Treasury # 912828PX2	
(8) Collateral held by:	HSBC Securities, Inc.	
(9) Names and addresses of all other persons involved in transaction:	HSBC Securities, Inc. 452 5th Avenue New York, NY 10018	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #6

(1) Dates of Transactions:	start date:	11/13/2019
	maturity date:	1/10/2020
(2) Description of securities/collateral involved:		
	carry value:	\$32,457,880
	accrued interest:	82,880
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$32,375,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$32,563,563
(7) Form of collateral:	US Treasury #912833LL2	
(8) Collateral held by:	Daiwa Securities America Inc.	
(9) Names and addresses of all other persons involved in transaction:	Daiwa Securities America Inc. Financial Square 32 Old Slip, 14th Floor New York, NY 10005-3538	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #7

(1) Dates of Transactions:	start date:	11/13/2019
	maturity date:	2/14/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$151,316,381
	accrued interest:	386,381
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$150,930,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$152,381,963
(7) Form of collateral:	US Treasury #912828MP2	
(8) Collateral held by:	Bank of Montreal	
(9) Names and addresses of all other persons involved in transaction:	Bank of Montreal 115 South LaSalle Street Chicago, IL 60603	

Repurchase Agreements

****Schedule for Q4 2019 General Interrogatory**

Transaction #8

(1) Dates of Transactions:	start date:	11/8/2019
	maturity date:	2/7/2020
(2) Description of securities/collateral involved:		
	carry value:	\$44,051,516
	accrued interest:	119,653
	maturity interest rates:	1.85%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$43,931,863
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$44,056,631
(7) Form of collateral:	US Treasury #912828PX2	
(8) Collateral held by:	HSBC Securities, Inc.	
(9) Names and addresses of all other persons involved in transaction:	HSBC Securities, Inc. 452 5th Avenue New York, NY 10018	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #9

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/3/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$56,300,902
	accrued interest:	182,152
	maturity interest rates:	2.05%
	weighted average interest rates:	N/A
 (3) Number of shares or amount of bond or other security:		
		\$56,118,750
 (4) Market value on date securities were delivered:		
		N/A Rolling Transaction
 (5) Market value on date securities were returned/Payback amount (Due at maturity)		
		N/A not returned yet
 (6) Collateral value held/Underlying asset value		
		\$56,367,634
 (7) Form of collateral:		
		US Treasury #912803AY9
 (8) Collateral held by:		
		JP Morgan Chase
 (9) Names and addresses of all other persons involved in transaction:		
		JP Morgan Chase 50 Rowes Wharf, 4th Floor Boston, MA 02110

Repurchase Agreements

****Schedule for Q4 2019 General Interrogatory**

Transaction #10

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/30/2020
(2) Description of securities/collateral involved:		
	carry value:	\$201,949,566
	accrued interest:	612,066
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$201,337,500
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$201,935,615
(7) Form of collateral:	US Treasury #912828PX2	
(8) Collateral held by:	MUFG Securities Americas, Inc.	
(9) Names and addresses of all other persons involved in transaction:	MUFG Securities Americas, Inc. 1221 6th Ave New York, NY 10020	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #11

(1) Dates of Transactions:	start date:	10/28/2019
	maturity date:	1/28/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$175,126,649
	accrued interest:	626,649
	maturity interest rates:	2.02%
	weighted average interest rates:	N/A
 (3) Number of shares or amount of bond or other security:		
		\$174,500,000
 (4) Market value on date securities were delivered:		
		N/A Rolling Transaction
 (5) Market value on date securities were returned/Payback amount (Due at maturity)		
		N/A not returned yet
 (6) Collateral value held/Underlying asset value		
		\$173,281,240
 (7) Form of collateral:		
		US Treasury #912803BM4
 (8) Collateral held by:		
		Mizuho Securities USA LLC
 (9) Names and addresses of all other persons involved in transaction:		
		Mizuho Securities USA LLC 125 High Street, 21st Floor Boston, MA 02110

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #12

(1) Dates of Transactions:	start date:	11/6/2019
	maturity date:	2/6/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$50,758,889
	accrued interest:	146,144
	maturity interest rates:	1.89%
	weighted average interest rates:	N/A
 (3) Number of shares or amount of bond or other security:		
		\$50,612,745
 (4) Market value on date securities were delivered:		
		N/A Rolling Transaction
 (5) Market value on date securities were returned/Payback amount (Due at maturity)		
		N/A not returned yet
 (6) Collateral value held/Underlying asset value		
		\$50,756,488
 (7) Form of collateral:		
		US Treasury #912828PX2
 (8) Collateral held by:		
		Credit Agricole Corporate and Investment Bank
 (9) Names and addresses of all other persons involved in transaction:		
		Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #13

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	2/4/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$107,532,603
	accrued interest:	302,211
	maturity interest rates:	1.78%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$107,230,392
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$106,134,760
(7) Form of collateral:	US Treasury #912803BM4	
(8) Collateral held by:	HSBC Securities, Inc.	
(9) Names and addresses of all other persons involved in transaction:	HSBC Securities, Inc. 452 5th Avenue New York, NY 10018	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #14

(1) Dates of Transactions:	start date:	11/13/2019
	maturity date:	1/10/2020
(2) Description of securities/collateral involved:		
	carry value:	\$64,564,864
	accrued interest:	164,864
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$64,400,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$64,832,358
(7) Form of collateral:	US Treasury #912833LN8	
(8) Collateral held by:	Daiwa Securities America Inc.	
(9) Names and addresses of all other persons involved in transaction:	Daiwa Securities America Inc. Financial Square 32 Old Slip, 14th Floor New York, NY 10005-3538	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #15

(1) Dates of Transactions:	start date:	11/5/2019
	maturity date:	2/5/2020
(2) Description of securities/collateral involved:		
	carry value:	\$198,113,368
	accrued interest:	574,618
	maturity interest rates:	1.87%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$197,538,750
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$198,051,815
(7) Form of collateral:	US Treasury #912828PX2	
(8) Collateral held by:	Morgan Stanley & Co. Inc.	
(9) Names and addresses of all other persons involved in transaction:	Morgan Stanley & Co. Inc. 1 International Place Suite 1300 Boston, MA 02110	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #16

(1) Dates of Transactions:	start date:	10/29/2019
	maturity date:	1/29/2020
(2) Description of securities/collateral involved:		
	carry value:	\$193,253,094
	accrued interest:	667,310
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$192,585,784
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$189,165,664
(7) Form of collateral:	US Treasury #912810RU4	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #17

(1) Dates of Transactions:	start date:	11/12/2019
	maturity date:	2/10/2020
(2) Description of securities/collateral involved:		
	carry value:	\$92,388,937
	accrued interest:	238,312
	maturity interest rates:	1.90%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$92,150,625
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$92,424,378
(7) Form of collateral:	US Treasury # 912828PX2	
(8) Collateral held by:	RBC Capital Markets	
(9) Names and addresses of all other persons involved in transaction:	RBC Capital Markets 3 World Financial Ctr 200 Vesey Street New York, NY 10281	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #18

(1) Dates of Transactions:	start date:	11/13/2019
	maturity date:	2/14/2020
(2) Description of securities/collateral involved:		
	carry value:	\$473,596,812
	accrued interest:	1,209,312
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$472,387,500
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$478,809,018
(7) Form of collateral:	US Treasury # 912810QK7	
(8) Collateral held by:	Bank of Montreal	
(9) Names and addresses of all other persons involved in transaction:	Bank of Montreal 115 South LaSalle Street Chicago, IL 60603	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #19

(1) Dates of Transactions:	start date:	10/29/2019
	maturity date:	1/29/2020
(2) Description of securities/collateral involved:		
	carry value:	\$22,553,368
	accrued interest:	77,878
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$22,475,490
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$22,050,911
(7) Form of collateral:	US Treasury # 912810RP5	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

****Schedule for Q4 2019 General Interrogatory**

Transaction #20

(1) Dates of Transactions:	start date:	10/29/2019
	maturity date:	1/29/2020
(2) Description of securities/collateral involved:		
	carry value:	\$23,629,387
	accrued interest:	81,593
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$23,547,794
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$23,419,402
(7) Form of collateral:	US Treasury # 912810RV2	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #21

(1) Dates of Transactions:	start date:	11/21/2019
	maturity date:	1/21/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$169,572,240
	accrued interest:	372,240
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
 (3) Number of shares or amount of bond or other security:		
		\$169,200,000
 (4) Market value on date securities were delivered:		
		N/A Rolling Transaction
 (5) Market value on date securities were returned/Payback amount (Due at maturity)		
		N/A not returned yet
 (6) Collateral value held/Underlying asset value		
		\$165,439,654
 (7) Form of collateral:		
		US Treasury #912810RU4
 (8) Collateral held by:		
		Canadian Imperial Bank of Commerce
 (9) Names and addresses of all other persons involved in transaction:		
		Canadian Imperial Bank of Commerce 161 Bay Street, Brookfield Place, 10th Floor Toronto, Ontario Canada M5J 2S8

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #22

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/3/2020
(2) Description of securities/collateral involved:		
	carry value:	\$260,342,294
	accrued interest:	842,294
	maturity interest rates:	2.05%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$259,500,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$258,398,921
(7) Form of collateral:	US Treasury # 912803BH5	
(8) Collateral held by:	JP Morgan Chase	
(9) Names and addresses of all other persons involved in transaction:	JP Morgan Chase 50 Rowes Wharf, 4th Floor Boston, MA 02110	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #23

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	2/3/2020
(2) Description of securities/collateral involved:		
	carry value:	\$223,653,204
	accrued interest:	653,204
	maturity interest rates:	1.85%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$223,000,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$221,093,750
(7) Form of collateral:	US Treasury # 912803BJ1	
(8) Collateral held by:	Canadian Imperial Bank of Commerce	
(9) Names and addresses of all other persons involved in transaction:	Canadian Imperial Bank of Commerce 161 Bay Street, Brookfield Place, 10th Floor Toronto, Ontario Canada M5J 2S8	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #24

(1) Dates of Transactions:	start date:	10/29/2019
	maturity date:	1/29/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$20,456,667
	accrued interest:	70,638
	maturity interest rates:	1.98%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$20,386,029
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$19,932,032
(7) Form of collateral:	US Treasury # 912810QQ4	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

****Schedule for Q4 2019 General Interrogatory**

Transaction #25

(1) Dates of Transactions:	start date:	11/6/2019
	maturity date:	2/6/2020
(2) Description of securities/collateral involved:		
	carry value:	\$112,333,232
	accrued interest:	323,428
	maturity interest rates:	1.89%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$112,009,804
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$111,520,960
(7) Form of collateral:	US Treasury # 912810RV2	
(8) Collateral held by:	Credit Agricole Corporate and Investment Bank	
(9) Names and addresses of all other persons involved in transaction:	Credit Agricole CIB 194 Wood Avenue South, 7th Floor Iselin, NJ 08830	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #26

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	1/30/2020
(2) Description of securities/collateral involved:		
	carry value:	\$194,464,380
	accrued interest:	589,380
	maturity interest rates:	1.92%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$193,875,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$187,726,724
(7) Form of collateral:	US Treasury # 912810RV2	
(8) Collateral held by:	MUFG Securities Americas, Inc.	
(9) Names and addresses of all other persons involved in transaction:	MUFG Securities Americas, Inc. 1221 6th Ave New York, NY 10020	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #27

(1) Dates of Transactions:	start date:	10/4/2019
	maturity date:	1/3/2020
 (2) Description of securities/collateral involved:		
	carry value:	\$200,147,963
	accrued interest:	997,963
	maturity interest rates:	2.05%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$199,150,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$186,032,296
(7) Form of collateral:	US Treasury # 912810QQ4	
(8) Collateral held by:	Daiwa Securities America Inc.	
(9) Names and addresses of all other persons involved in transaction:	Daiwa Securities America Inc. 32 Old Slip, 14th Floor New York, NY 10005-3538	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

Repurchase Agreements

**Schedule for Q4 2019 General Interrogatory

Transaction #28

(1) Dates of Transactions:	start date:	11/4/2019
	maturity date:	2/3/2020
(2) Description of securities/collateral involved:		
	carry value:	\$82,631,334
	accrued interest:	241,334
	maturity interest rates:	1.85%
	weighted average interest rates:	N/A
(3) Number of shares or amount of bond or other security:		\$82,390,000
(4) Market value on date securities were delivered:	N/A Rolling Transaction	
(5) Market value on date securities were returned/Payback amount (Due at maturity)	N/A not returned yet	
(6) Collateral value held/Underlying asset value		\$79,641,641
(7) Form of collateral:	US Treasury # 912810RV2	
(8) Collateral held by:	Canadian Imperial Bank of Commerce	
(9) Names and addresses of all other persons involved in transaction:	Canadian Imperial Bank of Commerce 161 Bay Street, Brookfield Place, 10th Floor Toronto, Ontario Canada M5J 2S8	

GENERAL INTERROGATORIES

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

Life, Accident and Health Companies/Fraternal Benefit Societies:

- 1.1 Does the reporting entity have any direct Medicare Supplement Insurance in force? Yes No
- 1.2 If yes, indicate premium earned on U.S. business only\$1,145,296
- 1.3 What portion of Item (1.2) is not reported on the Medicare Supplement Insurance Experience Exhibit?\$
 1.31 Reason for excluding:

- 1.4 Indicate amount of earned premium attributable to Canadian and/or Other Alien not included in Item (1.2) above.\$
- 1.5 Indicate total incurred claims on all Medicare Supplement insurance.\$1,231,395

- 1.6 Individual policies:

Most current three years:	
1.61 Total premium earned	\$1,145,110
1.62 Total incurred claims	\$1,216,371
1.63 Number of covered lives	.....682

- All years prior to most current three years
- 1.64 Total premium earned\$
- 1.65 Total incurred claims\$
- 1.66 Number of covered lives

- 1.7 Group policies:

Most current three years:	
1.71 Total premium earned	\$
1.72 Total incurred claims	\$
1.73 Number of covered lives	.....

- All years prior to most current three years
- 1.74 Total premium earned\$
- 1.75 Total incurred claims\$
- 1.76 Number of covered lives

2. Health Test:

	1 Current Year	2 Prior Year
2.1 Premium Numerator		160,815
2.2 Premium Denominator	22,752,212,483	22,905,684,993
2.3 Premium Ratio (2.1/2.2)	0.000	0.000
2.4 Reserve Numerator	110,905,425	109,895,312
2.5 Reserve Denominator	127,275,077,632	119,786,001,396
2.6 Reserve Ratio (2.4/2.5)	0.001	0.001

- 3.1 Does this reporting entity have Separate Accounts? Yes No
- 3.2 If yes, has a Separate Accounts Statement been filed with this Department? Yes No N/A
- 3.3 What portion of capital and surplus funds of the reporting entity covered by assets in the Separate Accounts statement, is not currently distributable from the Separate Accounts to the general account for use by the general account?\$134,499,953
- 3.4 State the authority under which Separate Accounts are maintained:

- 3.5 Was any of the reporting entity's Separate Accounts business reinsured as of December 31? Yes No
- 3.6 Has the reporting entity assumed by reinsurance any Separate Accounts business as of December 31? Yes No
- 3.7 If the reporting entity has assumed Separate Accounts business, how much, if any, reinsurance assumed receivable for reinsurance of Separate Accounts reserve expense allowances is included as a negative amount in the liability for "Transfers to Separate Accounts due or accrued (net)"?\$

4. For reporting entities having sold annuities to another insurer where the insurer purchasing the annuities has obtained a release of liability from the claimant (payee) as the result of the purchase of an annuity from the reporting entity only:

- 4.1 Amount of loss reserves established by these annuities during the current year:\$
- 4.2 List the name and location of the insurance company purchasing the annuities and the statement value on the purchase date of the annuities.

1	2 Statement Value on Purchase Date of Annuities (i.e., Present Value)
P&C Insurance Company And Location	

GENERAL INTERROGATORIES

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

- 5.1 Do you act as a custodian for health savings accounts? Yes [] No [X]
- 5.2 If yes, please provide the amount of custodial funds held as of the reporting date. \$
- 5.3 Do you act as an administrator for health savings accounts? Yes [] No [X]
- 5.4 If yes, please provide the balance of funds administered as of the reporting date. \$
- 6.1 Are any of the captive affiliates reported on Schedule S, Part 3, authorized reinsurers? Yes [] No [] N/A [X]
- 6.2 If the answer to 6.1 is yes, please provide the following:

1 Company Name	2 NAIC Company Code	3 Domiciliary Jurisdiction	4 Reserve Credit	Assets Supporting Reserve Credit		
				5 Letters of Credit	6 Trust Agreements	7 Other

7. Provide the following for individual ordinary life insurance* policies (U.S. business only) for the current year (prior to reinsurance assumed or ceded):
- 7.1 Direct Premium Written \$ 6,385,342,376
- 7.2 Total Incurred Claims \$ 2,303,893,445
- 7.3 Number of Covered Lives 1,736,721

*Ordinary Life Insurance Includes
Term (whether full underwriting, limited underwriting, jet issue, "short form app")
Whole Life (whether full underwriting, limited underwriting, jet issue, "short form app")
Variable Life (with or without secondary guarantee)
Universal Life (with or without secondary guarantee)
Variable Universal Life (with or without secondary guarantee)

8. Is the reporting entity licensed or chartered, registered, qualified, eligible or writing business in at least two states? Yes [X] No []
- 8.1 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 []

Life, Accident and Health Companies Only:

- 9.1 Are personnel or facilities of this reporting entity used by another entity or entities or are personnel or facilities of another entity or entities used by this reporting entity (except for activities such as administration of jointly underwritten group contracts and joint mortality or morbidity studies)? Yes [X] No []
- 9.2 Net reimbursement of such expenses between reporting entities:
- 9.21 Paid \$
- 9.22 Received \$ 161,798,899
- 10.1 Does the reporting entity write any guaranteed interest contracts? Yes [X] No []
- 10.2 If yes, what amount pertaining to these lines is included in:
- 10.21 Page 3, Line 1 \$ 138,810,236
- 10.22 Page 4, Line 1 \$ 3,000,000
11. For stock reporting entities only:
- 11.1 Total amount paid in by stockholders as surplus funds since organization of the reporting entity: \$
12. Total dividends paid stockholders since organization of the reporting entity:
- 12.11 Cash \$
- 12.12 Stock \$
- 13.1 Does the reporting entity reinsure any Workers' Compensation Carve-Out business defined as: Yes [] No [X]
 Reinsurance (including retrocessional reinsurance) assumed by life and health insurers of medical, wage loss and death benefits of the occupational illness and accident exposures, but not the employers liability exposures, of business originally written as workers' compensation insurance.
- 13.2 If yes, has the reporting entity completed the Workers' Compensation Carve-Out Supplement to the Annual Statement? Yes [] No [X]
- 13.3 If 13.1 is yes, the amounts of earned premiums and claims incurred in this statement are:
- | | 1
Reinsurance
Assumed | 2
Reinsurance
Ceded | 3
Net
Retained |
|---|-----------------------------|---------------------------|----------------------|
| 13.31 Earned premium | | | |
| 13.32 Paid claims | | | |
| 13.33 Claim liability and reserve (beginning of year) | | | |
| 13.34 Claim liability and reserve (end of year) | | | |
| 13.35 Incurred claims | | | |

GENERAL INTERROGATORIES

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

13.4 If reinsurance assumed included amounts with attachment points below \$1,000,000, the distribution of the amounts reported in Lines 13.31 and 13.34 for Column (1) are:

	Attachment Point	1 Earned Premium	2 Claim Liability and Reserve
13.41	<\$25,000	.....	.....
13.42	\$25,000 - 99,999	.....	.....
13.43	\$100,000 - 249,999	.....	.....
13.44	\$250,000 - 999,999	.....	.....
13.45	\$1,000,000 or more	.....	.....

13.5 What portion of earned premium reported in 13.31, Column 1 was assumed from pools? \$

Fraternal Benefit Societies Only:

- 14. Is the reporting entity organized and conducted on the lodge system, with ritualistic form of work and representative form of government? Yes [] No []
- 15. How often are meetings of the subordinate branches required to be held?
.....
- 16. How are the subordinate branches represented in the supreme or governing body?
.....
- 17. What is the basis of representation in the governing body?
.....
- 18.1 How often are regular meetings of the governing body held?
.....
- 18.2 When was the last regular meeting of the governing body held?
- 18.3 When and where will the next regular or special meeting of the governing body be held?
- 18.4 How many members of the governing body attended the last regular meeting?
- 18.5 How many of the same were delegates of the subordinate branches?
- 19. How are the expenses of the governing body defrayed?
.....
- 20. When and by whom are the officers and directors elected?
.....
- 21. What are the qualifications for membership?
.....
- 22. What are the limiting ages for admission?
.....
- 23. What is the minimum and maximum insurance that may be issued on any one life?
.....
- 24. Is a medical examination required before issuing a benefit certificate to applicants? Yes [] No []
- 25. Are applicants admitted to membership without filing an application with and becoming a member of a local branch by ballot and initiation? Yes [] No []
- 26.1 Are notices of the payments required sent to the members? Yes [] No [] N/A []
- 26.2 If yes, do the notices state the purpose for which the money is to be used? Yes [] No []
- 27. What proportion of first and subsequent year's payments may be used for management expenses?
27.11 First Year %
27.12 Subsequent Years %
- 28.1 Is any part of the mortuary, disability, emergency or reserve fund, or the accretions from or payments for the same, used for expenses? Yes [] No []
- 28.2 If so, what amount and for what purpose? \$
- 29.1 Does the reporting entity pay an old age disability benefit? Yes [] No []
- 29.2 If yes, at what age does the benefit commence?
- 30.1 Has the constitution or have the laws of the reporting entity been amended during the year? Yes [] No []
- 30.2 If yes, when?
.....
- 31. Have you filed with this Department all forms of benefit certificates issued, a copy of the constitution and all of the laws, rules and regulations in force at the present time? Yes [] No []
- 32.1 State whether all or a portion of the regular insurance contributions were waived during the current year under premium-paying certificates on account of meeting attained age or membership requirements? Yes [] No []
- 32.2 If so, was an additional reserve included in Exhibit 5? Yes [] No [] N/A []
- 32.3 If yes, explain
.....
- 33.1 Has the reporting entity reinsured, amalgamated with, or absorbed any company, order, society, or association during the year? Yes [] No []
- 33.2 If yes, was there any contract agreement, or understanding, written or oral, expressed or implied, by means of which any officer, director, trustee, or any other person, or firm, corporation, society or association, received or is to receive any fee, commission, emolument, or compensation of any nature whatsoever in connection with, on an account of such reinsurance, amalgamation, absorption, or transfer of membership or funds? Yes [] No [] N/A []
- 34. Has any present or former officer, director, trustee, incorporator, or any other persons, or any firm, corporation, society or association, any claims of any nature whatsoever against this reporting entity, which is not included in the liabilities on Page 3 of this statement? Yes [] No []
- 35.1 Does the reporting entity have outstanding assessments in the form of liens against policy benefits that have increased surplus? Yes [] No []
- 35.2 If yes, what is the date of the original lien and the total outstanding balance of liens that remain in surplus?

Date	Outstanding Lien Amount
.....

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

FIVE-YEAR HISTORICAL DATA

Show amounts in whole dollars only, no cents; show percentages to one decimal place, i.e. 17.6.
\$000 omitted for amounts of life insurance

	1 2019	2 2018	3 2017	4 2016	5 2015
Life Insurance in Force (Exhibit of Life Insurance)					
1. Ordinary - whole life and endowment (Line 34, Col. 4)	430,924,448	300,479,113	278,784,267	256,056,164	237,304,751
2. Ordinary - term (Line 21, Col. 4, less Line 34, Col. 4)	284,755,414	318,185,389	286,269,389	253,041,259	231,263,192
3. Credit life (Line 21, Col. 6)					
4. Group, excluding FEGLI/SGLI (Line 21, Col. 9 less Lines 43 & 44, Col. 4)	26,755,924	65,940,688	64,964,787	60,320,208	55,273,484
5. Industrial (Line 21, Col. 2)					
6. FEGLI/SGLI (Lines 43 & 44, Col. 4)					
7. Total (Line 21, Col. 10)	742,435,787	684,605,190	630,018,443	569,417,631	523,841,427
7.1 Total in force for which VM-20 deterministic/stochastic reserves are calculated				XXX	XXX
New Business Issued (Exhibit of Life Insurance)					
8. Ordinary - whole life and endowment (Line 34, Col. 2)	37,549,434	32,343,359	32,750,498	28,150,352	24,506,721
9. Ordinary - term (Line 2, Col. 4, less Line 34, Col. 2)	50,380,625	48,992,057	48,258,016	34,383,023	29,662,683
10. Credit life (Line 2, Col. 6)					
11. Group (Line 2, Col. 9)	1,981,037	4,264,882	6,352,081	5,979,182	5,035,633
12. Industrial (Line 2, Col. 2)					
13. Total (Line 2, Col. 10)	89,911,096	85,600,298	87,360,595	68,512,557	59,205,037
Premium Income - Lines of Business (Exhibit 1 - Part 1)					
14. Industrial life (Line 20.4, Col. 2)					
15.1 Ordinary-life insurance (Line 20.4, Col. 3)	8,169,175,191	6,510,171,725	6,201,581,128	5,310,388,997	5,277,080,473
15.2 Ordinary-individual annuities (Line 20.4, Col. 4)	1,751,097,710	2,598,978,399	2,227,107,174	2,428,308,628	2,236,745,879
16. Credit life (group and individual) (Line 20.4, Col. 5)					
17.1 Group life insurance (Line 20.4, Col. 6)	67,707,664	646,047,476	(2,616,625,570)	1,428,629,720	1,356,040,660
17.2 Group annuities (Line 20.4, Col. 7)	12,039,080,643	12,392,277,530	11,064,787,204	11,655,352,698	12,094,590,573
18.1 A & H-group (Line 20.4, Col. 8)	244,828	169,605	63,374		
18.2 A & H-credit (group and individual) (Line 20.4, Col. 9)					
18.3 A & H-other (Line 20.4, Col. 10)	673,066,777	756,741,821	611,172,889	586,947,018	565,759,442
19. Aggregate of all other lines of business (Line 20.4, Col. 11)					
20. Total	22,700,372,813	22,904,386,556	17,488,086,199	21,409,627,061	21,530,217,027
Balance Sheet (Pages 2 & 3)					
21. Total admitted assets excluding Separate Accounts business (Page 2, Line 26, Col. 3)	198,018,586,709	179,168,746,235	170,900,940,563	161,466,469,743	149,973,161,492
22. Total liabilities excluding Separate Accounts business (Page 3, Line 26)	179,125,676,538	163,558,959,566	155,195,727,040	146,052,119,164	134,999,742,976
23. Aggregate life reserves (Page 3, Line 1)	127,404,910,418	119,010,301,284	112,904,106,756	109,391,085,184	99,942,257,473
23.1 Excess VM-20 deterministic/stochastic reserve over NPR related to Line 7.1				XXX	XXX
24. Aggregate A & H reserves (Page 3, Line 2)	3,074,252,813	2,967,573,431	2,859,824,790	2,794,862,457	2,683,981,025
25. Deposit-type contract funds (Page 3, Line 3)	15,296,773,875	14,369,907,287	13,014,264,844	11,574,147,866	10,491,117,975
26. Asset valuation reserve (Page 3, Line 24.01)	4,670,184,316	3,306,820,067	3,207,069,587	3,178,008,369	2,817,138,360
27. Capital (Page 3, Lines 29 and 30)					
28. Surplus (Page 3, Line 37)	18,892,910,171	15,609,786,669	15,705,216,653	15,423,489,956	14,982,532,137
Cash Flow (Page 5)					
29. Net Cash from Operations (Line 11)	8,877,238,998	6,432,561,571	8,311,620,508	9,338,557,644	7,800,197,774
Risk-Based Capital Analysis					
30. Total adjusted capital	24,515,204,471	19,875,551,909	17,427,690,776	17,276,323,340	17,340,787,408
31. Authorized control level risk - based capital	2,785,045,018	2,223,863,534	1,934,732,292	1,882,163,260	1,732,441,607
Percentage Distribution of Cash, Cash Equivalents and Invested Assets (Page 2, Col. 3) (Line No. /Page 2, Line 12, Col. 3) x 100.0					
32. Bonds (Line 1)	53.6	56.7	55.2	54.1	55.3
33. Stocks (Lines 2.1 and 2.2)	9.9	7.9	10.0	10.2	6.7
34. Mortgage loans on real estate(Lines 3.1 and 3.2)	14.4	13.8	13.8	13.5	15.3
35. Real estate (Lines 4.1, 4.2 and 4.3)	0.2	0.3	0.5	0.6	0.6
36. Cash, cash equivalents and short-term investments (Line 5)	2.0	2.5	2.2	2.4	2.1
37. Contract loans (Line 6)	7.7	8.1	8.1	8.0	8.2
38. Derivatives (Page 2, Line 7)	6.3	5.1	5.4	6.3	6.4
39. Other invested assets (Line 8)	4.7	5.0	4.7	4.6	5.2
40. Receivables for securities (Line 9)	1.1	0.5	0.1	0.1	0.0
41. Securities lending reinvested collateral assets (Line 10)					
42. Aggregate write-ins for invested assets (Line 11)					
43. Cash, cash equivalents and invested assets (Line 12)	100.0	100.0	100.0	100.0	100.0

FIVE-YEAR HISTORICAL DATA

(Continued)

	1 2019	2 2018	3 2017	4 2016	5 2015
Investments in Parent, Subsidiaries and Affiliates					
44. Affiliated bonds (Schedule D Summary, Line 12, Col. 1)	6,499,768,623	7,526,017,124	7,024,093,120	6,508,255,596	6,176,512,151
45. Affiliated preferred stocks (Schedule D Summary, Line 18, Col. 1)					
46. Affiliated common stocks (Schedule D Summary Line 24, Col. 1),	16,713,885,643	12,013,931,427	14,002,443,719	13,670,494,513	7,503,525,833
47. Affiliated short-term investments (subtotal included in Schedule DA Verification, Col. 5, Line 10)					
48. Affiliated mortgage loans on real estate					
49. All other affiliated	5,768,552,842	5,685,872,120	4,536,580,572	3,484,857,931	4,213,299,770
50. Total of above Lines 44 to 49	28,982,207,108	25,225,820,671	25,563,117,411	23,663,608,040	17,893,337,754
51. Total Investment in Parent included in Lines 44 to 49 above					
Total Nonadmitted and Admitted Assets					
52. Total nonadmitted assets (Page 2, Line 28, Col. 2)	1,475,705,544	2,222,797,167	1,506,487,870	1,630,741,548	1,304,547,618
53. Total admitted assets (Page 2, Line 28, Col. 3)	268,249,285,895	243,646,846,820	240,063,222,121	223,670,465,625	210,358,711,235
Investment Data					
54. Net investment income (Exhibit of Net Investment Income)	7,682,463,670	7,709,838,336	6,427,963,676	6,198,498,168	6,246,441,543
55. Realized capital gains (losses) (Page 4, Line 34, Column 1)	(36,723,981)	(1,044,256,266)	(422,051,259)	(208,411,773)	58,635,533
56. Unrealized capital gains (losses) (Page 4, Line 38, Column 1)	3,433,085,448	1,778,861,989	367,766,370	1,104,826,359	194,731,062
57. Total of above Lines 54, 55 and 56	11,078,825,137	8,444,444,059	6,373,678,787	7,094,912,754	6,499,808,138
Benefits and Reserve Increases (Page 6)					
58. Total contract/certificate benefits - life (Lines 10, 11, 12, 13, 14 and 15, Col. 1 minus Lines 10, 11, 12, 13, 14 and 15, Cols. 6, 7 and 8)	23,804,742,582	22,062,690,112	19,313,047,113	17,460,110,130	15,643,535,253
59. Total contract/certificate benefits - A & H (Lines 13 & 14, Col. 6)	346,274,849	342,151,000	342,997,017	338,035,628	338,979,632
60. Increase in life reserves - other than group and annuities (Line 19, Col. 2)	5,745,703,691	4,170,004,180	3,842,206,597	3,271,691,628	3,197,567,991
61. Increase in A & H reserves (Line 19, Col. 6)	106,679,383	107,748,641	64,962,333	110,881,432	73,146,596
62. Dividends to policyholders and refunds to members (Line 30, Col. 1)	1,671,109,490	1,695,253,440	1,569,130,529	1,565,630,560	1,727,593,543
Operating Percentages					
63. Insurance expense percent (Page 6, Col. 1, Lines 21, 22 & 23, less Line 6)/(Page 6, Col. 1, Line 1 plus Exhibit 7, Col. 2, Line 2) x 100.0	12.5	13.5	17.7	12.0	10.7
64. Lapse percent (ordinary only) [(Exhibit of Life Insurance, Col. 4, Lines 14 & 15) / 1/2 (Exhibit of Life Insurance, Col. 4, Lines 1 & 21)] x 100.0	3.9	4.2	4.1	4.1	4.0
65. A & H loss percent (Schedule H, Part 1, Lines 5 and 6, Col. 2)	68.0	60.5	67.7	77.6	74.0
66. A & H cost containment percent (Schedule H, Pt. 1, Line 4, Col. 2)	1.0	1.0	1.0	1.2	1.3
67. A & H expense percent excluding cost containment expenses (Schedule H, Pt. 1, Line 10, Col. 2)	42.1	39.1	42.4	41.0	40.9
A & H Claim Reserve Adequacy					
68. Incurred losses on prior years' claims - group health (Schedule H, Part 3, Line 3.1 Col. 2)					
69. Prior years' claim liability and reserve - group health (Schedule H, Part 3, Line 3.2 Col. 2)					
70. Incurred losses on prior years' claims-health other than group (Schedule H, Part 3, Line 3.1 Col. 1 less Col. 2)	1,960,252,474	1,974,533,835	1,994,460,505	2,023,132,666	2,013,155,304
71. Prior years' claim liability and reserve-health other than group (Schedule H, Part 3, Line 3.2 Col. 1 less Col. 2)	1,874,495,751	1,877,320,923	1,918,454,996	1,900,378,992	1,900,423,384
Net Gains From Operations After Dividends to Policyholders/Members' Refunds and Federal Income Taxes by Lines of Business (Page 6.x, Line 33)					
72. Industrial life (Page 6.1, Col. 2)					
73. Ordinary - life (Page 6.1, Col. 1 less Cols. 2, 10 and 12)	(400,777,170)	(414,680,265)	(195,046,499)	(452,874,059)	(273,993,807)
74. Ordinary - individual annuities (Page 6, Col. 4)	298,860,020	(155,641,446)	229,760,994	105,282,875	32,895,738
75. Ordinary-supplementary contracts	XXX	73,580,641	30,733,793	41,806,527	44,096,574
76. Credit life (Page 6.1, Col. 10 plus Page 6.2, Col. 7)					
77. Group life (Page 6.2, Col. 1 Less Cols. 7 and 9)	18,789,222	235,476,177	116,383,212	117,350,263	66,510,596
78. Group annuities (Page 6, Col. 5)	432,070,442	409,759,021	203,701,817	339,521,949	415,593,989
79. A & H-group (Page 6.5, Col. 3)		1,528,002	762,561	800,122	833,228
80. A & H-credit (Page 6.5, Col. 10)					
81. A & H-other (Page 6.5, Col. 1 less Cols. 3 and 10)	112,027,981	72,886,996	87,831,777	42,641,185	67,608,742
82. Aggregate of all other lines of business (Page 6, Col. 8)					
83. Fraternal (Page 6, Col. 7)					
84. Total (Page 6, Col. 1)	460,970,495	222,909,126	474,127,656	194,528,862	353,545,060

NOTE: If a party to a merger, have the two most recent years of this exhibit been restated due to a merger in compliance with the disclosure requirements of SSAP No. 3, Accounting Changes and Correction of Errors? Yes [] No []
 If no, please explain:



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Alabama

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	68,161,051		268,875		68,429,926
2. Annuity considerations	33,786,342		37,055,245		70,841,587
3. Deposit-type contract funds	9,358,791	XXX	39,790,532	XXX	49,149,323
4. Other considerations			51,449,435		51,449,435
5. Totals (Sum of Lines 1 to 4)	111,306,184		128,564,087		239,870,271
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	626,808				626,808
6.2 Applied to pay renewal premiums	2,545,678				2,545,678
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	9,392,162				9,392,162
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	12,564,648				12,564,648
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	28,383				28,383
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	28,383				28,383
8. Grand Totals (Lines 6.5 plus 7.4)	12,593,031				12,593,031
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	13,386,959		25,000		13,411,959
10. Matured endowments					
11. Annuity benefits	4,679,617		14,108,592		18,788,209
12. Surrender values and withdrawals for life contracts	22,998,873		23,296,647		46,295,520
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	189,269				189,269
15. Totals	41,254,718		37,430,239		78,684,957
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	45	1,257,612							45	1,257,612
17. Incurred during current year	260	14,470,763			2	125,000			262	14,595,763
Settled during current year:										
18.1 By payment in full	274	13,576,228			1	25,000			275	13,601,228
18.2 By payment on compromised claims										
18.3 Totals paid	274	13,576,228			1	25,000			275	13,601,228
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	274	13,576,228			1	25,000			275	13,601,228
19. Unpaid Dec. 31, current year (16+17-18.6)	31	2,152,146			1	100,000			32	2,252,146
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	14,377	4,514,726,901	(a)		129	1,198,378,712			14,506	5,713,105,613
21. Issued during year	1,491	831,966,572			2	41,162,468			1,493	873,129,040
22. Other changes to in force (Net)	1,031	903,213,363			(116)	(1,170,502,469)			915	(267,289,106)
23. In force December 31 of current year	16,899	6,249,906,836	(a)		15	69,038,711			17,006	6,318,945,547

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	61,183	61,183			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	5,254,629	5,368,143	254,069	2,096,634	3,857,425
25.2 Guaranteed renewable (b)	1,676,821	1,431,053		293,966	216,700
25.3 Non-renewable for stated reasons only (b)	98,354	100,479	4,756		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	7,029,804	6,899,675	258,825	2,390,600	4,074,125
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	7,090,987	6,960,858	258,825	2,390,600	4,074,125

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Alaska

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Arizona

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Arkansas

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-Ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF California

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies, Federal Employees Health Benefits Plan, Medicare Title XVIII, and other individual policies.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Colorado

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$..., current year \$... Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$..., current year \$... Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$..., current year \$...

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0.



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Connecticut

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	191,609,777		3,836,199		195,445,976
2. Annuity considerations	78,881,600		76,340,989		155,222,589
3. Deposit-type contract funds	6,304,847	XXX	39,540,665	XXX	45,845,512
4. Other considerations			163,707,053		163,707,053
5. Totals (Sum of Lines 1 to 4)	276,796,224		283,424,906		560,221,130
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	2,838,356				2,838,356
6.2 Applied to pay renewal premiums	9,827,850				9,827,850
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	39,637,676				39,637,676
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	52,303,882				52,303,882
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	28,823				28,823
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	28,823				28,823
8. Grand Totals (Lines 6.5 plus 7.4)	52,332,705				52,332,705
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	57,667,664		101,973,664		159,641,328
10. Matured endowments	341,770				341,770
11. Annuity benefits	12,809,868		16,716,487		29,526,355
12. Surrender values and withdrawals for life contracts	162,833,996		234,411,262		397,245,258
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	503,416				503,416
15. Totals	234,156,714		353,101,413		587,258,127
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	90	11,989,642			18	37,944,172			108	49,933,814
17. Incurred during current year	637	56,905,623			40	107,154,043			677	164,059,665
Settled during current year:										
18.1 By payment in full	648	58,512,791			36	101,973,664			684	160,486,455
18.2 By payment on compromised claims										
18.3 Totals paid	648	58,512,791			36	101,973,664			684	160,486,455
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	648	58,512,791			36	101,973,664			684	160,486,455
19. Unpaid Dec. 31, current year (16+17-18.6)	79	10,382,474			22	43,124,550			101	53,507,024
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	43,353	17,829,868,912	(a)		129	6,554,341,176			43,482	24,384,210,088
21. Issued during year	3,145	2,249,772,947			9	69,006,200			3,154	2,318,779,147
22. Other changes to in force (Net)	(2,810)	(659,759,720)			(67)	(5,369,034)			(2,877)	(665,128,754)
23. In force December 31 of current year	43,688	19,419,882,139	(a)		71	6,617,978,315			43,759	26,037,860,454

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	6,550	6,550			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	14,429,647	14,741,366	640,347	9,355,429	4,434,394
25.2 Guaranteed renewable (b)	5,560,760	4,868,310		826,740	1,267,478
25.3 Non-renewable for stated reasons only (b)	377,700	385,860	16,761		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	20,368,107	19,995,536	657,108	10,182,169	5,701,872
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	20,374,657	20,002,086	657,108	10,182,169	5,701,872

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Delaware

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	174,754,470		51,772		174,806,242
2. Annuity considerations	13,553,345		6,715,394		20,268,739
3. Deposit-type contract funds	498,434	XXX	2,114,999,002	XXX	2,115,497,436
4. Other considerations			14,715,785		14,715,785
5. Totals (Sum of Lines 1 to 4)	188,806,249		2,136,481,953		2,325,288,202
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	457,848				457,848
6.2 Applied to pay renewal premiums	1,253,080				1,253,080
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	5,088,817				5,088,817
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	6,799,745				6,799,745
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	2,396				2,396
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	2,396				2,396
8. Grand Totals (Lines 6.5 plus 7.4)	6,802,141				6,802,141
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	15,065,621		10,957,077		26,022,698
10. Matured endowments	272				272
11. Annuity benefits	2,061,916		12,805,202		14,867,118
12. Surrender values and withdrawals for life contracts	10,925,605		100,052,606		110,978,211
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	8,073				8,073
15. Totals	28,061,487		123,814,885		151,876,372
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	11	186,043			2	1,522,018			13	1,708,061
17. Incurred during current year	1,144	15,961,911			31	13,181,782			1,175	29,143,693
Settled during current year:										
18.1 By payment in full	1,146	15,073,966			28	10,957,077			1,174	26,031,043
18.2 By payment on compromised claims										
18.3 Totals paid	1,146	15,073,966			28	10,957,077			1,174	26,031,043
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,146	15,073,966			28	10,957,077			1,174	26,031,043
19. Unpaid Dec. 31, current year (16+17-18.6)	9	1,073,988			5	3,746,723			14	4,820,711
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	5,173	1,880,962,436	(a)		282	5,660,211,597			5,455	7,541,174,033
21. Issued during year	941	666,223,842			1	1,015,000			942	667,238,842
22. Other changes to in force (Net)	5,240	2,919,056,711			(268)	(2,984,506,971)			4,972	(65,450,260)
23. In force December 31 of current year	11,354	5,466,242,989	(a)		15	2,676,719,626			11,369	8,142,962,615

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	191	191			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	1,241,860	1,268,688	58,488	420,293	520,010
25.2 Guaranteed renewable (b)	552,575	341,175		144,692	161,264
25.3 Non-renewable for stated reasons only (b)	3,127	3,195	147		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	1,797,562	1,613,058	58,635	564,985	681,274
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	1,797,753	1,613,249	58,635	564,985	681,274

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF District of Columbia

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include: DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS, DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS, DIRECT CLAIMS AND BENEFITS PAID, and DETAILS OF WRITE-INS.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include: DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED and POLICY EXHIBIT.

(a) Includes Individual Credit Life Insurance prior year \$..., current year \$... Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$..., current year \$... Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$..., current year \$...

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include: 24 Group Policies (b), 24.1 Federal Employees Health Benefits Plan premium (b), 24.2 Credit (Group and Individual), 24.3 Collectively renewable policies/certificates (b), 24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies: 25.1 Non-cancelable (b), 25.2 Guaranteed renewable (b), 25.3 Non-renewable for stated reasons only (b), 25.4 Other accident only, 25.5 All other (b), 25.6 Totals (sum of Lines 25.1 to 25.5), 26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0.



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Florida

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	531,569,910		4,900,783		536,470,693
2. Annuity considerations	246,676,590		304,041,253		550,717,843
3. Deposit-type contract funds	27,583,575	XXX	271,991,622	XXX	299,575,197
4. Other considerations			319,503,906		319,503,906
5. Totals (Sum of Lines 1 to 4)	805,830,075		900,437,564		1,706,267,639
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	8,532,638				8,532,638
6.2 Applied to pay renewal premiums	24,925,722				24,925,722
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	92,897,938				92,897,938
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	126,356,298				126,356,298
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	86,253				86,253
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	86,253				86,253
8. Grand Totals (Lines 6.5 plus 7.4)	126,442,551				126,442,551
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	170,582,598		5,235,420		175,818,018
10. Matured endowments	2,326,764				2,326,764
11. Annuity benefits	42,073,551		106,748,245		148,821,796
12. Surrender values and withdrawals for life contracts	208,058,983		255,076,363		463,135,346
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	2,660,493				2,660,493
15. Totals	425,702,389		367,060,028		792,762,417
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	295	34,673,269			9	245,161			304	34,918,430
17. Incurred during current year	2,053	160,426,318			10	5,370,864			2,063	165,797,182
Settled during current year:										
18.1 By payment in full	2,067	175,569,056			9	5,235,420			2,076	180,804,475
18.2 By payment on compromised claims										
18.3 Totals paid	2,067	175,569,056			9	5,235,420			2,076	180,804,475
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	2,067	175,569,056			9	5,235,420			2,076	180,804,475
19. Unpaid Dec. 31, current year (16+17-18.6)	281	19,530,531			10	380,606			291	19,911,136
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	89,563	35,598,923,091	(a)		170	2,087,490,227			89,733	37,686,413,318
21. Issued during year	8,500	5,919,956,662			16	73,504,301			8,516	5,993,460,963
22. Other changes to in force (Net)	(2,129)	(311,248,496)			(132)	(1,871,249,004)			(2,261)	(2,182,497,500)
23. In force December 31 of current year	95,934	41,207,631,257	(a)		54	289,745,524			95,988	41,497,376,781

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	2,285	2,285			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	18,845,747	19,252,841	760,595	14,162,235	15,870,685
25.2 Guaranteed renewable (b)	14,471,170	9,654,134		2,939,878	4,021,637
25.3 Non-renewable for stated reasons only (b)	231,449	236,449	9,342	50	50
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	33,548,366	29,143,424	769,937	17,102,163	19,892,372
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	33,550,651	29,145,709	769,937	17,102,163	19,892,372

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Georgia

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	184,586,627		2,199,229		186,785,856
2. Annuity considerations	75,321,031		96,924,260		172,245,291
3. Deposit-type contract funds	15,676,776	XXX	90,480,898	XXX	106,157,674
4. Other considerations			154,156,628		154,156,628
5. Totals (Sum of Lines 1 to 4)	275,584,434		343,761,015		619,345,449
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	3,853,292				3,853,292
6.2 Applied to pay renewal premiums	10,302,099				10,302,099
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	59,682,694				59,682,694
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	73,838,085				73,838,085
Annuities:					
7.1 Paid in cash or left on deposit	298				298
7.2 Applied to provide paid-up annuities	48,868				48,868
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	49,166				49,166
8. Grand Totals (Lines 6.5 plus 7.4)	73,887,251				73,887,251
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	75,803,533		618,300		76,421,833
10. Matured endowments	377,312				377,312
11. Annuity benefits	13,210,781		34,242,233		47,453,014
12. Surrender values and withdrawals for life contracts	101,448,620		1,618,754,084		1,720,202,704
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	1,218,304				1,218,304
15. Totals	192,058,550		1,653,614,617		1,845,673,167
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	123	8,682,801			3	4,700,693			126	13,383,494
17. Incurred during current year	942	96,971,088			11	796,899			953	97,767,987
Settled during current year:										
18.1 By payment in full	902	77,398,811			9	618,300			911	78,017,111
18.2 By payment on compromised claims										
18.3 Totals paid	902	77,398,811			9	618,300			911	78,017,111
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	902	77,398,811			9	618,300			911	78,017,111
19. Unpaid Dec. 31, current year (16+17-18.6)	163	28,255,077			5	4,879,292			168	33,134,370
POLICY EXHIBIT										
20. In force December 31, prior year	56,828	20,003,174,124	(a)		No. of Policies 213	1,781,201,235			57,041	21,784,375,360
21. Issued during year	4,324	2,488,409,827			28	26,081,960			4,352	2,514,491,787
22. Other changes to in force (Net)	(8)	584,793,150			(178)	(1,658,163,548)			(186)	(1,073,370,398)
23. In force December 31 of current year	61,144	23,076,377,101	(a)		63	149,119,647			61,207	23,225,496,748

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	63,839	63,839			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees					
Other Individual Policies:					
25.1 Non-cancelable (b)	16,153,753	16,502,644	745,852	6,462,240	7,806,271
25.2 Guaranteed renewable (b)	7,394,946	8,172,596		2,513,457	2,383,200
25.3 Non-renewable for stated reasons only (b)	304,232	310,805	14,050	35,123	16,959
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	23,852,931	24,986,045	759,902	9,010,820	10,206,430
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	23,916,770	25,049,884	759,902	9,010,820	10,206,430

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Hawaii

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	24,611,244		173,021		24,784,265
2. Annuity considerations	13,058,089		7,047,462		20,105,551
3. Deposit-type contract funds	16,069,451	XXX	13,244,798	XXX	29,314,249
4. Other considerations			6,737,557		6,737,557
5. Totals (Sum of Lines 1 to 4)	53,738,784		27,202,838		80,941,622
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	517,429				517,429
6.2 Applied to pay renewal premiums	1,586,150				1,586,150
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	7,199,897				7,199,897
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	9,303,476				9,303,476
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	12,852				12,852
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	12,852				12,852
8. Grand Totals (Lines 6.5 plus 7.4)	9,316,328				9,316,328
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	12,242,729				12,242,729
10. Matured endowments	15,014				15,014
11. Annuity benefits	4,986,960		2,320,178		7,307,138
12. Surrender values and withdrawals for life contracts	18,241,857		12,877,042		31,118,899
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	67,286				67,286
15. Totals	35,553,846		15,197,220		50,751,066
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	16	556,534							16	556,534
17. Incurred during current year	161	13,224,855							161	13,224,855
Settled during current year:										
18.1 By payment in full	147	12,324,933							147	12,324,933
18.2 By payment on compromised claims										
18.3 Totals paid	147	12,324,933							147	12,324,933
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	147	12,324,933							147	12,324,933
19. Unpaid Dec. 31, current year (16+17-18.6)	30	1,456,455							30	1,456,455
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	8,852	1,876,609,963	(a)		26	318,828,124			8,878	2,195,438,086
21. Issued during year	398	171,092,324				1,550,000			398	172,642,324
22. Other changes to in force (Net)	245	191,740,586			(15)	(310,487,038)			230	(118,746,452)
23. In force December 31 of current year	9,495	2,239,442,873	(a)		11	9,891,086			9,506	2,249,333,959

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	1,644,148	1,679,666	58,046	907,376	769,062
25.2 Guaranteed renewable (b)	1,460,853	1,292,998		252,417	524,844
25.3 Non-renewable for stated reasons only (b)	88,201	90,106	3,114		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	3,193,202	3,062,770	61,160	1,159,793	1,293,906
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	3,193,202	3,062,770	61,160	1,159,793	1,293,906

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Idaho

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	29,188,370		36,045		29,224,415
2. Annuity considerations	7,476,106		7,616,612		15,092,718
3. Deposit-type contract funds	5,094,234	XXX	5,716,110	XXX	10,810,344
4. Other considerations			10,933,208		10,933,208
5. Totals (Sum of Lines 1 to 4)	41,758,710		24,301,975		66,060,685
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	594,943				594,943
6.2 Applied to pay renewal premiums	1,005,949				1,005,949
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	6,607,933				6,607,933
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	8,208,825				8,208,825
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	1,511				1,511
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	1,511				1,511
8. Grand Totals (Lines 6.5 plus 7.4)	8,210,336				8,210,336
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	7,653,822				7,653,822
10. Matured endowments	167,830				167,830
11. Annuity benefits	2,361,348		4,091,641		6,452,989
12. Surrender values and withdrawals for life contracts	12,486,080		11,410,651		23,896,731
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	27,879				27,879
15. Totals	22,696,959		15,502,292		38,199,251
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	11	622,059							11	622,059
17. Incurred during current year	101	7,766,424							101	7,766,424
Settled during current year:										
18.1 By payment in full	101	7,849,520							101	7,849,520
18.2 By payment on compromised claims										
18.3 Totals paid	101	7,849,520							101	7,849,520
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	101	7,849,520							101	7,849,520
19. Unpaid Dec. 31, current year (16+17-18.6)	11	538,962							11	538,962
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	6,904	2,327,307,163	(a)		18	65,754,304			6,922	2,393,061,467
21. Issued during year	578	385,550,903			2	1,300,000			580	386,850,903
22. Other changes to in force (Net)	(198)	(81,356,873)			(18)	(66,854,304)			(216)	(148,211,177)
23. In force December 31 of current year	7,284	2,631,501,193	(a)		2	200,000			7,286	2,631,701,193

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	1,077,453	1,100,729	39,414	219,561	155,561
25.2 Guaranteed renewable (b)	594,790	436,585		35,429	(85,794)
25.3 Non-renewable for stated reasons only (b)	6,456	6,596	236		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	1,678,699	1,543,910	39,650	254,990	69,767
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	1,678,699	1,543,910	39,650	254,990	69,767

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Illinois

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	478,698,705		4,451,649		483,150,354
2. Annuity considerations	147,877,121		124,625,907		272,503,028
3. Deposit-type contract funds	10,614,141	XXX	88,203,679	XXX	98,817,820
4. Other considerations			531,598,294		531,598,294
5. Totals (Sum of Lines 1 to 4)	637,189,967		748,879,529		1,386,069,496
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	5,244,655				5,244,655
6.2 Applied to pay renewal premiums	16,381,048				16,381,048
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	56,243,157				56,243,157
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	77,868,860				77,868,860
Annuities:					
7.1 Paid in cash or left on deposit	1				1
7.2 Applied to provide paid-up annuities	78,668				78,668
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	78,669				78,669
8. Grand Totals (Lines 6.5 plus 7.4)	77,947,529				77,947,529
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	105,915,418		7,527,166		113,442,584
10. Matured endowments	4,491,090				4,491,090
11. Annuity benefits	21,934,284		31,519,130		53,453,414
12. Surrender values and withdrawals for life contracts	107,174,025		459,154,651		566,328,676
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	489,143				489,143
15. Totals	240,003,960		498,200,947		738,204,907
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	183	12,033,987			2	926,577			185	12,960,564
17. Incurred during current year	1,211	106,259,687			13	9,077,755			1,224	115,337,442
Settled during current year:										
18.1 By payment in full	1,252	110,895,125			11	7,527,166			1,263	118,422,291
18.2 By payment on compromised claims										
18.3 Totals paid	1,252	110,895,125			11	7,527,166			1,263	118,422,291
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,252	110,895,125			11	7,527,166			1,263	118,422,291
19. Unpaid Dec. 31, current year (16+17-18.6)	142	7,398,549			4	2,477,166			146	9,875,716
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	71,551	21,807,423,007	(a)		349	2,901,763,240			71,900	24,709,186,247
21. Issued during year	5,914	3,509,528,341			20	34,779,100			5,934	3,544,307,441
22. Other changes to in force (Net)	(674)	895,218,786			(252)	(1,795,958,355)			(926)	(900,739,569)
23. In force December 31 of current year	76,791	26,212,170,134	(a)		117	1,140,583,985			76,908	27,352,754,119

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	13,519	13,519			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	18,553,606	18,954,415	1,004,993	12,556,966	9,845,920
25.2 Guaranteed renewable (b)	6,231,475	6,783,096		1,641,974	1,356,328
25.3 Non-renewable for stated reasons only (b)	438,853	448,334	23,771	11,813	78,089
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	25,223,934	26,185,845	1,028,764	14,210,753	11,280,337
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	25,237,453	26,199,364	1,028,764	14,210,753	11,280,337

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Indiana

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	108,498,599		1,006,956		109,505,555
2. Annuity considerations	57,528,859		11,145,416		68,674,275
3. Deposit-type contract funds	11,714,067	XXX	40,845,218	XXX	52,559,285
4. Other considerations			56,764,961		56,764,961
5. Totals (Sum of Lines 1 to 4)	177,741,525		109,762,551		287,504,076
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,628,128				1,628,128
6.2 Applied to pay renewal premiums	4,798,965				4,798,965
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	20,222,243				20,222,243
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	26,649,336				26,649,336
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	166,190				166,190
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	166,190				166,190
8. Grand Totals (Lines 6.5 plus 7.4)	26,815,526				26,815,526
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	25,346,636		1,465,804		26,812,440
10. Matured endowments	30,261				30,261
11. Annuity benefits	10,501,131		22,550,476		33,051,607
12. Surrender values and withdrawals for life contracts	68,804,170		113,998,537		182,802,707
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	252,372				252,372
15. Totals	104,934,570		138,014,817		242,949,387
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	61	9,975,680			1	593,758			62	10,569,438
17. Incurred during current year	513	17,256,815			5	1,872,048			518	19,128,863
Settled during current year:										
18.1 By payment in full	524	25,629,268			5	1,465,804			529	27,095,072
18.2 By payment on compromised claims										
18.3 Totals paid	524	25,629,268			5	1,465,804			529	27,095,072
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	524	25,629,268			5	1,465,804			529	27,095,072
19. Unpaid Dec. 31, current year (16+17-18.6)	50	1,603,227			1	1,000,003			51	2,603,230
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	30,984	9,148,729,767	(a)		165	755,034,380			31,149	9,903,764,147
21. Issued during year	2,291	1,368,578,904			2	21,548,554			2,293	1,390,127,458
22. Other changes to in force (Net)	(519)	(82,747,931)			(142)	(544,469,220)			(661)	(627,217,151)
23. In force December 31 of current year	32,756	10,434,560,740	(a)		25	232,113,714			32,781	10,666,674,454

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	853	853			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	7,575,592	7,739,245	409,657	3,939,385	3,665,048
25.2 Guaranteed renewable (b)	1,979,339	1,713,053		322,230	577,227
25.3 Non-renewable for stated reasons only (b)	120,182	122,778	6,499	2,941	(15,927)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	9,675,113	9,575,076	416,156	4,264,556	4,226,348
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	9,675,966	9,575,929	416,156	4,264,556	4,226,348

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Iowa

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	44,489,761		101,981		44,591,742
2. Annuity considerations	17,139,258		15,725,279		32,864,537
3. Deposit-type contract funds	1,340,946	XXX	34,999,516	XXX	36,340,462
4. Other considerations			141,638,197		141,638,197
5. Totals (Sum of Lines 1 to 4)	62,969,965		192,464,973		255,434,938
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	931,839				931,839
6.2 Applied to pay renewal premiums	3,501,685				3,501,685
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	12,443,333				12,443,333
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	16,876,857				16,876,857
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	18,478				18,478
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	18,478				18,478
8. Grand Totals (Lines 6.5 plus 7.4)	16,895,335				16,895,335
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	17,204,151		664,000		17,868,151
10. Matured endowments	92,783				92,783
11. Annuity benefits	4,753,985		9,888,067		14,642,052
12. Surrender values and withdrawals for life contracts	41,437,465		82,528,285		123,965,750
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	138,175				138,175
15. Totals	63,626,559		93,080,352		156,706,911
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	32	1,954,248							32	1,954,248
17. Incurred during current year	371	19,856,114			1	664,000			372	20,520,114
Settled during current year:										
18.1 By payment in full	358	17,435,109			1	664,000			359	18,099,109
18.2 By payment on compromised claims										
18.3 Totals paid	358	17,435,109			1	664,000			359	18,099,109
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	358	17,435,109			1	664,000			359	18,099,109
19. Unpaid Dec. 31, current year (16+17-18.6)	45	4,375,253							45	4,375,253
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	18,148	3,087,087,315	(a)		178	657,169,521			18,326	3,744,256,836
21. Issued during year	577	241,763,003				576,288			577	242,339,291
22. Other changes to in force (Net)	207	506,122,113			(164)	(597,066,726)			43	(90,944,613)
23. In force December 31 of current year	18,932	3,834,972,431	(a)		14	60,679,083			18,946	3,895,651,514

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	36	36			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	2,143,178	2,189,477	103,341	1,606,382	1,727,182
25.2 Guaranteed renewable (b)	1,736,195	2,160,174		117,741	34,360
25.3 Non-renewable for stated reasons only (b)	37,877	38,696	1,826	2,410	(76,886)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	3,917,250	4,388,347	105,167	1,726,533	1,684,656
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	3,917,286	4,388,383	105,167	1,726,533	1,684,656

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Kansas

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred, and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies, Federal Employees Health Benefits Plan, Medicare Title XVIII, and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Kentucky

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies, Federal Employees Health Benefits Plan, Medicare Title XVIII, and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Louisiana

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	50,653,485		431,259		51,084,744
2. Annuity considerations	43,070,459		15,692,489		58,762,948
3. Deposit-type contract funds	2,796,950	XXX	42,390,853	XXX	45,187,803
4. Other considerations			29,214,061		29,214,061
5. Totals (Sum of Lines 1 to 4)	96,520,894		87,728,662		184,249,556
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,322,781				1,322,781
6.2 Applied to pay renewal premiums	1,835,928				1,835,928
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	9,155,250				9,155,250
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	12,313,959				12,313,959
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	14,190				14,190
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	14,190				14,190
8. Grand Totals (Lines 6.5 plus 7.4)	12,328,149				12,328,149
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	30,021,023				30,021,023
10. Matured endowments					
11. Annuity benefits	4,596,632		14,891,730		19,488,362
12. Surrender values and withdrawals for life contracts	16,845,718		27,176,338		44,022,056
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	127,861				127,861
15. Totals	51,591,234		42,068,068		93,659,302
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	45	1,807,445			1	638,123			46	2,445,568
17. Incurred during current year	237	29,722,393							237	29,722,393
Settled during current year:										
18.1 By payment in full	243	30,146,680							243	30,146,680
18.2 By payment on compromised claims										
18.3 Totals paid	243	30,146,680							243	30,146,680
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	243	30,146,680							243	30,146,680
19. Unpaid Dec. 31, current year (16+17-18.6)	39	1,383,159			1	638,123			40	2,021,282
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	12,827	4,378,341,714	(a)		120	602,647,489			12,947	4,980,989,203
21. Issued during year	1,371	791,315,745			5	10,670,057			1,376	801,985,802
22. Other changes to in force (Net)	(36)	303,526,437			(99)	(555,166,705)			(135)	(251,640,268)
23. In force December 31 of current year	14,162	5,473,183,896	(a)		26	58,150,841			14,188	5,531,334,737

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	5,065,451	5,174,878	286,463	3,300,166	3,360,769
25.2 Guaranteed renewable (b)	1,279,971	1,460,018		348,523	555,920
25.3 Non-renewable for stated reasons only (b)	88,947	90,868	5,030		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	6,434,369	6,725,764	291,493	3,648,689	3,916,689
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	6,434,369	6,725,764	291,493	3,648,689	3,916,689

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Maine

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Maryland

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	125,505,080		1,130,472		126,635,552
2. Annuity considerations	56,208,751		59,784,844		115,993,595
3. Deposit-type contract funds	14,363,568	XXX	111,849,201	XXX	126,212,769
4. Other considerations			208,461,039		208,461,039
5. Totals (Sum of Lines 1 to 4)	196,077,399		381,225,556		577,302,955
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	3,559,913				3,559,913
6.2 Applied to pay renewal premiums	11,023,491				11,023,491
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	35,343,636				35,343,636
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	49,927,040				49,927,040
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	29,658				29,658
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	29,658				29,658
8. Grand Totals (Lines 6.5 plus 7.4)	49,956,698				49,956,698
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	46,385,444		1,145,032		47,530,476
10. Matured endowments	378,219				378,219
11. Annuity benefits	9,122,589		16,427,421		25,550,010
12. Surrender values and withdrawals for life contracts	76,938,327		135,533,814		212,472,141
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	502,231				502,231
15. Totals	133,326,810		153,106,267		286,433,077
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	75	8,026,974			1	262,878			76	8,289,852
17. Incurred during current year	764	43,285,338			4	1,145,032			768	44,430,371
Settled during current year:										
18.1 By payment in full	770	47,265,737			4	1,145,032			774	48,410,770
18.2 By payment on compromised claims										
18.3 Totals paid	770	47,265,737			4	1,145,032			774	48,410,770
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	770	47,265,737			4	1,145,032			774	48,410,770
19. Unpaid Dec. 31, current year (16+17-18.6)	69	4,046,575			1	262,878			70	4,309,453
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	40,860	13,384,788,860	(a)		102	561,142,458			40,962	13,945,931,318
21. Issued during year	2,348	1,290,742,531			1	4,650,000			2,349	1,295,392,531
22. Other changes to in force (Net)	(1,185)	(92,916,486)			(94)	(479,793,408)			(1,279)	(572,709,894)
23. In force December 31 of current year	42,023	14,582,614,905	(a)		9	85,999,050			42,032	14,668,613,955

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	25	25			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	16,903,688	17,268,854	1,035,051	10,405,354	7,934,083
25.2 Guaranteed renewable (b)	10,142,164	12,610,550		2,457,026	6,708,605
25.3 Non-renewable for stated reasons only (b)	381,083	389,316	23,335	14,942	90,973
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	27,426,935	30,268,720	1,058,386	12,877,322	14,733,661
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	27,426,960	30,268,745	1,058,386	12,877,322	14,733,661

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Massachusetts

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	236,421,019		6,919,625		243,340,644
2. Annuity considerations	213,999,866		277,524,280		491,524,146
3. Deposit-type contract funds	23,569,587	XXX	329,656,330	XXX	353,225,917
4. Other considerations			843,609,314		843,609,314
5. Totals (Sum of Lines 1 to 4)	473,990,472		1,457,709,549		1,931,700,021
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	5,146,980				5,146,980
6.2 Applied to pay renewal premiums	13,394,725				13,394,725
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	49,144,091				49,144,091
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	67,685,796				67,685,796
Annuities:					
7.1 Paid in cash or left on deposit	7,810				7,810
7.2 Applied to provide paid-up annuities	60,980				60,980
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	68,790				68,790
8. Grand Totals (Lines 6.5 plus 7.4)	67,754,586				67,754,586
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	76,610,334		3,223,250		79,833,584
10. Matured endowments	533,502				533,502
11. Annuity benefits	34,971,247		130,280,000		165,251,247
12. Surrender values and withdrawals for life contracts	150,188,026		3,994,967,531		4,145,155,557
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	746,149				746,149
15. Totals	263,049,258		4,128,470,781		4,391,520,039
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind. Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	158	9,912,113			2	1,689,968			160	11,602,081
17. Incurred during current year	1,224	79,478,833			11	3,361,940			1,235	82,840,773
Settled during current year:										
18.1 By payment in full	1,191	77,889,920			9	3,223,250			1,200	81,113,170
18.2 By payment on compromised claims										
18.3 Totals paid	1,191	77,889,920			9	3,223,250			1,200	81,113,170
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,191	77,889,920			9	3,223,250			1,200	81,113,170
19. Unpaid Dec. 31, current year (16+17-18.6)	191	11,501,026			4	1,828,659			195	13,329,685
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	62,934	22,130,657,182	(a)		327	3,759,890,276			63,261	25,890,547,457
21. Issued during year	5,506	3,945,777,843			4	148,806,514			5,510	4,094,584,357
22. Other changes to in force (Net)	(510)	576,660,596			(252)	(1,356,983,996)			(762)	(780,323,400)
23. In force December 31 of current year	67,930	26,653,095,621	(a)		79	2,551,712,794			68,009	29,204,808,415

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	8,984	8,984			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	22,117,773	22,595,578	1,086,809	13,446,465	16,666,898
25.2 Guaranteed renewable (b)	10,964,819	8,815,096		2,184,958	4,112,304
25.3 Non-renewable for stated reasons only (b)	533,562	545,088	26,218	22,859	(49,055)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	33,616,154	31,955,762	1,113,027	15,654,282	20,730,147
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	33,625,138	31,964,746	1,113,027	15,654,282	20,730,147

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Michigan

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	130,186,588		901,121		131,087,709
2. Annuity considerations	125,973,036		135,273,949		261,246,985
3. Deposit-type contract funds	12,592,426	XXX	85,609,714	XXX	98,202,140
4. Other considerations			227,868,512		227,868,512
5. Totals (Sum of Lines 1 to 4)	268,752,050		449,653,296		718,405,346
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	4,008,115				4,008,115
6.2 Applied to pay renewal premiums	10,461,728				10,461,728
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	34,484,800				34,484,800
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	48,954,643				48,954,643
Annuities:					
7.1 Paid in cash or left on deposit	165				165
7.2 Applied to provide paid-up annuities	116,363				116,363
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	116,528				116,528
8. Grand Totals (Lines 6.5 plus 7.4)	49,071,171				49,071,171
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	57,971,178		2,635,969		60,607,147
10. Matured endowments	268,912				268,912
11. Annuity benefits	25,155,658		63,643,232		88,798,890
12. Surrender values and withdrawals for life contracts	106,742,430		169,476,705		276,219,135
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	588,652				588,652
15. Totals	190,726,830		235,755,906		426,482,736
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	127	13,682,764			2	662,845			129	14,345,608
17. Incurred during current year	1,047	50,689,027			6	1,973,124			1,053	52,662,151
Settled during current year:										
18.1 By payment in full	1,041	58,828,620			8	2,635,969			1,049	61,464,589
18.2 By payment on compromised claims										
18.3 Totals paid	1,041	58,828,620			8	2,635,969			1,049	61,464,589
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,041	58,828,620			8	2,635,969			1,049	61,464,589
19. Unpaid Dec. 31, current year (16+17-18.6)	133	5,543,170							133	5,543,170
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	45,209	10,248,671,616	(a)		132	1,277,117,161			45,341	11,525,788,778
21. Issued during year	2,291	1,234,417,278			2	9,745,262			2,293	1,244,162,540
22. Other changes to in force (Net)	(300)	700,772,080			(102)	(1,197,866,320)			(402)	(497,094,240)
23. In force December 31 of current year	47,200	12,183,860,974	(a)		32	88,996,103			47,232	12,272,857,077

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	4,001	4,001			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	8,837,996	9,028,921	417,146	6,508,869	5,206,781
25.2 Guaranteed renewable (b)	6,340,508	6,386,541		1,345,301	1,152,761
25.3 Non-renewable for stated reasons only (b)	181,746	185,672	8,578	3,095	1,422
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	15,360,250	15,601,134	425,724	7,857,265	6,360,964
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	15,364,251	15,605,135	425,724	7,857,265	6,360,964

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Minnesota

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	61,044,192		479,447		61,523,639
2. Annuity considerations	61,300,590		12,746,864		74,047,454
3. Deposit-type contract funds	3,447,133	XXX	87,126,446	XXX	90,573,579
4. Other considerations			299,039,263		299,039,263
5. Totals (Sum of Lines 1 to 4)	125,791,915		399,392,020		525,183,935
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,768,009				1,768,009
6.2 Applied to pay renewal premiums	3,240,936				3,240,936
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	14,116,477				14,116,477
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	19,125,422				19,125,422
Annuities:					
7.1 Paid in cash or left on deposit	227				227
7.2 Applied to provide paid-up annuities	16,834				16,834
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	17,061				17,061
8. Grand Totals (Lines 6.5 plus 7.4)	19,142,483				19,142,483
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	26,357,490				26,357,490
10. Matured endowments	551,629				551,629
11. Annuity benefits	17,750,733		22,922,527		40,673,260
12. Surrender values and withdrawals for life contracts	43,665,328		495,891,522		539,556,850
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	134,244				134,244
15. Totals	88,459,424		518,814,049		607,273,473
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	60	7,599,994			1	143,325			61	7,743,319
17. Incurred during current year	426	22,911,356							426	22,911,356
Settled during current year:										
18.1 By payment in full	432	27,043,291							432	27,043,291
18.2 By payment on compromised claims										
18.3 Totals paid	432	27,043,291							432	27,043,291
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	432	27,043,291							432	27,043,291
19. Unpaid Dec. 31, current year (16+17-18.6)	54	3,468,058			1	143,325			55	3,611,384
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	21,534	5,198,441,024	(a)		145	592,664,347			21,679	5,791,105,371
21. Issued during year	1,049	642,377,777				10,790,013			1,049	653,167,790
22. Other changes to in force (Net)	(278)	247,605,597			(135)	(531,222,235)			(413)	(283,616,638)
23. In force December 31 of current year	22,305	6,088,424,398	(a)		10	72,232,125			22,315	6,160,656,523

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	6,269,806	6,405,234	304,650	5,665,765	6,370,154
25.2 Guaranteed renewable (b)	2,928,417	2,616,463		286,414	441,934
25.3 Non-renewable for stated reasons only (b)	67,840	69,305	3,297		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	9,266,063	9,091,002	307,947	5,952,179	6,812,088
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	9,266,063	9,091,002	307,947	5,952,179	6,812,088

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Mississippi

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Missouri

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1-2 Ordinary (No. of Pols. & Certifs., Amount), 3-4 Credit Life (No. of Ind. Pols. & Gr. Certifs., Amount), 5-6 Group (No. of Certifs., Amount), 7-8 Industrial (No. of Pols. & Certifs., Amount), 9-10 Total (No. of Pols. & Certifs., Amount). Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$..., current year \$... Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$..., current year \$... Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$..., current year \$...

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various individual policies.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0.



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Montana

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	15,513,681		547,290		16,060,971
2. Annuity considerations	7,622,637		3,913,986		11,536,623
3. Deposit-type contract funds	97,994	XXX	12,950,344	XXX	13,048,338
4. Other considerations			5,430,061		5,430,061
5. Totals (Sum of Lines 1 to 4)	23,234,312		22,841,681		46,075,993
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	323,481				323,481
6.2 Applied to pay renewal premiums	1,036,925				1,036,925
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	3,618,700				3,618,700
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	4,979,106				4,979,106
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	4,538				4,538
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	4,538				4,538
8. Grand Totals (Lines 6.5 plus 7.4)	4,983,644				4,983,644
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	3,184,827		474,969		3,659,796
10. Matured endowments					
11. Annuity benefits	3,645,572		1,576,929		5,222,501
12. Surrender values and withdrawals for life contracts	9,552,135		516,754		10,068,889
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	43,505				43,505
15. Totals	16,426,039		2,568,652		18,994,691
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	14	592,162							14	592,162
17. Incurred during current year	67	2,673,722			1	474,969			68	3,148,691
Settled during current year:										
18.1 By payment in full	79	3,228,332			1	474,969			80	3,703,301
18.2 By payment on compromised claims										
18.3 Totals paid	79	3,228,332			1	474,969			80	3,703,301
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	79	3,228,332			1	474,969			80	3,703,301
19. Unpaid Dec. 31, current year (16+17-18.6)	2	37,553							2	37,553
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	3,054	789,027,196	(a)		39	443,488,643			3,093	1,232,515,839
21. Issued during year	198	113,333,609				18,127,150			198	131,460,759
22. Other changes to in force (Net)	320	182,325,999			(36)	(219,414,171)			284	(37,088,172)
23. In force December 31 of current year	3,572	1,084,686,804	(a)		3	242,201,622			3,575	1,326,888,426

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	931,843	951,973	35,233	917,394	2,691,729
25.2 Guaranteed renewable (b)	443,036	390,891		9,948	4,878
25.3 Non-renewable for stated reasons only (b)	20,219	20,656	764		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	1,395,098	1,363,520	35,997	927,342	2,696,607
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	1,395,098	1,363,520	35,997	927,342	2,696,607

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Nebraska

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	46,881,444		420,617		47,302,061
2. Annuity considerations	10,946,432		63,906,587		74,853,019
3. Deposit-type contract funds	6,128,730	XXX	19,690,741	XXX	25,819,471
4. Other considerations			91,908,055		91,908,055
5. Totals (Sum of Lines 1 to 4)	63,956,606		175,926,000		239,882,606
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,248,586				1,248,586
6.2 Applied to pay renewal premiums	3,284,671				3,284,671
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	11,379,002				11,379,002
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	15,912,259				15,912,259
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	12,794				12,794
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	12,794				12,794
8. Grand Totals (Lines 6.5 plus 7.4)	15,925,053				15,925,053
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	23,602,987				23,602,987
10. Matured endowments	15,014				15,014
11. Annuity benefits	3,776,920		10,020,617		13,797,537
12. Surrender values and withdrawals for life contracts	25,984,299		197,497,430		223,481,729
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	163,235				163,235
15. Totals	53,542,455		207,518,047		261,060,502
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	48	11,454,939							48	11,454,939
17. Incurred during current year	335	15,311,373							335	15,311,373
Settled during current year:										
18.1 By payment in full	344	23,781,235							344	23,781,235
18.2 By payment on compromised claims										
18.3 Totals paid	344	23,781,235							344	23,781,235
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	344	23,781,235							344	23,781,235
19. Unpaid Dec. 31, current year (16+17-18.6)	39	2,985,077							39	2,985,077
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	16,889	2,785,043,730	(a)		84	286,815,149			16,973	3,071,858,880
21. Issued during year	469	244,158,876			1	3,645,000			470	247,803,876
22. Other changes to in force (Net)	(326)	131,680,880			(73)	(262,695,707)			(399)	(131,014,827)
23. In force December 31 of current year	17,032	3,160,883,486	(a)		12	27,764,442			17,044	3,188,647,928

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	2,611,028	2,667,433	113,000	2,151,336	2,290,427
25.2 Guaranteed renewable (b)	2,998,303	3,154,681		786,930	2,299,338
25.3 Non-renewable for stated reasons only (b)	166,649	170,249	7,212	16,675	10,377
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	5,775,980	5,992,363	120,212	2,954,941	4,600,142
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	5,775,980	5,992,363	120,212	2,954,941	4,600,142

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Nevada

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF New Hampshire

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	37,195,811		199,576		37,395,387
2. Annuity considerations	32,960,691		9,099,984		42,060,675
3. Deposit-type contract funds	2,094,690	XXX	15,524,216	XXX	17,618,906
4. Other considerations			37,688,299		37,688,299
5. Totals (Sum of Lines 1 to 4)	72,251,192		62,512,075		134,763,267
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	840,551				840,551
6.2 Applied to pay renewal premiums	2,006,961				2,006,961
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	7,837,188				7,837,188
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	10,684,700				10,684,700
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	9,820				9,820
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	9,820				9,820
8. Grand Totals (Lines 6.5 plus 7.4)	10,694,520				10,694,520
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	16,381,243				16,381,243
10. Matured endowments	69,276				69,276
11. Annuity benefits	7,971,972		15,521,063		23,493,035
12. Surrender values and withdrawals for life contracts	25,089,415		15,066,170		40,155,585
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	114,194				114,194
15. Totals	49,626,100		30,587,233		80,213,333
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	23	1,977,354							23	1,977,354
17. Incurred during current year	251	16,396,839							251	16,396,839
Settled during current year:										
18.1 By payment in full	241	16,564,560							241	16,564,560
18.2 By payment on compromised claims										
18.3 Totals paid	241	16,564,560							241	16,564,560
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	241	16,564,560							241	16,564,560
19. Unpaid Dec. 31, current year (16+17-18.6)	33	1,809,633							33	1,809,633
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	13,307	3,250,114,275	(a)		32	117,047,953			13,339	3,367,162,229
21. Issued during year	950	499,539,168			2	1,435,000			952	500,974,168
22. Other changes to in force (Net)	(382)	(597,354)			(27)	(112,937,342)			(409)	(113,534,696)
23. In force December 31 of current year	13,875	3,749,056,089	(a)		7	5,545,611			13,882	3,754,601,700

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	2,622,424	2,679,076	114,981	1,075,379	1,060,615
25.2 Guaranteed renewable (b)	1,791,373	1,453,287		274,017	44,064
25.3 Non-renewable for stated reasons only (b)	76,810	78,469	3,368	623	623
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	4,490,607	4,210,832	118,349	1,350,019	1,105,302
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	4,490,607	4,210,832	118,349	1,350,019	1,105,302

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF New Jersey

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	430,355,524		4,367,614		434,723,138
2. Annuity considerations	144,075,341		76,090,442		220,165,783
3. Deposit-type contract funds	7,189,664	XXX	133,887,936	XXX	141,077,600
4. Other considerations			1,185,663,718		1,185,663,718
5. Totals (Sum of Lines 1 to 4)	581,620,529		1,400,009,710		1,981,630,239
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	4,094,807				4,094,807
6.2 Applied to pay renewal premiums	13,962,201				13,962,201
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	69,529,282				69,529,282
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	87,586,290				87,586,290
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	22,183				22,183
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	22,183				22,183
8. Grand Totals (Lines 6.5 plus 7.4)	87,608,473				87,608,473
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	107,004,003		3,713,046		110,717,049
10. Matured endowments	341,435				341,435
11. Annuity benefits	24,154,074		41,921,014		66,075,088
12. Surrender values and withdrawals for life contracts	157,453,356		482,462,322		639,915,678
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	2,125,228				2,125,228
15. Totals	291,078,096		528,096,382		819,174,478
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	81	18,527,012			1	201,870			82	18,728,881
17. Incurred during current year	846	119,921,394			8	4,362,733			854	124,284,127
Settled during current year:										
18.1 By payment in full	837	109,470,607			6	3,713,046			843	113,183,652
18.2 By payment on compromised claims										
18.3 Totals paid	837	109,470,607			6	3,713,046			843	113,183,652
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	837	109,470,607			6	3,713,046			843	113,183,652
19. Unpaid Dec. 31, current year (16+17-18.6)	90	28,977,799			3	851,557			93	29,829,356
POLICY EXHIBIT										
20. In force December 31, prior year	70,616	40,046,983,335	(a)		151	1,555,167,590			70,767	41,602,150,925
21. Issued during year	8,220	6,291,553,209			21	50,978,093			8,241	6,342,531,302
22. Other changes to in force (Net)	(2,392)	(1,206,474,751)			(67)	(770,237,506)			(2,459)	(1,976,712,257)
23. In force December 31 of current year	76,444	45,132,061,793	(a)		105	835,908,177			76,549	45,967,969,970

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	10,377	10,377			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	27,951,167	28,554,989	1,112,752	11,563,681	13,056,720
25.2 Guaranteed renewable (b)	11,465,380	10,134,655		1,869,073	2,304,326
25.3 Non-renewable for stated reasons only (b)	491,316	501,929	19,560	23,363	81,857
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	39,907,863	39,191,573	1,132,312	13,456,117	15,442,903
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	39,918,240	39,201,950	1,132,312	13,456,117	15,442,903

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF New Mexico

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	20,703,474		444,141		21,147,615
2. Annuity considerations	29,225,503		7,319,127		36,544,630
3. Deposit-type contract funds	1,446,794	XXX	6,433,228	XXX	7,880,022
4. Other considerations			1,473,095		1,473,095
5. Totals (Sum of Lines 1 to 4)	51,375,771		15,669,591		67,045,362
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	695,086				695,086
6.2 Applied to pay renewal premiums	1,232,272				1,232,272
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	6,271,629				6,271,629
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	8,198,987				8,198,987
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	9,398				9,398
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	9,398				9,398
8. Grand Totals (Lines 6.5 plus 7.4)	8,208,385				8,208,385
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	9,063,721				9,063,721
10. Matured endowments	44,333				44,333
11. Annuity benefits	3,393,261		2,864,793		6,258,054
12. Surrender values and withdrawals for life contracts	8,034,575		1,336,100		9,370,675
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	85,102				85,102
15. Totals	20,620,992		4,200,893		24,821,885
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	13	386,991							13	386,991
17. Incurred during current year	157	13,820,709							157	13,820,709
Settled during current year:										
18.1 By payment in full	149	9,193,034							149	9,193,034
18.2 By payment on compromised claims										
18.3 Totals paid	149	9,193,034							149	9,193,034
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	149	9,193,034							149	9,193,034
19. Unpaid Dec. 31, current year (16+17-18.6)	21	5,014,666							21	5,014,666
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	7,856	1,859,255,607	(a)		57	197,251,898			7,913	2,056,507,505
21. Issued during year	490	252,798,626			3	4,850,000			493	257,648,626
22. Other changes to in force (Net)	(114)	100,806,140			(42)	(185,217,852)			(156)	(84,411,712)
23. In force December 31 of current year	8,232	2,212,860,373	(a)		18	16,884,046			8,250	2,229,744,419

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	1,409,745	1,440,199	57,843	655,797	1,498,101
25.2 Guaranteed renewable (b)	1,033,612	859,855		222,834	383,563
25.3 Non-renewable for stated reasons only (b)	50,992	52,094	2,092		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	2,494,349	2,352,148	59,935	878,631	1,881,664
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	2,494,349	2,352,148	59,935	878,631	1,881,664

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF New York

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	1,269,206,701		25,490,281		1,294,696,982
2. Annuity considerations	407,114,013		167,212,181		574,326,194
3. Deposit-type contract funds	90,448,752	XXX	220,305,245	XXX	310,753,997
4. Other considerations			826,710,428		826,710,428
5. Totals (Sum of Lines 1 to 4)	1,766,769,466		1,239,718,135		3,006,487,601
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	13,153,778				13,153,778
6.2 Applied to pay renewal premiums	43,211,770				43,211,770
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	206,203,746				206,203,746
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	262,569,294				262,569,294
Annuities:					
7.1 Paid in cash or left on deposit	154				154
7.2 Applied to provide paid-up annuities	243,499				243,499
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	243,653				243,653
8. Grand Totals (Lines 6.5 plus 7.4)	262,812,947				262,812,947
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	316,616,346		9,074,314		325,690,660
10. Matured endowments	617,716				617,716
11. Annuity benefits	67,502,598		100,078,966		167,581,564
12. Surrender values and withdrawals for life contracts	520,158,610		861,086,909		1,381,245,519
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	4,886,779				4,886,779
15. Totals	909,782,049		970,240,189		1,880,022,238
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	326	45,392,647			5	1,946,288			331	47,338,936
17. Incurred during current year	2,980	354,577,485			19	9,425,877			2,999	364,003,362
Settled during current year:										
18.1 By payment in full	2,911	321,931,342			18	9,074,314			2,929	331,005,656
18.2 By payment on compromised claims										
18.3 Totals paid	2,911	321,931,342			18	9,074,314			2,929	331,005,656
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	2,911	321,931,342			18	9,074,314			2,929	331,005,656
19. Unpaid Dec. 31, current year (16+17-18.6)	395	78,038,791			6	2,297,851			401	80,336,642
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	215,295	117,489,378,864	(a)		502	5,063,999,634			215,797	122,553,378,498
21. Issued during year	22,080	16,867,253,471			84	525,193,793			22,164	17,392,447,264
22. Other changes to in force (Net)	(9,782)	(4,871,089,312)			(82)	(1,078,814,426)			(9,864)	(5,949,903,738)
23. In force December 31 of current year	227,593	129,485,543,023	(a)		504	4,510,379,001			228,097	133,995,922,024

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	7,239	7,239			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	61,975,760	63,314,393	3,973,195	52,393,312	42,751,331
25.2 Guaranteed renewable (b)	24,962,967	25,262,515		4,131,138	3,949,361
25.3 Non-renewable for stated reasons only (b)	827,676	845,556	53,070	25,114	56,523
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	87,766,403	89,422,464	4,026,265	56,549,564	46,757,215
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	87,773,642	89,429,703	4,026,265	56,549,564	46,757,215

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF North Carolina

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	153,885,982		2,077,244		155,963,226
2. Annuity considerations	92,350,829		75,812,269		168,163,098
3. Deposit-type contract funds	10,633,030	XXX	143,943,434	XXX	154,576,464
4. Other considerations			93,400,004		93,400,004
5. Totals (Sum of Lines 1 to 4)	256,869,841		315,232,951		572,102,792
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	4,821,588				4,821,588
6.2 Applied to pay renewal premiums	14,690,712				14,690,712
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	50,288,746				50,288,746
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	69,801,046				69,801,046
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	29,430				29,430
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	29,430				29,430
8. Grand Totals (Lines 6.5 plus 7.4)	69,830,476				69,830,476
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	85,009,902		641,572		85,651,474
10. Matured endowments	174,163				174,163
11. Annuity benefits	69,750,860		45,624,994		115,375,854
12. Surrender values and withdrawals for life contracts	74,004,721		92,795,566		166,800,287
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	842,521				842,521
15. Totals	229,782,167		139,062,132		368,844,299
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	142	7,735,739			4	595,634			146	8,331,373
17. Incurred during current year	1,189	92,910,854			4	869,475			1,193	93,780,329
Settled during current year:										
18.1 By payment in full	1,209	86,026,586			3	641,572			1,212	86,668,159
18.2 By payment on compromised claims										
18.3 Totals paid	1,209	86,026,586			3	641,572			1,212	86,668,159
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,209	86,026,586			3	641,572			1,212	86,668,159
19. Unpaid Dec. 31, current year (16+17-18.6)	122	14,620,007			5	823,537			127	15,443,544
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	56,264	15,442,566,430	(a)		152	1,742,803,035			56,416	17,185,369,464
21. Issued during year	3,084	1,815,407,309			1	58,118,073			3,085	1,873,525,382
22. Other changes to in force (Net)	592	805,686,278			(120)	(1,594,689,878)			472	(789,003,600)
23. In force December 31 of current year	59,940	18,063,660,017	(a)		33	206,231,230			59,973	18,269,891,247

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	4,379	4,379			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees					
Other Individual Policies:					
25.1 Non-cancelable (b)	20,991,461	21,444,905	1,155,814	21,881,295	12,805,833
25.2 Guaranteed renewable (b)	8,866,350	8,728,486		1,415,542	3,007,532
25.3 Non-renewable for stated reasons only (b)	607,963	621,097	33,477	29,620	(132,905)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	30,465,774	30,794,488	1,189,291	23,326,457	15,680,460
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	30,470,153	30,798,867	1,189,291	23,326,457	15,680,460

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF North Dakota

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Ohio

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	155,287,240		2,494,173		157,781,413
2. Annuity considerations	142,864,450		336,339,615		479,204,065
3. Deposit-type contract funds	26,657,322	XXX	109,590,789	XXX	136,248,111
4. Other considerations			284,312,843		284,312,843
5. Totals (Sum of Lines 1 to 4)	324,809,012		732,737,420		1,057,546,432
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	3,126,281				3,126,281
6.2 Applied to pay renewal premiums	8,635,375				8,635,375
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	32,406,618				32,406,618
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	44,168,274				44,168,274
Annuities:					
7.1 Paid in cash or left on deposit	1,133				1,133
7.2 Applied to provide paid-up annuities	39,772				39,772
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	40,905				40,905
8. Grand Totals (Lines 6.5 plus 7.4)	44,209,179				44,209,179
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	51,893,982		3,823,467		55,717,449
10. Matured endowments	127,463				127,463
11. Annuity benefits	27,379,196		78,634,196		106,013,392
12. Surrender values and withdrawals for life contracts	132,498,205		225,774,180		358,272,385
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	401,013				401,013
15. Totals	212,299,859		308,231,843		520,531,702
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	143	8,788,182			13	4,116,564			156	12,904,745
17. Incurred during current year	1,047	50,274,682			8	4,224,527			1,055	54,499,210
Settled during current year:										
18.1 By payment in full	1,061	52,407,152			7	3,823,467			1,068	56,230,619
18.2 By payment on compromised claims										
18.3 Totals paid	1,061	52,407,152			7	3,823,467			1,068	56,230,619
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,061	52,407,152			7	3,823,467			1,068	56,230,619
19. Unpaid Dec. 31, current year (16+17-18.6)	129	6,655,712			14	4,517,624			143	11,173,336
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	49,674	11,247,896,297	(a)		309	3,105,174,066			49,983	14,353,070,363
21. Issued during year	2,668	1,295,579,858			4	37,521,600			2,672	1,333,101,458
22. Other changes to in force (Net)	2,242	2,082,423,921			(210)	(2,730,596,142)			2,032	(648,172,221)
23. In force December 31 of current year	54,584	14,625,900,076	(a)		103	412,099,524			54,687	15,037,999,600

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	1,749	1,749			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	11,843,581	12,099,428	672,435	7,323,318	7,122,750
25.2 Guaranteed renewable (b)	5,080,150	5,179,842		998,242	908,242
25.3 Non-renewable for stated reasons only (b)	162,865	166,383	9,247	2,956	(12,185)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	17,086,596	17,445,653	681,682	8,324,516	8,018,807
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	17,088,345	17,447,402	681,682	8,324,516	8,018,807

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Oklahoma

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pol. & Certifs., 2 Amount, 3 No. of Ind. Pol. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pol. & Certifs., 8 Amount, 9 No. of Pol. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred, and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies, Federal Employees Health Benefits Plan, Medicare Title XVIII, and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Oregon

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	33,328,755		155,624		33,484,379
2. Annuity considerations	37,934,228		35,439,233		73,373,461
3. Deposit-type contract funds	722,287	XXX	26,496,198	XXX	27,218,485
4. Other considerations			25,382,376		25,382,376
5. Totals (Sum of Lines 1 to 4)	71,985,270		87,473,431		159,458,701
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,329,405				1,329,405
6.2 Applied to pay renewal premiums	1,865,885				1,865,885
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	7,304,636				7,304,636
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	10,499,926				10,499,926
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	5,762				5,762
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	5,762				5,762
8. Grand Totals (Lines 6.5 plus 7.4)	10,505,688				10,505,688
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	34,335,887				34,335,887
10. Matured endowments	140,197				140,197
11. Annuity benefits	5,431,387		10,307,528		15,738,915
12. Surrender values and withdrawals for life contracts	24,367,895		33,165,932		57,533,827
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	131,476				131,476
15. Totals	64,406,842		43,473,460		107,880,302
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	27	898,090							27	898,090
17. Incurred during current year	218	36,868,901							218	36,868,901
Settled during current year:										
18.1 By payment in full	207	34,607,560							207	34,607,560
18.2 By payment on compromised claims										
18.3 Totals paid	207	34,607,560							207	34,607,560
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	207	34,607,560							207	34,607,560
19. Unpaid Dec. 31, current year (16+17-18.6)	38	3,159,431							38	3,159,431
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	11,181	3,271,199,210	(a)		38	128,828,813			11,219	3,400,028,023
21. Issued during year	884	569,960,707				150,000			884	570,110,707
22. Other changes to in force (Net)	(259)	(51,672,911)			(36)	(126,121,813)			(295)	(177,794,724)
23. In force December 31 of current year	11,806	3,789,487,006	(a)		2	2,857,000			11,808	3,792,344,006

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	3,451,689	3,526,255	144,373	1,316,072	1,752,688
25.2 Guaranteed renewable (b)	1,516,624	1,392,427		424,212	(23,620)
25.3 Non-renewable for stated reasons only (b)	46,151	47,148	1,930	21,088	(161,759)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	5,014,464	4,965,830	146,303	1,761,372	1,567,309
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	5,014,464	4,965,830	146,303	1,761,372	1,567,309

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Pennsylvania

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	367,462,924		2,362,142		369,825,066
2. Annuity considerations	182,036,055		61,900,217		243,936,272
3. Deposit-type contract funds	12,027,001	XXX	25,857,390	XXX	37,884,391
4. Other considerations			515,248,526		515,248,526
5. Totals (Sum of Lines 1 to 4)	561,525,980		605,368,275		1,166,894,255
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	5,537,687				5,537,687
6.2 Applied to pay renewal premiums	18,036,181				18,036,181
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	63,429,917				63,429,917
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	87,003,785				87,003,785
Annuities:					
7.1 Paid in cash or left on deposit	3,757				3,757
7.2 Applied to provide paid-up annuities	65,288				65,288
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	69,045				69,045
8. Grand Totals (Lines 6.5 plus 7.4)	87,072,830				87,072,830
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	116,180,614		2,155,831		118,336,445
10. Matured endowments	255,680				255,680
11. Annuity benefits	36,411,327		147,454,705		183,866,032
12. Surrender values and withdrawals for life contracts	209,511,580		490,582,704		700,094,284
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	804,955				804,955
15. Totals	363,164,156		640,193,240		1,003,357,396
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	141	19,090,425			2	582,379			143	19,672,804
17. Incurred during current year	1,382	116,119,500			4	2,305,831			1,386	118,425,331
Settled during current year:										
18.1 By payment in full	1,374	117,240,916			3	2,155,831			1,377	119,396,748
18.2 By payment on compromised claims										
18.3 Totals paid	1,374	117,240,916			3	2,155,831			1,377	119,396,748
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,374	117,240,916			3	2,155,831			1,377	119,396,748
19. Unpaid Dec. 31, current year (16+17-18.6)	149	17,969,008			3	732,379			152	18,701,387
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	86,137	26,114,755,268	(a)		352	2,662,816,516			86,489	28,777,571,784
21. Issued during year	6,926	3,880,236,448			12	22,033,552			6,938	3,902,270,000
22. Other changes to in force (Net)	(32)	1,166,852,231			(310)	(2,368,133,230)			(342)	(1,201,280,999)
23. In force December 31 of current year	93,031	31,161,843,947	(a)		54	316,716,838			93,085	31,478,560,785

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	15,214	15,214			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	26,097,398	26,661,058	1,452,487	15,485,570	18,552,615
25.2 Guaranteed renewable (b)	12,999,186	12,468,815		4,184,963	3,558,432
25.3 Non-renewable for stated reasons only (b)	955,573	976,216	53,195	24,268	426,054
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	40,052,157	40,106,089	1,505,682	19,694,801	22,537,101
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	40,067,371	40,121,303	1,505,682	19,694,801	22,537,101

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Rhode Island

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	21,226,790		224,831		21,451,621
2. Annuity considerations	21,495,080		62,353,854		83,848,934
3. Deposit-type contract funds	2,351,832	XXX	11,347,715	XXX	13,699,547
4. Other considerations			58,817,189		58,817,189
5. Totals (Sum of Lines 1 to 4)	45,073,702		132,743,589		177,817,291
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	586,649				586,649
6.2 Applied to pay renewal premiums	1,732,082				1,732,082
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	6,012,062				6,012,062
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	8,330,793				8,330,793
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	3,170				3,170
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	3,170				3,170
8. Grand Totals (Lines 6.5 plus 7.4)	8,333,963				8,333,963
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	17,115,046		235,292		17,350,338
10. Matured endowments	42,985				42,985
11. Annuity benefits	3,005,715		17,144,981		20,150,696
12. Surrender values and withdrawals for life contracts	17,990,503		24,448,133		42,438,636
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	194,076				194,076
15. Totals	38,348,325		41,828,406		80,176,731
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	22	3,263,833			1	235,292			23	3,499,125
17. Incurred during current year	198	14,885,247							198	14,885,247
Settled during current year:										
18.1 By payment in full	204	17,352,106			1	235,292			205	17,587,398
18.2 By payment on compromised claims										
18.3 Totals paid	204	17,352,106			1	235,292			205	17,587,398
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	204	17,352,106			1	235,292			205	17,587,398
19. Unpaid Dec. 31, current year (16+17-18.6)	16	796,974							16	796,974
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	8,488	2,277,350,471	(a)		30	226,298,371			8,518	2,503,648,842
21. Issued during year	817	339,908,575			1	2,960,000			818	342,868,575
22. Other changes to in force (Net)	(4)	102,285,416			(15)	(218,457,517)			(19)	(116,172,101)
23. In force December 31 of current year	9,301	2,719,544,462	(a)		16	10,800,854			9,317	2,730,345,316

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	2,141,878	2,188,149	101,695	1,742,156	(105,005)
25.2 Guaranteed renewable (b)	988,238	772,437		191,323	(134,221)
25.3 Non-renewable for stated reasons only (b)	31,827	32,515	1,511		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	3,161,943	2,993,101	103,206	1,933,479	(239,226)
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	3,161,943	2,993,101	103,206	1,933,479	(239,226)

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF South Carolina

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	83,551,009		1,198,050		84,749,059
2. Annuity considerations	46,007,792		31,083,462		77,091,254
3. Deposit-type contract funds	3,795,269	XXX	59,520,153	XXX	63,315,422
4. Other considerations			25,618,078		25,618,078
5. Totals (Sum of Lines 1 to 4)	133,354,070		117,419,743		250,773,813
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	2,514,391				2,514,391
6.2 Applied to pay renewal premiums	7,388,355				7,388,355
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	24,128,715				24,128,715
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	34,031,461				34,031,461
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	13,542				13,542
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	13,542				13,542
8. Grand Totals (Lines 6.5 plus 7.4)	34,045,003				34,045,003
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	34,524,481		1,056,409		35,580,890
10. Matured endowments	234,084				234,084
11. Annuity benefits	8,525,240		24,714,525		33,239,765
12. Surrender values and withdrawals for life contracts	47,229,656		17,674,328		64,903,984
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	857,880				857,880
15. Totals	91,371,341		43,445,262		134,816,603
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	56	7,292,064			2	341,035			58	7,633,099
17. Incurred during current year	592	30,957,698			3	1,056,409			595	32,014,107
Settled during current year:										
18.1 By payment in full	604	35,616,444			3	1,056,409			607	36,672,853
18.2 By payment on compromised claims										
18.3 Totals paid	604	35,616,444			3	1,056,409			607	36,672,853
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	604	35,616,444			3	1,056,409			607	36,672,853
19. Unpaid Dec. 31, current year (16+17-18.6)	44	2,633,318			2	341,035			46	2,974,353
POLICY EXHIBIT										
20. In force December 31, prior year	27,073	8,264,667,751	(a)		87	626,087,418			27,160	8,890,755,169
21. Issued during year	1,851	1,156,890,910			1	10,188,000			1,852	1,167,078,910
22. Other changes to in force (Net)	(154)	144,529,264			(69)	(473,345,481)			(223)	(328,816,217)
23. In force December 31 of current year	28,770	9,566,087,925	(a)		19	162,929,937			28,789	9,729,017,862

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	21,748	21,748			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	9,966,242	10,181,540	439,403	10,338,563	11,393,531
25.2 Guaranteed renewable (b)	5,236,294	5,452,444		1,452,966	911,388
25.3 Non-renewable for stated reasons only (b)	333,300	340,500	14,695	55,958	18,261
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	15,535,836	15,974,484	454,098	11,847,487	12,323,180
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	15,557,584	15,996,232	454,098	11,847,487	12,323,180

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF South Dakota

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include: DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS, DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS, DIRECT CLAIMS AND BENEFITS PAID, and DETAILS OF WRITE-INS.

Table with 10 columns: 1 No. of Pol. & Certifs., 2 Amount, 3 No. of Ind. Pol. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pol. & Certifs., 8 Amount, 9 No. of Pol. & Certifs., 10 Amount. Rows include: DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED and POLICY EXHIBIT.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include: 24 Group Policies (b), 24.1 Federal Employees Health Benefits Plan premium (b), 24.2 Credit (Group and Individual), 24.3 Collectively renewable policies/certificates (b), 24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies: 25.1 Non-cancelable (b), 25.2 Guaranteed renewable (b), 25.3 Non-renewable for stated reasons only (b), 25.4 Other accident only, 25.5 All other (b), 25.6 Totals (sum of Lines 25.1 to 25.5), 26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Tennessee

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	116,556,462		849,844		117,406,306
2. Annuity considerations	67,893,302		22,110,788		90,004,090
3. Deposit-type contract funds	4,861,277	XXX	36,677,666	XXX	41,538,943
4. Other considerations			281,059,049		281,059,049
5. Totals (Sum of Lines 1 to 4)	189,311,041		340,697,347		530,008,388
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	2,291,175				2,291,175
6.2 Applied to pay renewal premiums	5,989,250				5,989,250
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	22,479,168				22,479,168
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	30,759,593				30,759,593
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	32,612				32,612
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	32,612				32,612
8. Grand Totals (Lines 6.5 plus 7.4)	30,792,205				30,792,205
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	69,330,536		213,470		69,544,006
10. Matured endowments	360,440				360,440
11. Annuity benefits	13,755,446		18,107,699		31,863,145
12. Surrender values and withdrawals for life contracts	63,158,996		140,228,022		203,387,018
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	623,582				623,582
15. Totals	147,229,000		158,549,191		305,778,191
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	85	24,680,150							85	24,680,150
17. Incurred during current year	721	53,420,629			2	213,470			723	53,634,099
Settled during current year:										
18.1 By payment in full	706	70,214,518			2	213,470			708	70,427,987
18.2 By payment on compromised claims										
18.3 Totals paid	706	70,214,518			2	213,470			708	70,427,987
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	706	70,214,518			2	213,470			708	70,427,987
19. Unpaid Dec. 31, current year (16+17-18.6)	100	7,886,261							100	7,886,261
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	30,955	11,651,383,416	(a)		188	1,294,778,883			31,143	12,946,162,299
21. Issued during year	2,418	1,777,205,849			2	27,531,012			2,420	1,804,736,861
22. Other changes to in force (Net)	114	452,201,033			(170)	(1,052,550,395)			(56)	(600,349,362)
23. In force December 31 of current year	33,487	13,880,790,298	(a)		20	269,759,500			33,507	14,150,549,798

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	4,100	4,100			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	12,532,715	12,803,456	618,508	8,977,616	9,139,012
25.2 Guaranteed renewable (b)	5,991,627	5,545,741		1,454,304	1,779,716
25.3 Non-renewable for stated reasons only (b)	286,976	293,176	14,163	21,914	(69,403)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	18,811,318	18,642,373	632,671	10,453,834	10,849,325
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	18,815,418	18,646,473	632,671	10,453,834	10,849,325

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Texas

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies, Federal Employees Health Benefits Plan, Medicare Title XVIII, and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Utah

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1-2 Ordinary (No. of Pols. & Certifs., Amount), 3-4 Credit Life (No. of Ind. Pols. & Gr. Certifs., Amount), 5-6 Group (No. of Certifs., Amount), 7-8 Industrial (No. of Pols. & Certifs., Amount), 9-10 Total (No. of Pols. & Certifs., Amount). Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$..., current year \$... Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$..., current year \$... Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$..., current year \$...

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0.



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Vermont

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	15,084,393		8,982,079		24,066,472
2. Annuity considerations	12,166,738		3,483,557		15,650,295
3. Deposit-type contract funds	257,830	XXX	3,115,874	XXX	3,373,704
4. Other considerations			14,877,665		14,877,665
5. Totals (Sum of Lines 1 to 4)	27,508,961		30,459,175		57,968,136
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	665,427				665,427
6.2 Applied to pay renewal premiums	1,792,535				1,792,535
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	4,989,616				4,989,616
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	7,447,578				7,447,578
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	3,912				3,912
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	3,912				3,912
8. Grand Totals (Lines 6.5 plus 7.4)	7,451,490				7,451,490
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	10,217,611				10,217,611
10. Matured endowments	16,011				16,011
11. Annuity benefits	2,849,898		3,931,614		6,781,512
12. Surrender values and withdrawals for life contracts	9,791,825		15,603,803		25,395,628
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	156,652				156,652
15. Totals	23,031,997		19,535,417		42,567,414
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	31	662,858							31	662,858
17. Incurred during current year	216	11,357,398							216	11,357,398
Settled during current year:										
18.1 By payment in full	211	10,390,275							211	10,390,275
18.2 By payment on compromised claims										
18.3 Totals paid	211	10,390,275							211	10,390,275
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	211	10,390,275							211	10,390,275
19. Unpaid Dec. 31, current year (16+17-18.6)	36	1,629,980							36	1,629,980
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	7,597	1,160,455,306	(a)		19	162,457,130			7,616	1,322,912,436
21. Issued during year	390	189,296,852				750,000			390	190,046,852
22. Other changes to in force (Net)	(115)	122,330,899			(18)	(162,850,338)			(133)	(40,519,439)
23. In force December 31 of current year	7,872	1,472,083,057	(a)		1	356,792			7,873	1,472,439,849

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	955,809	976,457	50,851	989,886	191,978
25.2 Guaranteed renewable (b)	548,640	400,106		263,155	259,038
25.3 Non-renewable for stated reasons only (b)	1,579	1,613	84		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	1,506,028	1,378,176	50,935	1,253,041	451,016
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	1,506,028	1,378,176	50,935	1,253,041	451,016

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Virginia

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	215,580,347		1,436,295		217,016,642
2. Annuity considerations	129,041,465		92,241,431		221,282,896
3. Deposit-type contract funds	15,718,131	XXX	80,357,957	XXX	96,076,088
4. Other considerations			246,936,308		246,936,308
5. Totals (Sum of Lines 1 to 4)	360,339,943		420,971,991		781,311,934
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	4,635,847				4,635,847
6.2 Applied to pay renewal premiums	12,954,225				12,954,225
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	51,928,542				51,928,542
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	69,518,614				69,518,614
Annuities:					
7.1 Paid in cash or left on deposit	1,787				1,787
7.2 Applied to provide paid-up annuities	57,119				57,119
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	58,906				58,906
8. Grand Totals (Lines 6.5 plus 7.4)	69,577,520				69,577,520
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	78,148,144		3,137,264		81,285,408
10. Matured endowments	546,724				546,724
11. Annuity benefits	24,330,218		47,424,519		71,754,737
12. Surrender values and withdrawals for life contracts	135,506,543		541,285,271		676,791,814
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	859,213				859,213
15. Totals	239,390,842		591,847,054		831,237,896
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	155	12,514,638			3	882,509			158	13,397,147
17. Incurred during current year	1,021	76,164,901			5	2,857,942			1,026	79,022,843
Settled during current year:										
18.1 By payment in full	1,046	79,554,081			7	3,137,264			1,053	82,691,345
18.2 By payment on compromised claims										
18.3 Totals paid	1,046	79,554,081			7	3,137,264			1,053	82,691,345
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	1,046	79,554,081			7	3,137,264			1,053	82,691,345
19. Unpaid Dec. 31, current year (16+17-18.6)	130	9,125,458			1	603,187			131	9,728,645
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	66,893	18,109,952,274	(a)		154	1,220,226,634			67,047	19,330,178,908
21. Issued during year	4,182	2,235,050,138			3	13,392,426			4,185	2,248,442,564
22. Other changes to in force (Net)	(1,312)	115,487,421			(132)	(1,048,829,342)			(1,444)	(933,341,921)
23. In force December 31 of current year	69,763	20,460,489,833	(a)		25	184,789,718			69,788	20,645,279,551

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	17,577,722	17,957,436	704,247	9,562,788	9,258,233
25.2 Guaranteed renewable (b)	11,831,176	13,624,271		2,849,467	5,589,692
25.3 Non-renewable for stated reasons only (b)	573,349	585,735	22,972	13,643	81,173
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	29,982,247	32,167,442	727,219	12,425,898	14,929,098
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	29,982,247	32,167,442	727,219	12,425,898	14,929,098

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Washington

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	75,119,781		403,994		75,523,775
2. Annuity considerations	70,059,664		107,191,145		177,250,809
3. Deposit-type contract funds	4,502,342	XXX	9,088,791	XXX	13,591,133
4. Other considerations			75,803,972		75,803,972
5. Totals (Sum of Lines 1 to 4)	149,681,787		192,487,902		342,169,689
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,558,756				1,558,756
6.2 Applied to pay renewal premiums	3,480,083				3,480,083
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	15,457,727				15,457,727
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	20,496,566				20,496,566
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	21,384				21,384
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	21,384				21,384
8. Grand Totals (Lines 6.5 plus 7.4)	20,517,950				20,517,950
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	29,226,128				29,226,128
10. Matured endowments	107,213				107,213
11. Annuity benefits	10,000,692		16,125,909		26,126,601
12. Surrender values and withdrawals for life contracts	72,984,203		73,963,433		146,947,636
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	218,668				218,668
15. Totals	112,536,904		90,089,342		202,626,246
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	45	2,616,543			1	110,216			46	2,726,760
17. Incurred during current year	421	29,714,449							421	29,714,449
Settled during current year:										
18.1 By payment in full	402	29,551,891							402	29,551,891
18.2 By payment on compromised claims										
18.3 Totals paid	402	29,551,891							402	29,551,891
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	402	29,551,891							402	29,551,891
19. Unpaid Dec. 31, current year (16+17-18.6)	64	2,779,101			1	110,216			65	2,889,317
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	22,457	6,751,257,566	(a)		62	732,135,221			22,519	7,483,392,786
21. Issued during year	1,531	933,874,949			1	1,725,000			1,532	935,599,949
22. Other changes to in force (Net)	(146)	359,038,746			(59)	(730,518,803)			(205)	(371,480,057)
23. In force December 31 of current year	23,842	8,044,171,261	(a)		4	3,341,418			23,846	8,047,512,679

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	6,895,452	7,044,412	272,001	5,281,335	3,549,266
25.2 Guaranteed renewable (b)	4,367,523	3,415,538		729,058	1,958,214
25.3 Non-renewable for stated reasons only (b)	196,185	200,424	7,739	3,638	(98,439)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	11,459,160	10,660,374	279,740	6,014,031	5,409,041
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	11,459,160	10,660,374	279,740	6,014,031	5,409,041

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF West Virginia

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	17,900,346		85,841		17,986,187
2. Annuity considerations	10,146,359		11,808,515		21,954,874
3. Deposit-type contract funds	1,332,807	XXX	56,261,974	XXX	57,594,781
4. Other considerations			35,216,878		35,216,878
5. Totals (Sum of Lines 1 to 4)	29,379,512		103,373,208		132,752,720
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	505,576				505,576
6.2 Applied to pay renewal premiums	1,354,771				1,354,771
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	4,718,746				4,718,746
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	6,579,093				6,579,093
Annuities:					
7.1 Paid in cash or left on deposit	126				126
7.2 Applied to provide paid-up annuities	63,425				63,425
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	63,551				63,551
8. Grand Totals (Lines 6.5 plus 7.4)	6,642,644				6,642,644
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	9,451,293				9,451,293
10. Matured endowments	67,740				67,740
11. Annuity benefits	2,703,118		6,493,620		9,196,738
12. Surrender values and withdrawals for life contracts	12,479,925		29,767,025		42,246,950
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	102,357				102,357
15. Totals	24,804,433		36,260,645		61,065,078
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	22	1,554,307							22	1,554,307
17. Incurred during current year	193	9,764,486							193	9,764,486
Settled during current year:										
18.1 By payment in full	193	9,621,314							193	9,621,314
18.2 By payment on compromised claims										
18.3 Totals paid	193	9,621,314							193	9,621,314
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	193	9,621,314							193	9,621,314
19. Unpaid Dec. 31, current year (16+17-18.6)	22	1,697,480							22	1,697,480
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	7,763	1,273,224,590	(a)		76	271,050,810			7,839	1,544,275,400
21. Issued during year	265	109,933,337			1	1,522,500			266	111,455,837
22. Other changes to in force (Net)	185	229,927,643			(73)	(268,477,834)			112	(38,550,191)
23. In force December 31 of current year	8,213	1,613,085,570	(a)		4	4,095,476			8,217	1,617,181,046

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	154	154			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	955,919	976,570	46,963	1,731,666	427,415
25.2 Guaranteed renewable (b)	441,814	579,220		195,378	79,542
25.3 Non-renewable for stated reasons only (b)	49,541	50,611	2,434	14,780	(59,203)
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	1,447,274	1,606,401	49,397	1,941,824	447,754
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	1,447,428	1,606,555	49,397	1,941,824	447,754

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Wisconsin

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	56,758,394		543,137		57,301,531
2. Annuity considerations	54,332,009		11,264,308		65,596,317
3. Deposit-type contract funds	4,591,385	XXX	4,800,243	XXX	9,391,628
4. Other considerations			68,958,247		68,958,247
5. Totals (Sum of Lines 1 to 4)	115,681,788		85,565,935		201,247,723
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	1,807,102				1,807,102
6.2 Applied to pay renewal premiums	4,399,339				4,399,339
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	14,262,958				14,262,958
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	20,469,399				20,469,399
Annuities:					
7.1 Paid in cash or left on deposit	151				151
7.2 Applied to provide paid-up annuities	14,339				14,339
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	14,490				14,490
8. Grand Totals (Lines 6.5 plus 7.4)	20,483,889				20,483,889
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	33,165,602		1,032,171		34,197,773
10. Matured endowments	450,434				450,434
11. Annuity benefits	11,482,265		44,260,688		55,742,953
12. Surrender values and withdrawals for life contracts	53,063,143		43,334,911		96,398,054
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	187,137				187,137
15. Totals	98,348,581		88,627,770		186,976,351
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	73	5,153,720							73	5,153,720
17. Incurred during current year	615	30,832,179			4	1,032,171			619	31,864,350
Settled during current year:										
18.1 By payment in full	612	33,802,213			4	1,032,171			616	34,834,384
18.2 By payment on compromised claims										
18.3 Totals paid	612	33,802,213			4	1,032,171			616	34,834,384
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	612	33,802,213			4	1,032,171			616	34,834,384
19. Unpaid Dec. 31, current year (16+17-18.6)	76	2,183,686							76	2,183,686
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	23,921	4,519,650,934	(a)		218	1,163,458,051			24,139	5,683,108,985
21. Issued during year	1,468	586,838,190			3	10,707,500			1,471	597,545,690
22. Other changes to in force (Net)	333	639,923,003			(179)	(928,560,507)			154	(288,637,504)
23. In force December 31 of current year	25,722	5,746,412,127	(a)		42	245,605,044			25,764	5,992,017,171

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	3,645	3,645			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	4,289,490	4,382,154	189,505	3,094,929	1,537,856
25.2 Guaranteed renewable (b)	2,275,559	2,440,302		471,099	1,366,835
25.3 Non-renewable for stated reasons only (b)	100,637	102,811	4,446		
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	6,665,686	6,925,267	193,951	3,566,028	2,904,691
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	6,669,331	6,928,912	193,951	3,566,028	2,904,691

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Wyoming

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include Direct Death Benefits and Matured Endowments Incurred and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF American Samoa

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include: DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS, DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS, DIRECT CLAIMS AND BENEFITS PAID, and DETAILS OF WRITE-INS.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include: DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED and POLICY EXHIBIT.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$
Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$
Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include: 24 Group Policies (b), 24.1 Federal Employees Health Benefits Plan premium (b), 24.2 Credit (Group and Individual), 24.3 Collectively renewable policies/certificates (b), 24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies: 25.1 Non-cancelable (b), 25.2 Guaranteed renewable (b), 25.3 Non-renewable for stated reasons only (b), 25.4 Other accident only, 25.5 All other (b), 25.6 Totals (sum of Lines 25.1 to 25.5), 26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Guam

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	1,500				1,500
2. Annuity considerations	1,500		94,533		96,033
3. Deposit-type contract funds		XXX	57,902	XXX	57,902
4. Other considerations					
5. Totals (Sum of Lines 1 to 4)	3,000		152,435		155,435
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit					
6.2 Applied to pay renewal premiums					
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period					
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)					
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities					
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)					
8. Grand Totals (Lines 6.5 plus 7.4)					
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits					
10. Matured endowments					
11. Annuity benefits					
12. Surrender values and withdrawals for life contracts	2,443				2,443
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health					
15. Totals	2,443				2,443
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year		8								8
17. Incurred during current year		(8)								(8)
Settled during current year:										
18.1 By payment in full										
18.2 By payment on compromised claims										
18.3 Totals paid										
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements										
19. Unpaid Dec. 31, current year (16+17-18.6)										
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year		50,000	(a)							50,000
21. Issued during year										
22. Other changes to in force (Net)		(25,000)								(25,000)
23. In force December 31 of current year		25,000	(a)							25,000

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees					
Other Individual Policies:					
25.1 Non-cancelable (b)	7,527	7,690			
25.2 Guaranteed renewable (b)					
25.3 Non-renewable for stated reasons only (b)					
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	7,527	7,690			
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	7,527	7,690			

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Puerto Rico

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	78,675,449		21,708		78,697,157
2. Annuity considerations	3,760,905		1,943,000		5,703,905
3. Deposit-type contract funds	734,661	XXX	1,425,833	XXX	2,160,494
4. Other considerations			20,414,183		20,414,183
5. Totals (Sum of Lines 1 to 4)	83,171,015		23,804,724		106,975,739
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	222,589				222,589
6.2 Applied to pay renewal premiums	417,860				417,860
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	8,161,512				8,161,512
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	8,801,961				8,801,961
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	441				441
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	441				441
8. Grand Totals (Lines 6.5 plus 7.4)	8,802,402				8,802,402
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	3,018,600				3,018,600
10. Matured endowments					
11. Annuity benefits	1,356,215		5,432,420		6,788,635
12. Surrender values and withdrawals for life contracts	15,434,822		15,938,600		31,373,422
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	284,199				284,199
15. Totals	20,093,836		21,371,020		41,464,856
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year	5	515,313							5	515,313
17. Incurred during current year	51	3,242,419							51	3,242,419
Settled during current year:										
18.1 By payment in full	49	3,302,799							49	3,302,799
18.2 By payment on compromised claims										
18.3 Totals paid	49	3,302,799							49	3,302,799
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	49	3,302,799							49	3,302,799
19. Unpaid Dec. 31, current year (16+17-18.6)	7	454,933							7	454,933
POLICY EXHIBIT										
20. In force December 31, prior year	10,140	5,103,624,008	(a)						10,140	5,103,624,008
21. Issued during year	1,538	830,320,579				600,000			1,538	830,920,579
22. Other changes to in force (Net)	(620)	(307,172,342)				(600,000)			(620)	(307,772,342)
23. In force December 31 of current year	11,058	5,626,772,245	(a)						11,058	5,626,772,245

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	7,616,426	7,780,962	389,358	1,130,574	2,285,066
25.2 Guaranteed renewable (b)	1,991,105	1,110,080		9,026	59,490
25.3 Non-renewable for stated reasons only (b)	69,163	70,657	3,536	5,230	80,700
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	9,676,694	8,961,699	392,894	1,144,830	2,425,256
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	9,676,694	8,961,699	392,894	1,144,830	2,425,256

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF U.S. Virgin Islands

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	14,455				14,455
2. Annuity considerations			21,301,901		21,301,901
3. Deposit-type contract funds		XXX	32,500	XXX	32,500
4. Other considerations					
5. Totals (Sum of Lines 1 to 4)	14,455		21,334,401		21,348,856
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit					
6.2 Applied to pay renewal premiums					
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	87				87
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	87				87
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities					
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)					
8. Grand Totals (Lines 6.5 plus 7.4)	87				87
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits					
10. Matured endowments					
11. Annuity benefits	4,173				4,173
12. Surrender values and withdrawals for life contracts	3,122				3,122
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health					
15. Totals	7,295				7,295
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pols. & Certifs.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pols. & Certifs.	Amount	No. of Pols. & Certifs.	Amount
16. Unpaid December 31, prior year		1								1
17. Incurred during current year Settled during current year:		(1)								(1)
18.1 By payment in full										
18.2 By payment on compromised claims										
18.3 Totals paid										
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements										
19. Unpaid Dec. 31, current year (16+17-18.6)										
POLICY EXHIBIT					No. of Policies					
20. In force December 31, prior year			(a)							
21. Issued during year										
22. Other changes to in force (Net)										
23. In force December 31 of current year			(a)							

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	25,328	25,875			
25.2 Guaranteed renewable (b)	4,233				
25.3 Non-renewable for stated reasons only (b)					
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	29,561	25,875			
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	29,561	25,875			

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons
 insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Northern Mariana Islands

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include: DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS, DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS, DIRECT CLAIMS AND BENEFITS PAID, and DETAILS OF WRITE-INS.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include: DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED and POLICY EXHIBIT.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$. Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$. Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$.

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include: 24 Group Policies (b), 24.1 Federal Employees Health Benefits Plan premium (b), 24.2 Credit (Group and Individual), 24.3 Collectively renewable policies/certificates (b), 24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies: 25.1 Non-cancelable (b), 25.2 Guaranteed renewable (b), 25.3 Non-renewable for stated reasons only (b), 25.4 Other accident only, 25.5 All other (b), 25.6 Totals (sum of Lines 25.1 to 25.5), 26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6).

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Canada

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	2,175,240		31,054		2,206,294
2. Annuity considerations			845,656		845,656
3. Deposit-type contract funds		XXX	315,448	XXX	315,448
4. Other considerations			414		414
5. Totals (Sum of Lines 1 to 4)	2,175,240		1,192,572		3,367,812
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	19,560				19,560
6.2 Applied to pay renewal premiums	339,754				339,754
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	1,761,042				1,761,042
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	2,120,356				2,120,356
Annuities:					
7.1 Paid in cash or left on deposit					
7.2 Applied to provide paid-up annuities	517				517
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	517				517
8. Grand Totals (Lines 6.5 plus 7.4)	2,120,873				2,120,873
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	246,374				246,374
10. Matured endowments					
11. Annuity benefits	16,434				16,434
12. Surrender values and withdrawals for life contracts	595,097				595,097
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health					
15. Totals	857,905				857,905
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	.1	220,807							.1	220,807
17. Incurred during current year	5	25,677							5	25,677
Settled during current year:										
18.1 By payment in full	6	246,374							6	246,374
18.2 By payment on compromised claims										
18.3 Totals paid	6	246,374							6	246,374
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	6	246,374							6	246,374
19. Unpaid Dec. 31, current year (16+17-18.6)		109								109
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	311	122,803,959	(a)						311	122,803,959
21. Issued during year										
22. Other changes to in force (Net)	(10)	(847,035)							(10)	(847,035)
23. In force December 31 of current year	301	121,956,924	(a)						301	121,956,924

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)					
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees					
Other Individual Policies:					
25.1 Non-cancelable (b)	118,847	121,414			
25.2 Guaranteed renewable (b)					
25.3 Non-renewable for stated reasons only (b)					
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	118,847	121,414			
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	118,847	121,414			

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Other Alien

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include: DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS, DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS, DIRECT CLAIMS AND BENEFITS PAID, and DETAILS OF WRITE-INS.

Table with 10 columns: 1 No. of Pols. & Certifs., 2 Amount, 3 No. of Ind. Pols. & Gr. Certifs., 4 Amount, 5 No. of Certifs., 6 Amount, 7 No. of Pols. & Certifs., 8 Amount, 9 No. of Pols. & Certifs., 10 Amount. Rows include: DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED and POLICY EXHIBIT.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include: 24 Group Policies (b), 24.1 Federal Employees Health Benefits Plan premium (b), 24.2 Credit (Group and Individual), 24.3 Collectively renewable policies/certificates (b), 24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies: 25.1 Non-cancelable (b), 25.2 Guaranteed renewable (b), 25.3 Non-renewable for stated reasons only (b), 25.4 Other accident only, 25.5 All other (b), 25.6 Totals (sum of Lines 25.1 to 25.5), 26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Other Aliens

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

Table with 5 columns: 1 Ordinary, 2 Credit Life (Group and Individual), 3 Group, 4 Industrial, 5 Total. Rows include Direct Premiums and Annuity Considerations, Direct Dividends to Policyholders/Refunds to Members, Direct Claims and Benefits Paid, and Details of Write-ins.

Table with 10 columns: 1-2 Ordinary (No. of Pols. & Certifs., Amount), 3-4 Credit Life (No. of Ind. Pols. & Gr. Certifs., Amount), 5-6 Group (No. of Certifs., Amount), 7-8 Industrial (No. of Pols. & Certifs., Amount), 9-10 Total (No. of Pols. & Certifs., Amount). Rows include Maturity and Death Benefits, and Policy Exhibit.

(a) Includes Individual Credit Life Insurance prior year \$, current year \$ Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

Table with 5 columns: 1 Direct Premiums, 2 Direct Premiums Earned, 3 Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business, 4 Direct Losses Paid, 5 Direct Losses Incurred. Rows include Group Policies (b) and various accident types.

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products 0 and number of persons insured under indemnity only products 0



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Grand Total

DURING THE YEAR 2019

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 65935

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	7,666,031,447		101,972,472		7,768,003,919
2. Annuity considerations	3,774,509,022		3,290,969,005		7,065,478,027
3. Deposit-type contract funds	437,281,572	XXX	5,299,067,393	XXX	5,736,348,965
4. Other considerations			8,200,398,583		8,200,398,583
5. Totals (Sum of Lines 1 to 4)	11,877,822,041		16,892,407,453		28,770,229,494
DIRECT DIVIDENDS TO POLICYHOLDERS/REFUNDS TO MEMBERS					
Life insurance:					
6.1 Paid in cash or left on deposit	122,871,588				122,871,588
6.2 Applied to pay renewal premiums	345,009,835				345,009,835
6.3 Applied to provide paid-up additions or shorten the endowment or premium-paying period	1,419,815,561				1,419,815,561
6.4 Other					
6.5 Totals (Sum of Lines 6.1 to 6.4)	1,887,696,984				1,887,696,984
Annuities:					
7.1 Paid in cash or left on deposit	15,692				15,692
7.2 Applied to provide paid-up annuities	1,768,385				1,768,385
7.3 Other					
7.4 Totals (Sum of Lines 7.1 to 7.3)	1,784,077				1,784,077
8. Grand Totals (Lines 6.5 plus 7.4)	1,889,481,061				1,889,481,061
DIRECT CLAIMS AND BENEFITS PAID					
9. Death benefits	2,416,964,567		175,093,141		2,592,057,708
10. Matured endowments	16,392,048				16,392,048
11. Annuity benefits	714,323,347		1,433,969,541		2,148,292,888
12. Surrender values and withdrawals for life contracts	3,636,683,305		13,302,634,005		16,939,317,310
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	27,832,313				27,832,313
15. Totals	6,812,195,580		14,911,696,687		21,723,892,267
DETAILS OF WRITE-INS					
1301.					
1302.					
1303.					
1398. Summary of Line 13 from overflow page					
1399. Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS INCURRED	Ordinary		Credit Life (Group and Individual)		Group		Industrial		Total	
	1	2	3	4	5	6	7	8	9	10
	No. of Pol. & Certifs.	Amount	No. of Ind. Pol. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No. of Pol. & Certifs.	Amount	No. of Pol. & Certifs.	Amount
16. Unpaid December 31, prior year	3,744	366,382,239			99	89,592,201			3,843	455,974,441
17. Incurred during current year	30,693	2,488,320,960			231	186,794,380			30,924	2,675,115,340
Settled during current year:										
18.1 By payment in full	30,554	2,460,814,941			211	175,093,141			30,765	2,635,908,081
18.2 By payment on compromised claims	1	11,000							1	11,000
18.3 Totals paid	30,555	2,460,825,941			211	175,093,141			30,766	2,635,919,081
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	30,555	2,460,825,941			211	175,093,141			30,766	2,635,919,081
19. Unpaid Dec. 31, current year (16+17-18.6)	3,882	393,877,259			119	101,293,440			4,001	495,170,699
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	1,691,731	613,112,917,349	(a)		7,076	63,700,125,350			1,698,807	676,813,042,700
21. Issued during year	134,932	87,930,059,702			286	1,981,036,854			135,218	89,911,096,556
22. Other changes to in force (Net)	(18,371)	9,403,502,756			(5,496)	(41,158,987,674)			(23,867)	(31,755,484,918)
23. In force December 31 of current year	1,808,292	710,446,479,808	(a)		1,866	24,522,174,506			1,810,250	734,968,654,314

(a) Includes Individual Credit Life Insurance prior year \$ _____, current year \$ _____
 Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$ _____, current year \$ _____
 Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$ _____, current year \$ _____

ACCIDENT AND HEALTH INSURANCE

	1	2	3	4	5
	Direct Premiums	Direct Premiums Earned	Policyholder Dividends Paid, Refunds to Members or Credited on Direct Business	Direct Losses Paid	Direct Losses Incurred
24. Group Policies (b)	347,479	347,479			
24.1 Federal Employees Health Benefits Plan premium (b)					
24.2 Credit (Group and Individual)					
24.3 Collectively renewable policies/certificates (b)					
24.4 Medicare Title XVIII exempt from state taxes or fees Other Individual Policies:					
25.1 Non-cancelable (b)	495,875,616	506,587,278	24,502,065	347,164,916	319,304,230
25.2 Guaranteed renewable (b)	243,511,514	237,151,986		51,469,737	72,476,826
25.3 Non-renewable for stated reasons only (b)	11,624,183	11,875,302	570,129	455,873	81,780
25.4 Other accident only					
25.5 All other (b)					
25.6 Totals (sum of Lines 25.1 to 25.5)	751,011,313	755,614,566	25,072,194	399,090,526	391,862,836
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)	751,358,792	755,962,045	25,072,194	399,090,526	391,862,836

(b) For health business on indicated lines report: Number of persons insured under PPO managed care products0 and number of persons insured under indemnity only products0 .

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
EXHIBIT OF LIFE INSURANCE
(\$000 Omitted for Amounts of Life Insurance)

	Industrial		Ordinary		Credit Life (Group and Individual)		Group			10 Total Amount of Insurance
	1	2	3	4	5	6	8		9	
	Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance	Number of Individual Policies and Group Certificates	Amount of Insurance	Number of Policies	Certificates	Amount of Insurance	
1. In force end of prior year			1,707,175	618,664,502			7,076	131,497	65,940,688	684,605,190
2. Issued during year			134,932	87,930,059			286	23,491	1,981,037	89,911,096
3. Reinsurance assumed										
4. Revived during year			21	11,695				40	20,992	32,687
5. Increased during year (net)			135,009	105,018,668						105,018,668
6. Subtotals, Lines 2 to 5			269,962	192,960,422			286	23,531	2,002,029	194,962,451
7. Additions by dividends during year	XXX		XXX	2,762,926	XXX		XXX	XXX	780	2,763,706
8. Aggregate write-ins for increases										
9. Totals (Lines 1 and 6 to 8)			1,977,137	814,387,850			7,362	155,028	67,943,497	882,331,348
Deductions during year:										
10. Death			19,669	2,383,380			XXX	266	178,600	2,561,980
11. Maturity			465	22,037			XXX			22,037
12. Disability							XXX			
13. Expiry			5,174	1,029,158						1,029,158
14. Surrender			35,920	12,878,523			7	2,784	528,490	13,407,013
15. Lapse			18,999	13,140,516			8	8,079	1,689,923	14,830,439
16. Conversion			1,993	1,341,492			XXX	XXX	XXX	1,341,492
17. Decreased (net)			71,181	67,594,680			5,481	62,894	38,783,748	106,378,428
18. Reinsurance			735	318,202				11	6,812	325,014
19. Aggregate write-ins for decreases										
20. Totals (Lines 10 to 19)			154,136	98,707,988			5,496	74,034	41,187,573	139,895,561
21. In force end of year (b) (Line 9 minus Line 20)			1,823,001	715,679,862			1,866	80,994	26,755,924	742,435,787
22. Reinsurance ceded end of year	XXX		XXX	513,752,157	XXX		XXX	XXX	6,641,888	520,394,045
23. Line 21 minus Line 22	XXX		XXX	201,927,705	XXX	(a)	XXX	XXX	20,114,036	222,041,742
DETAILS OF WRITE-INS										
0801.										
0802.										
0803.										
0898. Summary of remaining write-ins for Line 8 from overflow page										
0899. TOTALS (Lines 0801 thru 0803 plus 0898) (Line 8 above)										
1901.										
1902.										
1903.										
1998. Summary of remaining write-ins for Line 19 from overflow page										
1999. TOTALS (Lines 1901 thru 1903 plus 1998) (Line 19 above)										

Life, Accident and Health Companies Only:

(a) Group \$; Individual \$

Fraternal Benefit Societies Only:

(b) Paid-up insurance included in the final totals of Line 21 (including additions to certificates) number of certificates , Amount \$

Additional accidental death benefits included in life certificates were in amount \$, Does the society collect any contributions from members for general expenses of the society under fully paid-up certificates? Yes [] No []

If not, how are such expenses met?
.....

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

EXHIBIT OF LIFE INSURANCE

(\$000 Omitted for Amounts of Life Insurance) (Continued)
ADDITIONAL INFORMATION ON INSURANCE IN FORCE END OF YEAR

	Industrial		Ordinary	
	1 Number of Policies	2 Amount of Insurance	3 Number of Policies	4 Amount of Insurance
24. Additions by dividends	XXX		XXX	26,870,037
25. Other paid-up insurance			124,407	16,794,766
26. Debit ordinary insurance	XXX	XXX		

ADDITIONAL INFORMATION ON ORDINARY INSURANCE

Term Insurance Excluding Extended Term Insurance	Issued During Year (Included in Line 2)		In Force End of Year (Included in Line 21)	
	1 Number of Policies	2 Amount of Insurance	3 Number of Policies	4 Amount of Insurance
27. Term policies - decreasing				
28. Term policies - other	53,012	48,175,568	360,776	259,620,069
29. Other term insurance - decreasing	XXX		XXX	
30. Other term insurance	XXX	1,083,918	XXX	12,232,200
31. Totals (Lines 27 to 30)	53,012	49,259,486	360,776	271,852,269
Reconciliation to Lines 2 and 21:				
32. Term additions	XXX	1,121,140	XXX	12,170,084
33. Totals, extended term insurance	XXX	XXX	5,389	733,060
34. Totals, whole life and endowment	81,920	37,549,434	1,456,836	430,924,448
35. Totals (Lines 31 to 34)	134,932	87,930,060	1,823,001	715,679,861

CLASSIFICATION OF AMOUNT OF INSURANCE BY PARTICIPATING STATUS

	Issued During Year (Included in Line 2)		In Force End of Year (Included in Line 21)	
	1 Non-Participating	2 Participating	3 Non-Participating	4 Participating
36. Industrial				
37. Ordinary	9,259,618	78,670,441	125,352,768	590,327,093
38. Credit Life (Group and Individual)				
39. Group	1,981,037		26,755,925	
40. Totals (Lines 36 to 39)	11,240,655	78,670,441	152,108,693	590,327,093

ADDITIONAL INFORMATION ON CREDIT LIFE AND GROUP INSURANCE

	Credit Life		Group	
	1 Number of Individual Policies and Group Certificates	2 Amount of Insurance	3 Number of Certificates	4 Amount of Insurance
41. Amount of insurance included in Line 2 ceded to other companies	XXX		XXX	1,523,875
42. Number in force end of year if the number under shared groups is counted on a pro-rata basis		XXX		XXX
43. Federal Employees' Group Life Insurance included in Line 21				
44. Servicemen's Group Life Insurance included in Line 21				
45. Group Permanent Insurance included in Line 21				

ADDITIONAL ACCIDENTAL DEATH BENEFITS

46. Amount of additional accidental death benefits in force end of year under ordinary policies	1,344,385
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BASIS OF CALCULATION OF ORDINARY TERM INSURANCE

47. State basis of calculation of (47.1) decreasing term insurance contracts containing Family Income, Mortgage Repayment, etc., policies and riders and of (47.2) term insurance on wife and children under Family, Parent and Child, etc., policies and riders, including above.	NONE
47.1	
47.2	

POLICIES WITH DISABILITY PROVISIONS

Disability Provisions	Industrial		Ordinary		Credit		Group	
	1 Number of Policies	2 Amount of Insurance	3 Number of Policies	4 Amount of Insurance	5 Number of Policies	6 Amount of Insurance	7 Number of Certificates	8 Amount of Insurance
48. Waiver of Premium			685,229	251,071,392			25,618	4,507,772
49. Disability Income								
50. Extended Benefits			XXX	XXX				
51. Other								
52. Total		(a)	685,229	(a) 251,071,392		(a)	25,618	(a) 4,507,772

(a) See the Annual Audited Financial Reports section of the annual statement instructions

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
EXHIBIT OF NUMBER OF POLICIES, CONTRACTS, CERTIFICATES, INCOME PAYABLE AND ACCOUNT VALUES IN FORCE FOR SUPPLEMENTARY CONTRACTS, ANNUITIES, ACCIDENT & HEALTH AND OTHER POLICIES

SUPPLEMENTARY CONTRACTS

	Ordinary		Group	
	1 Involving Life Contingencies	2 Not Involving Life Contingencies	3 Involving Life Contingencies	4 Not Involving Life Contingencies
1. In force end of prior year	4,767	8,506	1	
2. Issued during year	469	861		
3. Reinsurance assumed				
4. Increased during year (net)				
5. Total (Lines 1 to 4)	5,236	9,367	1	
Deductions during year:				
6. Decreased (net)	276	1,023		
7. Reinsurance ceded				
8. Totals (Lines 6 and 7)	276	1,023		
9. In force end of year	4,960	8,344	1	
10. Amount on deposit	221,353,229	(a) 662,477,319	335	(a)
11. Income now payable	4,960	1,307		
12. Amount of income payable	(a) 22,882,652	(a) 15,054,533	(a)	(a)

ANNUITIES

	Ordinary		Group	
	1 Immediate	2 Deferred	3 Contracts	4 Certificates
1. In force end of prior year	45,206	187,062	13,527	2,385,852
2. Issued during year	4,482	16,950	133	212,911
3. Reinsurance assumed				
4. Increased during year (net)				
5. Totals (Lines 1 to 4)	49,688	204,012	13,660	2,598,763
Deductions during year:				
6. Decreased (net)	2,651	14,879	1,732	245,594
7. Reinsurance ceded				
8. Totals (Lines 6 and 7)	2,651	14,879	1,732	245,594
9. In force end of year	47,037	189,133	11,928	2,353,169
Income now payable:				
10. Amount of income payable	(a) 708,238,224	XXX	XXX	(a) 1,073,307,759
Deferred fully paid:				
11. Account balance	XXX	(a) 8,018,816,218	XXX	(a) 12,355,836,084
Deferred not fully paid:				
12. Account balance	XXX	(a) 14,862,122,193	XXX	(a) 68,078,427,239

ACCIDENT AND HEALTH INSURANCE

	Group		Credit		Other	
	1 Certificates	2 Premiums in Force	3 Policies	4 Premiums in Force	5 Policies	6 Premiums in Force
1. In force end of prior year	1,180	329,169			341,045	753,959,769
2. Issued during year	712	218,690			19,621	43,837,304
3. Reinsurance assumed						
4. Increased during year (net)		XXX		XXX		XXX
5. Totals (Lines 1 to 4)	1,892	XXX		XXX	360,666	XXX
Deductions during year:						
6. Conversions		XXX	XXX	XXX	XXX	XXX
7. Decreased (net)	542	XXX		XXX	22,352	XXX
8. Reinsurance ceded		XXX		XXX		XXX
9. Totals (Lines 6 to 8)	542	XXX		XXX	22,352	XXX
10. In force end of year	1,350	(a) 403,552		(a)	338,314	(a) 771,097,407

DEPOSIT FUNDS AND DIVIDEND ACCUMULATIONS

	1	2
	Deposit Funds Contracts	Dividend Accumulations Contracts
1. In force end of prior year	45,282	87,458
2. Issued during year	2,429	442
3. Reinsurance assumed		
4. Increased during year (net)		2,440
5. Totals (Lines 1 to 4)	47,711	90,340
Deductions During Year:		
6. Decreased (net)	1,667	7,403
7. Reinsurance ceded		
8. Totals (Lines 6 and 7)	1,667	7,403
9. In force end of year	46,044	82,937
10. Amount of account balance	(a) 3,355,276,860	(a) 492,780,409

(a) See the Annual Audited Financial Reports section of the annual statement instructions.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
FORM FOR CALCULATING THE INTEREST MAINTENANCE RESERVE

INTEREST MAINTENANCE RESERVE

	1 Amount
1. Reserve as of December 31, Prior Year	(562,688,197)
2. Current year's realized pre-tax capital gains/(losses) of \$1,084,142,982 transferred into the reserve net of taxes of \$64,426,605	1,019,716,377
3. Adjustment for current year's liability gains/(losses) released from the reserve	(8,147,124)
4. Balance before reduction for amount transferred to Summary of Operations (Line 1 + Line 2 + Line 3)	448,881,056
5. Current year's amortization released to Summary of Operations (Amortization, Line 1, Column 4)	10,699,953
6. Reserve as of December 31, current year (Line 4 minus Line 5)	438,181,103

AMORTIZATION

Year of Amortization	1 Reserve as of December 31, Prior Year	2 Current Year's Realized Capital Gains/(Losses) Transferred into the Reserve Net of Taxes	3 Adjustment for Current Year's Liability Gains/(Losses) Released From the Reserve	4 Balance Before Reduction for Current Year's Amortization (Cols. 1 + 2 + 3)
1. 2019	(21,612,271)	32,588,369	(276,145)	10,699,953
2. 2020	(25,562,432)	51,358,096	(563,082)	25,232,582
3. 2021	(35,132,050)	52,755,077	(590,169)	17,032,858
4. 2022	(41,830,005)	46,182,208	(615,932)	3,736,271
5. 2023	(41,835,121)	39,766,972	(636,192)	(2,704,341)
6. 2024	(39,118,497)	32,421,293	(664,600)	(7,361,804)
7. 2025	(34,263,261)	28,888,808	(670,531)	(6,044,984)
8. 2026	(29,155,607)	28,607,526	(659,274)	(1,207,355)
9. 2027	(23,238,521)	28,562,698	(645,373)	4,678,804
10. 2028	(17,670,492)	27,575,083	(630,150)	9,274,441
11. 2029	(14,739,418)	27,945,864	(619,107)	12,587,339
12. 2030	(12,409,352)	28,849,057	(552,823)	15,886,882
13. 2031	(11,559,432)	29,736,166	(443,623)	17,733,111
14. 2032	(10,763,734)	31,781,814	(320,774)	20,697,306
15. 2033	(11,605,753)	32,965,988	(191,099)	21,169,136
16. 2034	(11,219,516)	34,751,169	(68,250)	23,463,403
17. 2035	(9,948,162)	36,407,514		26,459,352
18. 2036	(9,033,736)	37,689,909		28,656,173
19. 2037	(9,761,715)	39,862,998		30,101,283
20. 2038	(13,376,241)	41,727,356		28,351,115
21. 2039	(16,454,813)	43,016,133		26,561,320
22. 2040	(22,112,711)	42,630,025		20,517,314
23. 2041	(21,709,304)	40,617,292		18,907,988
24. 2042	(22,537,899)	37,090,022		14,552,123
25. 2043	(18,597,659)	35,016,262		16,418,603
26. 2044	(15,004,490)	31,804,106		16,799,616
27. 2045	(11,141,394)	27,890,720		16,749,326
28. 2046	(6,766,111)	22,198,736		15,432,625
29. 2047	(3,446,866)	15,937,554		12,490,688
30. 2048	(1,081,633)	9,676,372		8,594,739
31. 2049 and Later		3,415,190		3,415,190
32. Total (Lines 1 to 31)	(562,688,197)	1,019,716,377	(8,147,124)	448,881,056

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

	Default Component			Equity Component			7 Total Amount (Cols. 3 + 6)
	1 Other Than Mortgage Loans	2 Mortgage Loans	3 Total (Cols. 1 + 2)	4 Common Stock	5 Real Estate and Other Invested Assets	6 Total (Cols. 4 + 5)	
1. Reserve as of December 31, prior year	1,079,967,841	230,882,648	1,310,850,489	821,702,600	1,174,266,979	1,995,969,579	3,306,820,068
2. Realized capital gains/(losses) net of taxes - General Account	(45,615,157)	2,177,663	(43,437,494)	25,381,359	58,115,018	83,496,377	40,058,883
3. Realized capital gains/(losses) net of taxes - Separate Accounts							
4. Unrealized capital gains/(losses) net of deferred taxes - General Account	39,416,561	76,709,903	116,126,464	3,538,338,496	31,045,606	3,569,384,102	3,685,510,566
5. Unrealized capital gains/(losses) net of deferred taxes - Separate Accounts							
6. Capital gains credited/(losses charged) to contract benefits, payments or reserves	(2,570,761)	(628,569)	(3,199,330)	484,208	(111,021)	373,187	(2,826,143)
7. Basic contribution	350,096,355	68,592,999	418,689,354	11,680,490	13,909,261	25,589,751	444,279,104
8. Accumulated balances (Lines 1 through 5 - 6 + 7)	1,426,436,361	378,991,782	1,805,428,143	4,396,618,737	1,277,447,885	5,674,066,621	7,479,494,764
9. Maximum reserve	1,527,388,132	291,953,787	1,819,341,919	1,564,310,428	1,421,280,070	2,985,590,498	4,804,932,417
10. Reserve objective	977,584,228	223,672,282	1,201,256,510	1,541,045,975	1,404,136,438	2,945,182,413	4,146,438,923
11. 20% of (Line 10 - Line 8)	(89,770,427)	(31,063,900)	(120,834,327)	(571,114,552)	25,337,711	(545,776,842)	(666,611,168)
12. Balance before transfers (Lines 8 + 11)	1,336,665,934	347,927,882	1,684,593,816	3,825,504,184	1,302,785,595	5,128,289,780	6,812,883,596
13. Transfers	55,974,097	(55,974,097)		(118,494,475)	118,494,475		
14. Voluntary contribution							
15. Adjustment down to maximum/up to zero				(2,142,699,280)		(2,142,699,280)	(2,142,699,280)
16. Reserve as of December 31, current year (Lines 12 + 13 + 14 + 15)	1,392,640,031	291,953,785	1,684,593,816	1,564,310,429	1,421,280,070	2,985,590,500	4,670,184,316

ASSET VALUATION RESERVE
BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS
DEFAULT COMPONENT

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols.4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
LONG-TERM BONDS												
1.		Exempt Obligations	4,324,684,902	XXX	XXX	4,324,684,902	0.0000		0.0000		0.0000	
2.	1	Highest Quality	48,523,206,393	XXX	XXX	48,523,206,393	0.0005	24,261,603	0.0016	77,637,130	0.0033	160,126,581
3.	2	High Quality	38,707,187,420	XXX	XXX	38,707,187,420	0.0021	81,285,094	0.0064	247,725,999	0.0106	410,296,187
4.	3	Medium Quality	6,225,839,840	XXX	XXX	6,225,839,840	0.0099	61,635,814	0.0263	163,739,588	0.0376	234,091,578
5.	4	Low Quality	1,737,313,896	XXX	XXX	1,737,313,896	0.0245	42,564,190	0.0572	99,374,355	0.0817	141,938,545
6.	5	Lower Quality	1,917,144,304	XXX	XXX	1,917,144,304	0.0630	120,780,091	0.1128	216,253,877	0.1880	360,423,129
7.	6	In or Near Default	471,254,134	XXX	XXX	471,254,134	0.0000		0.2370	111,687,230	0.2370	111,687,230
8.		Total Unrated Multi-class Securities Acquired by Conversion ..		XXX	XXX		XXX		XXX		XXX	
9.		Total Long-Term Bonds (Sum of Lines 1 through 8)	101,906,630,889	XXX	XXX	101,906,630,889	XXX	330,526,793	XXX	916,418,180	XXX	1,418,563,250
PREFERRED STOCK												
10.	1	Highest Quality	443,850,000	XXX	XXX	443,850,000	0.0005	221,925	0.0016	710,160	0.0033	1,464,705
11.	2	High Quality	130,181,688	XXX	XXX	130,181,688	0.0021	273,382	0.0064	833,163	0.0106	1,379,926
12.	3	Medium Quality	141,021,927	XXX	XXX	141,021,927	0.0099	1,396,117	0.0263	3,708,877	0.0376	5,302,424
13.	4	Low Quality		XXX	XXX		0.0245		0.0572		0.0817	
14.	5	Lower Quality	22,047,657	XXX	XXX	22,047,657	0.0630	1,389,002	0.1128	2,486,976	0.1880	4,144,960
15.	6	In or Near Default	11,782,864	XXX	XXX	11,782,864	0.0000		0.2370	2,792,539	0.2370	2,792,539
16.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
17.		Total Preferred Stocks (Sum of Lines 10 through 16)	748,884,136	XXX	XXX	748,884,136	XXX	3,280,426	XXX	10,531,714	XXX	15,084,554
SHORT - TERM BONDS												
18.		Exempt Obligations		XXX	XXX		0.0000		0.0000		0.0000	
19.	1	Highest Quality	579,699,983	XXX	XXX	579,699,983	0.0005	289,850	0.0016	927,520	0.0033	1,913,010
20.	2	High Quality	579,472,282	XXX	XXX	579,472,282	0.0021	1,216,892	0.0064	3,708,623	0.0106	6,142,406
21.	3	Medium Quality		XXX	XXX		0.0099		0.0263		0.0376	
22.	4	Low Quality		XXX	XXX		0.0245		0.0572		0.0817	
23.	5	Lower Quality		XXX	XXX		0.0630		0.1128		0.1880	
24.	6	In or Near Default		XXX	XXX		0.0000		0.2370		0.2370	
25.		Total Short - Term Bonds (Sum of Lines 18 through 24)	1,159,172,265	XXX	XXX	1,159,172,265	XXX	1,506,742	XXX	4,636,143	XXX	8,055,416
DERIVATIVE INSTRUMENTS												
26.		Exchange Traded		XXX	XXX		0.0005		0.0016		0.0033	
27.	1	Highest Quality	375,028,433	XXX	XXX	375,028,433	0.0005	187,514	0.0016	600,045	0.0033	1,237,594
28.	2	High Quality	30,130,011	XXX	XXX	30,130,011	0.0021	63,273	0.0064	192,832	0.0106	319,378
29.	3	Medium Quality		XXX	XXX		0.0099		0.0263		0.0376	
30.	4	Low Quality		XXX	XXX		0.0245		0.0572		0.0817	
31.	5	Lower Quality		XXX	XXX		0.0630		0.1128		0.1880	
32.	6	In or Near Default		XXX	XXX		0.0000		0.2370		0.2370	
33.		Total Derivative Instruments	405,158,444	XXX	XXX	405,158,444	XXX	250,787	XXX	792,878	XXX	1,556,972
34.		Total (Lines 9 + 17 + 25 + 33)	104,219,845,734	XXX	XXX	104,219,845,734	XXX	335,564,748	XXX	932,378,914	XXX	1,443,260,192

ASSET VALUATION RESERVE (Continued)
BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS
DEFAULT COMPONENT

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols.4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
MORTGAGE LOANS												
In Good Standing:												
35.		Farm Mortgages - CM1 - Highest Quality			XXX		0.0011		0.0057		0.0074	
36.		Farm Mortgages - CM2 - High Quality			XXX		0.0040		0.0114		0.0149	
37.		Farm Mortgages - CM3 - Medium Quality			XXX		0.0069		0.0200		0.0257	
38.		Farm Mortgages - CM4 - Low Medium Quality			XXX		0.0120		0.0343		0.0428	
39.		Farm Mortgages - CM5 - Low Quality			XXX		0.0183		0.0486		0.0628	
40.		Residential Mortgages - Insured or Guaranteed	2,590,406,114		XXX	2,590,406,114	0.0003	777,122	0.0007	1,813,284	0.0011	2,849,447
41.		Residential Mortgages - All Other	720,140,704		XXX	720,140,704	0.0015	1,080,211	0.0034	2,448,478	0.0046	3,312,647
42.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003		0.0007		0.0011	
43.		Commercial Mortgages - All Other - CM1 - Highest Quality	11,265,318,139		XXX	11,265,318,139	0.0011	12,391,850	0.0057	64,212,313	0.0074	83,363,354
44.		Commercial Mortgages - All Other - CM2 - High Quality	11,946,789,764		XXX	11,946,789,764	0.0040	47,787,159	0.0114	136,193,403	0.0149	178,007,167
45.		Commercial Mortgages - All Other - CM3 - Medium Quality	950,240,145		XXX	950,240,145	0.0069	6,556,657	0.0200	19,004,803	0.0257	24,421,172
46.		Commercial Mortgages - All Other - CM4 - Low Medium Quality			XXX		0.0120		0.0343		0.0428	
47.		Commercial Mortgages - All Other - CM5 - Low Quality			XXX		0.0183		0.0486		0.0628	
Overdue, Not in Process:												
48.		Farm Mortgages			XXX		0.0480		0.0868		0.1371	
49.		Residential Mortgages - Insured or Guaranteed			XXX		0.0006		0.0014		0.0023	
50.		Residential Mortgages - All Other			XXX		0.0029		0.0066		0.0103	
51.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0006		0.0014		0.0023	
52.		Commercial Mortgages - All Other			XXX		0.0480		0.0868		0.1371	
In Process of Foreclosure:												
53.		Farm Mortgages			XXX		0.0000		0.1942		0.1942	
54.		Residential Mortgages - Insured or Guaranteed			XXX		0.0000		0.0046		0.0046	
55.		Residential Mortgages - All Other			XXX		0.0000		0.0149		0.0149	
56.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0000		0.0046		0.0046	
57.		Commercial Mortgages - All Other			XXX		0.0000		0.1942		0.1942	
58.		Total Schedule B Mortgages (Sum of Lines 35 through 57)	27,472,894,866		XXX	27,472,894,866	XXX	68,592,999	XXX	223,672,282	XXX	291,953,787
59.		Schedule DA Mortgages			XXX		0.0034		0.0114		0.0149	
60.		Total Mortgage Loans on Real Estate (Lines 58 + 59)	27,472,894,866		XXX	27,472,894,866	XXX	68,592,999	XXX	223,672,282	XXX	291,953,787

ASSET VALUATION RESERVE
BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS
EQUITY AND OTHER INVESTED ASSET COMPONENT

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols. 4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
COMMON STOCK												
1.		Unaffiliated - Public	913,417,868	XXX	XXX	913,417,868	0.0000		0.2198 (a)	200,769,247	0.2198 (a)	200,769,247
2.		Unaffiliated - Private	211,622,616	XXX	XXX	211,622,616	0.0000		0.1945	41,160,599	0.1945	41,160,599
3.		Federal Home Loan Bank	59,880,000	XXX	XXX	59,880,000	0.0000		0.0061	365,268	0.0097	580,836
4.		Affiliated - Life with AVR	1,735,036,269	XXX	XXX	1,735,036,269	0.0000		0.0000		0.0000	
Affiliated - Investment Subsidiary:												
5.		Fixed Income - Exempt Obligations	543,674,480			543,674,480	XXX		XXX		XXX	
6.		Fixed Income - Highest Quality	2,928,230,391			2,928,230,391	XXX	1,464,115	XXX	4,685,169	XXX	9,663,160
7.		Fixed Income - High Quality	3,612,261,660			3,612,261,660	XXX	7,585,749	XXX	23,118,475	XXX	38,289,974
8.		Fixed Income - Medium Quality	187,387,566			187,387,566	XXX	1,855,137	XXX	4,928,293	XXX	7,045,772
9.		Fixed Income - Low Quality	30,297,923			30,297,923	XXX	742,299	XXX	1,733,041	XXX	2,475,340
10.		Fixed Income - Lower Quality	526,820			526,820	XXX	33,190	XXX	59,425	XXX	99,042
11.		Fixed Income - In/Near Default	17,633,418			17,633,418	XXX		XXX	4,179,120	XXX	4,179,120
12.		Unaffiliated Common Stock - Public					0.0000		0.1580 (a)		0.1580 (a)	
13.		Unaffiliated Common Stock - Private					0.0000		0.1945		0.1945	
14.		Real Estate					(b)		(b)		(b)	
15.		Affiliated - Certain Other (See SVO Purposes and Procedures Manual)	7,658,837,116	XXX	XXX	7,658,837,116	0.0000		0.1580	1,210,096,264	0.1580	1,210,096,264
16.		Affiliated - All Other	256,817,858	XXX	XXX	256,817,858	0.0000		0.1945	49,951,073	0.1945	49,951,073
17.		Total Common Stock (Sum of Lines 1 through 16)	18,155,623,985			18,155,623,985	XXX	11,680,490	XXX	1,541,045,975	XXX	1,564,310,428
REAL ESTATE												
18.		Home Office Property (General Account only)	209,287,678			209,287,678	0.0000		0.0912	19,087,036	0.0912	19,087,036
19.		Investment Properties	148,924,938		924,379,045	1,073,303,983	0.0000		0.0912	97,885,323	0.0912	97,885,323
20.		Properties Acquired in Satisfaction of Debt					0.0000		0.1337		0.1337	
21.		Total Real Estate (Sum of Lines 18 through 20)	358,212,616		924,379,045	1,282,591,661	XXX		XXX	116,972,359	XXX	116,972,359
OTHER INVESTED ASSETS												
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF BONDS												
22.		Exempt Obligations		XXX	XXX		0.0000		0.0000		0.0000	
23.	1	Highest Quality		XXX	XXX		0.0005		0.0016		0.0033	
24.	2	High Quality	766,759,397	XXX	XXX	766,759,397	0.0021	1,610,195	0.0064	4,907,260	0.0106	8,127,650
25.	3	Medium Quality	205,691,032	XXX	XXX	205,691,032	0.0099	2,036,341	0.0263	5,409,674	0.0376	7,733,983
26.	4	Low Quality	115,990	XXX	XXX	115,990	0.0245	2,842	0.0572	6,635	0.0817	9,476
27.	5	Lower Quality	91,010,377	XXX	XXX	91,010,377	0.0630	5,733,654	0.1128	10,265,971	0.1880	17,109,951
28.	6	In or Near Default		XXX	XXX		0.0000		0.2370		0.2370	
29.		Total with Bond Characteristics (Sum of Lines 22 through 28)	1,063,576,797	XXX	XXX	1,063,576,797	XXX	9,383,031	XXX	20,589,539	XXX	32,981,060

ASSET VALUATION RESERVE (Continued)
BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS
EQUITY AND OTHER INVESTED ASSET COMPONENT

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols. 4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF PREFERRED STOCKS												
30.	1	Highest Quality	347,442,287	XXX	XXX	347,442,287	0.0005	173,721	0.0016	555,908	0.0033	1,146,560
31.	2	High Quality	803,067	XXX	XXX	803,067	0.0021	1,686	0.0064	5,140	0.0106	8,513
32.	3	Medium Quality		XXX	XXX		0.0099		0.0263		0.0376	
33.	4	Low Quality		XXX	XXX		0.0245		0.0572		0.0817	
34.	5	Lower Quality	10,488	XXX	XXX	10,488	0.0630	661	0.1128	1,183	0.1880	1,972
35.	6	In or Near Default		XXX	XXX		0.0000		0.2370		0.2370	
36.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
37.		Total with Preferred Stock Characteristics (Sum of Lines 30 through 36)	348,255,842	XXX	XXX	348,255,842	XXX	176,068	XXX	562,230	XXX	1,157,044
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF MORTGAGE LOANS												
In Good Standing Affiliated:												
38.		Mortgages - CM1 - Highest Quality	65,236,198		XXX	65,236,198	0.0011	71,760	0.0057	371,846	0.0074	482,748
39.		Mortgages - CM2 - High Quality	519,448,250		XXX	519,448,250	0.0040	2,077,793	0.0114	5,921,710	0.0149	7,739,779
40.		Mortgages - CM3 - Medium Quality	73,022,445		XXX	73,022,445	0.0069	503,855	0.0200	1,460,449	0.0257	1,876,677
41.		Mortgages - CM4 - Low Medium Quality	15,157,074		XXX	15,157,074	0.0120	181,885	0.0343	519,888	0.0428	648,723
42.		Mortgages - CM5 - Low Quality			XXX		0.0183		0.0486		0.0628	
43.		Residential Mortgages - Insured or Guaranteed			XXX		0.0003		0.0007		0.0011	
44.		Residential Mortgages - All Other		XXX	XXX		0.0015		0.0034		0.0046	
45.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003		0.0007		0.0011	
Overdue, Not in Process Affiliated:												
46.		Farm Mortgages			XXX		0.0480		0.0868		0.1371	
47.		Residential Mortgages - Insured or Guaranteed			XXX		0.0006		0.0014		0.0023	
48.		Residential Mortgages - All Other			XXX		0.0029		0.0066		0.0103	
49.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0006		0.0014		0.0023	
50.		Commercial Mortgages - All Other			XXX		0.0480		0.0868		0.1371	
In Process of Foreclosure Affiliated:												
51.		Farm Mortgages			XXX		0.0000		0.1942		0.1942	
52.		Residential Mortgages - Insured or Guaranteed			XXX		0.0000		0.0046		0.0046	
53.		Residential Mortgages - All Other			XXX		0.0000		0.0149		0.0149	
54.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0000		0.0046		0.0046	
55.		Commercial Mortgages - All Other			XXX		0.0000		0.1942		0.1942	
56.		Total Affiliated (Sum of Lines 38 through 55)	672,863,968		XXX	672,863,968	XXX	2,835,293	XXX	8,273,893	XXX	10,747,926
57.		Unaffiliated - In Good Standing With Covenants			XXX		(c)		(c)		(c)	
58.		Unaffiliated - In Good Standing Defeased With Government Securities			XXX		0.0011		0.0057		0.0074	
59.		Unaffiliated - In Good Standing Primarily Senior			XXX		0.0040		0.0114		0.0149	
60.		Unaffiliated - In Good Standing All Other			XXX		0.0069		0.0200		0.0257	
61.		Unaffiliated - Overdue, Not in Process			XXX		0.0480		0.0868		0.1371	
62.		Unaffiliated - In Process of Foreclosure			XXX		0.0000		0.1942		0.1942	
63.		Total Unaffiliated (Sum of Lines 57 through 62)			XXX		XXX		XXX		XXX	
64.		Total with Mortgage Loan Characteristics (Lines 56 + 63)	672,863,968		XXX	672,863,968	XXX	2,835,293	XXX	8,273,893	XXX	10,747,926

ASSET VALUATION RESERVE (Continued)
BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS
EQUITY AND OTHER INVESTED ASSET COMPONENT

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols. 4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF COMMON STOCK												
65.		Unaffiliated Public		XXX	XXX		0.0000		0.1580 (a)		0.1580 (a)	
66.		Unaffiliated Private	2,098,254,059	XXX	XXX	2,098,254,059	0.0000		0.1945	408,110,414	0.1945	408,110,414
67.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
68.		Affiliated Certain Other (See SVO Purposes & Procedures Manual)		XXX	XXX		0.0000		0.1580		0.1580	
69.		Affiliated Other - All Other	3,129,679,193	XXX	XXX	3,129,679,193	0.0000		0.1945	608,722,603	0.1945	608,722,603
70.		Total with Common Stock Characteristics (Sum of Lines 65 through 69)	5,227,933,252	XXX	XXX	5,227,933,252	XXX		XXX	1,016,833,018	XXX	1,016,833,018
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF REAL ESTATE												
71.		Home Office Property (General Account only)					0.0000		0.0912		0.0912	
72.		Investment Properties	1,182,856,798		932,881,285	2,115,738,083	0.0000		0.0912	192,955,313	0.0912	192,955,313
73.		Properties Acquired in Satisfaction of Debt					0.0000		0.1337		0.1337	
74.		Total with Real Estate Characteristics (Sum of Lines 71 through 73)	1,182,856,798		932,881,285	2,115,738,083	XXX		XXX	192,955,313	XXX	192,955,313
LOW INCOME HOUSING TAX CREDIT INVESTMENTS												
75.		Guaranteed Federal Low Income Housing Tax Credit	1,173,997			1,173,997	0.0003	352	0.0006	704	0.0010	1,174
76.		Non-guaranteed Federal Low Income Housing Tax Credit	240,399,379			240,399,379	0.0063	1,514,516	0.0120	2,884,793	0.0190	4,567,588
77.		Guaranteed State Low Income Housing Tax Credit					0.0003		0.0006		0.0010	
78.		Non-guaranteed State Low Income Housing Tax Credit					0.0063		0.0120		0.0190	
79.		All Other Low Income Housing Tax Credit					0.0273		0.0600		0.0975	
80.		Total LIHTC (Sum of Lines 75 through 79)	241,573,376			241,573,376	XXX	1,514,868	XXX	2,885,497	XXX	4,568,762
ALL OTHER INVESTMENTS												
81.		NAIC 1 Working Capital Finance Investments		XXX			0.0000		0.0042		0.0042	
82.		NAIC 2 Working Capital Finance Investments		XXX			0.0000		0.0137		0.0137	
83.		Other Invested Assets - Schedule BA	285,218,913	XXX		285,218,913	0.0000		0.1580	45,064,588	0.1580	45,064,588
84.		Other Short-Term Invested Assets - Schedule DA		XXX			0.0000		0.1580		0.1580	
85.		Total All Other (Sum of Lines 81, 82, 83 and 84)	285,218,913	XXX		285,218,913	XXX		XXX	45,064,588	XXX	45,064,588
86.		Total Other Invested Assets - Schedules BA & DA (Sum of Lines 29, 37, 64, 70, 74, 80 and 85)	9,022,278,944		932,881,285	9,955,160,229	XXX	13,909,261	XXX	1,287,164,079	XXX	1,304,307,711

(a) Times the company's weighted average portfolio beta (Minimum .1215, Maximum .2431).
 (b) Determined using the same factors and breakdowns used for directly owned real estate.
 (c) This will be the factor associated with the risk category determined in the company generated worksheet.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1 RSAT Number	2 Type	3 CUSIP	4 Description of Asset(s)	5 NAIC Designation or Other Description of Asset	6 Value of Asset	7 AVR Basic Contribution	8 AVR Reserve Objective	9 AVR Maximum Reserve
57629*AA9	R		Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2	57,593,543	120,946	368,599	610,492
57629*AA9	R		Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2				
57629*AA9	R		Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2				
57629*AA9	R		Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2				
57629*AA9	R		Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3	52,483,004	519,582	1,380,303	1,973,361
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AB7	R		Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	272,409,958	136,205	435,856	898,953
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AC5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	102,660,064	51,330	164,256	338,778
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AE1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,684,031	50,342	161,094	332,257
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AD3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	108,025,127	54,013	172,840	356,483
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AF8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AH4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	111,200,000	55,600	177,920	366,960
57629*AH4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AH4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AH4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1	2	3	4	5	6	7	8	9
RSAT Number	Type	CUSIP	Description of Asset(s)	NAIC Designation or Other Description of Asset	Value of Asset	AVR Basic Contribution	AVR Reserve Objective	AVR Maximum Reserve
57629*AH4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	101,048,804	50,524	161,678	333,461
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AG6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,002,224	25,001	80,004	165,007
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AJ0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AK7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	58,420,000	29,210	93,472	192,786
57629*AK7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AK7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AK7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	51,154,542	25,577	81,847	168,810
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AL5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,050,000	25,025	80,080	165,165
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AM3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AN1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	54,237,500	27,119	86,780	178,984
57629*AN1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AN1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AN1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AP6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	54,550,000	27,275	87,280	180,015
57629*AP6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AP6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AP6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AP6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	62,169,910	31,085	99,472	205,161
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A04	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,505,002	25,253	80,808	166,667
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1	2	3	4	5	6	7	8	9
RSAT Number	Type	CUSIP	Description of Asset(s)	NAIC Designation or Other Description of Asset	Value of Asset	AVR Basic Contribution	AVR Reserve Objective	AVR Maximum Reserve
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AR2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	52,352,257	26,176	83,764	172,762
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*ASO	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AT8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	53,980,000	26,990	86,368	178,134
57629*AT8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AT8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AT8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	59,020,000	29,510	94,432	194,766
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AW1	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AV3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	62,717,032	31,359	100,347	206,966
57629*AV3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AV3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AV3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AX9	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	56,948,736	28,474	91,118	187,931
57629*AX9	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AX9	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AX9	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,750,000	27,875	89,200	183,975
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AY7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AU5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	59,900,000	29,950	95,840	197,670
57629*AU5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*AU5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	65,658,291	32,829	105,053	216,672
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BA8	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BB6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	53,600,000	26,800	85,760	176,880
57629*BB6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BB6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BB6	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A24	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,031,032	25,016	80,050	165,102
57629*A24	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A24	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*A24	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1 RSAT Number	2 Type	3 CUSIP	4 Description of Asset(s)	5 NAIC Designation or Other Description of Asset	6 Value of Asset	7 AVR Basic Contribution	8 AVR Reserve Objective	9 AVR Maximum Reserve
57629*AZ4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,615,000	50,308	160,984	332,030
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BD2	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,506,838	50,253	160,811	331,673
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BC4	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	152,747,891	76,374	244,397	504,068
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BE0	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BF7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,900,000	62,950	201,440	415,470
57629*BF7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BF7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BF7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BF7	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	153,312,388	76,656	245,300	505,931
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BG5	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,082,916	75,041	240,133	495,274
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BH3	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1				
57629*BJ9	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,500,000	75,250	240,800	496,650

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1 RSAT Number	2 Type	3 CUSIP	4 Description of Asset(s)	5 NAIC Designation or Other Description of Asset	6 Value of Asset	7 AVR Basic Contribution	8 AVR Reserve Objective	9 AVR Maximum Reserve
57629*DX6	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DX6	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DX6	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DX6	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1	373,582,437	186,791	597,732	1,232,822
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DW8	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2	389,799,907	818,580	2,494,719	4,131,879
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2				
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2				
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2				
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2				
12607@AD2	R		Evergreen Basket of Floating Rate Corporate Bonds	2				
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1	200,683,693	100,342	321,094	662,256
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DQ1	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1	406,592,726	203,296	650,548	1,341,756
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DR9	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1	170,604,963	85,302	272,968	562,996
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DS7	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1	197,172,655	98,586	315,476	650,670
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DT5	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1	182,592,542	91,296	292,148	602,555
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
57629*DU2	R		Evergreen Basket of Floating Rate Corporate Bonds	1				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z	219,097,020	109,549	350,555	723,020

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1	2	3	4	5	6	7	8	9
RSAT Number	Type	CUSIP	Description of Asset(s)	NAIC Designation or Other Description of Asset	Value of Asset	AVR Basic Contribution	AVR Reserve Objective	AVR Maximum Reserve
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z	276,346,806	138,173	442,155	911,944
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z	199,449,183	99,725	319,119	658,182
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z	183,221,828	91,611	293,155	604,632
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z	191,534,963	95,767	306,456	632,065
Awaiting PPN	R		Evergreen Basket of Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	279,458,047	139,729	447,133	922,212
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	278,645,765	139,323	445,833	919,531
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				

35.14

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

Table with 9 columns: 1 RSAT Number, 2 Type, 3 CUSIP, 4 Description of Asset(s), 5 NAIC Designation or Other Description of Asset, 6 Value of Asset, 7 AVR Basic Contribution, 8 AVR Reserve Objective, 9 AVR Maximum Reserve. Rows include Evergreen Basket of Inverse Floating Rate Corporate Bonds and Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds.

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1 RSAT Number	2 Type	3 CUSIP	4 Description of Asset(s)	5 NAIC Designation or Other Description of Asset	6 Value of Asset	7 AVR Basic Contribution	8 AVR Reserve Objective	9 AVR Maximum Reserve
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	250,890,512	125,445	401,425	827,939
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	151,901,005	75,951	243,042	501,273

35.16

ASSET VALUATION RESERVE

BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS REPLICATIONS (SYNTHETIC) ASSETS

1 RSAT Number	2 Type	3 CUSIP	4 Description of Asset(s)	5 NAIC Designation or Other Description of Asset	6 Value of Asset	7 AVR Basic Contribution	8 AVR Reserve Objective	9 AVR Maximum Reserve
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z				
Need to File with the NAIC	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	125,000,000	62,500	200,000	412,500
Need to File with the NAIC	R		Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z				
0199999. Subtotal Default Component - Other Than Mortgage					17,941,758,487	14,531,607	45,205,314	84,127,940
0599999 - Total					17,941,758,487	14,531,607	45,205,314	84,127,940

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE F

Showing all claims for death losses and all other contract claims resisted or compromised during the year, and all claims for death losses and all other contract claims resisted December 31 of current year

1	2	3	4	5	6	7	8
Contract Numbers	Claim Numbers	State of Residence of Claimant	Year of Claim for Death or Disability	Amount Claimed	Amount Paid During the Year	Amount Resisted Dec. 31 of Current Year	Why Compromised or Resisted
22454473	18-04478	SC	2019	200,000			Company claims material misrepresentation in application. Compromised to avoid legal expenses and uncertainty of litigation. Company claims material misrepresentation in application. Compromised to avoid legal expenses and uncertainty of litigation. Company claims material misrepresentation in application. Compromised to avoid legal expenses and uncertainty of litigation. Company claims no policy issued. Suit against Company dismissed. Company claims correct proceeds paid to the beneficiary. Compromised to avoid legal expenses and uncertainty of litigation.
22503000	18-04478	SC	2019	50,000			
24389468	18-04478	SC	2019	450,000			
15676535	0000624	MA	2016	250,000			
9823522	17-04353	CA	2018	22,000	11,000		
0199999. Death Claims - Ordinary				972,000	11,000		XXX
0599999. Death Claims - Disposed Of				972,000	11,000		XXX
1099999. Additional Accidental Death Benefits Claims - Disposed Of							XXX
1599999. Disability Benefits Claims - Disposed Of							XXX
2099999. Matured Endowments Claims - Disposed Of							XXX
2599999. Annuities with Life Contingency Claims - Disposed Of							XXX
2699999. Claims Disposed of During Current Year				972,000	11,000		XXX
21181987	15-01694	VA	2019	750,000		750,000	Company claims suicide within first two policy years. Company claims proceeds paid to the beneficiary. Company claims correct proceeds paid to the beneficiary.
4350524	0001235	NC	2019	8,000		8,000	
11080963	18-04723	MO	2019	500,000		500,000	
2799999. Death Claims - Ordinary				1,258,000		1,258,000	XXX
3199999. Death Claims - Resisted				1,258,000		1,258,000	XXX
3699999. Additional Accidental Death Benefits Claims - Resisted							XXX
4199999. Disability Benefits Claims - Resisted							XXX
4699999. Matured Endowments Claims - Resisted							XXX
5199999. Annuities with Life Contingencies Claims - Resisted							XXX
5299999. Claims Resisted During Current Year				1,258,000		1,258,000	XXX
5399999 - Totals				2,230,000	11,000	1,258,000	XXX

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE H - ACCIDENT AND HEALTH EXHIBIT

	Total		Group Accident and Health		Credit Accident and Health (Group and Individual)		Collectively Renewable	Other Individual Contracts									
	1 Amount	2 %	3 Amount	4 %	5 Amount	6 %		Non-Cancelable		Guaranteed Renewable		Non-Renewable for Stated Reasons Only		Other Accident Only		All Other	
								9 Amount	10 %	11 Amount	12 %	13 Amount	14 %	15 Amount	16 %	17 Amount	18 %
PART 1. - ANALYSIS OF UNDERWRITING OPERATIONS																	
1. Premiums written	675,580,176	XXX	243,075	XXX		XXX	XXX	506,403,152	XXX	157,024,337	XXX	11,909,612	XXX		XXX		XXX
2. Premiums earned	675,322,592	XXX	243,075	XXX		XXX	XXX	506,227,186	XXX	156,640,217	XXX	12,212,114	XXX		XXX		XXX
3. Incurred claims	324,308,123	48.0	22,490	9.3				317,026,799	62.6	7,177,053	4.6	81,781	0.7				
4. Cost containment expenses	6,523,949	1.0						6,523,949	1.3								
5. Incurred claims and cost containment expenses (Lines 3 and 4)	330,832,072	49.0	22,490	9.3				323,550,748	63.9	7,177,053	4.6	81,781	0.7				
6. Increase in contract reserves	128,387,562	19.0						6,772,960	1.3	121,633,480	77.7	(18,878)	(0.2)				
7. Commissions (a)	70,790,047	10.5	83,724	34.4				68,045,054	13.4	1,019,765	0.7	1,641,504	13.4				
8. Other general insurance expenses	193,974,706	28.7	28,111	11.6				145,426,380	28.7	45,011,981	28.7	3,508,234	28.7				
9. Taxes, licenses and fees	19,698,082	2.9	44,962	18.5				14,068,668	2.8	5,245,063	3.3	339,389	2.8				
10. Total other expenses incurred	284,462,835	42.1	156,797	64.5				227,540,102	44.9	51,276,809	32.7	5,489,127	44.9				
11. Aggregate write-ins for deductions	4,121,706	0.6	67,485	27.8				4,227,317	0.8	(173,096)	(0.1)						
12. Gain from underwriting before dividends or refunds	(72,481,583)	(10.7)	(3,697)	(1.5)				(55,863,941)	(11.0)	(23,274,029)	(14.9)	6,660,084	54.5				
13. Dividends or refunds	23,853,761	3.5						23,302,569	4.6	2,820	0.0	548,372	4.5				
14. Gain from underwriting after dividends or refunds	(96,335,344)	(14.3)	(3,697)	(1.5)				(79,166,510)	(15.6)	(23,276,849)	(14.9)	6,111,712	50.0				
DETAILS OF WRITE-INS																	
1101. Miscellaneous charges	4,121,706	0.6	67,485	27.8				4,227,317	0.8	(173,096)	(0.1)						
1102.																	
1103.																	
1198. Summary of remaining write-ins for Line 11 from overflow page																	
1199. Totals (Lines 1101 thru 1103 plus 1198)(Line 11 above)	4,121,706	0.6	67,485	27.8				4,227,317	0.8	(173,096)	(0.1)						

(a) Includes \$ reported as "Contract, membership and other fees retained by agents."

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
SCHEDULE H - ACCIDENT AND HEALTH EXHIBIT (Continued)

	1 Total	2 Group Accident and Health	3 Credit Accident and Health (Group and Individual)	4 Collectively Renewable	Other Individual Contracts				
					5 Non-Cancelable	6 Guaranteed Renewable	7 Non-Renewable for Stated Reasons Only	8 Other Accident Only	9 All Other
PART 2. - RESERVES AND LIABILITIES									
A. Premium Reserves:									
1. Unearned premiums	68,670,065				44,072,886	24,363,433	233,746		
2. Advance premiums	11,937,645				8,740,450	3,014,302	182,893		
3. Reserve for rate credits									
4. Total premium reserves, current year	80,607,710				52,813,336	27,377,735	416,639		
5. Total premium reserves, prior year	78,876,455				51,661,227	26,526,482	688,746		
6. Increase in total premium reserves	1,731,255				1,152,109	851,253	(272,107)		
B. Contract Reserves:									
1. Additional reserves (a)	1,180,539,906				533,497,857	647,030,162	11,887		
2. Reserve for future contingent benefits									
3. Total contract reserves, current year	1,180,539,906				533,497,857	647,030,162	11,887		
4. Total contract reserves, prior year	1,052,152,344				526,724,897	525,396,682	30,765		
5. Increase in contract reserves	128,387,562				6,772,960	121,633,480	(18,878)		
C. Claim Reserves and Liabilities:									
1. Total current year	1,853,614,223				1,831,354,531	19,812,294	2,447,398		
2. Total prior year	1,874,495,751				1,855,574,892	16,099,369	2,821,490		
3. Increase	(20,881,528)				(24,220,361)	3,712,925	(374,092)		

PART 3. - TEST OF PRIOR YEAR'S CLAIM RESERVES AND LIABILITIES									
1. Claims paid during the year:									
1.1 On claims incurred prior to current year	336,416,541				333,216,479	2,953,760	246,302		
1.2 On claims incurred during current year	8,773,110	22,490			8,030,681	510,368	209,571		
2. Claim reserves and liabilities, December 31, current year:									
2.1 On claims incurred prior to current year	1,623,835,933				1,614,940,432	7,423,996	1,471,505		
2.2 On claims incurred during current year	229,778,290				216,414,099	12,388,298	975,893		
3. Test:									
3.1 Lines 1.1 and 2.1	1,960,252,474				1,948,156,911	10,377,756	1,717,807		
3.2 Claim reserves and liabilities, December 31, prior year	1,874,495,751				1,855,574,892	16,099,369	2,821,490		
3.3 Line 3.1 minus Line 3.2	85,756,723				92,582,019	(5,721,613)	(1,103,683)		

PART 4. - REINSURANCE									
A. Reinsurance Assumed:									
1. Premiums written									
2. Premiums earned									
3. Incurred claims									
4. Commissions									
B. Reinsurance Ceded:									
1. Premiums written	86,271,478	132,452				86,139,026			
2. Premiums earned	86,603,182	132,452				86,470,730			
3. Incurred claims	68,835,948	27,452			2,277,331	66,531,165			
4. Commissions	12,765,763	52,844				12,712,919			

(a) Includes \$ premium deficiency reserve.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE H - PART 5 - HEALTH CLAIMS

	1 Medical	2 Dental	3 Other	4 Total
A. Direct:				
1. Incurred Claims			393,144,071	393,144,071
2. Beginning Claim Reserves and Liabilities			2,103,410,478	2,103,410,478
3. Ending Claim Reserves and Liabilities			2,095,952,199	2,095,952,199
4. Claims Paid			400,602,350	400,602,350
B. Assumed Reinsurance:				
5. Incurred Claims.....				
6. Beginning Claim Reserves and Liabilities				
7. Ending Claim Reserves and Liabilities				
8. Claims Paid				
C. Ceded Reinsurance:				
9. Incurred Claims.....			68,835,948	68,835,948
10. Beginning Claim Reserves and Liabilities			229,069,424	229,069,424
11. Ending Claim Reserves and Liabilities			243,041,757	243,041,757
12. Claims Paid			54,863,615	54,863,615
D. Net:				
13. Incurred Claims.....			324,308,123	324,308,123
14. Beginning Claim Reserves and Liabilities			1,874,341,054	1,874,341,054
15. Ending Claim Reserves and Liabilities			1,852,910,442	1,852,910,442
16. Claims Paid			345,738,735	345,738,735
E. Net Incurred Claims and Cost Containment Expenses:				
17. Incurred Claims and Cost Containment Expenses			330,832,072	330,832,072
18. Beginning Reserves and Liabilities			1,877,159,250	1,877,159,250
19. Ending Reserves and Liabilities			1,855,707,521	1,855,707,521
20. Paid Claims and Cost Containment Expenses			352,283,801	352,283,801

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 1 - SECTION 1

Reinsurance Assumed Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsured Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Reinsured	5 Domiciliary Jurisdiction	6 Type of Reinsurance Assumed	7 Type of Business Assumed	8 Amount of In Force at End of Year	9 Reserve	10 Premiums	11 Reinsurance Payable on Paid and Unpaid Losses	12 Modified Coinsurance Reserve	13 Funds Withheld Under Coinsurance
93432	06-1041383	01/01/1985	C. M. Life Insurance Company	CT	OTH/I	OL			329,567			
93432	06-1041383	01/01/2000	C. M. Life Insurance Company	CT	CO/I	AXXX	2,521,774,378	154,952,223	10,456,867	4,232,520		
93432	06-1041383	01/01/2000	C. M. Life Insurance Company	CT	CO/I	OL		202,397,854				
93432	06-1041383	01/01/2002	C. M. Life Insurance Company	CT	CO/I	AXXX	2,351,893,078	373,553,088	29,020,607	18,945,397		
70416	43-0581430	09/07/1983	MML Bay State Life Insurance Company	CT	YRT/I	OL	351,918,386	4,502,350	5,271,089	295,436		
70416	43-0581430	01/01/1997	MML Bay State Life Insurance Company	CT	OTH/I	OL			129,110			
0299999. General Account - U.S. Affiliates - Other							5,225,585,842	735,405,515	45,207,240	23,473,353		
0399999. Total General Account - U.S. Affiliates							5,225,585,842	735,405,515	45,207,240	23,473,353		
0699999. Total General Account - Non-U.S. Affiliates												
0799999. Total General Account - Affiliates							5,225,585,842	735,405,515	45,207,240	23,473,353		
80659	82-4533188	01/01/1986	US Business of Canada Life Assur Co	MI	YRT/I	OL	274,784	9,669	18,393			
97136	13-3114906	10/01/1981	Metropolitan Tower Life Insurance Co. (FAC)	NE	YRT/I	OL	1,861,498	98,140	233,956			
97136	13-3114906	11/01/1985	Metropolitan Tower Life Insurance Co. (JX25)	NE	YRT/I	OL	5,469,586	158,773	98,650			
80314	52-0913817	12/31/1994	UniCARE Life and Health Insurance Company	IN	CO/G	OL		636,777				
88072	06-0974148	01/01/2013	Talcott Resolution Life Insurance Company	CT	CO/G	OL		5,681,698,944	683,173,349			
0899999. General Account - U.S. Non-Affiliates							7,605,868	5,682,602,303	683,524,348			
00000	AA-3190973	10/01/2000	Argus International Life Insurance Limited	BMJ	YRT/I	OL	189,475	1,204	287			
00000	AA-1120119	02/21/2017	Rothesay Life Plc	GBR	OTH/I	OL			17,782,540	1,425,112		
00000	AA-1120119	10/01/2019	Rothesay Life Plc	GBR	OTH/I	OL			17,324,023	5,602,387		
0999999. General Account - Non-U.S. Non-Affiliates							189,475	1,204	35,106,850	7,027,499		
1099999. Total General Account - Non-Affiliates							7,795,343	5,682,603,507	718,631,198	7,027,499		
1199999. Total General Account							5,233,381,185	6,418,009,022	763,838,438	30,500,852		
70416	43-0581430	01/01/2000	MML Bay State Life Insurance Company	CT	MCO/G	OL	2,233,750,409		(482,292)	423,124	1,145,399,254	
1399999. Separate Accounts - U.S. Affiliates - Other							2,233,750,409		(482,292)	423,124	1,145,399,254	
1499999. Total Separate Accounts - U.S. Affiliates							2,233,750,409		(482,292)	423,124	1,145,399,254	
1799999. Total Separate Accounts - Non-U.S. Affiliates												
1899999. Total Separate Accounts - Affiliates							2,233,750,409		(482,292)	423,124	1,145,399,254	
88072	06-0974148	01/01/2013	Talcott Resolution Life Insurance Company	CT	MCO/G	VA			704,301,242		8,687,777,710	
1999999. Separate Accounts - U.S. Non-Affiliates									704,301,242		8,687,777,710	
2199999. Total Separate Accounts - Non-Affiliates									704,301,242		8,687,777,710	
2299999. Total Separate Accounts							2,233,750,409		703,818,950	423,124	9,833,176,964	
2399999. Total U.S. (Sum of 0399999, 0899999, 1499999 and 1999999)							7,466,942,119	6,418,007,818	1,432,550,538	23,896,477	9,833,176,964	
2499999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999 and 2099999)							189,475	1,204	35,106,850	7,027,499		
9999999 - Totals							7,467,131,594	6,418,009,022	1,467,657,388	30,923,976	9,833,176,964	

SCHEDULE S - PART 1 - SECTION 2

Reinsurance Assumed Accident and Health Insurance Listed by Reinsured Company as of December 31, Current Year

1	2	3	4	5	6	7	8	9	10	11	12	13
NAIC Company Code	ID Number	Effective Date	Name of Reinsured	Domiciliary Jurisdiction	Type of Reinsurance Assumed	Type of Business Assumed	Premiums	Unearned Premiums	Reserve Liability Other Than for Unearned Premiums	Reinsurance Payable on Paid and Unpaid Losses	Modified Coinsurance Reserve	Funds Withheld Under Coinsurance
NONE												
999999 - Totals												

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 2

Reinsurance Recoverable on Paid and Unpaid Losses Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domiciliary Jurisdiction	6 Paid Losses	7 Unpaid Losses
0399999. Total Life and Annuity - U.S. Affiliates						
0699999. Total Life and Annuity - Non-U.S. Affiliates						
0799999. Total Life and Annuity - Affiliates						
80659	82-4533188	09/24/1999	Canada Life Assurance Co (CRB1)	MI	58,758	1,744,532
80659	82-4533188	11/01/2005	Canada Life Assurance Co (CRB4)	MI	14,235	3,782,743
80659	82-4533188	11/23/2007	Canada Life Assurance Co (CRB5)	MI	7,479	109,904
80659	82-4533188	08/01/2008	Canada Life Assurance Co (CRH2)	MI		110,000
67652	23-2044248	11/01/1999	First Penn-Pacific Life Ins. Co. (FP86)	IN	166,847	
86258	13-2572994	03/01/1996	General Re Life Corp. (CL30)	CT		1,595,718
86258	13-2572994	03/01/1996	General Re Life Corp. (CL44)	CT	235,471	684,170
86258	13-2572994	03/31/2003	General Re Life Corp. (CLH1)	CT	12,486	16,526
86258	13-2572994	09/01/1976	General Re Life Corp. (C001)	CT	639,054	707,507
86258	13-2572994	03/07/1994	General Re Life Corp. (C047)	CT		142,567
86258	13-2572994	03/01/1996	General Re Life Corp. (C061)	CT	482,535	1,089,894
86258	13-2572994	09/16/1996	General Re Life Corp. (C071)	CT	150,031	15,003
86258	13-2572994	02/08/1999	General Re Life Corp. (C081)	CT		310,125
86258	13-2572994	01/01/2005	General Re Life Corp. (C084)	CT	247,938	697,283
86258	13-2572994	07/01/2007	General Re Life Corp. (GRN1)	CT	12,106	143,412
86258	13-2572994	07/15/2008	General Re Life Corp. (GRN3)	CT		178,077
86258	13-2572994	07/15/2008	General Re Life Corp. (GRN4)	CT	34,594	291,419
86258	13-2572994	11/01/2010	General Re Life Corp. (GRN5)	CT		106,299
86258	13-2572994	07/01/2018	General Re Life Corp. (GRN9)	CT		14,122
86258	13-2572994	09/01/1976	General Re Life Corp. (GRPA)	CT		170,661
88340	59-2859797	01/01/2012	Hannover Life Reassurance Co of America (HAB7)	FL	166,749	91,747
88340	59-2859797	03/01/2008	Hannover Life Reassurance Co of America (HAE1)	FL		62,926
88340	59-2859797	04/01/2005	Hannover Life Reassurance Co of America (HAM5)	FL		2,000
88340	59-2859797	04/01/2005	Hannover Life Reassurance Co of America (HAM7)	FL	130,018	324,905
88340	59-2859797	11/01/2010	Hannover Life Reassurance Co of America (HAN5)	FL		212,593
88340	59-2859797	01/01/2011	Hannover Life Reassurance Co of America (HAN6)	FL	466,223	287,312
88340	59-2859797	07/01/2018	Hannover Life Reassurance Co of America (HAN9)	FL		28,245
88340	59-2859797	12/01/2015	Hannover Life Reassurance Co of America (HAS2)	FL	62,469	187,500
88340	59-2859797	05/07/2012	Hannover Life Reassurance Co of America (SD96)	FL	450,000	7,171,887
65676	35-0472300	11/19/2001	Lincoln National Life Ins. Co. (LID1)	IN	235,378	607,400
65676	35-0472300	06/01/1937	Lincoln National Life Ins. Co. (LN03)	IN	75,000	99,500
65676	35-0472300	09/01/1982	Lincoln National Life Ins. Co. (LN12)	IN		161,809
65676	35-0472300	01/05/1983	Lincoln National Life Ins. Co. (LN16)	IN		10,509
65676	35-0472300	03/29/1993	Lincoln National Life Ins. Co. (LN36)	IN	50,004	235,126
65676	35-0472300	09/16/1996	Lincoln National Life Ins. Co. (LN72)	IN	99,991	9,999
65676	35-0472300	02/08/1999	Lincoln National Life Ins. Co. (LN81)	IN		325,879
65676	35-0472300	03/28/2000	Lincoln National Life Ins. Co. (LN85)	IN	389,725	
66346	58-0828824	09/16/1996	Munich American Reassurance Co (CA69)	GA	199,980	19,998
66346	58-0828824	09/08/1997	Munich American Reassurance Co (CA76)	GA		9,386
66346	58-0828824	03/28/2000	Munich American Reassurance Co (CA84)	GA	497,291	851,431
66346	58-0828824	03/28/2000	Munich American Reassurance Co (CA85)	GA	167,054	
66346	58-0828824	07/01/2007	Munich American Reassurance Co (CAN1)	GA	30,177	215,118
66346	58-0828824	11/01/1980	Munich American Reassurance Co (CM41)	GA	284,908	348,629
66346	58-0828824	01/01/1988	Munich American Reassurance Co (CM42)	GA		1,021,886
66346	58-0828824	09/08/1997	Munich American Reassurance Co (CN85)	GA		90,825
66346	58-0828824	05/01/2001	Munich American Reassurance Co (MA97)	GA	135,739	191,107
66346	58-0828824	09/16/1996	Munich American Reassurance Co (MAA1)	GA	8,620	
66346	58-0828824	09/24/1999	Munich American Reassurance Co (MAB1)	GA	859,126	3,296,812
66346	58-0828824	03/31/2004	Munich American Reassurance Co (MAB2)	GA		8,615
66346	58-0828824	08/23/2004	Munich American Reassurance Co (MAB3)	GA	977,398	3,027,978
66346	58-0828824	11/01/2005	Munich American Reassurance Co (MAB4)	GA	922,414	6,619,803
66346	58-0828824	11/23/2007	Munich American Reassurance Co (MAB5)	GA	1,204,467	256,440
66346	58-0828824	08/01/2008	Munich American Reassurance Co (MAB6)	GA	9,891	
66346	58-0828824	11/01/2005	Munich American Reassurance Co (MAD5)	GA	168,065	
66346	58-0828824	03/01/2008	Munich American Reassurance Co (MAE1)	GA		151,023
66346	58-0828824	05/28/2012	Munich American Reassurance Co (MAE1)	GA	199,156	1,050,396
66346	58-0828824	08/01/2008	Munich American Reassurance Co (MAH2)	GA	8,685	82,500
66346	58-0828824	04/01/2005	Munich American Reassurance Co (MAM5)	GA		1,500
66346	58-0828824	04/01/2005	Munich American Reassurance Co (MAM7)	GA	118,000	324,905
66346	58-0828824	02/08/1999	Munich American Reassurance Co (MU81)	GA		356,556
66346	58-0828824	01/01/1999	Munich American Reassurance Co (MU82)	GA		
66346	58-0828824	03/31/2004	Munich American Reassurance Co (MU84)	GA	1,383	
66346	58-0828824	05/01/2004	Munich American Reassurance Co (MUJ2)	GA	509,580	769,168
66346	58-0828824	01/01/2005	Munich American Reassurance Co (MUJ6)	GA	12,021	372,758
66346	58-0828824	01/01/2005	Munich American Reassurance Co (MUJ6)	GA	72,322	
66346	58-0828824	05/23/2005	Munich American Reassurance Co (MUL2)	GA	112,500	135,000
66346	58-0828824	11/01/2008	Munich American Reassurance Co (MUL3)	GA	15,000	18,000
66346	58-0828824	04/28/2011	Munich American Reassurance Co (MUL6)	GA	273,053	
66346	58-0828824	08/30/2010	Munich American Reassurance Co (MUL7)	GA	90,000	975,000
66346	58-0828824	08/30/2010	Munich American Reassurance Co (MUL8)	GA	74,795	411,500
66346	58-0828824	07/01/2007	Munich American Reassurance Co (MUN1)	GA	40,234	286,824
66346	58-0828824	07/15/2008	Munich American Reassurance Co (MUN3)	GA	60,679	394,083
66346	58-0828824	07/15/2008	Munich American Reassurance Co (MUN4)	GA	261,874	437,130
66346	58-0828824	11/01/2010	Munich American Reassurance Co (MUN5)	GA		106,298
66346	58-0828824	01/01/2011	Munich American Reassurance Co (MUN6)	GA	1,085,318	576,056
66346	58-0828824	07/01/2018	Munich American Reassurance Co (MUN9)	GA		14,122
66346	58-0828824	08/08/2016	Munich American Reassurance Co (MU07)	GA		45,000
66346	58-0828824	08/30/2010	Munich American Reassurance Co (MUT1)	GA	45,000	1,735,500
66346	58-0828824	08/30/2010	Munich American Reassurance Co (MUT2)	GA	35,000	797,300
66346	58-0828824	07/07/2018	Munich American Reassurance Co (MUT5)	GA		20,000
66346	58-0828824	07/07/2018	Munich American Reassurance Co (MUT9)	GA	50,000	
66346	58-0828824	01/23/2019	Munich American Reassurance Co (MUJ7)	GA		15,000
88099	75-1608507	11/23/2007	Optimum Re Insurance Company (OPB5)	TX	172,067	36,636
88099	75-1608507	01/01/2012	Optimum Re Insurance Company (OPB7)	TX	171,141	106,405
74900	63-0483783	07/07/2018	PartnerRe Life Reins Co (PRT6)	AR		80,000
74900	63-0483783	07/07/2018	PartnerRe Life Reins Co (PRTB)	AR		157,458
93572	43-1235868	03/01/1996	RGA Reinsurance Co. (AL44)	MO	235,471	1,185,679
93572	43-1235868	05/01/2001	RGA Reinsurance Co. (AL97)	MO	75,948	191,195
93572	43-1235868	09/16/1996	RGA Reinsurance Co. (ALA1)	MO	11,491	
93572	43-1235868	09/01/2001	RGA Reinsurance Co. (ALB2)	MO	95,709	252,291
93572	43-1235868	11/19/2001	RGA Reinsurance Co. (ALD1)	MO	294,275	759,387
93572	43-1235868	03/01/1996	RGA Reinsurance Co. (AZ62)	MO	482,535	1,089,894
93572	43-1235868	01/01/1999	RGA Reinsurance Co. (AZ82)	MO	1,661	
93572	43-1235868	03/28/2000	RGA Reinsurance Co. (AZ84)	MO	119,739	790,261
93572	43-1235868	03/28/2000	RGA Reinsurance Co. (AZ85)	MO	222,671	
93572	43-1235868	09/14/1981	RGA Reinsurance Co. (GA11)	MO	231,177	4,149,455
93572	43-1235868	12/31/2017	RGA Reinsurance Co. (GA17)	MO		3,403,113
93572	43-1235868	12/31/2017	RGA Reinsurance Co. (GA17)	MO		348,962
93572	43-1235868	01/01/1984	RGA Reinsurance Co. (GA18)	MO	207,901	401,453
93572	43-1235868	09/01/1986	RGA Reinsurance Co. (GA24)	MO	279,921	1,376,281
93572	43-1235868	03/29/1993	RGA Reinsurance Co. (GA39)	MO	39,996	188,067
93572	43-1235868	03/29/1993	RGA Reinsurance Co. (GA43)	MO	41,367	
93572	43-1235868	05/01/1994	RGA Reinsurance Co. (GA49)	MO		152,496

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 2

Reinsurance Recoverable on Paid and Unpaid Losses Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domiciliary Jurisdiction	6 Paid Losses	7 Unpaid Losses
93572	43-1235868	02/08/1999	RG A Reinsurance Co. (GA81)	MO		325,879
93572	43-1235868	03/28/2000	RG A Reinsurance Co. (GA84)	MO	594,154	924,454
93572	43-1235868	07/01/2002	RG A Reinsurance Co. (GAE5)	MO	22,052	119,902
93572	43-1235868	05/01/2004	RG A Reinsurance Co. (GAJ2)	MO	4,808	149,103
93572	43-1235868	01/01/2005	RG A Reinsurance Co. (GAJ6)	MO	28,929	
93572	43-1235868	05/23/2005	RG A Reinsurance Co. (GAL2)	MO	67,500	81,000
93572	43-1235868	05/23/2005	RG A Reinsurance Co. (GAL3)	MO	90,000	2,012,954
93572	43-1235868	08/30/2010	RG A Reinsurance Co. (GAL7)	MO	40,000	2,600,000
93572	43-1235868	08/30/2010	RG A Reinsurance Co. (GAL8)	MO	75,000	2,271,000
93572	43-1235868	07/01/2007	RG A Reinsurance Co. (GAN1)	MO	81,359	423,429
93572	43-1235868	02/24/2014	RG A Reinsurance Co. (GAN3)	MO		77,828
93572	43-1235868	11/01/2010	RG A Reinsurance Co. (GAN5)	MO		106,298
93572	43-1235868	06/01/2012	RG A Reinsurance Co. (GAN6)	MO	48,500	772,719
93572	43-1235868	12/06/2017	RG A Reinsurance Co. (GAN8)	MO		412,110
93572	43-1235868	07/01/2018	RG A Reinsurance Co. (GAN9)	MO		14,122
93572	43-1235868	08/30/2010	RG A Reinsurance Co. (GAT1)	MO	120,000	4,628,000
93572	43-1235868	08/30/2010	RG A Reinsurance Co. (GAT2)	MO	2,222,500	2,790,550
93572	43-1235868	07/07/2018	RG A Reinsurance Co. (GAT5)	MO		25,000
93572	43-1235868	07/07/2018	RG A Reinsurance Co. (GAT6)	MO		100,000
93572	43-1235868	07/07/2018	RG A Reinsurance Co. (GAT9)	MO	25,000	
93572	43-1235868	07/07/2018	RG A Reinsurance Co. (GATB)	MO		314,916
93572	43-1235868	10/01/1976	RG A Reinsurance Co. (NC02)	MO	34,971	1,804,107
93572	43-1235868	03/29/1993	RG A Reinsurance Co. (NC40)	MO	51,718	
93572	43-1235868	12/06/2017	RG A Reinsurance Co. (RA17)	MO		12,804
93572	43-1235868	01/01/1997	RG A Reinsurance Co. (RG026)	MO	1,997,600	8,116,480
93572	43-1235868	01/01/1997	RG A Reinsurance Co. (RG036)	MO	477,192	863,013
93572	43-1235868	01/01/1997	RG A Reinsurance Co. (RG046)	MO	800,000	924,145
93572	43-1235868	01/01/1997	RG A Reinsurance Co. (RG056)	MO		675,000
93572	43-1235868	11/01/1986	RG A Reinsurance Co. (RG10)	MO		985,281
93572	43-1235868	01/01/1983	RG A Reinsurance Co. (RG12)	MO		198,304
93572	43-1235868	02/14/1983	RG A Reinsurance Co. (RG13)	MO	43,331	69,700
93572	43-1235868	01/01/1988	RG A Reinsurance Co. (RG14)	MO		65,000
93572	43-1235868	04/15/1991	RG A Reinsurance Co. (RG19)	MO		272,811
93572	43-1235868	09/14/1981	RG A Reinsurance Co. (RG22)	MO		4,661,912
93572	43-1235868	05/01/2001	RG A Reinsurance Co. (RG97)	MO	127,693	95,548
93572	43-1235868	09/16/1996	RG A Reinsurance Co. (RGA1)	MO	8,621	
93572	43-1235868	02/29/2004	RG A Reinsurance Co. (RGA1)	MO	18,934	205,280
93572	43-1235868	08/23/2004	RG A Reinsurance Co. (RGA3)	MO	814,499	2,523,315
93572	43-1235868	06/01/2008	RG A Reinsurance Co. (RGA5)	MO	20,940	126,551
93572	43-1235868	08/01/2008	RG A Reinsurance Co. (RGA6)	MO	12,364	
93572	43-1235868	01/01/2012	RG A Reinsurance Co. (RGA7)	MO	13,176	227,469
93572	43-1235868	11/01/2005	RG A Reinsurance Co. (RGD5)	MO	96,037	
93572	43-1235868	02/29/2004	RG A Reinsurance Co. (RGH1)	MO	6,243	1,253,448
93572	43-1235868	06/01/2008	RG A Reinsurance Co. (RGH2)	MO	17,370	165,000
93572	43-1235868	04/01/2005	RG A Reinsurance Co. (RGM7)	MO	665,000	1,042,405
64688	75-6020048	09/01/2001	SCOR Global Life Americas Reins Co (SCB2)	DE	42,093	391,473
64688	75-6020048	08/23/2004	SCOR Global Life Americas Reins Co (SCB3)	DE	449,244	1,513,989
64688	75-6020048	01/01/2012	SCOR Global Life Americas Reins Co (SCB7)	DE	8,784	212,811
64688	75-6020048	01/01/2001	SCOR Global Life Americas Reins Co (SCG1)	DE		2,000,000
64688	75-6020048	11/01/2010	SCOR Global Life Americas Reins Co (SCN5)	DE		212,593
64688	75-6020048	01/01/2011	SCOR Global Life Americas Reins Co (SCN6)	DE	247,711	382,124
64688	75-6020048	07/01/2018	SCOR Global Life Americas Reins Co (SCN9)	DE		28,245
64688	75-6020048	09/01/1986	SCOR Global Life Americas Reins Co (TA23)	DE	44,843	688,139
64688	75-6020048	11/01/1986	SCOR Global Life Americas Reins Co (TA25)	DE	103,293	172,129
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL7)	DE		707,841
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL8)	DE	99,589	823,000
64688	75-6020048	07/15/2008	SCOR Global Life Americas Reins Co (TAN3)	DE		320,526
64688	75-6020048	07/15/2008	SCOR Global Life Americas Reins Co (TAN4)	DE		291,420
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT1)	DE		1,157,000
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT2)	DE	87,500	1,993,250
64688	75-6020048	03/31/2003	SCOR Global Life Americas Reins Co (TRH1)	DE		1,044,540
64688	75-6020048	08/01/2008	SCOR Global Life Americas Reins Co (XLH2)	DE		55,000
87017	62-1003368	09/16/1996	SCOR Global Life Reins Co of Delaware (GG70)	DE	99,991	9,999
87017	62-1003368	09/24/1999	SCOR Global Life Reins Co of Delaware (GGB1)	DE	43,764	1,744,539
87017	62-1003368	09/01/2001	SCOR Global Life Reins Co of Delaware (GGB2)	DE		239,665
87017	62-1003368	11/19/2001	SCOR Global Life Reins Co of Delaware (GGD1)	DE		303,700
97071	13-3126819	05/01/2001	SCOR Global Life USA Reins Co (BA97)	DE	34,284	95,555
97071	13-3126819	03/28/2000	SCOR Global Life USA Reins Co (BM84)	DE	350,307	851,430
97071	13-3126819	01/01/2001	SCOR Global Life USA Reins Co (BMF1)	DE		4,945,138
97071	13-3126819	11/01/2005	SCOR Global Life USA Reins Co (GIB4)	DE		2,837,059
97071	13-3126819	11/23/2007	SCOR Global Life USA Reins Co (GIB5)	DE	363,795	109,904
97071	13-3126819	01/01/2012	SCOR Global Life USA Reins Co (GIB7)	DE	13,176	319,216
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL7)	DE		1,625,000
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL8)	DE		312,500
97071	13-3126819	07/01/2007	SCOR Global Life USA Reins Co (GIN1)	DE	9,863	215,119
97071	13-3126819	07/15/2008	SCOR Global Life USA Reins Co (GIN3)	DE		315,265
97071	13-3126819	07/15/2008	SCOR Global Life USA Reins Co (GIN4)	DE		745,511
97071	13-3126819	11/01/2010	SCOR Global Life USA Reins Co (GIN5)	DE		212,593
97071	13-3126819	01/01/2011	SCOR Global Life USA Reins Co (GIN6)	DE	346,683	867,602
97071	13-3126819	07/01/2018	SCOR Global Life USA Reins Co (GIN9)	DE		28,245
97071	13-3126819	12/06/2017	SCOR Global Life USA Reins Co (SU17)	DE		10,242
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE8)	DE	159,795	
97071	13-3126819	12/06/2017	SCOR Global Life USA Reins Co (SUN8)	DE		329,690
97071	13-3126819	08/08/2016	SCOR Global Life USA Reins Co (SU07)	DE		45,000
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT5)	DE		20,000
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT6)	DE		80,000
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT9)	DE	100,000	
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUTB)	DE		78,728
97071	13-3126819	01/23/2019	SCOR Global Life USA Reins Co (SUV7)	DE		45,000
68713	84-0499703	03/29/1993	Security Life of Denver Ins. Co. (SD37)	CO	50,004	
68713	84-0499703	06/15/1999	Security Life of Denver Ins. Co. (SD83)	CO	1,943,437	2,579,998
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ2)	CO	21,638	670,964
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ6)	CO	108,161	
82627	06-0839705	09/08/1997	Swiss Re Life & Health America Inc. (LF85)	MO		121,064
82627	06-0839705	08/01/1984	Swiss Re Life & Health America Inc. (LF88)	MO		115,475
82627	06-0839705	10/01/1981	Swiss Re Life & Health America Inc. (LR10)	MO	125,601	8,329
82627	06-0839705	01/01/1984	Swiss Re Life & Health America Inc. (LR17)	MO		56,032
82627	06-0839705	03/29/1993	Swiss Re Life & Health America Inc. (LR38)	MO	39,996	188,067
82627	06-0839705	03/29/1993	Swiss Re Life & Health America Inc. (LR42)	MO	41,367	
82627	06-0839705	09/08/1997	Swiss Re Life & Health America Inc. (LR78)	MO		12,510
82627	06-0839705	03/01/1996	Swiss Re Life & Health America Inc. (N044)	MO	235,471	1,185,679
82627	06-0839705	02/01/1994	Swiss Re Life & Health America Inc. (N045)	MO		6,934
82627	06-0839705	03/01/1996	Swiss Re Life & Health America Inc. (N048)	MO	1,427,304	
82627	06-0839705	03/01/1996	Swiss Re Life & Health America Inc. (N050)	MO		3,087,307
82627	06-0839705	09/08/1997	Swiss Re Life & Health America Inc. (N085)	MO		90,825

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 2

Reinsurance Recoverable on Paid and Unpaid Losses Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domiciliary Jurisdiction	6 Paid Losses	7 Unpaid Losses
82627	06-0839705	05/01/2001	Swiss Re Life & Health America Inc. (NO97)	MO	135,739	191,107
82627	06-0839705	09/16/1996	Swiss Re Life & Health America Inc. (NOA1)	MO	11,491	
82627	06-0839705	09/01/2001	Swiss Re Life & Health America Inc. (NOB2)	MO	244,214	1,174,191
82627	06-0839705	11/19/2001	Swiss Re Life & Health America Inc. (NOD1)	MO	117,689	303,700
82627	06-0839705	03/31/2003	Swiss Re Life & Health America Inc. (NOH1)	MO	53,070	
82627	06-0839705	12/31/2016	Swiss Re Life & Health America Inc. (SR16)	MO	312,515	15,366,270
82627	06-0839705	12/31/2016	Swiss Re Life & Health America Inc. (SR16)	MO		214,667
82627	06-0839705	03/01/1996	Swiss Re Life & Health America Inc. (SR60)	MO	485,342	1,089,894
82627	06-0839705	03/01/1996	Swiss Re Life & Health America Inc. (SR64)	MO	16,065	
82627	06-0839705	09/08/1997	Swiss Re Life & Health America Inc. (SR77)	MO		9,386
82627	06-0839705	01/01/2000	Swiss Re Life & Health America Inc. (SR84)	MO	164,448	801,219
82627	06-0839705	06/12/2012	Swiss Re Life & Health America Inc. (SRB2)	MO	98,899	264,942
82627	06-0839705	08/01/2008	Swiss Re Life & Health America Inc. (SRB6)	MO	7,418	
82627	06-0839705	01/01/2012	Swiss Re Life & Health America Inc. (SRB7)	MO	171,141	106,405
82627	06-0839705	06/12/2012	Swiss Re Life & Health America Inc. (SRD1)	MO	411,952	759,326
82627	06-0839705	05/28/2012	Swiss Re Life & Health America Inc. (SRE1)	MO	199,156	1,050,395
82627	06-0839705	01/01/2018	Swiss Re Life & Health America Inc. (SRE8)	MO	159,795	
82627	06-0839705	08/01/2008	Swiss Re Life & Health America Inc. (SRH2)	MO	8,685	82,500
82627	06-0839705	05/23/2005	Swiss Re Life & Health America Inc. (SRL2)	MO	22,500	27,000
82627	06-0839705	05/23/2005	Swiss Re Life & Health America Inc. (SRL3)	MO	135,000	1,994,954
82627	06-0839705	11/01/2006	Swiss Re Life & Health America Inc. (SRL5)	MO	450,000	141,863
82627	06-0839705	08/30/2010	Swiss Re Life & Health America Inc. (SRL6)	MO		121,914
82627	06-0839705	08/30/2010	Swiss Re Life & Health America Inc. (SRL7)	MO		28,921
82627	06-0839705	08/30/2010	Swiss Re Life & Health America Inc. (SRL8)	MO	99,589	2,698,000
82627	06-0839705	04/01/2005	Swiss Re Life & Health America Inc. (SRM5)	MO		5,000
82627	06-0839705	04/01/2005	Swiss Re Life & Health America Inc. (SRM7)	MO	50,000	534,333
82627	06-0839705	08/01/2017	Swiss Re Life & Health America Inc. (SRN6)	MO	70,768	237,554
82627	06-0839705	06/29/2015	Swiss Re Life & Health America Inc. (SRR1)	MO	49,279	
82627	06-0839705	12/01/2015	Swiss Re Life & Health America Inc. (SRS2)	MO	62,469	187,500
82627	06-0839705	08/30/2010	Swiss Re Life & Health America Inc. (SRT1)	MO	75,000	2,892,500
82627	06-0839705	08/30/2010	Swiss Re Life & Health America Inc. (SRT2)	MO	70,000	1,594,600
82627	06-0839705	07/07/2018	Swiss Re Life & Health America Inc. (SRT5)	MO		25,000
82627	06-0839705	07/07/2018	Swiss Re Life & Health America Inc. (SRT6)	MO		100,000
82627	06-0839705	07/07/2018	Swiss Re Life & Health America Inc. (SRT9)	MO	50,000	
82627	06-0839705	07/07/2018	Swiss Re Life & Health America Inc. (SRTB)	MO		157,458
82627	06-0839705	01/23/2019	Swiss Re Life & Health America Inc. (SRV7)	MO		30,000
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ2)	NY		149,103
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ6)	NY	24,036	
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL2)	NY		27,000
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL3)	NY		1,006,475
70688	36-6071399	07/15/2008	Transamerica Financial Life Ins. Co. (TAN3)	NY		132,916
0899999. Life and Annuity - U.S. Non-Affiliates					34,379,335	173,878,872
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (PHB1)	CYM		25,342
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (ST84)	CYM	248,554	53,998
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (ST97)	CYM	29,912	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STB1)	CYM	20,255	62,514
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STB2)	CYM		17,304
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STB3)	CYM	651,590	960,718
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STB4)	CYM	544,473	2,830,840
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STB5)	CYM	500,000	19,967
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STH1)	CYM	55,791	626,724
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STM5)	CYM		1,000
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co (Cayman) Ltd (STN1)	CYM	6,575	6,807
0999999. Life and Annuity - Non-U.S. Non-Affiliates					2,057,150	4,605,214
1099999. Total Life and Annuity - Non-Affiliates					36,436,485	178,484,086
1199999. Total Life and Annuity					36,436,485	178,484,086
1499999. Total Accident and Health - U.S. Affiliates						
1799999. Total Accident and Health - Non-U.S. Affiliates						
1899999. Total Accident and Health - Affiliates						
60054	06-6033492	03/22/2017	Aetna Life Insurance Corporation (AE17)	CT	90,480	122,543
68276	48-1024691	06/01/2000	Employers Reassurance Corp. (ER03)	KS		5,434,787
91898	86-0388413	01/01/2018	LifeCare Assurance Company	AZ	613,300	42,702
80314	52-0913817	12/31/1994	UnicARE Life & Health Insurance Co. (UN02)	IN		20,000
39845	48-0921045	01/01/1993	Westport Insurance Corporation (ER01)	MO		506,980
1999999. Accident and Health - U.S. Non-Affiliates					703,781	6,127,012
2199999. Total Accident and Health - Non-Affiliates					703,781	6,127,012
2299999. Total Accident and Health					703,781	6,127,012
2399999. Total U.S. (Sum of 0399999, 0899999, 1499999 and 1999999)					35,083,116	180,005,884
2499999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999 and 2099999)					2,057,150	4,605,214
9999999 Totals - Life, Annuity and Accident and Health					37,140,266	184,611,098

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
0399999. Total General Account - Authorized U.S. Affiliates														
0699999. Total General Account - Authorized Non-U.S. Affiliates														
0799999. Total General Account - Authorized Affiliates														
61492	44-0188050	09/01/2018	Athene Annuity & Life Assur. Co. (TH18)	DE	CO/L	JA		2,645,469,891	696,408,817		1,972,072,485			
80659	82-4533188	08/01/1985	Canada Life Assurance Co. (CR22)	MI	YRT/I	OL	121,058	5,454	5,175		8,267			
80659	82-4533188	03/01/1996	Canada Life Assurance Co. (CR57)	MI	YRT/I	OL	50,005,670	148,953	135,112		135,327			
80659	82-4533188	09/01/1984	Canada Life Assurance Co. (CR82)	MI	YRT/I	OL	118,922	1,052	988		1,399			
80659	82-4533188	03/01/1996	Canada Life Assurance Co. (CR83)	MI	YRT/I	OL	12,267,932	92,018	79,348		50,868			
80659	82-4533188	03/28/2000	Canada Life Assurance Co. (CR85)	MI	YRT/I	OL	96,297,323	940,111	936,298		545,136			
80659	82-4533188	09/24/1999	Canada Life Assurance Co. (CRB1)	MI	YRT/I	OL	395,036,765	7,113,441	7,202,562		3,589,390			
80659	82-4533188	11/01/2005	Canada Life Assurance Co. (CRB4)	MI	YRT/I	OL	397,453,547	13,161,431	12,724,020		13,834,277			
80659	82-4533188	11/23/2007	Canada Life Assurance Co. (CRB5)	MI	YRT/I	OL	364,322,474	3,780,653	3,575,384		3,331,307			
80659	82-4533188	08/01/2008	Canada Life Assurance Co. (CRB6)	MI	YRT/I	OL	39,738,220	234,225	217,829		128,783			
80659	82-4533188	09/01/1999	Canada Life Assurance Co. (CRC1)	MI	YRT/I	OL	444,224	5,028	4,598		2,448			
80659	82-4533188	05/01/2004	Canada Life Assurance Co. (CRD3)	MI	YRT/I	OL	43,962,487	578,594	564,023		233,103			
80659	82-4533188	11/01/2005	Canada Life Assurance Co. (CRD5)	MI	YRT/I	OL	579,294,492	4,407,180	3,746,085		2,906,434			
80659	82-4533188	01/01/2009	Canada Life Assurance Co. (CRE4)	MI	YRT/I	OL	405,550	2,774	2,490		1,545			
80659	82-4533188	08/01/2008	Canada Life Assurance Co. (CRH2)	MI	YRT/I	OL	166,840,116	238,169	200,726		113,251			
80659	82-4533188	09/01/2003	Canada Life Assurance Co. (CRI1)	MI	YRT/I	OL	3,073,979	217,653	198,143		151,802			
80659	82-4533188	07/15/2008	Canada Life Assurance Co. (CRN2)	MI	YRT/I	OL	702,997,395	1,562,591	1,441,930		910,197			
80659	82-4533188	07/01/2012	Canada Life Assurance Co. (CRPE)	MI	YRT/I	OL	531,711,215	1,077,177	845,916		408,454			
84824	04-6145677	07/23/2019	Commonwealth Annuity & Life Insurance Co (CW19)	MA	CO/G	FA		897,134,883			871,735,017			
67652	23-2044248	11/01/1999	First Penn-Pacific Life Ins. Co. (FP86)	IN	MCO/I	OL	38,572,416						34,308,608	
86258	13-2572994	05/01/1994	General Re Life Corp. (CL29)	CT	YRT/I	OL	75,746,055	394,424	343,492		202,683			
86258	13-2572994	03/01/1996	General Re Life Corp. (CL30)	CT	YRT/I	OL	110,084,351	2,261,964	2,080,099		2,114,594			
86258	13-2572994	07/01/1972	General Re Life Corp. (CL31)	CT	YRT/I	OL	8,855,395	264,441	266,037		416,677			
86258	13-2572994	03/01/1996	General Re Life Corp. (CL44)	CT	YRT/I	OL	103,419,141	2,432,031	2,516,178		2,117,070			
86258	13-2572994	09/01/1998	General Re Life Corp. (CL87)	CT	YRT/I	OL	94,537,491	795,417	799,505		480,419			
86258	13-2572994	03/31/2004	General Re Life Corp. (CLD2)	CT	YRT/I	OL	3,185,046	14,162	11,860		2,468			
86258	13-2572994	05/01/2004	General Re Life Corp. (CLD3)	CT	YRT/I	OL	6,793,715	81,786	82,344		23,481			
86258	13-2572994	03/31/2003	General Re Life Corp. (CLH1)	CT	YRT/I	OL	66,200,946	1,424,938	1,368,825		654,921			
86258	13-2572994	09/01/1976	General Re Life Corp. (C001)	CT	YRT/G	OL	523,366	17,360	43,193		34,233			
86258	13-2572994	09/01/1976	General Re Life Corp. (C001)	CT	YRT/I	OL	341,368,711	6,361,447	6,685,883		8,810,163			
86258	13-2572994	03/07/1994	General Re Life Corp. (C047)	CT	YRT/I	OL	32,314,221	624,150	663,996		647,963			
86258	13-2572994	05/01/1994	General Re Life Corp. (C050)	CT	YRT/I	OL	117,181,557	1,467,805	1,394,195		1,012,337			
86258	13-2572994	03/01/1996	General Re Life Corp. (C061)	CT	YRT/G	OL			336,957					
86258	13-2572994	03/01/1996	General Re Life Corp. (C061)	CT	YRT/I	OL	417,326,467	4,175,105	3,847,615		4,668,405			
86258	13-2572994	01/19/2005	General Re Life Corp. (C066)	CT	YRT/I	OL	24,010,763	49,121	46,004		24,222			
86258	13-2572994	09/16/1996	General Re Life Corp. (C071)	CT	YRT/I	OL	209,319,473	1,334,362	1,362,452		879,181			
86258	13-2572994	02/08/1999	General Re Life Corp. (C081)	CT	YRT/I	OL	41,655,221	369,985	366,913		238,471			
86258	13-2572994	01/01/2005	General Re Life Corp. (C084)	CT	YRT/I	OL	670,879,175	2,655,777	2,605,108		1,625,810			
86258	13-2572994	09/01/1999	General Re Life Corp. (C0C1)	CT	YRT/I	OL	444,224	5,028	4,598		2,869			
86258	13-2572994	07/01/2007	General Re Life Corp. (GRN1)	CT	YRT/I	OL	841,682,965	2,162,518	2,130,458		1,770,159			
86258	13-2572994	07/15/2008	General Re Life Corp. (GRN2)	CT	YRT/I	OL	526,482,242	1,144,374	1,055,604		733,070			
86258	13-2572994	07/15/2008	General Re Life Corp. (GRN3)	CT	YRT/I	OL	1,230,883,471	1,277,166	1,272,164		1,039,800			
86258	13-2572994	07/15/2008	General Re Life Corp. (GRN4)	CT	YRT/I	OL	4,427,850,046	7,340,375	7,285,808		4,787,581			
86258	13-2572994	11/01/2010	General Re Life Corp. (GRN5)	CT	YRT/I	OL	1,779,780,684	1,791,792	1,813,580		1,060,796			
86258	13-2572994	05/14/2014	General Re Life Corp. (GRN6)	CT	YRT/I	OL	1,183,261	4,693	4,400		5,360			
86258	13-2572994	07/01/2018	General Re Life Corp. (GRN9)	CT	YRT/I	OL	763,340,839	695,684	248,074		130,637			
86258	13-2572994	09/01/1976	General Re Life Corp. (GRPA)	CT	YRT/I	OL	113,034,230	190,817	79,790		81,654			
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW1)	CT	YRT/I	OL	11,924,816	9,473						
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW2)	CT	YRT/I	OL	6,831,024	4,200						
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW3)	CT	YRT/I	OL	23,431,710	11,404			1,275			
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW4)	CT	YRT/I	OL	43,274,613	35,079			1,198			
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW5)	CT	YRT/I	OL	62,110,077	41,151			1,536			
86258	13-2572994	11/23/2019	General Re Life Corp. (GRW7)	CT	YRT/I	OL	10,698,878	7,484			78			

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
88340	59-2859797	03/01/1981	Hannover Life Reassurance (HA96)	FL	YRT/I	OL	247,919	10,767	10,394	15,014				
88340	59-2859797	08/05/2011	Hannover Life Reassurance (HA85)	FL	YRT/I	OL	50,541,131	446,548	410,656	273,601				
88340	59-2859797	01/01/2012	Hannover Life Reassurance (HA87)	FL	YRT/I	OL	104,584,206	1,048,893	978,321	533,239				
88340	59-2859797	08/05/2011	Hannover Life Reassurance (HA85)	FL	YRT/I	OL	51,864,976	291,645	240,841	154,978				
88340	59-2859797	01/01/2012	Hannover Life Reassurance (HA86)	FL	YRT/I	OL	137,374,565	282,680	230,433	104,340				
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA81)	FL	YRT/G	OL	12,697,951	156,958	1,057,516	83,134				
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA81)	FL	YRT/I	OL	259,108,395	959,563		658,820				
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA82)	FL	YRT/G	OL			2,997					
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA82)	FL	YRT/I	OL	317,828	3,248		2,242				
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA83)	FL	YRT/G	OL			170,578					
88340	59-2859797	03/01/2008	Hannover Life Reassurance (HA83)	FL	YRT/I	OL	49,167,419	182,905		117,549				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA82)	FL	YRT/G	OL	1,947,320	678	637	5,846				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA83)	FL	YRT/G	OL	4,713,798	1,023	997	8,732				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA83)	FL	YRT/I	OL	688,082	720	685	654				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA84)	FL	YRT/G	OL	1,405,360	338	306	2,849				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA84)	FL	YRT/I	OL	19,434	34	32	36				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA85)	FL	YRT/G	OL	3,745,719	1,104	1,094	9,782				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA85)	FL	YRT/I	OL	665,010	2,547	2,420	2,559				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA86)	FL	YRT/G	OL	116,000	91	82	801				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA87)	FL	YRT/G	OL	129,659,678	42,097	45,621	392,860				
88340	59-2859797	04/01/2005	Hannover Life Reassurance (HA88)	FL	YRT/G	OL	3,741,105	1,488	1,419	15,394				
88340	59-2859797	04/01/2010	Hannover Life Reassurance (HA89)	FL	YRT/G	OL	14,661,295	2,127	2,208	21,031				
88340	59-2859797	11/01/2010	Hannover Life Reassurance (HA85)	FL	YRT/I	OL	3,573,275,824	3,568,881	3,617,190	1,981,443				
88340	59-2859797	01/01/2011	Hannover Life Reassurance (HA86)	FL	YRT/I	OL	4,120,432,200	8,300,168	8,240,562	4,551,137				
88340	59-2859797	01/01/2012	Hannover Life Reassurance (HA87)	FL	YRT/I	OL	325,090,391	710,129	693,119	350,517				
88340	59-2859797	07/01/2018	Hannover Life Reassurance (HA89)	FL	YRT/I	OL	1,525,372,369	1,386,545	499,077	239,967				
88340	59-2859797	07/01/2012	Hannover Life Reassurance (HA86)	FL	YRT/I	OL	361,384,481	773,415	652,055	288,397				
88340	59-2859797	08/08/2016	Hannover Life Reassurance (HA80)	FL	CO/I	XXXL	174,656,350	853,721	460,987	175,815				
88340	59-2859797	12/01/2015	Hannover Life Reassurance (HA82)	FL	YRT/G	OL	501,612,874	110,049	87,245	671,032				
88340	59-2859797	05/07/2012	Hannover Life Reassurance (SD96)	FL	CO/I	XXXL	14,651,313,625	285,202,178	344,552,309	21,519,764				
88340	59-2859797	05/07/2012	Hannover Life Reassurance (SD96)	FL	YRT/I	OL	1,329,300,162	6,203,747	5,492,633	3,739,995				
88340	59-2859797	05/23/2005	Hannover Life Reassurance (STL1)	FL	CO/I	XXXL	4,417,270	13,053	14,952	69,144				
88340	59-2859797	05/23/2005	Hannover Life Reassurance (STL1)	FL	YRT/I	OL	41,096,276	501,495	507,775	303,255				
88340	59-2859797	05/23/2005	Hannover Life Reassurance (STL2)	FL	CO/I	XXXL	10,747,024	19,245	24,097	95,337				
88340	59-2859797	05/23/2005	Hannover Life Reassurance (STL2)	FL	YRT/I	OL	66,879,049	326,460	315,174	262,609				
93440	06-1041332	07/15/1994	HM Life Insurance Co. (GL49)	PA	YRT/I	OL	125,432	1,949	2,178	4,225				
93440	06-1041332	03/31/1997	HM Life Insurance Co. (TG67)	PA	YRT/I	OL	1,011,183	42,200	40,841	76,217				
65676	35-0472300	12/01/1964	Lincoln National Life Ins. Co. (LI51)	IN	YRT/I	OL	2,145,352	194,151	243,840	340,518				
65676	35-0472300	01/05/1983	Lincoln National Life Ins. Co. (LI54)	IN	YRT/I	OL	32,349,252	658,229	612,742	343,237				
65676	35-0472300	09/01/1998	Lincoln National Life Ins. Co. (LI87)	IN	YRT/I	OL	63,099,965	530,938	533,656	317,199				
65676	35-0472300	11/19/2001	Lincoln National Life Ins. Co. (LI87)	IN	YRT/I	OL	257,476,121	5,618,399	5,176,932	1,732,871				
65676	35-0472300	06/01/1937	Lincoln National Life Ins. Co. (LN03)	IN	MCO/I	OL	9,617,783			187,922			7,582,291	
65676	35-0472300	06/01/1937	Lincoln National Life Ins. Co. (LN04)	IN	MCO/I	OL	5,224,814			85,839			3,766,571	
65676	35-0472300	09/01/1982	Lincoln National Life Ins. Co. (LN12)	IN	YRT/I	OL	7,936,967	400,193	419,364	513,168				
65676	35-0472300	01/05/1983	Lincoln National Life Ins. Co. (LN16)	IN	YRT/G	OL			141,953					
65676	35-0472300	01/05/1983	Lincoln National Life Ins. Co. (LN16)	IN	YRT/I	OL	120,857,032	3,465,046	3,260,196	3,596,826				
65676	35-0472300	03/29/1993	Lincoln National Life Ins. Co. (LN36)	IN	YRT/I	OL	451,602,387	3,757,557	3,771,839	3,161,689				
65676	35-0472300	09/16/1996	Lincoln National Life Ins. Co. (LN72)	IN	YRT/I	OL	139,513,798	888,810	907,519	623,235				
65676	35-0472300	02/08/1999	Lincoln National Life Ins. Co. (LN81)	IN	YRT/I	OL	63,238,768	561,760	557,042	357,593				
65676	35-0472300	03/28/2000	Lincoln National Life Ins. Co. (LN85)	IN	YRT/I	OL	142,870,785	1,705,874	1,671,383	1,006,021				
65676	35-0472300	09/01/1999	Lincoln National Life Ins. Co. (LNC1)	IN	YRT/I	OL	444,224	5,028	4,598	2,371				
66346	58-0828824	01/01/1988	Munich American Reassurance (CA26)	GA	YRT/G	OL			21,320					
66346	58-0828824	01/01/1988	Munich American Reassurance (CA26)	GA	YRT/I	OL	185,690,285	1,845,945	1,898,732	2,337,454				
66346	58-0828824	05/01/1994	Munich American Reassurance (CA48)	GA	YRT/I	OL	185,643,034	780,065	1,390,404	570,222				
66346	58-0828824	03/01/1996	Munich American Reassurance (CA65)	GA	YRT/I	OL	122,304,991	588,688	599,154	316,290				
66346	58-0828824	09/16/1996	Munich American Reassurance (CA69)	GA	YRT/I	OL	279,003,176	1,778,468	1,815,902	1,162,504				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
66346	58-0828824	09/08/1997	Munich American Reassurance (CA76)	GA	YRT/I	OL	70,492,641	671,848	731,625	418,321				
66346	58-0828824	03/28/2000	Munich American Reassurance (CA84)	GA	YRT/I	OL	1,595,439,814	7,064,726	6,910,176	4,030,116				
66346	58-0828824	03/28/2000	Munich American Reassurance (CA85)	GA	YRT/I	OL	144,460,239	1,410,347	1,404,633	821,311				
66346	58-0828824	07/01/2007	Munich American Reassurance (CAN1)	GA	YRT/I	OL	1,262,494,504	3,243,773	3,196,027	2,601,608				
66346	58-0828824	05/01/1994	Munich American Reassurance (CN40)	GA	YRT/I	OL	199,309,946	1,570,721	1,396,530	693,003				
66346	58-0828824	11/01/1980	Munich American Reassurance (CN41)	GA	YRT/G	OL			10,927					
66346	58-0828824	11/01/1980	Munich American Reassurance (CN41)	GA	YRT/I	OL	19,634,755	528,743	523,318	891,697				
66346	58-0828824	01/01/1988	Munich American Reassurance (CN42)	GA	YRT/I	OL	80,734,029	1,044,655	1,013,339	821,179				
66346	58-0828824	03/01/1996	Munich American Reassurance (CN43)	GA	YRT/I	OL	7,873,188	208,332	196,217	103,740				
66346	58-0828824	09/08/1997	Munich American Reassurance (CN85)	GA	YRT/I	OL	21,505,538	289,228	279,422	209,968				
66346	58-0828824	05/01/2001	Munich American Reassurance (CN97)	GA	YRT/I	OL	28,548,999	206,116	244,491	99,098				
66346	58-0828824	09/01/1998	Munich American Reassurance (MA87)	GA	YRT/I	OL	94,537,491	795,417	799,505	443,785				
66346	58-0828824	10/01/1994	Munich American Reassurance (MA91)	GA	YRT/I	OL	77,723,253	535,509	483,823	329,327				
66346	58-0828824	10/01/1981	Munich American Reassurance (MA92)	GA	YRT/I	OL	214,773	6,637	6,397	8,366				
66346	58-0828824	05/01/2001	Munich American Reassurance (MA97)	GA	YRT/I	OL	730,983,423	3,482,489	3,511,025	1,898,955				
66346	58-0828824	09/16/1996	Munich American Reassurance (MAA1)	GA	YRT/I	OL	63,567,554	597,384	572,399	259,096				
66346	58-0828824	04/01/1997	Munich American Reassurance (MAA7)	GA	YRT/I	OL	195,199	4,881	4,620	2,204				
66346	58-0828824	09/24/1999	Munich American Reassurance (MAB1)	GA	YRT/I	OL	790,048,612	14,226,370	14,404,540	6,981,731				
66346	58-0828824	03/31/2004	Munich American Reassurance (MAB2)	GA	YRT/I	OL	59,204,745	2,429,324	2,329,366	1,449,163				
66346	58-0828824	08/23/2004	Munich American Reassurance (MAB3)	GA	YRT/I	OL	279,648,531	14,442,182	13,501,036	6,983,212				
66346	58-0828824	11/01/2005	Munich American Reassurance (MAB4)	GA	YRT/I	OL	695,543,747	23,032,427	22,266,979	19,806,192				
66346	58-0828824	11/23/2007	Munich American Reassurance (MAB5)	GA	YRT/I	OL	850,084,829	8,821,371	8,342,400	6,256,146				
66346	58-0828824	08/01/2008	Munich American Reassurance (MAB6)	GA	YRT/I	OL	39,738,217	234,225	217,829	125,967				
66346	58-0828824	03/31/2004	Munich American Reassurance (MAD1)	GA	YRT/I	OL	190,305,421	4,319,906	3,957,831	1,162,434				
66346	58-0828824	09/01/2002	Munich American Reassurance (MAD2)	GA	YRT/I	OL	34,153,082	421,161	368,015	138,405				
66346	58-0828824	05/01/2004	Munich American Reassurance (MAD3)	GA	YRT/I	OL	87,924,975	1,157,192	1,128,042	292,942				
66346	58-0828824	08/23/2004	Munich American Reassurance (MAD4)	GA	YRT/I	OL	38,642,188	170,607	154,120	57,863				
66346	58-0828824	11/01/2005	Munich American Reassurance (MAD5)	GA	YRT/I	OL	1,013,765,373	7,712,581	6,555,635	3,517,934				
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE1)	GA	YRT/G	OL	30,475,086	376,693	2,538,311	185,792				
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE1)	GA	YRT/I	OL	622,055,235	2,303,245		1,449,952				
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE1)	GA	YRT/G	OL			6,629,622					
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE1)	GA	YRT/I	OL	2,740,260,953	7,081,590		3,724,359				
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE2)	GA	YRT/G	OL			7,193					
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE2)	GA	YRT/I	OL	762,788	7,797		4,766				
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE2)	GA	YRT/G	OL			21,837					
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE2)	GA	YRT/I	OL	5,117,717	23,493		12,778				
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE3)	GA	YRT/G	OL			409,385					
66346	58-0828824	03/01/2008	Munich American Reassurance (MAE3)	GA	YRT/I	OL	118,001,823	438,968		254,825				
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE3)	GA	YRT/G	OL			1,132,325					
66346	58-0828824	05/28/2012	Munich American Reassurance (MAE3)	GA	YRT/I	OL	464,885,961	1,211,259		610,244				
66346	58-0828824	08/01/2008	Munich American Reassurance (MAH2)	GA	YRT/I	OL	128,024,526	184,651	155,904	86,120				
66346	58-0828824	09/01/2003	Munich American Reassurance (MAI1)	GA	YRT/I	OL	3,842,513	272,064	247,676	172,086				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM2)	GA	YRT/G	OL	1,460,490	506	471	4,648				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM3)	GA	YRT/G	OL	3,545,349	763	747	7,023				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM3)	GA	YRT/I	OL	516,060	539	514	519				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM4)	GA	YRT/G	OL	1,054,020	254	230	2,263				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM4)	GA	YRT/I	OL	14,575	26	25	29				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM5)	GA	YRT/G	OL	2,809,289	833	815	7,796				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM5)	GA	YRT/I	OL	498,757	1,910	1,817	2,029				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM6)	GA	YRT/G	OL	87,000	68	61	636				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM7)	GA	YRT/G	OL	156,168,972	47,936	51,492	529,553				
66346	58-0828824	04/01/2005	Munich American Reassurance (MAM8)	GA	YRT/G	OL	3,741,104	1,488	1,419	16,984				
66346	58-0828824	04/01/2010	Munich American Reassurance (MAM9)	GA	YRT/G	OL	14,661,275	2,127	2,208	30,104				
66346	58-0828824	03/27/1979	Munich American Reassurance (MU09)	GA	YRT/I	OL	1,063,254	30,787	30,485	48,601				
66346	58-0828824	10/01/1994	Munich American Reassurance (MU53)	GA	YRT/G	OL			70,976					
66346	58-0828824	10/01/1994	Munich American Reassurance (MU53)	GA	YRT/I	OL	79,493,465	298,485	211,356	257,098				

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
66346	58-0828824	02/08/1999	Munich American Reassurance (MU81)	GA	YRT/I	OL	105,271,985	935,127	927,245	552,890				
66346	58-0828824	01/01/1999	Munich American Reassurance (MU82)	GA	YRT/I	OL	25,663,519	347,300	348,104	214,749				
66346	58-0828824	03/31/2004	Munich American Reassurance (MU84)	GA	YRT/I	OL	1,542,413,520	6,198,331	6,066,359	3,569,583				
66346	58-0828824	03/31/2004	Munich American Reassurance (MU85)	GA	YRT/I	OL	128,934,155	1,057,370	1,061,394	583,950				
66346	58-0828824	09/01/1999	Munich American Reassurance (MUC1)	GA	YRT/I	OL	444,224	5,028	4,598	2,983				
66346	58-0828824	07/01/2002	Munich American Reassurance (MUE4)	GA	YRT/I	OL	33,303,354	403,636	391,705	183,153				
66346	58-0828824	08/01/2008	Munich American Reassurance (MUE4)	GA	YRT/I	OL	57,055,152	396,665	339,378	239,418				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ1)	GA	CO/I	XXXL	15,237,272	77,083	80,842	79,556				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ1)	GA	YRT/I	OL	25,736,709	201,446	208,823	130,235				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ2)	GA	CO/I	XXXL	16,354,416	85,103	90,728	102,698				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ2)	GA	YRT/I	OL	28,938,180	142,241	143,863	114,563				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ3)	GA	CO/I	XXXL	259,947,050	5,743,968	6,191,603	496,354				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ3)	GA	YRT/I	OL	31,578,017	96,775	91,049	76,320				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ4)	GA	CO/I	XXXL	70,339,569	5,828,022	5,531,020	140,590				
66346	58-0828824	05/01/2004	Munich American Reassurance (MUJ4)	GA	YRT/I	OL	13,232,678	21,526	20,092	14,553				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ5)	GA	CO/I	XXXL	4,344,211	6,313	7,297	16,494				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ5)	GA	YRT/I	OL	5,515,634	21,516	25,048	12,671				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ6)	GA	CO/I	XXXL	5,936,614	10,277	11,528	28,721				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ6)	GA	YRT/I	OL	12,614,163	55,165	54,229	44,647				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ7)	GA	CO/I	XXXL	109,839,289	2,400,235	2,510,398	213,357				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ7)	GA	YRT/I	OL	14,640,698	35,927	37,287	27,233				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ8)	GA	CO/I	XXXL	29,869,605	1,919,967	1,804,287	58,321				
66346	58-0828824	01/01/2005	Munich American Reassurance (MUJ8)	GA	YRT/I	OL	4,567,577	5,885	5,579	4,179				
66346	58-0828824	05/23/2005	Munich American Reassurance (MUL1)	GA	CO/I	XXXL	39,014,465	109,069	236,519	311,467				
66346	58-0828824	05/23/2005	Munich American Reassurance (MUL1)	GA	YRT/I	OL	138,588,341	1,413,662	1,496,142	770,739				
66346	58-0828824	05/23/2005	Munich American Reassurance (MUL2)	GA	CO/I	XXXL	232,174,967	619,643	1,484,921	1,210,518				
66346	58-0828824	05/23/2005	Munich American Reassurance (MUL2)	GA	YRT/I	OL	185,363,805	901,545	813,337	609,535				
66346	58-0828824	11/01/2008	Munich American Reassurance (MUL3)	GA	CO/I	XXXL	754,539,295	14,099,476	14,325,089	1,140,621				
66346	58-0828824	11/01/2008	Munich American Reassurance (MUL3)	GA	YRT/I	OL	66,360,974	132,775	98,713	94,630				
66346	58-0828824	04/28/2011	Munich American Reassurance (MUL6)	GA	CO/I	XXXL	3,786,157,719	4,998,549	5,724,439	4,303,893				
66346	58-0828824	04/28/2011	Munich American Reassurance (MUL6)	GA	YRT/I	OL	589,411,315	1,126,573	976,985	658,323				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUL7)	GA	CO/I	XXXL	1,904,118,276	10,391,658	11,766,947	2,865,174				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUL7)	GA	YRT/I	OL	208,742,142	523,876	450,303	379,090				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUL8)	GA	CO/I	XXXL	5,026,850,122	43,791,257	38,347,899	6,084,972				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUL8)	GA	YRT/I	OL	275,520,630	361,036	299,644	259,243				
66346	58-0828824	07/01/2007	Munich American Reassurance (MUN1)	GA	YRT/I	OL	1,683,321,757	4,324,855	4,261,044	3,076,112				
66346	58-0828824	07/15/2008	Munich American Reassurance (MUN2)	GA	YRT/I	OL	1,276,545,985	2,813,125	2,597,187	1,745,309				
66346	58-0828824	07/15/2008	Munich American Reassurance (MUN3)	GA	YRT/I	OL	6,567,210,767	5,282,349	4,841,104	3,440,784				
66346	58-0828824	07/15/2008	Munich American Reassurance (MUN4)	GA	YRT/I	OL	7,081,639,998	11,974,776	11,869,137	7,360,412				
66346	58-0828824	11/01/2010	Munich American Reassurance (MUN5)	GA	YRT/I	OL	1,816,931,331	1,811,661	1,837,887	892,486				
66346	58-0828824	01/01/2011	Munich American Reassurance (MUN6)	GA	YRT/I	OL	8,417,814,126	16,826,555	16,722,881	8,952,881				
66346	58-0828824	01/01/2012	Munich American Reassurance (MUN7)	GA	YRT/I	OL	688,117,120	1,468,190	1,433,533	683,203				
66346	58-0828824	07/01/2018	Munich American Reassurance (MUN9)	GA	YRT/I	OL	780,187,643	736,928	288,724	115,189				
66346	58-0828824	07/01/2012	Munich American Reassurance (MUPC)	GA	YRT/I	OL	601,726,643	1,379,291	1,018,856	498,597				
66346	58-0828824	08/08/2016	Munich American Reassurance (MUQ0)	GA	CO/I	XXXL	349,312,700	1,707,441	921,973	351,628				
66346	58-0828824	08/08/2016	Munich American Reassurance (MUQ7)	GA	CO/I	XXXL	141,781,050	318,563	203,617	100,586				
66346	58-0828824	08/08/2016	Munich American Reassurance (MUQ8)	GA	CO/I	XXXL	170,445,150	595,163	314,590	189,134				
66346	58-0828824	08/08/2016	Munich American Reassurance (MUQ9)	GA	CO/I	XXXL	499,966,695	1,752,582	1,002,345	443,619				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT0)	GA	CO/I	XXXL	746,894,962	1,744,208	191,853	947,533				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT0)	GA	YRT/I	OL	8,222,602	5,432	227	1,730				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUT1)	GA	CO/I	XXXL	2,913,452,250	10,784,884	8,071,253	3,912,716				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUT1)	GA	YRT/I	OL	109,896,497	150,318	74,761	60,682				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUT2)	GA	CO/I	XXXL	6,303,946,263	25,642,262	15,370,412	7,507,922				
66346	58-0828824	08/30/2010	Munich American Reassurance (MUT2)	GA	YRT/I	OL	127,956,774	122,853	67,216	45,479				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT5)	GA	CO/I	XXXL	4,812,503,412	7,192,383	1,422,114	6,298,830				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT5)	GA	YRT/I	OL	31,356,028	32,277	4,925	11,731				

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SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT7)	GA	CO/I	XXXL	609,134,179	2,476,768	204,371	1,063,305				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT7)	GA	YRT/I	DL	2,761,937	2,847	53	816				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT8)	GA	CO/I	XXXL	300,447,380	862,135	73,384	333,068				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT8)	GA	YRT/I	DL	1,260,431	1,178		427				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT9)	GA	CO/I	XXXL	1,021,636,063	3,063,633	324,862	1,482,226				
66346	58-0828824	07/07/2018	Munich American Reassurance (MUT9)	GA	YRT/I	DL	4,021,952	2,391	149	799				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ1)	GA	CO/I	XXXL			240	(8)				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ1)	GA	YRT/I	DL	560,475	297		160				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ2)	GA	CO/I	XXXL	6,666,233	5,070	943	4,407				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ3)	GA	YRT/I	DL	33,469,345	19,971	11,208	6,624				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ5)	GA	CO/I	XXXL	3,600,000	4,131	3,604	3,798				
66346	58-0828824	04/15/2017	Munich American Reassurance (MUJ6)	GA	CO/I	XXXL	333,300	524	414	312				
66346	58-0828824	05/01/2018	Munich American Reassurance (MUV1)	GA	CO/I	XXXL	51,333,750	77,493	36,989	52,057				
66346	58-0828824	05/01/2018	Munich American Reassurance (MUV2)	GA	CO/I	XXXL	50,385,000	90,697	26,871	56,727				
66346	58-0828824	05/01/2018	Munich American Reassurance (MUV3)	GA	CO/I	XXXL	241,050,000	506,485	112,574	239,720				
66346	58-0828824	05/01/2018	Munich American Reassurance (MUV4)	GA	CO/I	XXXL	164,602,500	478,227	70,730	186,149				
66346	58-0828824	01/23/2019	Munich American Reassurance (MUV5)	GA	CO/I	XXXL	38,070,000	37,902		45,634				
66346	58-0828824	01/23/2019	Munich American Reassurance (MUV6)	GA	CO/I	XXXL	41,355,000	40,274		46,358				
66346	58-0828824	01/23/2019	Munich American Reassurance (MUV7)	GA	CO/I	XXXL	144,255,000	115,275		166,188				
66346	58-0828824	01/23/2019	Munich American Reassurance (MUV8)	GA	CO/I	XXXL	88,327,500	85,445		110,142				
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW1)	GA	YRT/I	DL	36,674,446	28,457						
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW2)	GA	YRT/I	DL	13,662,045	8,394						
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW3)	GA	YRT/I	DL	47,972,724	23,012		2,550				
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW4)	GA	YRT/I	DL	129,823,866	105,213		3,593				
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW5)	GA	YRT/I	DL	125,220,090	82,907		3,073				
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW6)	GA	YRT/I	DL	125,501,754	121,760		1,378				
66346	58-0828824	11/23/2019	Munich American Reassurance (MUW7)	GA	YRT/I	DL	32,346,645	22,467		235				
88099	75-1608507	11/23/2007	Optimum Re Insurance Company (OPB5)	TX	YRT/I	DL	172,234,965	1,707,439	1,603,054	1,337,085				
88099	75-1608507	01/01/2012	Optimum Re Insurance Company (OPB7)	TX	YRT/I	DL	172,017,372	1,380,752	1,132,162	648,485				
88099	75-1608507	08/05/2011	Optimum Re Insurance Company (OPD5)	TX	YRT/I	DL	51,864,977	291,645	240,841	162,442				
88099	75-1608507	01/01/2012	Optimum Re Insurance Company (OPD6)	TX	YRT/I	DL	177,487,713	308,150	239,478	106,314				
88099	75-1608507	07/01/2012	Optimum Re Insurance Company (OPP1)	TX	YRT/I	DL	641,618,741	1,202,930	997,404	584,229				
88099	75-1608507	04/15/2017	Optimum Re Insurance Company (OPU3)	TX	YRT/I	DL	28,342,474	16,783	9,362	4,329				
74900	63-0483783	12/05/2018	Partner Re (PRPK)	AR	YRT/I	DL	49,932,412	75,517		22,996				
74900	63-0483783	07/07/2018	Partner Re (PRT3)	AR	CO/I	XXXL	550,667,008	1,587,911	367,378	1,333,378				
74900	63-0483783	07/07/2018	Partner Re (PRT3)	AR	YRT/I	DL	2,670,369	7,174		3,207				
74900	63-0483783	07/07/2018	Partner Re (PRT4)	AR	CO/I	XXXL	181,695,235	295,351	59,511	214,733				
74900	63-0483783	07/07/2018	Partner Re (PRT4)	AR	YRT/I	DL	676,368	629		570				
74900	63-0483783	07/07/2018	Partner Re (PRT6)	AR	CO/I	XXXL	2,128,944,110	2,031,817	396,313	1,980,579				
74900	63-0483783	07/07/2018	Partner Re (PRT6)	AR	YRT/I	DL	14,048,603	8,857		4,287				
74900	63-0483783	07/07/2018	Partner Re (PRT7)	AR	CO/I	XXXL	261,057,514	1,061,472	87,587	455,682				
74900	63-0483783	07/07/2018	Partner Re (PRT7)	AR	YRT/I	DL	1,183,690	1,221	23	525				
74900	63-0483783	07/07/2018	Partner Re (PRT8)	AR	CO/I	XXXL	128,763,163	369,487	31,451	142,744				
74900	63-0483783	07/07/2018	Partner Re (PRT8)	AR	YRT/I	DL	407,043	440		237				
74900	63-0483783	07/07/2018	Partner Re (PRTB)	AR	CO/I	XXXL	2,216,158,736	4,894,766	1,361,420	3,785,882				
74900	63-0483783	07/07/2018	Partner Re (PRTB)	AR	YRT/I	DL	22,976,566	33,394	1,844	14,853				
93572	43-1235868	03/01/1996	RGA Reinsurance Co. (AL44)	MO	YRT/I	DL	123,152,600	3,172,484	3,198,993	2,782,993				
93572	43-1235868	05/01/1994	RGA Reinsurance Co. (AL93)	MO	YRT/I	DL	7,466,568	103,067	95,396	55,073				
93572	43-1235868	01/01/1974	RGA Reinsurance Co. (AL94)	MO	YRT/I	DL	1,277,032	52,766	47,845	91,676				
93572	43-1235868	10/01/1976	RGA Reinsurance Co. (AL95)	MO	YRT/I	DL	36,384,400	655,866	636,422	495,304				
93572	43-1235868	05/01/2001	RGA Reinsurance Co. (AL97)	MO	YRT/I	DL	535,194,833	2,884,327	2,956,135	1,525,798				
93572	43-1235868	09/16/1996	RGA Reinsurance Co. (ALA1)	MO	YRT/I	DL	84,732,163	796,498	763,157	349,901				
93572	43-1235868	04/01/1997	RGA Reinsurance Co. (ALA7)	MO	YRT/I	DL	97,600	2,440	2,310	1,270				
93572	43-1235868	09/01/2001	RGA Reinsurance Co. (ALB2)	MO	YRT/I	DL	136,026,053	3,948,769	3,788,350	1,673,299				
93572	43-1235868	11/19/2001	RGA Reinsurance Co. (ALD1)	MO	YRT/I	DL	244,857,345	4,823,682	4,513,185	1,589,176				
93572	43-1235868	09/01/2002	RGA Reinsurance Co. (ALD2)	MO	YRT/I	DL	27,017,712	385,354	337,935	131,617				

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SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
93572	43-1235868	05/01/1994	RG Reinsurance Co. (AZ51)	MO	YRT/G	OL			5,828					
93572	43-1235868	05/01/1994	RG Reinsurance Co. (AZ51)	MO	YRT/I	OL	16,116,103	115,140	101,849	73,845				
93572	43-1235868	03/01/1996	RG Reinsurance Co. (AZ62)	MO	YRT/G	OL			336,957					
93572	43-1235868	03/01/1996	RG Reinsurance Co. (AZ62)	MO	YRT/I	OL	418,311,704	4,179,576	3,851,760	5,017,176				
93572	43-1235868	01/01/1999	RG Reinsurance Co. (AZ82)	MO	YRT/I	OL	30,832,901	417,233	418,244	330,567				
93572	43-1235868	03/28/2000	RG Reinsurance Co. (AZ84)	MO	YRT/I	OL	585,158,088	3,220,392	3,146,055	1,732,740				
93572	43-1235868	03/28/2000	RG Reinsurance Co. (AZ85)	MO	YRT/I	OL	63,660,232	822,799	811,194	523,556				
93572	43-1235868	06/01/2002	RG Reinsurance Co. (AZE4)	MO	YRT/I	OL	17,304,505	250,099	233,463	107,707				
93572	43-1235868	09/14/1981	RG Reinsurance Co. (GA11)	MO	YRT/G	OL	281,509	16,247	74,906	27,729				
93572	43-1235868	09/14/1981	RG Reinsurance Co. (GA11)	MO	YRT/I	OL	813,100,072	10,478,544	10,758,097	12,566,951				
93572	43-1235868	12/31/2017	RG Reinsurance Co. (GA17)	MO	COFI/G	OL			4,084,838,452					
93572	43-1235868	12/31/2017	RG Reinsurance Co. (GA17)	MO	COFI/I	OL	6,529,517,228	4,157,951,755		1,869,409				4,158,721,325
93572	43-1235868	12/31/2017	RG Reinsurance Co. (GA17)	MO	YRT/G	OL			722,355					
93572	43-1235868	12/31/2017	RG Reinsurance Co. (GA17)	MO	YRT/I	OL	3,793,393,551	769,570						
93572	43-1235868	01/01/1984	RG Reinsurance Co. (GA18)	MO	YRT/G	OL	1,662,985	57,338	53,166	64,911				
93572	43-1235868	01/01/1984	RG Reinsurance Co. (GA18)	MO	YRT/I	OL	108,507,819	2,376,948	2,518,587	2,664,309				
93572	43-1235868	03/01/1985	RG Reinsurance Co. (GA19)	MO	YRT/I	OL	6,610,868	99,390	852,619	(860,065)				
93572	43-1235868	09/01/1986	RG Reinsurance Co. (GA24)	MO	YRT/I	OL	638,475,733	1,737,633	1,790,298	8,175,784				
93572	43-1235868	03/29/1993	RG Reinsurance Co. (GA39)	MO	YRT/I	OL	361,000,204	2,998,057	3,009,488	2,477,452				
93572	43-1235868	03/29/1993	RG Reinsurance Co. (GA43)	MO	YRT/I	OL	9,452,815	117,889	113,768	100,623				
93572	43-1235868	05/01/1994	RG Reinsurance Co. (GA49)	MO	YRT/I	OL	229,127,541	1,658,129	1,578,398	1,123,606				
93572	43-1235868	04/15/2004	RG Reinsurance Co. (GA66)	MO	YRT/I	OL	105,387,328	411,241	387,890	351,560				
93572	43-1235868	02/08/1999	RG Reinsurance Co. (GA81)	MO	YRT/I	OL	63,238,768	561,760	557,042	351,645				
93572	43-1235868	03/28/2000	RG Reinsurance Co. (GA84)	MO	YRT/I	OL	2,185,834,144	9,667,398	9,464,501	5,503,501				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GA85)	MO	YRT/I	OL	83,034,456	665,949	675,848	399,615				
93572	43-1235868	07/01/2002	RG Reinsurance Co. (GAE4)	MO	YRT/I	OL	35,037,074	385,075	380,716	165,083				
93572	43-1235868	07/01/2002	RG Reinsurance Co. (GAE5)	MO	YRT/G	OL	79,314,025	769,970	726,948	604,443				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ2)	MO	CO/I	XXXL	6,541,766	34,041	36,291	41,079				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ2)	MO	YRT/I	OL	11,575,296	56,895	57,562	50,924				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ3)	MO	CO/I	XXXL	103,978,817	2,297,569	2,476,623	198,541				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ3)	MO	YRT/I	OL	12,631,236	38,720	36,405	33,610				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ4)	MO	CO/I	XXXL	28,135,828	2,331,204	2,212,404	56,236				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (GAJ4)	MO	YRT/I	OL	5,293,079	8,605	8,032	6,521				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ6)	MO	CO/I	XXXL	2,374,646	4,111	4,611	11,488				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ6)	MO	YRT/I	OL	5,045,667	22,073	21,694	19,362				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ7)	MO	CO/I	XXXL	43,935,715	960,087	1,004,151	85,342				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ7)	MO	YRT/I	OL	5,856,291	14,382	14,911	12,105				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ8)	MO	CO/I	XXXL	11,947,842	767,984	721,712	23,328				
93572	43-1235868	01/01/2005	RG Reinsurance Co. (GAJ8)	MO	YRT/I	OL	1,827,031	2,352	2,235	1,772				
93572	43-1235868	05/23/2005	RG Reinsurance Co. (GAL2)	MO	CO/I	XXXL	145,753,191	383,332	905,408	783,513				
93572	43-1235868	05/23/2005	RG Reinsurance Co. (GAL2)	MO	YRT/I	OL	151,344,367	736,789	677,091	566,420				
93572	43-1235868	05/23/2005	RG Reinsurance Co. (GAL3)	MO	CO/I	XXXL	11,946,291,615	231,756,401	237,297,294	18,250,373				
93572	43-1235868	05/23/2005	RG Reinsurance Co. (GAL3)	MO	YRT/I	OL	1,142,411,067	2,766,462	2,526,399	2,204,422				
93572	43-1235868	08/30/2010	RG Reinsurance Co. (GAL7)	MO	CO/I	XXXL	7,018,137,619	36,416,829	39,537,570	10,350,869				
93572	43-1235868	08/30/2010	RG Reinsurance Co. (GAL7)	MO	YRT/I	OL	524,939,880	1,383,779	1,186,107	946,688				
93572	43-1235868	08/30/2010	RG Reinsurance Co. (GAL8)	MO	CO/I	XXXL	25,285,586,458	232,957,264	206,121,986	31,004,932				
93572	43-1235868	08/30/2010	RG Reinsurance Co. (GAL8)	MO	YRT/I	OL	1,001,383,298	1,487,294	1,267,956	1,026,803				
93572	43-1235868	07/01/2007	RG Reinsurance Co. (GAN1)	MO	YRT/I	OL	2,418,705,903	6,223,541	6,137,081	4,587,416				
93572	43-1235868	06/01/2012	RG Reinsurance Co. (GAN2)	MO	YRT/I	OL	7,267,486	19,209	18,001	11,236				
93572	43-1235868	06/01/2012	RG Reinsurance Co. (GAN3)	MO	YRT/I	OL	100,019,683	98,993	93,886	68,967				
93572	43-1235868	02/24/2014	RG Reinsurance Co. (GAN3)	MO	YRT/I	OL	3,594,070,280	2,499,710	2,160,205	1,282,454				
93572	43-1235868	06/01/2012	RG Reinsurance Co. (GAN4)	MO	YRT/I	OL	154,024,785	200,219	201,964	127,538				
93572	43-1235868	11/01/2010	RG Reinsurance Co. (GAN5)	MO	YRT/I	OL	1,992,980,670	2,101,773	2,127,461	1,265,781				
93572	43-1235868	06/01/2012	RG Reinsurance Co. (GAN6)	MO	YRT/I	OL	168,590,276	292,555	251,522	169,528				
93572	43-1235868	12/20/2017	RG Reinsurance Co. (GAN6)	MO	YRT/I	OL	6,649,257,145	10,685,426	6,002,785	2,306,155				
93572	43-1235868	06/01/2012	RG Reinsurance Co. (GAN7)	MO	YRT/I	OL	8,644,511	23,457	23,023	13,496				

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
93572	43-1235868	12/06/2017	... RGA Reinsurance Co. (GAN8)	MO	YRT/I	OL	3,343,753,259	4,156,466	2,290,121	739,498				
93572	43-1235868	07/01/2018	... RGA Reinsurance Co. (GAN9)	MO	YRT/I	OL	880,519,117	1,031,185	384,871	185,943				
93572	43-1235868	03/15/2015	... RGA Reinsurance Co. (GAQ1)	MO	CO/I	XXXL	1,732,500	2,985	2,491	1,108				
93572	43-1235868	03/15/2015	... RGA Reinsurance Co. (GAQ2)	MO	CO/I	XXXL	2,565,000	7,145	5,747	1,483				
93572	43-1235868	03/15/2015	... RGA Reinsurance Co. (GAQ3)	MO	CO/I	XXXL	13,770,000	47,660	38,094	9,911				
93572	43-1235868	08/08/2016	... RGA Reinsurance Co. (GAQ9)	MO	CO/I	XXXL	399,974,805	1,402,283	802,014	354,881				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT0)	MO	CO/I	XXXL	390,460,766	911,276	101,761	508,735				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT0)	MO	YRT/I	OL	4,878,297	2,944	114	992				
93572	43-1235868	08/30/2010	... RGA Reinsurance Co. (GAT1)	MO	CO/I	XXXL	7,827,608,221	29,785,922	21,770,328	11,013,388				
93572	43-1235868	08/30/2010	... RGA Reinsurance Co. (GAT1)	MO	YRT/I	OL	296,431,540	409,645	200,239	195,625				
93572	43-1235868	08/30/2010	... RGA Reinsurance Co. (GAT2)	MO	CO/I	XXXL	22,198,630,327	89,091,118	53,484,170	26,158,341				
93572	43-1235868	08/30/2010	... RGA Reinsurance Co. (GAT2)	MO	YRT/I	OL	459,068,615	446,692	237,720	183,479				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT3)	MO	CO/I	XXXL	957,310,872	2,834,283	681,046	2,358,831				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT3)	MO	YRT/I	OL	6,068,080	14,666		4,442				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT4)	MO	CO/I	XXXL	312,325,386	539,843	119,017	378,344				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT4)	MO	YRT/I	OL	1,127,281	1,048		697				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT5)	MO	CO/I	XXXL	6,169,882,619	9,318,012	1,847,376	8,230,386				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT5)	MO	YRT/I	OL	40,195,051	45,843	6,156	15,377				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT6)	MO	CO/I	XXXL	2,741,706,458	2,760,923	553,688	2,649,383				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT6)	MO	YRT/I	OL	20,324,725	13,210	678	5,030				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT7)	MO	CO/I	XXXL	177,213,335	712,958	59,391	308,594				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT7)	MO	YRT/I	OL	789,127	814	15	196				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT8)	MO	CO/I	XXXL	88,442,107	265,854	31,377	95,832				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT8)	MO	YRT/I	OL	360,122	336		135				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT9)	MO	CO/I	XXXL	541,468,028	1,632,710	163,005	814,250				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GAT9)	MO	YRT/I	OL	2,010,975	1,197	75	320				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GATB)	MO	CO/I	XXXL	4,559,823,723	10,358,576	2,863,419	8,046,858				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GATB)	MO	YRT/I	OL	48,190,104	70,452	3,681	23,900				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GATR)	MO	CO/I	XXXL	530,192,962	1,151,489	386,438	657,881				
93572	43-1235868	07/07/2018	... RGA Reinsurance Co. (GATR)	MO	YRT/I	OL	19,334,138	45,162	2,177	17,467				
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW1)	MO	YRT/I	OL	11,924,818	9,473						
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW2)	MO	YRT/I	OL	7,008,659	7,193						
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW4)	MO	YRT/I	OL	51,885,855	36,724		1,198				
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW5)	MO	YRT/I	OL	42,886,679	28,054		1,024				
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW6)	MO	YRT/I	OL	38,136,540	37,101		394				
93572	43-1235868	11/23/2019	... RGA Reinsurance Co. (GAW7)	MO	YRT/I	OL	10,948,896	7,505		78				
93572	43-1235868	10/01/1976	... RGA Reinsurance Co. (NC02)	MO	YRT/G	OL	15,703	2,432	3,113	4,121				
93572	43-1235868	10/01/1976	... RGA Reinsurance Co. (NC02)	MO	YRT/I	OL	128,641,822	2,067,842	2,310,759	2,614,281				
93572	43-1235868	03/29/1993	... RGA Reinsurance Co. (NC40)	MO	YRT/I	OL	11,818,201	147,394	142,247	127,527				
93572	43-1235868	12/06/2017	... RGA Reinsurance Co. (RA17)	MO	COFII/I	OL	74,957,926	76,697,250	20,980,169	87,929,104				47,381,337
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG01)	MO	YRT/G	OL	108,077,767	62,078	66,839	548,240				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG02)	MO	YRT/G	OL	1,999,475,467	1,547,273	1,620,865	14,234,111				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG03)	MO	YRT/G	OL	181,208,469	179,677	195,151	2,051,712				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG04)	MO	YRT/G	OL	441,758,868	570,417	613,199	6,908,680				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG05)	MO	YRT/G	OL	295,120,242	141,366	140,515	1,139,990				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG05)	MO	YRT/I	OL	6,462,011	13,739	19,888	5,366				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG06)	MO	YRT/G	OL	9,563,250	5,824	5,641	51,159				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG06)	MO	YRT/I	OL	33,036	37	34	38				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG09)	MO	YRT/G	OL	925,400	454	411	4,052				
93572	43-1235868	11/01/1986	... RGA Reinsurance Co. (RG10)	MO	CO/I	OL	5,042,247	4,414,846	5,199,113	6,118				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG10)	MO	YRT/G	OL	1,361,600	871	797	7,435				
93572	43-1235868	01/01/1979	... RGA Reinsurance Co. (RG11)	MO	YRT/I	OL	491,475	4,438	4,086	8,369				
93572	43-1235868	01/01/1983	... RGA Reinsurance Co. (RG12)	MO	YRT/G	OL			124,148					
93572	43-1235868	01/01/1983	... RGA Reinsurance Co. (RG12)	MO	YRT/I	OL	43,853,043	1,844,375	1,790,937	2,937,582				
93572	43-1235868	02/14/1983	... RGA Reinsurance Co. (RG13)	MO	YRT/I	OL	8,265,791			578,414				
93572	43-1235868	01/01/1997	... RGA Reinsurance Co. (RG13)	MO	YRT/G	OL			540	1,328				

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SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
93572	43-1235868	01/01/1988	RG Reinsurance Co. (RG14)	MO	YRT/I	OL	13,152,263	554,458	568,404	656,166				
93572	43-1235868	01/01/1997	RG Reinsurance Co. (RG14)	MO	YRT/G	OL	19,975,828	19,457	20,819	187,154				
93572	43-1235868	01/01/1988	RG Reinsurance Co. (RG15)	MO	YRT/I	OL	5,089,242	276,635	299,337	625,320				
93572	43-1235868	04/15/1991	RG Reinsurance Co. (RG16)	MO	YRT/I	OL	3,568,698	91,780	87,524	121,072				
93572	43-1235868	04/15/1991	RG Reinsurance Co. (RG19)	MO	YRT/I	OL	16,275,325	535,947	568,048	676,394				
93572	43-1235868	02/01/1994	RG Reinsurance Co. (RG20)	MO	YRT/I	OL	1,751,834	17,656	21,272	34,239				
93572	43-1235868	09/14/1981	RG Reinsurance Co. (RG22)	MO	YRT/I	OL	284,957,010	6,107,955	6,274,296	4,704,432				
93572	43-1235868	05/01/1994	RG Reinsurance Co. (RG26)	MO	YRT/I	OL	188,892,737	5,127,084	4,619,632	2,397,863				
93572	43-1235868	01/01/1997	RG Reinsurance Co. (RG26)	MO	YRT/G	OL	23,307,500	15,223	16,792	143,682				
93572	43-1235868	02/01/1994	RG Reinsurance Co. (RG27)	MO	YRT/I	OL	151,850	2,176	2,063	4,788				
93572	43-1235868	01/01/1997	RG Reinsurance Co. (RG30)	MO	YRT/G	OL	33,444,712	12,130	13,171	103,936				
93572	43-1235868	04/15/1991	RG Reinsurance Co. (RG37)	MO	YRT/I	OL	3,530,331	29,748	47,719	19,676				
93572	43-1235868	02/01/1994	RG Reinsurance Co. (RG38)	MO	YRT/I	OL	3,110,881	9,267	11,021	6,578				
93572	43-1235868	02/01/1994	RG Reinsurance Co. (RG39)	MO	YRT/I	OL	306,939	7,870	7,464	11,678				
93572	43-1235868	04/01/1994	RG Reinsurance Co. (RG55)	MO	YRT/I	OL	3,440,548	95,043	90,480	89,469				
93572	43-1235868	02/01/1994	RG Reinsurance Co. (RG59)	MO	YRT/I	OL	164,270	3,813	3,579	5,845				
93572	43-1235868	09/01/1998	RG Reinsurance Co. (RG87)	MO	YRT/I	OL	126,087,454	1,060,913	1,066,296	579,472				
93572	43-1235868	05/01/2001	RG Reinsurance Co. (RG97)	MO	YRT/I	OL	604,291,337	2,649,770	2,678,306	1,438,518				
93572	43-1235868	09/16/1996	RG Reinsurance Co. (RG1)	MO	YRT/I	OL	63,568,444	597,567	572,572	259,861				
93572	43-1235868	02/29/2004	RG Reinsurance Co. (RG1)	MO	YRT/I	OL	93,199,695	1,371,729	1,332,448	773,252				
93572	43-1235868	11/01/2004	RG Reinsurance Co. (RG2)	MO	YRT/I	OL	24,942,203	1,127,740	1,045,889	822,501				
93572	43-1235868	08/23/2004	RG Reinsurance Co. (RG3)	MO	YRT/I	OL	233,040,448	12,035,151	11,250,862	5,999,118				
93572	43-1235868	06/01/2008	RG Reinsurance Co. (RG5)	MO	YRT/I	OL	557,851,086	5,605,244	5,275,489	4,109,963				
93572	43-1235868	08/01/2008	RG Reinsurance Co. (RG6)	MO	YRT/I	OL	50,477,365	300,019	287,074	165,441				
93572	43-1235868	01/01/2012	RG Reinsurance Co. (RG7)	MO	YRT/I	OL	431,205,371	3,489,601	2,764,609	1,524,821				
93572	43-1235868	03/31/2004	RG Reinsurance Co. (RG1)	MO	YRT/I	OL	191,410,340	4,419,412	4,045,585	1,517,004				
93572	43-1235868	03/31/2004	RG Reinsurance Co. (RG2)	MO	YRT/I	OL	8,592,320	45,293	38,155	10,023				
93572	43-1235868	05/01/2004	RG Reinsurance Co. (RG3)	MO	YRT/I	OL	87,924,983	1,157,192	1,128,043	377,529				
93572	43-1235868	08/23/2004	RG Reinsurance Co. (RG4)	MO	YRT/I	OL	38,642,188	170,607	154,120	68,197				
93572	43-1235868	11/01/2005	RG Reinsurance Co. (RG5)	MO	YRT/I	OL	706,368,124	4,941,780	4,184,996	3,113,463				
93572	43-1235868	01/01/2012	RG Reinsurance Co. (RG6)	MO	YRT/I	OL	387,169,759	780,125	623,196	287,477				
93572	43-1235868	02/29/2004	RG Reinsurance Co. (RG1)	MO	YRT/I	OL	117,365,128	2,910,495	2,803,843	1,436,164				
93572	43-1235868	06/01/2008	RG Reinsurance Co. (RG2)	MO	YRT/I	OL	257,002,557	384,856	326,612	183,523				
93572	43-1235868	04/01/2005	RG Reinsurance Co. (RG7)	MO	YRT/G	OL	1,031,250,717	336,457	364,530	3,595,188				
93572	43-1235868	04/01/2005	RG Reinsurance Co. (RG8)	MO	YRT/G	OL	29,928,834	11,893	11,384	130,989				
93572	43-1235868	07/01/2012	RG Reinsurance Co. (RGPD)	MO	YRT/I	OL	782,039,714	2,389,414	2,440,223	1,203,981				
64688	75-6020048	09/01/2001	SCOR Global Life Americas Reins Co (SCB2)	DE	YRT/I	OL	262,974,208	8,215,504	7,923,196	3,384,387				
64688	75-6020048	08/23/2004	SCOR Global Life Americas Reins Co (SCB3)	DE	YRT/I	OL	139,824,345	7,221,114	6,750,537	2,972,767				
64688	75-6020048	08/05/2011	SCOR Global Life Americas Reins Co (SCB5)	DE	YRT/I	OL	101,093,466	894,166	822,247	541,902				
64688	75-6020048	01/01/2012	SCOR Global Life Americas Reins Co (SCB7)	DE	YRT/I	OL	328,233,874	2,756,089	2,257,837	1,125,755				
64688	75-6020048	08/05/2011	SCOR Global Life Americas Reins Co (SCD5)	DE	YRT/I	OL	103,729,942	583,275	481,664	262,385				
64688	75-6020048	01/01/2012	SCOR Global Life Americas Reins Co (SCD6)	DE	YRT/I	OL	288,791,568	565,563	448,291	198,879				
64688	75-6020048	01/01/2001	SCOR Global Life Americas Reins Co (SCG1)	DE	YRT/I	OL	74,463,014	355,052	332,611	241,627				
64688	75-6020048	11/01/2010	SCOR Global Life Americas Reins Co (SCN5)	DE	YRT/I	OL	3,551,263,639	3,466,452	3,515,759	1,757,995				
64688	75-6020048	01/01/2011	SCOR Global Life Americas Reins Co (SCN6)	DE	YRT/I	OL	5,301,479,990	10,379,566	10,303,613	5,239,750				
64688	75-6020048	01/01/2012	SCOR Global Life Americas Reins Co (SCN7)	DE	YRT/I	OL	421,985,903	920,470	897,971	407,961				
64688	75-6020048	07/01/2018	SCOR Global Life Americas Reins Co (SCN9)	DE	YRT/I	OL	1,523,218,584	1,380,589	499,010	216,394				
64688	75-6020048	01/01/2002	SCOR Global Life Americas Reins Co (SCPH)	DE	YRT/I	OL	36,283,812	40,927	37,722	12,711				
64688	75-6020048	09/01/1986	SCOR Global Life Americas Reins Co (TA23)	DE	YRT/I	OL	319,537,549	892,161	914,237	4,119,231				
64688	75-6020048	11/01/1986	SCOR Global Life Americas Reins Co (TA25)	DE	YRT/I	OL	61,436,922	1,378,944	1,477,688	1,526,263				
64688	75-6020048	11/01/1989	SCOR Global Life Americas Reins Co (TA27)	DE	YRT/I	OL	2,927,163	198,710	197,894	324,900				
64688	75-6020048	01/01/2002	SCOR Global Life Americas Reins Co (TAF2)	DE	YRT/I	OL	88,929,219	320,590	295,080	210,341				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL7)	DE	CO/I	XXXL	3,773,969,786	18,513,157	18,587,292	5,471,432				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL7)	DE	YRT/I	OL	298,028,544	591,382	519,560	347,124				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL8)	DE	CO/I	XXXL	9,899,852,345	86,718,550	75,953,367	12,107,466				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAL8)	DE	YRT/I	OL	544,446,561	718,452	596,043	404,513				

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64688	75-6020048	07/15/2008	SCOR Global Life Americas Reins Co (TAN3)	DE	YRT/I	OL	6,952,733,913	5,674,550	5,226,635	3,718,001				
64688	75-6020048	07/15/2008	SCOR Global Life Americas Reins Co (TAN4)	DE	YRT/I	OL	4,381,879,600	7,185,204	7,137,146	4,680,793				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT1)	DE	CO/I	XXXL	1,971,687,585	7,223,083	5,245,074	2,726,465				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT1)	DE	YRT/I	OL	74,460,245	101,094	50,546	44,040				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT2)	DE	CO/I	XXXL	15,592,500,018	61,863,456	37,153,022	18,144,394				
64688	75-6020048	08/30/2010	SCOR Global Life Americas Reins Co (TAT2)	DE	YRT/I	OL	317,859,192	305,612	166,492	118,506				
64688	75-6020048	04/15/1991	SCOR Global Life Americas Reins Co (TR37)	DE	YRT/I	OL	3,530,333	29,748	47,719	19,727				
64688	75-6020048	04/15/1991	SCOR Global Life Americas Reins Co (TR61)	DE	YRT/I	OL	3,341,038	65,882	61,127	77,271				
64688	75-6020048	04/15/1991	SCOR Global Life Americas Reins Co (TR62)	DE	YRT/I	OL	7,710,502	224,038	190,091	557,371				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR63)	DE	CO/I	OL	27,767,088	536,300	464,681	458,924				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR64)	DE	CO/I	OL	125,000	834	401	2,541				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR65)	DE	YRT/I	OL	1,882,644	16,503	18,817	26,121				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR66)	DE	YRT/I	OL	20,137,239	320,490	316,357	480,296				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR67)	DE	CO/I	OL	8,600,000	36,906	39,909	120,331				
64688	75-6020048	09/01/1991	SCOR Global Life Americas Reins Co (TR68)	DE	CO/I	OL	100,000	830	16,881	2,505				
64688	75-6020048	09/01/2002	SCOR Global Life Americas Reins Co (TRD2)	DE	YRT/I	OL	27,318,583	336,872	294,365	102,771				
64688	75-6020048	01/01/2002	SCOR Global Life Americas Reins Co (TRF2)	DE	YRT/I	OL	39,819,853	1,015,645	949,491	456,860				
64688	75-6020048	03/31/2003	SCOR Global Life Americas Reins Co (TRH1)	DE	YRT/I	OL	157,499,753	3,735,098	3,468,297	1,687,843				
64688	75-6020048	09/01/2003	SCOR Global Life Americas Reins Co (TR11)	DE	YRT/I	OL	3,842,513	272,064	247,676	167,800				
64688	75-6020048	08/01/2008	SCOR Global Life Americas Reins Co (XLB6)	DE	YRT/I	OL	19,869,147	117,102	108,910	65,540				
64688	75-6020048	08/01/2008	SCOR Global Life Americas Reins Co (XLH2)	DE	YRT/I	OL	83,420,151	119,158	100,432	57,492				
87017	62-1003368	09/16/1996	SCOR Global Life Re Ins Co of DE (GG70)	DE	YRT/I	OL	139,527,540	888,870	907,575	580,731				
87017	62-1003368	03/01/1996	SCOR Global Life Re Ins Co of DE (GG80)	DE	YRT/I	OL	12,309,139	80,307	74,508	45,394				
87017	62-1003368	03/01/1996	SCOR Global Life Re Ins Co of DE (GG99)	DE	YRT/I	OL	2,640,059	158,942	146,354	64,130				
87017	62-1003368	09/24/1999	SCOR Global Life Re Ins Co of DE (GGB1)	DE	YRT/I	OL	394,246,656	7,111,008	7,200,123	3,562,950				
87017	62-1003368	09/01/2001	SCOR Global Life Re Ins Co of DE (GGB2)	DE	YRT/I	OL	93,777,404	2,136,567	2,103,882	1,055,194				
87017	62-1003368	11/19/2001	SCOR Global Life Re Ins Co of DE (GGD1)	DE	YRT/I	OL	65,019,223	1,475,597	1,348,830	523,372				
87017	62-1003368	10/01/2001	SCOR Global Life Re Ins Co of DE (GGE1)	DE	YRT/G	OL	63,464	182	9,228	118				
87017	62-1003368	10/01/2001	SCOR Global Life Re Ins Co of DE (GGE1)	DE	YRT/I	OL	2,331,691	9,692		8,879				
97071	13-3126819	02/01/1992	SCOR Global Life USA Reins Co (BA75)	DE	YRT/I	OL	5,963,219	297,407	287,245	502,977				
97071	13-3126819	05/01/2001	SCOR Global Life USA Reins Co (BA97)	DE	YRT/I	OL	379,767,125	1,844,477	1,877,976	966,321				
97071	13-3126819	08/01/1990	SCOR Global Life USA Reins Co (BM31)	DE	YRT/I	OL	740,163	5,665	5,349	9,260				
97071	13-3126819	03/28/2000	SCOR Global Life USA Reins Co (BM84)	DE	YRT/I	OL	1,599,185,095	7,090,159	6,935,918	3,654,173				
97071	13-3126819	03/28/2000	SCOR Global Life USA Reins Co (BM85)	DE	YRT/I	OL	96,297,261	940,109	936,300	528,349				
97071	13-3126819	07/01/2002	SCOR Global Life USA Reins Co (BME4)	DE	YRT/I	OL	16,651,673	201,817	195,852	81,362				
97071	13-3126819	01/01/2001	SCOR Global Life USA Reins Co (BMF1)	DE	YRT/I	OL	112,531,230	569,412	551,380	389,020				
97071	13-3126819	11/01/2005	SCOR Global Life USA Reins Co (GIB4)	DE	YRT/I	OL	298,090,229	9,871,065	9,543,032	9,835,938				
97071	13-3126819	11/23/2007	SCOR Global Life USA Reins Co (GIB5)	DE	YRT/I	OL	515,962,752	5,121,897	4,808,768	3,858,868				
97071	13-3126819	01/01/2012	SCOR Global Life USA Reins Co (GIB7)	DE	YRT/I	OL	506,468,171	4,285,570	3,489,853	1,600,388				
97071	13-3126819	11/01/2005	SCOR Global Life USA Reins Co (GID5)	DE	YRT/I	OL	564,029,713	4,028,887	3,407,045	2,422,443				
97071	13-3126819	01/01/2012	SCOR Global Life USA Reins Co (GID6)	DE	YRT/I	OL	365,082,625	705,880	559,607	269,005				
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL7)	DE	CO/I	XXXL	3,140,401,096	16,875,498	19,180,405	4,652,480				
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL7)	DE	YRT/I	OL	327,143,231	862,280	739,716	524,480				
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL8)	DE	CO/I	XXXL	2,602,916,328	28,239,450	25,818,277	3,217,327				
97071	13-3126819	08/30/2010	SCOR Global Life USA Reins Co (GIL8)	DE	YRT/I	OL	164,031,213	245,751	209,931	148,358				
97071	13-3126819	07/01/2007	SCOR Global Life USA Reins Co (GIN1)	DE	YRT/I	OL	1,262,477,171	3,243,704	3,195,957	2,112,061				
97071	13-3126819	07/15/2008	SCOR Global Life USA Reins Co (GIN2)	DE	YRT/I	OL	713,537,908	1,554,239	1,439,979	826,051				
97071	13-3126819	07/15/2008	SCOR Global Life USA Reins Co (GIN3)	DE	YRT/I	OL	5,319,889,418	4,293,037	3,928,881	2,460,807				
97071	13-3126819	07/15/2008	SCOR Global Life USA Reins Co (GIN4)	DE	YRT/I	OL	4,659,992,626	7,777,633	7,752,347	4,175,597				
97071	13-3126819	11/01/2010	SCOR Global Life USA Reins Co (GIN5)	DE	YRT/I	OL	3,626,862,530	3,553,957	3,616,352	1,826,191				
97071	13-3126819	01/01/2011	SCOR Global Life USA Reins Co (GIN6)	DE	YRT/I	OL	10,470,186,890	19,587,346	17,282,118	7,849,676				
97071	13-3126819	01/01/2012	SCOR Global Life USA Reins Co (GIN7)	DE	YRT/I	OL	571,004,969	1,252,822	1,223,855	545,141				
97071	13-3126819	07/01/2018	SCOR Global Life USA Reins Co (GIN9)	DE	YRT/I	OL	1,573,233,230	1,429,745	512,120	226,185				
97071	13-3126819	07/01/2012	SCOR Global Life USA Reins Co (GIPF)	DE	YRT/I	OL	83,889,303	138,606	83,940	45,405				
97071	13-3126819	12/06/2017	SCOR Global Life USA Reins Co (SU17)	DE	COFII/I	OL	59,966,467	61,357,440	16,783,923	70,336,504				36,853,704
97071	13-3126819	07/01/2018	SCOR Global Life USA Reins Co (SU20)	DE	COFII/I	OL	12,214,950	20,590,050	2,038,169	45,471,829				9,298,004

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE0)	DE	YRT/G	OL			86,433					
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE0)	DE	YRT/I	OL	103,982,711	171,934		28,442				
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE8)	DE	YRT/G	OL			461,985					
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE8)	DE	YRT/I	OL	811,416,519	1,627,081		202,958				
97071	13-3126819	01/01/2018	SCOR Global Life USA Reins Co (SUE9)	DE	YRT/I	OL	194,555	1,066						
97071	13-3126819	10/29/2019	SCOR Global Life USA Reins Co (SUI6)	DE	CO/I	XXXL	2,025,000	5,516		5,806				
97071	13-3126819	10/29/2019	SCOR Global Life USA Reins Co (SUI7)	DE	CO/I	XXXL	960,000	2,451		3,140				
97071	13-3126819	10/29/2019	SCOR Global Life USA Reins Co (SUI8)	DE	CO/I	XXXL	900,000	1,380		2,356				
97071	13-3126819	10/29/2019	SCOR Global Life USA Reins Co (SUI9)	DE	CO/I	XXXL	570,000	869		2,437				
97071	13-3126819	12/06/2017	SCOR Global Life USA Reins Co (SUN8)	DE	YRT/I	OL	2,656,780,520	3,193,295	1,765,732	583,192				
97071	13-3126819	03/15/2015	SCOR Global Life USA Reins Co (SUQ1)	DE	CO/I	XXXL	1,732,500	2,985		2,491				
97071	13-3126819	03/15/2015	SCOR Global Life USA Reins Co (SUQ2)	DE	CO/I	XXXL	2,565,000	7,145	5,747	1,483				
97071	13-3126819	03/15/2015	SCOR Global Life USA Reins Co (SUQ3)	DE	CO/I	XXXL	13,770,000	47,660	38,094	9,911				
97071	13-3126819	08/08/2016	SCOR Global Life USA Reins Co (SUQ7)	DE	CO/I	XXXL	141,781,050	318,563	203,617	100,568				
97071	13-3126819	08/08/2016	SCOR Global Life USA Reins Co (SUQ8)	DE	CO/I	XXXL	170,445,150	595,163	314,590	189,134				
97071	13-3126819	08/08/2016	SCOR Global Life USA Reins Co (SUQ9)	DE	CO/I	XXXL	899,941,500	3,155,137	1,804,532	798,485				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT0)	DE	CO/I	XXXL	1,494,789,912	3,491,594	384,512	1,896,618				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT0)	DE	YRT/I	OL	16,445,184	10,861	456	3,425				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT3)	DE	CO/I	XXXL	932,443,299	2,811,194	627,897	2,331,045				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT3)	DE	YRT/I	OL	4,450,615	11,956		3,109				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT4)	DE	CO/I	XXXL	313,525,384	507,839	99,185	377,430				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT4)	DE	YRT/I	OL	1,127,281	1,048		661				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT5)	DE	CO/I	XXXL	4,838,698,723	7,264,922	1,443,037	6,356,408				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT5)	DE	YRT/I	OL	31,356,035	32,277	4,925	9,910				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT6)	DE	CO/I	XXXL	2,155,744,059	2,077,891	403,179	2,024,353				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT6)	DE	YRT/I	OL	14,245,424	9,187	542	3,566				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT7)	DE	CO/I	XXXL	180,038,323	826,825	100,935	317,906				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT7)	DE	YRT/I	OL	789,124	814	15	206				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT8)	DE	CO/I	XXXL	86,842,107	247,831	20,967	97,373				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT8)	DE	YRT/I	OL	271,361	292		114				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT9)	DE	CO/I	XXXL	2,055,272,123	6,142,829	654,903	2,996,866				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUT9)	DE	YRT/I	OL	8,043,906	4,781	299	1,359				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUTB)	DE	CO/I	XXXL	1,195,479,331	2,754,256	746,690	2,114,329				
97071	13-3126819	07/07/2018	SCOR Global Life USA Reins Co (SUTB)	DE	YRT/I	OL	12,738,238	23,828	920	8,193				
97071	13-3126819	04/15/2017	SCOR Global Life USA Reins Co (SUU3)	DE	YRT/I	OL	15,676,595	11,135	7,193	2,877				
97071	13-3126819	05/01/2018	SCOR Global Life USA Reins Co (SUV1)	DE	CO/I	XXXL	154,001,250	232,480	110,967	156,170				
97071	13-3126819	05/01/2018	SCOR Global Life USA Reins Co (SUV2)	DE	CO/I	XXXL	151,155,000	272,091	80,612	170,181				
97071	13-3126819	05/01/2018	SCOR Global Life USA Reins Co (SUV3)	DE	CO/I	XXXL	723,150,000	1,519,456	337,293	719,122				
97071	13-3126819	05/01/2018	SCOR Global Life USA Reins Co (SUV4)	DE	CO/I	XXXL	493,807,500	1,434,682	212,190	558,445				
97071	13-3126819	01/23/2019	SCOR Global Life USA Reins Co (SUV5)	DE	CO/I	XXXL	114,210,000	113,707		136,819				
97071	13-3126819	01/23/2019	SCOR Global Life USA Reins Co (SUV6)	DE	CO/I	XXXL	124,065,000	120,822		139,074				
97071	13-3126819	01/23/2019	SCOR Global Life USA Reins Co (SUV7)	DE	CO/I	XXXL	432,765,000	345,825		498,561				
97071	13-3126819	01/23/2019	SCOR Global Life USA Reins Co (SUV8)	DE	CO/I	XXXL	264,982,500	256,335		330,423				
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW1)	DE	YRT/I	OL	23,849,633	18,935						
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW2)	DE	YRT/I	OL	10,321,566	6,736						
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW3)	DE	YRT/I	OL	36,503,317	23,319		1,700				
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW4)	DE	YRT/I	OL	102,549,249	76,153		2,395				
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW5)	DE	YRT/I	OL	62,430,666	41,353		1,536				
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW6)	DE	YRT/I	OL	76,599,335	75,427		787				
97071	13-3126819	11/23/2019	SCOR Global Life USA Reins Co (SUW7)	DE	YRT/I	OL	21,897,759	15,464		157				
68713	84-0499703	07/01/1992	Security Life of Denver Ins. Co. (SD35)	CO	YRT/I	OL				(4,813)				
68713	84-0499703	03/29/1993	Security Life of Denver Ins. Co. (SD37)	CO	YRT/I	OL				(51)				
68713	84-0499703	03/01/1996	Security Life of Denver Ins. Co. (SD46)	CO	YRT/I	OL				(1,359)				
68713	84-0499703	03/01/1996	Security Life of Denver Ins. Co. (SD63)	CO	YRT/I	OL				(212)				
68713	84-0499703	03/01/1996	Security Life of Denver Ins. Co. (SD66)	CO	YRT/I	OL				(805)				
68713	84-0499703	09/16/1996	Security Life of Denver Ins. Co. (SD73)	CO	YRT/I	OL				(373)				

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SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
68713	84-0499703	06/15/1999	Security Life of Denver Ins. Co. (SD83)	CO	CO/I	OL	483,231,360	3,894,761	4,796,916	1,994,854				
68713	84-0499703	06/15/1999	Security Life of Denver Ins. Co. (SD83)	CO	CO/I	XXXL	3,843,157,618	17,361,205	18,299,497	11,488,221				
68713	84-0499703	06/15/1999	Security Life of Denver Ins. Co. (SD83)	CO	YRT/I	OL	1,972,889,053	15,427,154	15,001,273	10,264,961				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ1)	CO	CO/I	XXXL	15,237,272	77,083	80,842	79,556				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ1)	CO	YRT/I	OL	25,759,065	201,461	208,837	140,133				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ2)	CO	CO/I	XXXL	29,437,949	153,185	163,310	184,856				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ2)	CO	YRT/I	OL	52,088,798	256,032	258,963	214,158				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ3)	CO	CO/I	XXXL	467,904,705	10,339,158	11,144,902	893,436				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ3)	CO	YRT/I	OL	56,840,527	174,174	163,869	145,028				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ4)	CO	CO/I	XXXL	126,611,226	10,490,457	9,955,853	253,061				
68713	84-0499703	05/01/2004	Security Life of Denver Ins. Co. (SDJ4)	CO	YRT/I	OL	23,818,828	38,743	36,160	28,248				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ5)	CO	CO/I	XXXL	4,344,211	6,313	7,297	16,494				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ5)	CO	YRT/I	OL	5,515,636	21,516	25,048	14,778				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ6)	CO	CO/I	XXXL	10,685,906	18,499	20,750	51,698				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ6)	CO	YRT/I	OL	22,705,519	99,304	97,620	81,439				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ7)	CO	CO/I	XXXL	197,710,728	4,320,434	4,518,727	384,042				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ7)	CO	YRT/I	OL	26,353,308	64,672	67,098	51,461				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ8)	CO	CO/I	XXXL	53,765,290	3,455,951	3,247,726	104,977				
68713	84-0499703	01/01/2005	Security Life of Denver Ins. Co. (SDJ8)	CO	YRT/I	OL	8,221,644	10,593	10,046	8,061				
68713	84-0499703	03/01/1996	Security Life of Denver Ins. Co. (SL44)	CO	YRT/I	OL				13				
68713	84-0499703	09/01/1998	Security Life of Denver Ins. Co. (SL87)	CO	YRT/I	OL				(3)				
68713	84-0499703	05/01/2001	Security Life of Denver Ins. Co. (SL97)	CO	YRT/I	OL				25				
68713	84-0499703	09/16/1996	Security Life of Denver Ins. Co. (SLA1)	CO	YRT/I	OL				(29)				
82627	06-0839705	11/01/1970	Swiss Re Life & Health America (CG07)	MO	YRT/I	OL	140,319	5,765	5,639	11,180				
82627	06-0839705	11/01/1985	Swiss Re Life & Health America (CG21)	MO	YRT/I	OL	1,110,750	69,522	67,368	70,410				
82627	06-0839705	01/01/1971	Swiss Re Life & Health America (C121)	MO	YRT/I	OL	4,715,753	355,787	356,855	506,258				
82627	06-0839705	01/01/1991	Swiss Re Life & Health America (C124)	MO	YRT/I	OL	3,287,864	82,631	81,860	87,646				
82627	06-0839705	01/01/1991	Swiss Re Life & Health America (C125)	MO	YRT/I	OL	4,925,763	12,734	11,075	16,009				
82627	06-0839705	09/08/1997	Swiss Re Life & Health America (LF85)	MO	YRT/I	OL	28,665,367	385,523	372,454	286,986				
82627	06-0839705	08/01/1984	Swiss Re Life & Health America (LF88)	MO	YRT/G	OL			7,950					
82627	06-0839705	08/01/1984	Swiss Re Life & Health America (LF88)	MO	YRT/I	OL	1,682,928	81,287	95,687	104,279				
82627	06-0839705	10/01/1981	Swiss Re Life & Health America (LR10)	MO	YRT/G	OL	45,639	3,060	3,166	4,702				
82627	06-0839705	10/01/1981	Swiss Re Life & Health America (LR10)	MO	YRT/I	OL	5,316,857	203,382	217,629	280,273				
82627	06-0839705	01/01/1984	Swiss Re Life & Health America (LR17)	MO	YRT/G	OL	1,662,969	57,337	53,165	65,701				
82627	06-0839705	01/01/1984	Swiss Re Life & Health America (LR17)	MO	YRT/I	OL	8,187,611	258,908	263,373	300,233				
82627	06-0839705	03/29/1993	Swiss Re Life & Health America (LR38)	MO	YRT/I	OL	360,890,802	2,998,614	3,010,503	2,348,801				
82627	06-0839705	03/29/1993	Swiss Re Life & Health America (LR42)	MO	YRT/I	OL	9,452,833	118,096	113,956	93,597				
82627	06-0839705	12/01/1993	Swiss Re Life & Health America (LR52)	MO	YRT/I	OL	2,449,368	102,575	99,280	96,712				
82627	06-0839705	09/08/1997	Swiss Re Life & Health America (LR78)	MO	YRT/I	OL	92,655,319	885,678	964,686	562,775				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (ME38)	MO	YRT/I	OL	3,111,807	9,309	11,038	6,616				
82627	06-0839705	01/01/1992	Swiss Re Life & Health America (ME72)	MO	YRT/I	OL	991,546	45,462	49,769	77,448				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (ME73)	MO	YRT/I	OL	1,923,883	59,194	56,088	80,284				
82627	06-0839705	01/01/1990	Swiss Re Life & Health America (MG29)	MO	YRT/I	OL	1,082,000	56,121	53,683	74,499				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (NO50)	MO	YRT/I	OL				(46)				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (NO38)	MO	YRT/I	OL	3,111,807	9,309	11,061	6,616				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (NO39)	MO	YRT/I	OL	297,913	7,640	7,245	16,660				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (NO44)	MO	YRT/I	OL	123,152,600	3,172,482	3,198,991	2,603,014				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (NO45)	MO	YRT/I	OL	7,633,896	196,104	191,339	278,731				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (NO46)	MO	YRT/I	OL	422,938	2,667	2,499	5,199				
82627	06-0839705	09/01/1994	Swiss Re Life & Health America (NO47)	MO	YRT/I	OL	540,630	3,717	5,037	4,803				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (NO48)	MO	YRT/I	OL	184,760,472	2,246,433	2,328,605	2,134,274				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (NO50)	MO	YRT/I	OL	416,873,019	6,250,783	6,126,882	2,671,964				
82627	06-0839705	02/01/1994	Swiss Re Life & Health America (NO59)	MO	YRT/I	OL	159,439	3,701	3,473	9,644				
82627	06-0839705	09/08/1997	Swiss Re Life & Health America (NO85)	MO	YRT/I	OL	21,505,541	289,228	279,424	211,307				
82627	06-0839705	05/01/2001	Swiss Re Life & Health America (NO97)	MO	YRT/I	OL	759,532,421	3,688,605	3,755,516	1,905,823				
82627	06-0839705	09/16/1996	Swiss Re Life & Health America (NOA1)	MO	YRT/I	OL	85,683,498	799,988	766,389	334,849				

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
82627	06-0839705	04/01/1997	Swiss Re Life & Health America (NOA7)	MO	YRT/I	OL	97,600	2,440	2,310	1,203				
82627	06-0839705	09/01/2001	Swiss Re Life & Health America (NOB2)	MO	YRT/I	OL	743,907,710	22,613,200	21,883,474	9,441,782				
82627	06-0839705	11/19/2001	Swiss Re Life & Health America (NOD1)	MO	YRT/I	OL	128,738,049	2,809,199	2,588,464	925,628				
82627	06-0839705	03/31/2003	Swiss Re Life & Health America (NOH1)	MO	YRT/I	OL	41,029,726	832,665	733,113	362,703				
82627	06-0839705	09/01/2001	Swiss Re Life & Health America (NOIWB)	MO	CO/I	AXXX		39,743,824	40,738,658	564,326				
82627	06-0839705	11/19/2001	Swiss Re Life & Health America (NOIWD)	MO	CO/I	AXXX		158,939,666	153,782,227	1,803,168				
82627	06-0839705	06/01/1974	Swiss Re Life & Health America (NR05)	MO	YRT/I	OL			34,676	(64,334)				
82627	06-0839705	01/01/1990	Swiss Re Life & Health America (NR30)	MO	YRT/I	OL	968,260	56,891	54,904	71,559				
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16)	MO	YRT/I	OL	163,987,465	332,487	230,662	203,219				
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16T)	MO	CO/I	XXXX	7,214,296,892	126,102,167	122,866,079	13,712,564	51,356,792	58,693,477		
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16U)	MO	CO/I	AXXX	335,342,370	287,641,935	296,060,495	5,135,652	72,872,341	78,090,657		
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16V)	MO	MCO/I	OL	1,224,017,980			16,261,354	18,942,537	20,199,614	91,996,242	
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR59)	MO	YRT/G	OL			163,792					
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR59)	MO	YRT/I	OL	524,441,583	2,044,965	1,788,904	1,455,791				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR60)	MO	YRT/G	OL			336,957					
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR60)	MO	YRT/I	OL	418,308,776	4,179,566	3,852,062	4,880,072				
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR64)	MO	YRT/G	OL			48,858					
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR64)	MO	YRT/I	OL	355,797,949	3,146,072	3,037,705	3,391,980				
82627	06-0839705	01/19/2005	Swiss Re Life & Health America (SR66)	MO	YRT/I	OL	84,342,336	364,318	343,974	260,166				
82627	06-0839705	09/08/1997	Swiss Re Life & Health America (SR77)	MO	YRT/I	OL	70,784,469	671,542	730,431	419,306				
82627	06-0839705	10/18/2003	Swiss Re Life & Health America (SR83)	MO	CO/I	XXXX	289,986,559	970,886	970,276	786,856				
82627	06-0839705	10/18/2003	Swiss Re Life & Health America (SR83)	MO	YRT/I	OL	135,160,046	1,011,169	995,678	643,131				
82627	06-0839705	01/01/2000	Swiss Re Life & Health America (SR84)	MO	YRT/I	OL	790,957,664	4,141,598	4,037,036	2,232,490				
82627	06-0839705	06/12/2012	Swiss Re Life & Health America (SRB2)	MO	YRT/I	OL	150,346,980	4,965,825	4,671,782	3,057,088				
82627	06-0839705	08/05/2011	Swiss Re Life & Health America (SRB5)	MO	YRT/I	OL	50,546,762	447,085	411,128	236,512				
82627	06-0839705	08/01/2008	Swiss Re Life & Health America (SRB6)	MO	YRT/I	OL	29,803,711	175,657	163,373	94,475				
82627	06-0839705	01/01/2012	Swiss Re Life & Health America (SRB7)	MO	YRT/I	OL	233,441,875	1,832,768	1,537,762	663,653				
82627	06-0839705	09/01/1999	Swiss Re Life & Health America (SRC1)	MO	YRT/I	OL	444,224	5,028	4,598	2,065				
82627	06-0839705	06/12/2012	Swiss Re Life & Health America (SRD1)	MO	YRT/I	OL	270,433,490	5,254,843	4,948,480	2,144,631				
82627	06-0839705	01/01/2018	Swiss Re Life & Health America (SRE0)	MO	YRT/G	OL			86,433					
82627	06-0839705	01/01/2018	Swiss Re Life & Health America (SRE0)	MO	YRT/I	OL	103,982,675	171,934		50,833				
82627	06-0839705	10/01/2001	Swiss Re Life & Health America (SRE1)	MO	YRT/G	OL	111,061	319	19,262	295				
82627	06-0839705	10/01/2001	Swiss Re Life & Health America (SRE1)	MO	YRT/I	OL	4,232,286	20,299		26,977				
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE1)	MO	YRT/G	OL			6,630,761					
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE1)	MO	YRT/I	OL	2,740,293,168	7,082,826		3,725,727				
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE2)	MO	YRT/G	OL			21,837					
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE2)	MO	YRT/I	OL	5,117,716	23,493		13,196				
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE3)	MO	YRT/G	OL			1,140,310					
82627	06-0839705	05/28/2012	Swiss Re Life & Health America (SRE3)	MO	YRT/I	OL	465,002,754	1,219,831		649,851				
82627	06-0839705	07/01/2002	Swiss Re Life & Health America (SRE4)	MO	YRT/I	OL	34,317,229	410,571	397,931	166,583				
82627	06-0839705	01/01/2018	Swiss Re Life & Health America (SRE8)	MO	YRT/G	OL			461,728					
82627	06-0839705	01/01/2018	Swiss Re Life & Health America (SRE8)	MO	YRT/I	OL	811,358,037	1,626,800		530,702				
82627	06-0839705	01/01/2018	Swiss Re Life & Health America (SRE9)	MO	YRT/I	OL	194,555	1,066		308				
82627	06-0839705	08/01/2008	Swiss Re Life & Health America (SRH2)	MO	YRT/I	OL	127,433,031	186,719	156,992	86,018				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI2)	MO	CO/I	XXXX	67,500	462		821				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI4)	MO	CO/I	XXXX	45,000	21		59				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI5)	MO	CO/I	XXXX	45,000	28		95				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI6)	MO	CO/I	XXXX	1,012,500	2,758		2,903				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI7)	MO	CO/I	XXXX	480,000	1,226		1,570				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI8)	MO	CO/I	XXXX	450,000	690		1,178				
82627	06-0839705	10/29/2019	Swiss Re Life & Health America (SRI9)	MO	CO/I	XXXX	285,000	434		1,219				
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL1)	MO	CO/I	XXXX	54,104,429	150,552	339,828	398,057				
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL1)	MO	YRT/I	OL	166,863,671	1,618,894	1,736,349	890,930				
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL2)	MO	CO/I	XXXX	48,584,400	127,775	301,800	261,171				
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL2)	MO	YRT/I	OL	50,448,809	245,585	225,713	168,257				
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL3)	MO	CO/I	XXXX	9,595,908,704	188,842,931	194,358,676	14,677,316				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL3)	MO	YRT/I	OL	935,728,170	2,380,155	2,236,459			1,677,921		
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL4)	MO	CO/I	XXXL	1,612,620,467	57,459,255	54,494,449			2,606,748		
82627	06-0839705	05/23/2005	Swiss Re Life & Health America (SRL4)	MO	YRT/I	OL	83,636,527	115,925	104,946			79,383		
82627	06-0839705	11/01/2006	Swiss Re Life & Health America (SRL5)	MO	CO/I	XXXL	5,208,938,170	10,164,596	13,629,204			8,736,246		
82627	06-0839705	11/01/2006	Swiss Re Life & Health America (SRL5)	MO	YRT/I	OL	1,860,758,319	3,861,751	3,379,238			3,238,247		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL6)	MO	CO/I	XXXL	4,250,267,911	5,824,365	6,572,598			5,007,039		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL6)	MO	YRT/I	OL	725,728,023	1,459,115	1,302,202			925,602		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL7)	MO	CO/I	XXXL	1,306,513,066	6,081,932	5,636,440			1,828,790		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL7)	MO	YRT/I	OL	127,942,916	156,497	132,652			75,332		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL8)	MO	CO/I	XXXL	25,548,236,535	256,619,615	231,143,437			31,510,117		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRL8)	MO	YRT/I	OL	1,540,847,773	2,199,081	1,862,274			1,298,709		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM2)	MO	YRT/G	OL	4,868,300	1,702	1,591			11,423		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM3)	MO	YRT/G	OL	11,684,495	2,543	2,490			16,651		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM3)	MO	YRT/I	OL	1,720,203	1,800	1,716			1,308		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM4)	MO	YRT/G	OL	3,513,400	849	782			5,508		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM4)	MO	YRT/I	OL	48,584	86	80			72		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM5)	MO	YRT/G	OL	9,364,297	2,790	2,749			18,953		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM5)	MO	YRT/I	OL	1,662,526	6,373	6,055			5,118		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM6)	MO	YRT/G	OL	290,000	229	206			1,549		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM7)	MO	YRT/G	OL	761,005,910	174,081	188,156			1,630,905		
82627	06-0839705	04/01/2005	Swiss Re Life & Health America (SRM8)	MO	YRT/G	OL	11,398,424	6,947	7,128			71,422		
82627	06-0839705	04/01/2010	Swiss Re Life & Health America (SRM9)	MO	YRT/G	OL	189,186,910	27,922	30,617			292,373		
82627	06-0839705	08/01/2017	Swiss Re Life & Health America (SRN6)	MO	YRT/I	OL	2,641,759,661	4,392,556	2,809,267			1,003,748		
82627	06-0839705	08/01/2017	Swiss Re Life & Health America (SRN7)	MO	YRT/I	OL	67,093,918	149,244	148,896			54,223		
82627	06-0839705	07/01/2012	Swiss Re Life & Health America (SRPB)	MO	YRT/I	OL	1,891,647,910	5,042,329	4,692,497			2,166,866		
82627	06-0839705	08/08/2016	Swiss Re Life & Health America (SRQ0)	MO	CO/I	XXXL	523,969,050	2,561,162	1,382,960			527,479		
82627	06-0839705	03/15/2015	Swiss Re Life & Health America (SRQ4)	MO	CO/I	XXXL	20,025,000	117,235	79,247			18,689		
82627	06-0839705	04/01/2016	Swiss Re Life & Health America (SRQ5)	MO	CO/I	XXXL	450,000	1,535	826			433		
82627	06-0839705	06/29/2015	Swiss Re Life & Health America (SRR1)	MO	YRT/I	OL	5,702,010	3,408	3,749			217,869		
82627	06-0839705	12/01/2015	Swiss Re Life & Health America (SRS2)	MO	YRT/G	OL	502,363,065	110,102	87,293			741,824		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT0)	MO	CO/I	XXXL	753,894,955	1,758,061	193,339			966,098		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT0)	MO	YRT/I	OL	8,222,599	5,432	227			1,843		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRT1)	MO	CO/I	XXXL	4,892,968,078	18,196,690	13,197,072			6,475,603		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRT1)	MO	YRT/I	OL	199,211,055	270,034	138,055			112,376		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRT2)	MO	CO/I	XXXL	12,642,391,059	50,921,803	30,509,447			15,669,427		
82627	06-0839705	08/30/2010	Swiss Re Life & Health America (SRT2)	MO	YRT/I	OL	262,557,900	266,932	133,223			102,744		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT3)	MO	CO/I	XXXL	970,306,759	2,779,244	640,769			2,310,825		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT3)	MO	YRT/I	OL	4,450,618	11,956				3,486		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT4)	MO	CO/I	XXXL	305,825,386	509,596	116,475			364,909		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT4)	MO	YRT/I	OL	1,127,281	1,048				654		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT5)	MO	CO/I	XXXL	6,096,050,017	9,432,963	1,882,956			8,125,857		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT5)	MO	YRT/I	OL	46,195,051	46,593	6,156			15,912		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT6)	MO	CO/I	XXXL	2,720,880,146	2,638,442	506,230			2,564,606		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT6)	MO	YRT/I	OL	17,560,753	11,067	678			3,827		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT7)	MO	CO/I	XXXL	350,576,670	1,437,093	128,993			615,435		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT7)	MO	YRT/I	OL	1,578,251	1,628	30			462		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT8)	MO	CO/I	XXXL	171,684,218	492,645	45,076			188,104		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT8)	MO	YRT/I	OL	720,244	675				249		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT9)	MO	CO/I	XXXL	1,038,636,061	3,135,634	330,647			1,594,606		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRT9)	MO	YRT/I	OL	4,021,954	2,391	149			735		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRTB)	MO	CO/I	XXXL	2,507,757,799	5,444,695	1,438,531			4,248,337		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRTB)	MO	YRT/I	OL	22,976,566	33,394	1,844			9,704		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRTR)	MO	CO/I	XXXL	657,491,199	1,448,133	474,649			838,631		
82627	06-0839705	07/07/2018	Swiss Re Life & Health America (SRTR)	MO	YRT/I	OL	24,167,677	56,463	2,721			18,371		
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU1)	MO	CO/I	XXXL	9,500,000	7,100	5,766			6,107		
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU1)	MO	YRT/I	OL	560,475	297				129		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance	
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year			
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU2)	MO	CO/I	XXXL	6,666,233	5,070	943	4,407					
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU3)	MO	YRT/I	DL	66,412,579	40,046	19,838	11,796					
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU5)	MO	CO/I	XXXL	3,600,000	4,131	3,604	3,798					
82627	06-0839705	04/15/2017	Swiss Re Life & Health America (SRU6)	MO	CO/I	XXXL	333,300	524	414	312					
82627	06-0839705	05/01/2018	Swiss Re Life & Health America (SRV1)	MO	CO/I	XXXL	102,667,500	154,987	73,978	104,113					
82627	06-0839705	05/01/2018	Swiss Re Life & Health America (SRV2)	MO	CO/I	XXXL	100,770,000	181,394	53,741	113,454					
82627	06-0839705	05/01/2018	Swiss Re Life & Health America (SRV3)	MO	CO/I	XXXL	482,100,000	1,012,970	225,096	479,415					
82627	06-0839705	05/01/2018	Swiss Re Life & Health America (SRV4)	MO	CO/I	XXXL	329,205,000	956,455	141,460	372,297					
82627	06-0839705	01/23/2019	Swiss Re Life & Health America (SRV5)	MO	CO/I	XXXL	76,140,000	75,805		91,213					
82627	06-0839705	01/23/2019	Swiss Re Life & Health America (SRV6)	MO	CO/I	XXXL	82,710,000	80,548		92,716					
82627	06-0839705	01/23/2019	Swiss Re Life & Health America (SRV7)	MO	CO/I	XXXL	288,510,000	230,550		332,374					
82627	06-0839705	01/23/2019	Swiss Re Life & Health America (SRV8)	MO	CO/I	XXXL	176,655,000	170,890		220,282					
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW1)	MO	YRT/I	DL	23,849,633	18,935							
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW2)	MO	YRT/I	DL	6,831,024	4,200							
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW3)	MO	YRT/I	DL	39,115,370	19,044		2,125					
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW4)	MO	YRT/I	DL	106,223,466	73,480		2,395					
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW5)	MO	YRT/I	DL	85,090,986	55,472		2,048					
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW6)	MO	YRT/I	DL	94,034,001	94,930		984					
82627	06-0839705	11/23/2019	Swiss Re Life & Health America (SRW7)	MO	YRT/I	DL	21,397,759	14,959		157					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ2)	NY	CO/I	XXXL	6,541,765	34,041	36,291	41,079					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ2)	NY	YRT/I	DL	11,575,287	56,895	57,562	44,074					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ3)	NY	CO/I	XXXL	103,978,809	2,297,549	2,476,602	198,541					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ3)	NY	YRT/I	DL	12,631,218	38,720	36,405	29,437					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ4)	NY	CO/I	XXXL	28,135,826	2,331,195	2,212,395	56,236					
70688	36-6071399	05/01/2004	Transamerica Financial Life Ins. Co. (TAJ4)	NY	YRT/I	DL	5,293,077	8,605	8,032	5,629					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ6)	NY	CO/I	XXXL	2,374,646	4,111	4,611	11,488					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ6)	NY	YRT/I	DL	5,045,668	22,073	21,694	17,182					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ7)	NY	CO/I	XXXL	43,935,711	960,084	1,004,148	85,342					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ7)	NY	YRT/I	DL	5,856,283	14,382	14,910	10,491					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ8)	NY	CO/I	XXXL	11,947,842	767,984	721,712	23,328					
70688	36-6071399	01/01/2005	Transamerica Financial Life Ins. Co. (TAJ8)	NY	YRT/I	DL	1,827,029	2,352	2,235	1,607					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL2)	NY	CO/I	XXXL	48,584,382	127,773	301,793	261,171					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL2)	NY	YRT/I	DL	59,953,431	271,535	225,713	185,529					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL3)	NY	CO/I	XXXL	5,574,895,507	108,690,602	111,511,148	8,518,300					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL3)	NY	YRT/I	DL	536,218,306	1,318,117	1,213,907	929,774					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL4)	NY	CO/I	XXXL	539,133,162	19,234,719	18,238,854	871,973					
70688	36-6071399	05/23/2005	Transamerica Financial Life Ins. Co. (TAL4)	NY	YRT/I	DL	27,878,852	38,651	34,984	25,752					
80314	52-0913817	12/31/1994	Unicare Life & Health Insurance Co. (UN02)	IN	CO/G			8,100,648	8,762,446						
66133	41-1760577	01/01/2014	Wilton Reassurance Co. (WRL4)	MN	YRT/I	DL	1,236,266	5,893	4,674	10,955					
66133	41-1760577	05/23/2005	Wilton Reassurance Co. (WRL4)	MN	CO/I	XXXL	509,293,896	18,323,559	17,409,728	823,516					
66133	41-1760577	05/23/2005	Wilton Reassurance Co. (WRL4)	MN	YRT/I	DL	27,456,373	38,044	34,414	25,376					
0899999. General Account - Authorized U.S. Non-Affiliates							518,641,496,059	11,417,773,173	8,137,826,442	3,985,020,107	143,171,670	156,983,748	137,653,712	4,252,254,370	
1099999. Total General Account - Authorized Non-Affiliates							518,641,496,059	11,417,773,173	8,137,826,442	3,985,020,107	143,171,670	156,983,748	137,653,712	4,252,254,370	
1199999. Total General Account Authorized							518,641,496,059	11,417,773,173	8,137,826,442	3,985,020,107	143,171,670	156,983,748	137,653,712	4,252,254,370	
1499999. Total General Account - Unauthorized U.S. Affiliates															
1799999. Total General Account - Unauthorized Non-U.S. Affiliates															
1899999. Total General Account - Unauthorized Affiliates															
85090	22-3026145	07/15/1994	Dearborn National Life Insurance Co of New York (FDNY)	NY	CO/G	DL		162,371	189,342						
1999999. General Account - Unauthorized U.S. Non-Affiliates								162,371	189,342						
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (FR56)	CYM	YRT/I	DL	67,959	132	125	3,311					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PH55)	CYM	YRT/I	DL	1,720,156	3,957	3,769	39,394					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PH56)	CYM	YRT/I	DL	195,299	92	155	1,157					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PHB1)	CYM	YRT/I	DL	11,024,599	18,336	16,851	135,327					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PX58)	CYM	YRT/I	DL	573,960	623	579	6,672					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST84)	CYM	YRT/I	DL	601,188,293	196,278	192,073	1,421,608					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST85)	CYM	YRT/I	DL	93,994,954	61,565	61,289	399,186					

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsurance Ceded	7 Type of Business Ceded	8 Amount in Force at End of Year	Reserve Credit Taken		11 Premiums	Outstanding Surplus Relief		14 Modified Coinsurance Reserve	15 Funds Withheld Under Coinsurance
								9 Current Year	10 Prior Year		12 Current Year	13 Prior Year		
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST97)	CYM	YRT/I	OL	147,132,914	46,749	47,786	346,233				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB1)	CYM	YRT/I	OL	60,913,652	72,797	70,299	446,090				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB2)	CYM	YRT/I	OL	81,385,802	205,906	207,429	1,311,086				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB3)	CYM	YRT/I	OL	144,391,735	519,744	481,145	2,947,530				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB4)	CYM	YRT/I	OL	333,068,315	855,697	818,590	11,725,897				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB5)	CYM	YRT/I	OL	25,814,278	26,266	25,006	312,632				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STD1)	CYM	YRT/I	OL	57,510,860	93,024	87,877	401,694				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STD4)	CYM	YRT/I	OL	25,590,328	10,541	9,473	49,741				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STE4)	CYM	YRT/I	OL	6,593,841	5,741	5,689	30,142				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STH1)	CYM	YRT/I	OL	49,452,699	107,595	102,005	723,249				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM2)	CYM	YRT/G	OL	973,660	331	311	3,007				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM3)	CYM	YRT/G	OL	2,366,899	510	497	4,530				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM3)	CYM	YRT/I	OL	344,043	30	29	316				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM5)	CYM	YRT/G	OL	1,854,860	536	525	4,914				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM5)	CYM	YRT/I	OL	332,506	105	98	1,268				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM6)	CYM	YRT/G	OL	58,000	46	42	412				
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STN1)	CYM	YRT/I	OL	105,999,541	21,668	20,877	202,884				
2099999. General Account - Unauthorized Non-U.S. Non-Affiliates							1,752,549,153	2,248,269	2,152,519	20,518,280				
2199999. Total General Account - Unauthorized Non-Affiliates							1,752,549,153	2,410,640	2,341,861	20,518,280				
2299999. Total General Account Unauthorized							1,752,549,153	2,410,640	2,341,861	20,518,280				
2599999. Total General Account - Certified U.S. Affiliates														
2899999. Total General Account - Certified Non-U.S. Affiliates														
2999999. Total General Account - Certified Affiliates														
3299999. Total General Account - Certified Non-Affiliates														
3399999. Total General Account Certified														
3499999. Total General Account Authorized, Unauthorized and Certified							520,394,045,212	11,420,183,813	8,140,168,303	4,005,538,387	143,171,670	156,983,748	137,653,712	4,252,254,370
3799999. Total Separate Accounts - Authorized U.S. Affiliates														
4099999. Total Separate Accounts - Authorized Non-U.S. Affiliates														
4199999. Total Separate Accounts - Authorized Affiliates														
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16V)	MO	MCO/I	OL							556,962,830	
4299999. Separate Accounts - Authorized U.S. Non-Affiliates														556,962,830
4499999. Total Separate Accounts - Authorized Non-Affiliates														556,962,830
4599999. Total Separate Accounts Authorized														556,962,830
4899999. Total Separate Accounts - Unauthorized U.S. Affiliates														
5199999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates														
5299999. Total Separate Accounts - Unauthorized Affiliates														
5599999. Total Separate Accounts - Unauthorized Non-Affiliates														
5699999. Total Separate Accounts Unauthorized														
5999999. Total Separate Accounts - Certified U.S. Affiliates														
6299999. Total Separate Accounts - Certified Non-U.S. Affiliates														
6399999. Total Separate Accounts - Certified Affiliates														
6699999. Total Separate Accounts - Certified Non-Affiliates														
6799999. Total Separate Accounts Certified														
6899999. Total Separate Accounts Authorized, Unauthorized and Certified														556,962,830
6999999. Total U.S. (Sum of 0399999, 0899999, 1499999, 1999999, 2599999, 3099999, 3799999, 4299999, 4899999, 5399999, 5999999 and 6499999)							518,641,496,059	11,417,935,544	8,138,015,784	3,985,020,107	143,171,670	156,983,748	694,616,542	4,252,254,370
7099999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999, 2099999, 2899999, 3199999, 4099999, 4399999, 5199999, 5499999, 6299999 and 6599999)							1,752,549,153	2,248,269	2,152,519	20,518,280				
9999999 - Totals							520,394,045,212	11,420,183,813	8,140,168,303	4,005,538,387	143,171,670	156,983,748	694,616,542	4,252,254,370

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 3 - SECTION 2

Reinsurance Ceded Accident and Health Insurance Listed by Reinsuring Company as of December 31, Current Year

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Company	5 Domi- ciliary Juris- diction	6 Type of Reinsur- ance Ceded	7 Type of Business Ceded	8 Premiums	9 Unearned Premiums (Estimated)	10 Reserve Credit Taken Other than for Unearned Premiums	Outstanding Surplus Relief		13 Modified Coinsurance Reserve	14 Funds Withheld Under Coinsurance
										11 Current Year	12 Prior Year		
0399999. Total General Account - Authorized U.S. Affiliates													
0699999. Total General Account - Authorized Non-U.S. Affiliates													
0799999. Total General Account - Authorized Affiliates													
60054	06-6033492	03/22/2017	Aetna Life Insurance Corporation	CT	QA/I	MS	1,031,853	27,374	820				
68276	48-1024691	06/01/2000	Employers Reassurance Corporation	KS	QA/I	LTC	82,619,864	13,363,982	3,577,746,191				
60213	25-1800302	07/15/1994	HM Life Insurance Company of New York	NY	QA/G	OH			393,370				
91898	86-0388413	01/01/2018	LifeCare Assurance Company	AZ	QA/I	LTC	4,757,633	272,628	6,533,027				
88099	75-1608507	05/09/2016	Optimum Re Insurance Corporation	TX	QA/G	OH	102,650						
80314	52-0913817	12/31/1994	UniCARE Life & Health Insurance Company	IN	QA/G	OH	28,048		184,898				
39845	48-0921045	01/01/1993	Westport Insurance Corporation	MO	OTH/I	LTDI			22,628,182				
0899999. General Account - Authorized U.S. Non-Affiliates													
1099999. Total General Account - Authorized Non-Affiliates													
1199999. Total General Account Authorized													
1499999. Total General Account - Unauthorized U.S. Affiliates													
1799999. Total General Account - Unauthorized Non-U.S. Affiliates													
1899999. Total General Account - Unauthorized Affiliates													
2199999. Total General Account - Unauthorized Non-Affiliates													
2299999. Total General Account Unauthorized													
2599999. Total General Account - Certified U.S. Affiliates													
2899999. Total General Account - Certified Non-U.S. Affiliates													
2999999. Total General Account - Certified Affiliates													
3299999. Total General Account - Certified Non-Affiliates													
3399999. Total General Account Certified													
3499999. Total General Account Authorized, Unauthorized and Certified													
3799999. Total Separate Accounts - Authorized U.S. Affiliates													
4099999. Total Separate Accounts - Authorized Non-U.S. Affiliates													
4199999. Total Separate Accounts - Authorized Affiliates													
4499999. Total Separate Accounts - Authorized Non-Affiliates													
4599999. Total Separate Accounts Authorized													
4899999. Total Separate Accounts - Unauthorized U.S. Affiliates													
5199999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates													
5299999. Total Separate Accounts - Unauthorized Affiliates													
5599999. Total Separate Accounts - Unauthorized Non-Affiliates													
5699999. Total Separate Accounts Unauthorized													
5999999. Total Separate Accounts - Certified U.S. Affiliates													
6299999. Total Separate Accounts - Certified Non-U.S. Affiliates													
6399999. Total Separate Accounts - Certified Affiliates													
6699999. Total Separate Accounts - Certified Non-Affiliates													
6799999. Total Separate Accounts Certified													
6899999. Total Separate Accounts Authorized, Unauthorized and Certified													
6999999. Total U.S. (Sum of 0399999, 0899999, 1499999, 1999999, 2599999, 3099999, 3799999, 4299999, 4899999, 5399999, 5999999 and 6499999)													
7099999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999, 2099999, 2899999, 3199999, 4099999, 4399999, 5199999, 5499999, 6299999 and 6599999)													
9999999 - Totals													

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 4

Reinsurance Ceded to Unauthorized Companies

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
NAIC Company Code	ID Number	Effective Date	Name of Reinsurer	Reserve Credit Taken	Paid and Unpaid Losses Recoverable (Debit)	Other Debits	Total (Cols.5+6+7)	Letters of Credit	Issuing or Confirming Bank Reference Number (a)	Trust Agreements	Funds Deposited by and Withheld from Reinsurers	Other	Miscellaneous Balances (Credit)	Sum of Cols. 9+11+12+13 +14 but not in Excess of Col. 8	
0399999. Total General Account - Life and Annuity U.S. Affiliates										XXX					
0699999. Total General Account - Life and Annuity Non-U.S. Affiliates										XXX					
0799999. Total General Account - Life and Annuity Affiliates										XXX					
85090	22-3026145	07/15/1994	Dearborn National Life Ins Co of NY	162,371			162,371								
0899999. General Account - Life and Annuity U.S. Non-Affiliates										XXX					
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (FR56)	132			132			112			288	132	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PH55)	3,957			3,957			3,345			3,335	3,957	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PH56)	92			92			78			72	92	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PHB1)	18,336	25,342	193	43,871			37,088			12,146	43,871	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (PX58)	623			623			527			580	623	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST84)	196,278	302,552	2,299	501,129			423,655			117,981	501,129	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST85)	61,565			61,565			52,047			34,537	61,565	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (ST97)	46,749	29,912	227	76,888			65,001			26,968	76,888	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB1)	72,797	82,769	629	156,195			132,048			38,074	156,195	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB2)	205,906	17,304	132	223,342			188,813			109,018	223,342	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB3)	519,744	1,612,308	12,254	2,144,306			1,812,799			242,354	2,055,152	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB4)	855,697	3,375,313	25,652	4,256,662			3,598,588			944,966	4,256,662	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STB5)	26,266	519,967	3,952	550,185			465,127			22,939	488,066	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STD1)	93,024			93,024			78,643			37,858	93,024	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STD4)	10,541			10,541			8,911			4,471	10,541	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STE4)	5,741			5,741			4,853			2,575	5,741	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STH1)	107,595	682,515	5,187	795,297			672,346			53,372	725,717	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM2)	331			331			280			254	331	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM3)	540			540			457			401	540	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM5)	641	1,000	8	1,649			1,394			510	1,649	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STM6)	46			46			39			35	46	
00000	AA-3770192	06/01/2016	Scottish Annuity & Life Ins Co. (Cayman) LTD (STN1)	21,668	13,382	102	35,151			29,717			17,174	35,151	
0999999. General Account - Life and Annuity Non-U.S. Non-Affiliates				2,248,268	6,662,364	50,634	8,961,265		XXX	7,575,866			1,669,907	8,740,413	
1099999. Total General Account - Life and Annuity Non-Affiliates				2,410,639	6,662,364	50,634	9,123,637		XXX	7,575,866			1,669,907	8,740,413	
1199999. Total General Account Life and Annuity				2,410,639	6,662,364	50,634	9,123,637		XXX	7,575,866			1,669,907	8,740,413	
1499999. Total General Account - Accident and Health U.S. Affiliates									XXX						
1799999. Total General Account - Accident and Health Non-U.S. Affiliates									XXX						
1899999. Total General Account - Accident and Health Affiliates									XXX						
2199999. Total General Account - Accident and Health Non-Affiliates									XXX						
2299999. Total General Account Accident and Health									XXX						
2399999. Total General Account				2,410,639	6,662,364	50,634	9,123,637		XXX	7,575,866			1,669,907	8,740,413	
2699999. Total Separate Accounts - U.S. Affiliates									XXX						
2999999. Total Separate Accounts - Non-U.S. Affiliates									XXX						
3099999. Total Separate Accounts - Affiliates									XXX						
3399999. Total Separate Accounts - Non-Affiliates									XXX						
3499999. Total Separate Accounts									XXX						
3599999. Total U.S. (Sum of 0399999, 0899999, 1499999, 1999999, 2699999 and 3199999)				162,371			162,371		XXX						
3699999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999, 2099999, 2999999 and 3299999)				2,248,268	6,662,364	50,634	8,961,265		XXX	7,575,866				1,669,907	8,740,413
9999999 - Totals				2,410,639	6,662,364	50,634	9,123,637		XXX	7,575,866			1,669,907	8,740,413	

(a)	Issuing or Confirming Bank Reference Number	Letters of Credit Code	American Bankers Association (ABA) Routing Number	Issuing or Confirming Bank Name	Letters of Credit Amount
				NONE	

Schedule S - Part 5

NONE

Schedule S - Part 5 - Bank Footnote

NONE

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE S - PART 6

Five Year Exhibit of Reinsurance Ceded Business
(\$000 Omitted)

	1 2019	2 2018	3 2017	4 2016	5 2015
A. OPERATIONS ITEMS					
1. Premiums and annuity considerations for life and accident and health contracts	4,145,918	1,692,226	4,970,357	1,329,486	819,218
2. Commissions and reinsurance expense allowances	287,604	183,575	129,972	398,451	110,106
3. Contract claims	756,649	731,949	658,178	565,785	594,097
4. Surrender benefits and withdrawals for life contracts	65,190	42,694	35,441	121	317
5. Dividends to policyholders and refunds to members	3,258	503	518	518	688
6. Reserve adjustments on reinsurance ceded	(33,004)	(120,339)	3,723	82,715	16,029
7. Increase in aggregate reserve for life and accident and health contracts	4,607,898	1,535,207	4,410,673	684,665	482,566
B. BALANCE SHEET ITEMS					
8. Premiums and annuity considerations for life and accident and health contracts deferred and uncollected	195,025	226,050	186,621	161,386	94,993
9. Aggregate reserves for life and accident and health contracts	15,041,334	10,433,437	8,898,230	4,487,557	3,802,892
10. Liability for deposit-type contracts					
11. Contract claims unpaid	184,611	131,699	134,449	108,752	149,963
12. Amounts recoverable on reinsurance	37,140	72,096	30,663	41,664	45,319
13. Experience rating refunds due or unpaid	2	81	117	108	113
14. Policyholders' dividends and refunds to members (not included in Line 10)	2,886	546	535	592	668
15. Commissions and reinsurance expense allowances due	31,808	29,496	24,140	(9,911)	23,408
16. Unauthorized reinsurance offset	383	189	204		
17. Offset for reinsurance with Certified Reinsurers					
C. UNAUTHORIZED REINSURANCE (DEPOSITS BY AND FUNDS WITHHELD FROM)					
18. Funds deposited by and withheld from (F)					
19. Letters of credit (L)					
20. Trust agreements (T)	7,576	10,767	6,429	6,272	
21. Other (O)				227	229
D. REINSURANCE WITH CERTIFIED REINSURERS (DEPOSITS BY AND FUNDS WITHHELD FROM)					
22. Multiple Beneficiary Trust					
23. Funds deposited by and withheld from (F)					
24. Letters of credit (L)					
25. Trust agreements (T)					
26. Other (O)					

SCHEDULE S - PART 7

Restatement of Balance Sheet to Identify Net Credit for Ceded Reinsurance

	1 As Reported (net of ceded)	2 Restatement Adjustments	3 Restated (gross of ceded)
ASSETS (Page 2, Col. 3)			
1. Cash and invested assets (Line 12)	190,272,787,214		190,272,787,214
2. Reinsurance (Line 16)	77,408,259	(77,408,259)	
3. Premiums and considerations (Line 15)	1,015,097,536	195,025,336	1,210,122,872
4. Net credit for ceded reinsurance	XXX	15,091,596,619	15,091,596,619
5. All other admitted assets (balance)	6,653,293,700		6,653,293,700
6. Total assets excluding Separate Accounts (Line 26)	198,018,586,709	15,209,213,696	213,227,800,405
7. Separate Account assets (Line 27)	70,230,699,186		70,230,699,186
8. Total assets (Line 28)	268,249,285,895	15,209,213,696	283,458,499,591
LIABILITIES, CAPITAL AND SURPLUS (Page 3)			
9. Contract reserves (Lines 1 and 2)	130,479,163,231	15,041,334,275	145,520,497,506
10. Liability for deposit-type contracts (Line 3)	15,296,773,875		15,296,773,875
11. Claim reserves (Line 4)	424,028,496	184,611,099	608,639,595
12. Policyholder dividends/member refunds/reserves (Lines 5 through 7)	1,683,748,960	2,885,737	1,686,634,697
13. Premium & annuity considerations received in advance (Line 8)	38,780,694	(5,456,656)	33,324,038
14. Other contract liabilities (Line 9)	481,351,338	(15,458,286)	465,893,052
15. Reinsurance in unauthorized companies (Line 24.02 minus inset amount)	383,223	(383,223)	
16. Funds held under reinsurance treaties with unauthorized reinsurers (Line 24.03 minus inset amount)			
17. Reinsurance with Certified Reinsurers (Line 24.02 inset amount)			
18. Funds held under reinsurance treaties with Certified Reinsurers (Line 24.03 inset amount)			
19. All other liabilities (balance)	30,721,446,721	1,680,750	30,723,127,470
20. Total liabilities excluding Separate Accounts (Line 26)	179,125,676,538	15,209,213,696	194,334,890,234
21. Separate Account liabilities (Line 27)	70,230,699,186		70,230,699,186
22. Total liabilities (Line 28)	249,356,375,724	15,209,213,696	264,565,589,420
23. Capital & surplus (Line 38)	18,892,910,171	XXX	18,892,910,171
24. Total liabilities, capital & surplus (Line 39)	268,249,285,895	15,209,213,696	283,458,499,591
NET CREDIT FOR CEDED REINSURANCE			
25. Contract reserves	15,041,334,275		
26. Claim reserves	184,611,099		
27. Policyholder dividends/reserves	2,885,737		
28. Premium & annuity considerations received in advance	(5,456,656)		
29. Liability for deposit-type contracts			
30. Other contract liabilities	(15,458,286)		
31. Reinsurance ceded assets	77,408,259		
32. Other ceded reinsurance recoverables			
33. Total ceded reinsurance recoverables	15,285,324,429		
34. Premiums and considerations	195,025,336		
35. Reinsurance in unauthorized companies	383,223		
36. Funds held under reinsurance treaties with unauthorized reinsurers			
37. Reinsurance with Certified Reinsurers			
38. Funds held under reinsurance treaties with Certified Reinsurers			
39. Other ceded reinsurance payables/offsets	(1,680,750)		
40. Total ceded reinsurance payable/offsets	193,727,810		
41. Total net credit for ceded reinsurance	15,091,596,619		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS (b)

Allocated by States and Territories

States, Etc.	1	Life Contracts		Direct Business Only			7	
		2	3	4	5	6		
	Active Status (a)	Life Insurance Premiums	Annuity Considerations	Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 through 5	Deposit-Type Contracts	
1. Alabama	AL	L	68,429,926	70,841,587	7,090,987	51,449,435	197,811,935	49,149,323
2. Alaska	AK	L	8,769,291	6,773,055	432,324	5,202,854	21,177,524	3,170,158
3. Arizona	AZ	L	77,407,614	148,197,106	10,810,496	21,509,324	257,924,540	46,764,422
4. Arkansas	AR	L	25,648,739	36,914,247	2,367,262	4,477,435	69,407,683	17,040,875
5. California	CA	L	930,521,283	814,638,033	65,389,125	541,868,466	2,352,416,907	379,744,197
6. Colorado	CO	L	94,495,496	102,834,016	11,223,131	28,326,881	236,879,524	39,186,644
7. Connecticut	CT	L	195,445,976	155,222,589	20,374,657	163,707,053	534,750,275	45,845,512
8. Delaware	DE	L	174,806,242	20,268,739	1,797,753	14,715,785	211,588,519	2,115,497,436
9. District of Columbia	DC	L	24,995,432	22,421,243	4,057,190	54,044,665	105,518,530	7,719,245
10. Florida	FL	L	536,470,693	550,717,843	33,550,651	319,503,906	1,440,243,093	299,575,197
11. Georgia	GA	L	186,785,856	172,245,291	23,916,770	154,156,628	537,104,545	106,157,674
12. Hawaii	HI	L	24,784,265	20,105,551	3,193,202	6,737,557	54,820,575	29,314,249
13. Idaho	ID	L	29,224,415	15,092,718	1,678,699	10,933,208	56,929,040	10,810,344
14. Illinois	IL	L	483,150,354	272,503,028	25,237,453	531,598,294	1,312,489,129	98,817,820
15. Indiana	IN	L	109,505,555	68,674,275	9,675,966	56,764,961	244,620,757	52,559,285
16. Iowa	IA	L	44,591,742	32,864,537	3,917,286	141,638,197	223,011,762	36,340,462
17. Kansas	KS	L	42,754,817	27,253,675	5,613,750	45,396,365	121,018,607	7,480,555
18. Kentucky	KY	L	29,663,991	155,932,631	5,188,192	47,239,058	238,023,872	45,752,991
19. Louisiana	LA	L	51,084,744	58,762,948	6,434,369	29,214,061	145,496,122	45,187,803
20. Maine	ME	L	27,952,913	24,004,524	2,591,570	6,971,374	61,520,381	6,986,017
21. Maryland	MD	L	126,635,552	115,993,595	27,426,960	208,461,039	478,517,146	126,212,769
22. Massachusetts	MA	L	243,340,644	491,524,146	33,625,138	843,609,314	1,612,099,242	353,225,917
23. Michigan	MI	L	131,087,709	261,246,985	15,364,251	227,868,512	635,567,457	98,202,140
24. Minnesota	MN	L	61,523,639	74,047,454	9,266,063	299,039,263	443,876,419	90,573,579
25. Mississippi	MS	L	57,342,459	46,359,607	10,410,198	3,394,497	117,506,761	18,987,663
26. Missouri	MO	L	70,998,110	80,076,520	10,663,832	95,510,607	257,249,069	36,969,241
27. Montana	MT	L	16,060,971	11,536,623	1,395,098	5,430,061	34,422,753	13,048,338
28. Nebraska	NE	L	47,302,061	74,853,019	5,775,980	91,908,055	219,839,115	25,819,471
29. Nevada	NV	L	43,406,948	33,929,679	3,383,864	55,687,584	136,408,075	16,694,794
30. New Hampshire	NH	L	37,395,387	42,060,675	4,490,607	37,688,299	121,634,968	17,618,906
31. New Jersey	NJ	L	434,723,138	220,165,783	39,918,240	1,185,663,718	1,880,470,879	141,077,600
32. New Mexico	NM	L	21,147,615	36,544,630	2,494,349	1,473,095	61,659,689	7,880,022
33. New York	NY	L	1,294,696,982	574,326,194	87,773,642	826,710,428	2,783,507,246	310,753,997
34. North Carolina	NC	L	155,963,226	168,163,098	30,470,153	93,400,004	447,996,481	154,576,464
35. North Dakota	ND	L	13,905,595	10,741,525	699,811	7,186,820	32,533,751	10,589,473
36. Ohio	OH	L	157,781,413	479,204,065	17,088,345	284,312,843	938,386,666	136,248,111
37. Oklahoma	OK	L	85,889,197	38,676,304	7,833,751	64,933,209	197,332,461	33,808,893
38. Oregon	OR	L	33,484,379	73,373,461	5,014,464	25,382,376	137,254,680	27,218,485
39. Pennsylvania	PA	L	369,825,066	243,936,272	40,067,371	515,248,526	1,169,077,235	37,884,391
40. Rhode Island	RI	L	21,451,621	83,848,934	3,161,943	58,817,189	167,279,687	13,699,547
41. South Carolina	SC	L	84,749,059	77,091,254	15,557,584	25,618,078	203,015,975	63,315,422
42. South Dakota	SD	L	9,724,014	3,217,306	697,647	1,757,038	15,396,005	6,127,070
43. Tennessee	TN	L	117,406,306	90,004,090	18,815,418	281,059,049	507,284,863	41,538,943
44. Texas	TX	L	422,195,491	382,602,068	49,072,141	253,895,611	1,107,765,311	292,499,888
45. Utah	UT	L	47,185,666	38,736,328	4,277,891	8,380,981	98,580,866	31,724,766
46. Vermont	VT	L	24,066,472	15,650,295	1,506,028	14,877,665	56,100,460	3,373,704
47. Virginia	VA	L	217,016,642	221,282,896	29,982,247	246,936,308	715,218,093	96,076,088
48. Washington	WA	L	75,523,775	177,250,809	11,459,160	75,803,972	340,037,716	13,591,133
49. West Virginia	WV	L	17,986,187	21,954,874	1,447,428	35,216,878	76,605,367	57,594,781
50. Wisconsin	WI	L	57,301,531	65,596,317	6,669,331	68,958,247	198,525,426	9,391,628
51. Wyoming	WY	L	6,295,661	6,668,113	633,086	299,213	13,896,073	4,359,188
52. American Samoa	AS	N						
53. Guam	GU	N	1,500	96,033	7,527		105,060	57,902
54. Puerto Rico	PR	L	78,697,157	5,703,905	9,676,694	20,414,183	114,491,939	2,160,494
55. U.S. Virgin Islands	VI	N	14,455	21,301,901	29,561		21,345,917	32,500
56. Northern Mariana Islands	MP	N						
57. Canada	CAN	N	2,206,294	845,656	118,847	414	3,171,211	315,448
58. Aggregate Other Alien	OT	XXX	17,182,653	599,977	543,308		18,325,938	
59. Subtotal	XXX		7,768,003,919	7,065,478,027	751,358,792	8,200,398,583	23,785,239,321	5,736,348,965
90. Reporting entity contributions for employee benefits plans	XXX							
91. Dividends or refunds applied to purchase paid-up additions and annuities	XXX		1,426,492,019	1,768,383			1,428,260,402	
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		27,832,762		12,105,353		39,938,115	
94. Aggregate or other amounts not allocable by State	XXX		58,733,767				58,733,767	
95. Totals (Direct Business)	XXX		9,281,062,467	7,067,246,410	763,464,145	8,200,398,583	25,312,171,605	5,736,348,965
96. Plus reinsurance assumed	XXX		47,710,448	29,766,274		1,383,742,505	1,461,219,227	1,307,806,671
97. Totals (All Business)	XXX		9,328,772,915	7,097,012,684	763,464,145	9,584,141,088	26,773,390,832	7,044,155,636
98. Less reinsurance ceded	XXX		1,142,445,141	2,892,119,495	86,049,098		4,120,613,734	
99. Totals (All Business) less Reinsurance Ceded	XXX		8,186,327,774	4,204,893,189	(c) 677,415,047	9,584,141,088	22,652,777,098	7,044,155,636
DETAILS OF WRITE-INS								
58001. HKG Hong Kong	XXX		243,176				243,176	
58002. ZZZ Other Alien	XXX		16,939,477	599,977	543,308		18,082,762	
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		17,182,653	599,977	543,308		18,325,938	
9401. Reinvested Net Nonforfeiture Option Proceeds	XXX		58,733,767				58,733,767	
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		58,733,767				58,733,767	

(a) Active Status Counts:

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

(b) Explanation of basis of allocation by states, etc., of premiums and annuity considerations

Individual insurance premiums and annuity considerations - allocated to the states in which the policyholder resides (based on Company records when the premium is received). Group premiums - allocated consistent with the 500 lives rule.

(c) Column 4 should balance with Exhibit 1, Lines 6.4, 10.4, and 16.4, Cols. 8, 9, 10, or with Schedule H, Part 1, Line 1, indicate which: Exhibit 1, Lines 6.4, 10.4, and 16.4, Cols. 8, 9, 10.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE T - PART 2
INTERSTATE COMPACT - EXHIBIT OF PREMIUMS WRITTEN

Allocated by States and Territories

		Direct Business Only					
		1	2	3	4	5	6
States, Etc.		Life (Group and Individual)	Annuities (Group and Individual)	Disability Income (Group and Individual)	Long-Term Care (Group and Individual)	Deposit-Type Contracts	Totals
1. Alabama	AL	68,429,926	70,841,587	5,353,332	1,676,471	49,149,323	195,450,639
2. Alaska	AK	8,769,291	6,773,055	354,529	77,795	3,170,158	19,144,828
3. Arizona	AZ	77,407,614	148,197,106	7,377,547	3,374,217	46,764,422	283,120,906
4. Arkansas	AR	25,648,739	36,914,247	1,976,559	390,703	17,040,875	81,971,123
5. California	CA	930,521,283	814,638,033	39,601,519	25,750,941	379,744,197	2,190,255,973
6. Colorado	CO	94,495,496	102,834,016	6,916,032	4,306,701	39,186,644	247,738,889
7. Connecticut	CT	195,445,976	155,222,589	14,820,637	5,547,470	45,845,512	416,882,184
8. Delaware	DE	174,806,242	20,268,739	1,245,599	551,964	2,115,497,436	2,312,369,980
9. District of Columbia	DC	24,995,432	22,421,243	2,889,275	1,167,915	7,719,245	59,193,110
10. Florida	FL	536,470,693	550,717,843	19,076,039	14,464,423	299,575,197	1,420,304,195
11. Georgia	GA	186,785,856	172,245,291	16,454,565	7,324,551	106,157,674	488,967,937
12. Hawaii	HI	24,784,265	20,105,551	1,733,814	1,459,389	29,314,249	77,397,268
13. Idaho	ID	29,224,415	15,092,718	1,083,909	594,790	10,810,344	56,806,176
14. Illinois	IL	483,150,354	272,503,028	18,993,360	6,170,051	98,817,820	879,634,613
15. Indiana	IN	109,505,555	68,674,275	7,696,073	1,953,611	52,559,285	240,388,799
16. Iowa	IA	44,591,742	32,864,537	2,181,056	1,700,837	36,340,462	117,678,634
17. Kansas	KS	42,754,817	27,253,675	3,860,410	1,706,877	7,480,555	83,056,334
18. Kentucky	KY	29,663,991	155,932,631	3,729,004	1,401,868	45,752,991	236,480,485
19. Louisiana	LA	51,084,744	58,762,948	5,154,813	1,279,556	45,187,803	161,469,864
20. Maine	ME	27,952,913	24,004,524	1,686,453	902,539	6,986,017	61,532,446
21. Maryland	MD	126,635,552	115,993,595	17,286,580	10,099,896	126,212,769	396,228,392
22. Massachusetts	MA	243,340,644	491,524,146	22,652,574	10,963,580	353,225,917	1,121,706,861
23. Michigan	MI	131,087,709	261,246,985	9,020,166	6,276,739	98,202,140	505,833,739
24. Minnesota	MN	61,523,639	74,047,454	6,336,871	2,928,417	90,573,579	235,409,960
25. Mississippi	MS	57,342,459	46,359,607	8,259,268	2,122,426	18,987,663	133,071,423
26. Missouri	MO	70,998,110	80,076,520	8,320,562	2,343,270	36,969,241	198,707,703
27. Montana	MT	16,060,971	11,536,623	952,062	373,941	13,048,338	41,971,935
28. Nebraska	NE	47,302,061	74,853,019	2,777,677	2,966,456	25,819,471	153,718,684
29. Nevada	NV	43,406,948	33,929,679	2,532,326	851,539	16,694,794	97,415,286
30. New Hampshire	NH	37,395,387	42,060,675	2,712,098	1,778,510	17,618,906	101,565,576
31. New Jersey	NJ	434,723,138	220,165,783	28,442,483	11,405,739	141,077,600	835,814,743
32. New Mexico	NM	21,147,615	36,544,630	1,460,737	1,033,612	7,880,022	68,066,616
33. New York	NY	1,294,696,982	574,326,194	62,794,057	24,962,454	310,753,997	2,267,533,684
34. North Carolina	NC	155,963,226	168,163,098	21,598,641	8,740,181	154,576,464	509,041,610
35. North Dakota	ND	13,905,595	10,741,525	507,461	192,350	10,589,473	35,936,404
36. Ohio	OH	157,781,413	479,204,065	12,006,875	4,935,388	136,248,111	790,175,852
37. Oklahoma	OK	85,889,197	38,676,304	5,294,857	2,518,621	33,808,893	166,187,872
38. Oregon	OR	33,484,379	73,373,461	3,497,840	1,516,244	27,218,485	139,090,409
39. Pennsylvania	PA	369,825,066	243,936,272	27,049,836	12,964,911	37,884,391	691,660,476
40. Rhode Island	RI	21,451,621	83,848,934	2,176,809	985,135	13,699,547	122,162,046
41. South Carolina	SC	84,749,059	77,091,254	10,299,542	5,208,339	63,315,422	240,663,616
42. South Dakota	SD	9,724,014	3,217,306	394,520	303,127	6,127,070	19,766,037
43. Tennessee	TN	117,406,306	90,004,090	12,820,998	5,938,808	41,538,943	267,709,145
44. Texas	TX	422,195,491	382,602,068	32,764,989	16,150,936	292,499,888	1,146,213,372
45. Utah	UT	47,185,666	38,736,328	3,100,995	1,176,897	31,724,766	121,924,652
46. Vermont	VT	24,066,472	15,650,295	958,906	547,122	3,373,704	44,596,499
47. Virginia	VA	217,016,642	221,282,896	18,157,363	11,824,253	96,076,088	564,357,242
48. Washington	WA	75,523,775	177,250,809	7,093,535	4,363,938	13,591,133	277,823,190
49. West Virginia	WV	17,986,187	21,954,874	1,005,575	441,699	57,594,781	98,983,116
50. Wisconsin	WI	57,301,531	65,596,317	4,390,406	2,260,621	9,391,628	138,940,503
51. Wyoming	WY	6,295,661	6,668,113	383,550	249,536	4,359,188	17,956,048
52. American Samoa	AS						
53. Guam	GU	1,500	96,033	7,527		57,902	162,962
54. Puerto Rico	PR	78,697,157	5,703,905	7,685,589	1,991,105	2,160,494	96,238,250
55. U.S. Virgin Islands	VI	14,455	21,301,901	25,328	4,233	32,500	21,378,417
56. Northern Mariana Islands	MP						
57. Canada	CAN	2,206,294	845,656	118,847		315,448	3,486,245
58. Aggregate Other Alien	OT	17,182,653	599,977	464,807	78,501		18,325,938
59. Total		7,768,003,919	7,065,478,027	507,536,782	242,301,193	5,736,348,965	21,319,668,886

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

PART 1 – ORGANIZATIONAL CHART

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Mezzanine Investor III, LLC	06-1041383		Delaware
CML Special Situations Investor LLC	None		Delaware
CML Global Capabilities LLC	None		Delaware
MM Global Capabilities I LLC	None		Delaware
MassMutual Global Business Services India LLP	None		India
MM Global Capabilities II LLC	None		Delaware
MM Global Capabilities I II 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 Timber Sales, Inc.	20-5305426		New York
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
Jefferies Finance LLC	27-0105644		Delaware
APEX Credit Partners LLC	None		Delaware
JFIN GP Adviser LLC	None		Delaware
JFIN Fund III LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
Jefferies Direct Lending Fund C LP	None		Delaware
JFIN Revolver Holdings LLC	None		Delaware
JFIN Revolver Holdings II LLC	None		Delaware
JFIN Co-Issuer Corporation	None		Delaware
JFIN Europe GP, S.a.r.l.	None		Luxembourg
Jefferies Finance Europe, SCSp	None		Luxembourg
Jefferies Finance Business Credit LLC	None		Delaware
JFIN Business Credit Fund I LLC	None		Delaware

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
JFIN High Yield Investments LLC	None		Delaware
JFIN LC Fund LLC	None		Delaware
JFIN Revolver CLO 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 MM CLO 2014 Ltd.*	None		Cayman Islands
JFIN CLO 2015 Ltd.*	None		Cayman Islands
Apex Credit CLO 2015-II Ltd.*	None		Cayman Islands
JFIN Revolver CLO 2015 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2018 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019-II Ltd.	None		Cayman Islands
JFIN Revolver Fund, L.P.	None		Delaware
Apex Credit CLO 2016 Ltd.	None		Cayman Islands
Apex Credit CLO 2017 Ltd.	None		Cayman Islands
Apex Credit CLO 2017-II Ltd.	None		Cayman Islands
Apex Credit CLO 2019-II Ltd.*	None		Cayman Islands
MassMutual Mortgage Lending LLC	None		Delaware
MassMutual Retirement Services, LLC	04-1590850		Delaware
MM Copper Hill Road LLC	04-1590850		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
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2013-A	90-1005837		Delaware
MMAF Equipment Finance LLC 2014-A	36-4785301		Delaware
MMAF Equipment Finance LLC 2015-A	38-3969560		Delaware
MMAF Equipment Finance LLC 2016-A	32-0489588		Delaware
MMAF Equipment Finance LLC 2017-A	35-2590691		Delaware
MMAF Equipment Finance LLC 2017-B	32-0546197		Delaware
MMAF Equipment Finance LLC 2018-A	82-5335801		Delaware
MMAF Equipment Finance LLC 2019-A	83-3722640		Delaware
MMAF Equipment Finance LLC 2019-B	None		Delaware
Rozier 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 Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
Sleeper Street LLC	None		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures Southeast Asia II LLC	None		Delaware
MassMutual Ventures UK LLC	None		Delaware
MassMutual Ventures US I LLC	47-1296410		Delaware
MassMutual Ventures US II LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
LifeScore Labs, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda
Baring Asset Management (Asia) Limited	98-0457463		Hong Kong, Special Administrative Region of China
Baring Asset Management Korea Limited	None		Korea
Barings Investment Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Barings Overseas Investment Fund Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Securities LLC	04-3238351		Delaware

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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 Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings Asset Management Spain SL	None		Spain
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Finland Oy	None		Finland
Barings Netherlands B.V.	None		Netherlands
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate GmbH	98-1194368		Germany
Baring Asset Management Limited	98-0241935		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Asset Management GmbH	98-0465031		Germany
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sàrl	None		Switzerland
Baring France SAS	98-0497550		France
Baring Fund Managers Limited	98-0457586		United Kingdom
Baring Pension Trustees Limited	98-0457574		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Investment Fund (LUX) GP S.à r.l.	None		Luxembourg
Barings GPC GP S.à.r.l.	None		Luxembourg
Barings European Core Property Fund GP S.à.r.l	None		United Kingdom
Almack Mezzanine GP III Limited	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Almack Mezzanine Fund II Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Multifamily Capital Holdings LLC	None		Delaware
Barings Multifamily Capital LLC	None		Michigan
Barings Multifamily Capital Corporation	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		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>
Aland Royalty Holdings LP	None		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Novation Companies, Inc.	None		Maryland
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
EIP Holdings I, LLC	None		Delaware
Tamiami Citrus, LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
U.S. Pharmaceuticals Holdings I, LLC	46-0687392		Delaware
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
Validus Pharmaceuticals LLC	None		Delaware
VGS Acquisition Holding, LLC	None		Delaware
Aland Royalty GP, LLC	None		Delaware
Alaska Future Fund GP, LLC	None		Delaware
BAI Funds SLP, LLC	None		Delaware
BAI GP, LLC	None		Delaware
Barings Alternative Investments SLP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Barings ABIF SLP, LLC	None		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Core Property Fund GP LLC	None		Delaware
Barings Direct Lending GP Ltd.	None		Cayman Islands
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings Multi Asset Income Fund	None		Hong Kong
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings/LAZ Parking Fund GP LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BRECS VII GP LLC	None		Delaware
CCM Fund I REIT Manager LLC	None		Delaware
CEMF I GP LLC	None		Delaware
CHY Venture GP LLC	None		Delaware
Cornerstone Hotel Fund GP, LLC	None		Delaware
CREF X GP LLC	None		Delaware
CREF VIII GP, LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Loan Strategies Management 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>
Mezzco LLC	04-1590850		Delaware
Mezzco II LLC	02-0767001		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
Somerset Special Opportunities Management LLC	04-1590850		Delaware
Invesco Ltd.	None		Bermuda
MassMutual International LLC	04-3313782		Delaware
MassMutual Solutions LLC	None		Delaware
HarborTech (Asia) Limited	None		Hong Kong
Yunfeng Financial Group Limited	None		Hong Kong
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
2160 Grand Manager LLC	04-1590850		Delaware
300 South Tryon LLC	04-1590850		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Almack Mezzanine Fund III LP*	None		United Kingdom
Barings Affordable Housing Mortgage Fund I LLC	82-3468147		Delaware
Barings Asset-Based Income Fund (US) LP	36-4868350		Delaware
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson CLO Ltd. 2016-II	None		Cayman Islands
Barings CLO Ltd. 2017-I	None		Cayman Islands

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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 CLO 2018-III	None		Cayman Islands
Barings CLO 2018-IV	None		Cayman Islands
Barings CLO 2019-I	None		Cayman Islands
Barings CLO 2019-II	98-1473665		Cayman Islands
Barings CLO 2019-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
Babson Euro CLO 2016-I BV	None		Netherlands
Barings Euro CLO 2019-I	36037260H		Ireland
Barings Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Inv. Grade Strat Fund	None		Ireland
Barings Global Private Loan Fund	None		Luxembourg
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings 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 North American Private Loan Fund LP	38-4010344		Delaware
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Baring International Small Cap Equity Fund	26-4142796		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Braemar Energy Ventures I, L.P. *	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Benchmark 2018-B8	38-4096530		New York
Braselton Point LLC	04-1590850		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Cornerstone Permanent Mortgage Fund III LLC	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV LLC	61-1793735		Massachusetts
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
KKR-MM Vector LP	82-1512591		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>
Marco Hotel LLC	46-4255307		Delaware
Miami Douglas One GP LLC*	04-1590850		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
MM Debt Participations LLC	81-3000420		Delaware
RB Apartments LLC	82-4411267		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Rockall CLO B.V.	None		United Kingdom
Rockville Town Center LLC	54-2055778		Virginia
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
SouthPointe Industrial LLC	04-1590850		Delaware
Ten Fan Pier Boulevard LLC	35-2553915		Delaware
Tower Square Capital Partners II, L.P.*	30-0336246		Delaware
Tower Square Capital Partners II-A, L.P.	32-0160190		Delaware
Tower Square Capital Partners III, L.P.	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Tower Square Capital Partners IV-A, L.P.	80-0920367		Delaware
Trailside MM Member LLC*	04-1590850		Delaware
Washington Gateway Two LLC*	83-1325764		Delaware
Washington Gateway Three LLC*	32-0574045		Delaware
West 46 th Street Hotel LLC	05-1590850		Delaware
Barings Affiliates & Funds:			
Barings Emerging Markets Debt Short Duration Fund	None		Ireland
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings Global High Yield Fund	47-3790192		Massachusetts
Barings Total Return Bond Fund	47-3734770		Massachusetts
Barings U.S. High Yield Fund	47-3801860		Massachusetts
CCIC Fund	None		Peoples Republic of China
Great Lakes II LLC*	71-1018134		Delaware
Barings Real Estate Affiliates & Funds:			
Wood Creek Venture Fund LLC	04-1590850		Delaware
50 Liberty LLC*	36-4823011		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
Budapester Strasse LLC	81-4382111		Delaware
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

*This entity is owned by another or multiple entities in the group. Please refer to Schedule 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>
Cornerstone Permanent Mortgage Fund III	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735		Massachusetts
CREA Madison Member LLC	81-0890084		Delaware
CCB Montford Park LLC*	82-1563809		Delaware
Danville Riverwalk Venture, LLC	82-2783393		Delaware
Fan Pier Development LLC*	20-3347091		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
MM Island Member LLC	04-1590850		Delaware
NoHo West Venture LLC	83-0881588		Delaware
PACO France Logistics 2 LLC	04-1590850		Delaware
Portland 400 Sixth Manager LLC	82-3393166		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Sawgrass Village Shopping Center LLC*	27-2977720		Delaware
Spain Avalon Holding LLC	04-1590850		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Twenty Two Liberty LLC*	35-2484550		Massachusetts
Unna, Dortmund Holding LLC	82-3250684		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
Ygnatio Valley Funding	20-5481477		Delaware
MassMutual Premier Funds:			
MassMutual Barings Dynamic Allocation Fund	45-3168892		Massachusetts
MassMutual Premier Focused International Fund	02-0754273		Massachusetts
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Premier Value Fund	04-3277550		Massachusetts
MassMutual Select Funds:			
MassMutual Select Diversified International Fund	14-1980900		Massachusetts
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Large Cap Value Fund	04-3513019		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

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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 Select T. Rowe Price Retirement 2030 Fund	82-3430358		Massachusetts
MassMutual Select T. Rowe Price Retirement 2035 Fund	82-3439837		Massachusetts
MassMutual Select T. Rowe Price Retirement 2040 Fund	82-3451779		Massachusetts
MassMutual Select T. Rowe Price Retirement 2045 Fund	82-3472295		Massachusetts
MassMutual Select T. Rowe Price Retirement 2050 Fund	82-3481715		Massachusetts
MassMutual Select T. Rowe Price Retirement 2055 Fund	82-3502011		Massachusetts
MassMutual Select T. Rowe Price Retirement 2060 Fund	82-3525148		Massachusetts
MassMutual Select T. Rowe Price Retirement Balanced Fund	82-3533944		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MML Series II Special Situations Fund	47-3559064		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual RetireSMART Conservative Fund	45-1618155		Massachusetts
MassMutual RetireSMART Growth Fund	45-1618222		Massachusetts
MassMutual RetireSMART In Retirement Fund	03-0532464		Massachusetts
MassMutual RetireSMART Moderate Fund	45-1618262		Massachusetts
MassMutual RetireSMART Moderate Growth Fund	45-1618046		Massachusetts

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ANNUAL STATEMENT FOR THE YEAR 2019 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? (Y/N)	*
.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	CM Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	MML Baystate Life Ins Co	70416	43-0581430				MML Bay State Life Insurance Company	CT	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor III, 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	Massachusetts Mutual Life Insurance Company	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							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	Ownership	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			20-5305426				Lyme Adirondack Timber Sales, Inc.	NY	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands I, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands II, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Berkshire Way LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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			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			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		1
.0000							MassMutual Mortgage Lending LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LLC	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LP	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Direct Lending Fund C LP	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Holdings II LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		

ANNUAL STATEMENT FOR THE YEAR 2019 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? (Y/N)	*
.0000							JFIN Europe GP, S.a.r.l.	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Europe, SCSp	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Business Credit LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Business Credit Fund I LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN High Yield Investments LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2012 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2013 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2014-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN IM CLO 2014 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	44.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	56.000	MMLIC		
.0000							JFIN Revolver Fund, L.P.	DE	NIA	Jefferies Finance LLC	Ownership	58.000	MMLIC		
.0000							Apex Credit CLO 2015-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	33.000	MMLIC		
.0000							Apex Credit CLO 2015-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	53.000	MMLIC		
.0000							JFIN Revolver CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2015 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2018 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2016 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2019-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	74.000	MMLIC		
.0000			04-1590850				MassMutual Retirement Services, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Copper Hill Road LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	DS	MassMutual Holding LLC	Ownership	1.000	MMLIC		
.0000							MML Investment Advisers, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	CT	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			26-0073611				MassMutual Asset Finance LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	99.600	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	DE	DS	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
.0000			90-1005837				MMAF Equipment Finance LLC 2013-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			36-4785301				MMAF Equipment Finance LLC 2014-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			38-3969560				MMAF Equipment Finance LLC 2015-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			32-0489588				MMAF Equipment Finance LLC 2016-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			35-2590691				MMAF Equipment Finance LLC 2017-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			32-0546197				MMAF Equipment Finance LLC 2017-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			82-5335801				MMAF Equipment Finance LLC 2018-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			83-3722640				MMAF Equipment Finance LLC 2019-A	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2019-B	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							Rozer LLC	DE	DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		

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ANNUAL STATEMENT FOR THE YEAR 2019 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? (Y/N)	*
.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	MML Private Equity Fund Investor LLC	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		Y
.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							Sleeper Street LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Capital Partners LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Holding LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Crane Venture Partners LLP	GBR	DS	MassMutual Holding LLC	Ownership	33.000	MMLIC		
.0000							MassMutual Ventures Management LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures SEA Management Private Limited	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia II LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures UK LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures US I LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US II LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US 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			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				MML ISI Financial Alliances, LLC	DE	DS	MML Investors Services, LLC	Ownership	100.000	MMLIC		
.0000			45-4000072				MM Asset Management Holding LLC	DE	DS	MassMutual Holding 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	Baring Asset Management (Asia) 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			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			98-0457456				Barings Australia Pty Ltd	AUS	DS	Baring Australia Holding Company 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		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000							BCF Senior Funding I Designated Activity Company	.IRL	.DS	Barings Finance 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		
.0000							Barings Asset Management Spain SL	.ESP	.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 Finland Oy	.FIN	.DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Netherlands B.V.	.NLD	.DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Real Estate UK Holdings Limited	.DE	.DS	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							BREAE AIFM LLP	.GBR	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654401				Barings Real Estate Advisers (Continental Europe) Limited	.GBR	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654388				Barings Real Estate Advisers Europe LLP	.GBR	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654412				Barings Real Estate Advisers Europe Finance LLP	.GBR	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-1194368				Barings Real Estate GmbH	.DEU	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR	.DS	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
.0000			98-1012393				Barings Global Advisors Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	.GBR	.DS	Baring Asset Management 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 Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0465031				Baring Asset Management GmbH	.DEU	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0524272				Baring International Fund Managers (Ireland) Limited	.IRL	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Switzerland Sarl	.CHE	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0497550				Baring France SAS	.FRA	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457574				Baring Pension Trustees Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.à. 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.à. r.l.	.LUX	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine GP III Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Holding Partnership GP Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund II Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR	.DS	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Holdings LLC	.DE	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital LLC	.MI	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Corporation	.DE	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA	.DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	NIA	Barings LLC	Influence		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	26.000	MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.000	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	18.300	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Novation Companies, Inc.	MD	NIA	Massachusetts Mutual Life Insurance Company	Ownership	20.700	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.500	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.700	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	CT	NIA	Barings LLC	Influence		MMLIC		
.0000							Tamiami Citrus, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000			46-0687392				US Pharmaceutical Holdings I, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Management		MMLIC		
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.400	MMLIC		
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							EIP Holdings I, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	29.400	MMLIC		
.0000							EIP Holdings I, LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Validus Pharmaceuticals LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	80.100	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							Barings Alternative Investments 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			04-1590850				Barings Global Investment Funds (U.S.) Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Babson Global Loan Feeder Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings ABIF SLP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							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							Barings Global Energy Infrastructure Advisors, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multi Asset Income Fund	HKG	DS	Barings LLC	Management		MMLIC		
.0000							Barings North American Private Loan Fund Management, 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/LAZ Parking Fund GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		

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.0000			98-0536233				Benton Street Advisors, Inc.	CYM	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							BRECS VII GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							CCM Fund I REIT Manager LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							CEMF I GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							CHY Venture GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Cornerstone Hotel Fund GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							CREF X GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							CREF VIII GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Great Lakes III GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Lake Jackson LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Loan Strategies Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Mezzco LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			02-0767001				Mezzco II LLC	DE	DS	Barings LLC	Ownership	98.400	MMLIC		
.0000			41-2280126				Mezzco III LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000			80-0920285				Mezzco IV LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000							Mezzco Australia II LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							RECSA-NY GP LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				SBNP SIA II LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Somerset Special Opportunities Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				SouthPointe Industrial LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				SouthPointe Industrial LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Invesco Ltd.	BMU	DS	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC	Y	
.0000							MassMutual International LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-3313782				MassMutual Solutions LLC	DE	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							HarborTech (Asia) Limited	HKG	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							Yunfeng Financial Group Limited	HKG	DS	MassMutual International LLC	Ownership	24.900	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-2443240				MML Management Corporation	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor II, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor III, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				100 w. 3rd Street LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				2160 Grand Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-2432216				300 South Tryon Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				300 South Tryon LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund I LP	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	41.400	MMLIC		
.0000							Almack Mezzanine Fund I LP	GBR	NIA	C.M. Life Insurance Company	Ownership	4.600	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.900	MMLIC		
.0000							Almack Mezzanine Fund II Unleveraged LP	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.900	MMLIC		
.0000							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.900	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.200	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	C.M. Life Insurance Company	Ownership	3.800	MMLIC		

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.0000							Almack Mezzanine Fund III LP	.GBR	NIA	Barings (U.K.) Limited	Management				
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.800	MMLIC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Barings LLC	Management				
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	13.100	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	.DE	NIA	C.M. Life Insurance Company	Ownership/Influence	1.300	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	.DE	NIA	Barings LLC	Management				
.0000							Barings Emerging Markets Corporate Bond Fund			Massachusetts Mutual Life Insurance Company	Ownership/Influence	95.200	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	.IRL	NIA		Management				
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	Barings LLC	Management				
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	22.800	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	Barings LLC	Management				
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	75.800	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	C.M. Life Insurance Company	Ownership	3.800	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	Barings LLC	Management				
.0000							Barings US High Yield Bond Fund	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	44.700	MMLIC		
.0000							Barings US High Yield Bond Fund	.IRL	NIA	Barings LLC	Management				
.0000							Babson CLO Ltd. 2013-I	.CYM	NIA	Barings LLC	Influence				3
.0000							Babson CLO Ltd. 2014-I	.CYM	NIA	Barings LLC	Influence				2
.0000							Babson CLO Ltd. 2015-I	.CYM	NIA	Barings LLC	Influence				4
.0000							Babson CLO Ltd. 2015-II	.CYM	NIA	Barings LLC	Influence				5
.0000							Babson CLO Ltd. 2016-I	.CYM	NIA	Barings LLC	Influence				
.0000							Babson CLO Ltd. 2016-II	.CYM	NIA	Barings LLC	Influence				
.0000							Barings CLO Ltd. 2017-I	.CYM	NIA	Barings LLC	Influence				
.0000							Barings CLO 2018-III	.CYM	NIA	Barings LLC	Influence				
.0000							Barings CLO 2018-IV	.CYM	NIA	Barings LLC	Influence				
.0000							Barings CLO 2019-I	.CYM	NIA	Barings LLC	Influence				
.0000			98-1473665				Barings CLO 2019-II	.CYM	NIA	Barings LLC	Influence				
.0000							Barings CLO 2019-III	.CYM	NIA	Barings LLC	Influence				
.0000							Babson Euro CLO 2014-I BV	.NLD	NIA	Barings LLC	Influence				
.0000							Babson Euro CLO 2014-II BV	.NLD	NIA	Barings LLC	Influence				
.0000							Babson Euro CLO 2015-I BV	.NLD	NIA	Barings LLC	Influence				
.0000							Babson Euro CLO 2016-I BV	.NLD	NIA	Barings LLC	Influence				
.0000			36-037260H				Babson Euro CLO 2019-I BV	.IRL	NIA	Barings LLC	Influence				
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.300	MMLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Barings LLC	Management				
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	44.800	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	C.M. Life Insurance Company	Ownership	5.000	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Barings LLC	Management				
.0000			82-5330194				Barings Global Em. Markets Equity Fund	.NC	NIA	Barings LLC	Management				

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.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	92.700	MMLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000							Barings Global Inv. Grade Strat Fund	.IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Private Loan Fund	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	12.000	MMLIC		
.0000							Barings Global Private Loan Fund	.LUX	NIA	Barings LLC	Management		MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.100	MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	C.M. Life Insurance Company	Ownership	7.000	MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Special Situations Credit Fund 3	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	21.200	MMLIC		
.0000							Barings Global Special Situations Credit Fund 3	.IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Middle Market CLO 2017-I Ltd & LLC	.CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Middle Market CLO 2018-I	.CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Middle Market CLO 2019-I	.CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	45.700	MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	.DE	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.300	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			26-4142796				Barings International Small Cap Equity Fund	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	9.300	MMLIC		
.0000			26-4142796				Barings International Small Cap Equity Fund	.DE	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	89.900	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	C.M. Life Insurance Company	Ownership	1.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	MassMutual Holding LLC	Ownership/Influence	14.500	MMLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	C.M. Life Insurance Company	Ownership	0.900	MMLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			38-4059932				Benchmark 2018-B2 Mortgage Trust	.NY	NIA	Barings LLC	Influence		MMLIC		
.0000							Benchmark 2018-B4	.NY	NIA	Barings LLC	Influence		MMLIC		
.0000			38-4096530				Benchmark 2018-B8	.NY	NIA	Barings LLC	Influence		MMLIC		
.0000			04-1590850				Braselton Point LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	0.000	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			46-5432619				Cornerstone Real Estate Fund X LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	25.500	MMLIC		
.0000			46-5432619				Cornerstone Real Estate Fund X LP	.DE	NIA	C.M. Life Insurance Company	Ownership	2.800	MMLIC		
.0000			46-5432619				Cornerstone Real Estate Fund X LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			35-2531693				Cornerstone Permanent Mortgage Fund III LLC	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.600	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV LLC	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.100	MMLIC		
.0000			46-5437441				Barings/LAZ Parking Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.300	MMLIC		
.0000			46-5437441				Barings/LAZ Parking Fund LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	35.300	MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000 .0000			90-0991195 90-0991195		0001597511 000159751		Gateway Mezzanine Partners II LP Gateway Mezzanine Partners II LP	DE DE	NIA NIA	C.M. Life Insurance Company Barings LLC Massachusetts Mutual Life Insurance Company	Ownership Management	5.200	MMLIC MMLIC		
.0000 .0000			37-1708623 37-1708623				Great Lakes III, L.P. Great Lakes III, L.P.	DE DE	NIA NIA	Company Barings LLC	Ownership/Influence Management	41.200	MMLIC MMLIC		
.0000 .0000			38-4041011 38-4032059				JPMCC Commercial Mortgage Securities Trust 2017-JP7 JPMDB Commercial Mortgage Securities Trust 2017-C5	NY NY	NIA NIA	Barings LLC Barings LLC	Influence Influence		MMLIC MMLIC		
.0000 .0000			82-1512591 46-4255307				KKR-MM Vector LP Marco Hotel LLC	DE DE	NIA NIA	Massachusetts Mutual Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership/Influence Ownership	47.200 100.000	MMLIC MMLIC		
.0000 .0000			04-1590850 04-1590850				Miami Douglas One GP LLC Miami Douglas One GP LLC	DE DE	NIA NIA	Company C.M. Life Insurance Company	Ownership Ownership	84.500 5.500	MMLIC MMLIC		
.0000 .0000			45-3623262 81-3000420				HB Naples Golf Owner LLC MM Debt Participations LLC	DE DE	NIA NIA	Company Massachusetts Mutual Life Insurance Company	Ownership Ownership/Influence	100.000 100.000	MMLIC MMLIC		
.0000 .0000			81-3000420 82-4411267				MM Debt Participations LLC RB Apartments LLC	DE DE	NIA NIA	Barings LLC Company	Management Ownership		MMLIC MMLIC		
.0000 .0000			75-2901061 54-2055778				Reston Arboretum LLC Rockall CLO B.V.	DE GBR	NIA NIA	Company Barings LLC	Ownership Influence	100.000	MMLIC MMLIC		
.0000 .0000			20-8856877 20-8856877				Rockville Town Center LLC Somerset Special Opportunities Fund L.P.	VA DE	NIA NIA	Company Massachusetts Mutual Life Insurance Company	Ownership Ownership/Influence	100.000 59.000	MMLIC MMLIC		
.0000 .0000			35-2553915 30-0336246				Somerset Special Opportunities Fund L.P. Ten Fan Pier Boulevard LLC	DE DE	NIA NIA	C.M. Life Insurance Company Company	Ownership Ownership	2.900 100.000	MMLIC MMLIC		
.0000 .0000			30-0336246 30-0336246				Tower Square Capital Partners II, L.P. Tower Square Capital Partners II, L.P.	DE DE	NIA NIA	Massachusetts Mutual Life Insurance Company C.M. Life Insurance Company	Ownership/Influence Ownership	22.400 3.900	MMLIC MMLIC		
.0000 .0000			32-0160190 41-2280127				Tower Square Capital Partners II-A, L.P. Tower Square Capital Partners III, L.P.	DE DE	NIA NIA	Company Barings LLC	Ownership/Influence Management	85.000	MMLIC MMLIC		
.0000 .0000			41-2280127 41-2280129				Tower Square Capital Partners III, L.P. Tower Square Capital Partners IIIA, L.P.	DE DE	NIA NIA	MassMutual Holding LLC Company	Ownership/Influence Ownership/Influence	14.700 93.900	MMLIC MMLIC		
.0000 .0000			41-2280129 41-2280129				Tower Square Capital Partners IIIA, L.P. Tower Square Capital Partners IIIA, L.P.	DE DE	NIA NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Management Ownership/Influence		MMLIC MMLIC		
.0000 .0000			80-0920367 04-1590850				Tower Square Capital Partners IV-A, L.P. Trailside MM Member LLC	DE DE	NIA NIA	Company Massachusetts Mutual Life Insurance Company	Ownership/Influence Ownership	21.300 59.600	MMLIC MMLIC		
.0000 .0000			04-1590850 04-1590850				Trailside MM Member LLC Trailside MM Member LLC	DE DE	NIA NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership Ownership	7.400	MMLIC MMLIC		
.0000 .0000			83-1325764 83-1325764				Washington Gateway Two LLC Washington Gateway Two LLC	DE DE	NIA NIA	Company C.M. Life Insurance Company	Ownership Ownership	88.300 6.700	MMLIC MMLIC		
.0000 .0000			32-0574045 32-0574045				Washington Gateway Three LLC Washington Gateway Three LLC	DE DE	NIA NIA	Massachusetts Mutual Life Insurance Company C.M. Life Insurance Company	Ownership Ownership	83.600 11.400	MMLIC MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000			04-1590850				West 46th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Emerging Markets Debt Short Duration Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson Capital Loan Strategies Master Fund LP	CYM	NIA	Barings LLC	Management		MMLIC		
.0000			47-3790192				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3734770				Barings Total Return Bond Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3801860				Barings U.S. High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000							CCIC Fund	CHN	NIA	Barings LLC	Influence		MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	11.200	MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	C.M. Life Insurance Company	Ownership	1.000	MMLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.000	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.100	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.800	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.000	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.000	MMLIC		
.0000			81-4382111				Budapester Strasse LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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	84.100	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	87.200	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	99.400	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Barings LLC	Management		MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-0890084				CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	90.000	MMLIC		
.0000			82-1563809				CCB Montford Park LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	75.200	MMLIC		
.0000			82-1563809				CCB Montford Park LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			82-2783393				Danville Riverwalk Venture, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	60.000	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.000	MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Island Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	51.000	MMLIC		
.0000			83-0881588				NoHo West Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				PACO France Logistics 2 LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-3393166				Portland 400 Sixth Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.000	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	84.200	MMLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	C.M. Life Insurance Company	Ownership	15.800	MMLIC		
.0000			04-1590850				Spain Avalon Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.100	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	65.000	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	35.000	MMLIC		
.0000			82-3250684				Unna, Dortmund Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	91.500	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC		
.0000			47-1993493				Waterloo London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-5481477				Ygnatio Valley Funding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			45-3168892				MassMutual Barings Dynamic Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			51-0529328		0000927972	00	MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.300	MMLIC		
.0000			26-3229251		0000927972	00	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	2.100	MMLIC		
.0000			04-3277550		0000927972	00	MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			14-1980900		0000916053	00	MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			01-0821120		0000916053	00	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.800	MMLIC		
.0000			04-3512593		0000916053	00	MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3513019		0000916053	00	MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			42-1710935		0000916053	00	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	17.900	MMLIC		
.0000			02-0769954		0000916053	00	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3584140		0000916053	00	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	11.100	MMLIC		

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.0000			82-3347422		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2005 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	6.500	MMLIC		
.0000			82-3355639		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2010 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3382389		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3396442		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2020 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3417420		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2025 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3430358		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2030 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3439837		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2035 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3451779		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2040 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3472295		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2045 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3481715		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2050 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3502011		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3525148		0000916053	QO	MassMutual Select T. Rowe Price Retirement 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3533944		0000916053	QO	MassMutual Select T. Rowe Price Retirement Balanced Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			46-4257056				MML Series International Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3517233				MML Series II Asset Momentum Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-3529636				MML Series II Dynamic Bond Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3544629				MML Series II Equity Rotation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.800	MMLIC		
.0000			47-3559064				MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.000	MMLIC		
.0000			27-1933828		0000916053	QO	MassMutual RetireSMART 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			27-1933389		0000916053	QO	MassMutual RetireSMART 2035 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.600	MMLIC		
.0000			27-1932769		0000916053	QO	MassMutual RetireSMART 2045 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	10.600	MMLIC		
.0000			46-3289207		0000916053	QO	MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	30.800	MMLIC		
.0000			47-5326235		0000916053	QO	MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	69.100	MMLIC		
.0000			45-1618155		0000916053	QO	MassMutual RetireSMART Conservative Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618222		0000916053	QO	MassMutual RetireSMART Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			03-0532464		0000916053	QO	MassMutual RetireSMART In Retirement Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.000	MMLIC		
.0000			45-1618262		0000916053	QO	MassMutual RetireSMART Moderate Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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..0000			45-1618046		0000916053	00	MassMutual RetireSMART Moderate Growth Fund	..MANIA	Massachusetts Mutual Life Insurance Company	Ownership	..0.000	MMLIC		

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 11.07% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own .6% and includes only Great Lakes III, L.P.
3	Debt investors own 9.6% and includes only Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own .5% and includes only Great Lakes III, L.P.
5	Debt investors own .2% and includes only Great Lakes III, L.P.

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PART 2 - SUMMARY OF INSURER'S TRANSACTIONS WITH ANY AFFILIATES

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NAIC Company Code	ID Number	Names of Insurers and Parent, Subsidiaries or Affiliates	Shareholder Dividends	Capital Contributions	Purchases, Sales or Exchanges of Loans, Securities, Real Estate, Mortgage Loans or Other Investments	Income/ (Disbursements) Incurred in Connection with Guarantees or Undertakings for the Benefit of any Affiliate(s)	Management Agreements and Service Contracts	Income/ (Disbursements) Incurred Under Reinsurance Agreements	*	Any Other Material Activity Not in the Ordinary Course of the Insurer's Business	Totals	Reinsurance Recoverable/ (Payable) on Losses and/or Reserve Credit Taken/(Liability)
65935	04-1590850	Massachusetts Mutual Life Insurance Company (MMLIC)	726,936,994	(365,494,103)	323,691,395						685,134,286	(23,896,477)
93432	06-1041383	C.M. Life Insurance Company	30,000,000	8,115,287							38,115,287	23,177,917
70416	43-0581430	MML Bay State Life Insurance Company	(30,000,000)								(30,000,000)	718,560
		NYC Deals Lease Finance Trust		134,891,647							134,891,647	
		GIA EU Holdings LLC		93,706,925							93,706,925	
		2160 Grand Manager LLC		62,720,000							62,720,000	
		Barings Affordable Housing Mortgage Fund I LLC		36,607,639							36,607,639	
		Washington Gateway Two LLC		35,685,223							35,685,223	
	95-4207717	Cornerstone California Mortgage Fund II LLC		32,489,210							32,489,210	
	82-3867745	Barings Global Special Situations Credit 3		19,761,888							19,761,888	
		Washington Gateway Three LLC		19,367,979							19,367,979	
	81-5360103	Landmark Manchester Holdings LLC		18,532,663							18,532,663	
	61-1793735	Cornerstone Permanent Mortgage Fund IV		16,534,980							16,534,980	
	83-0881588	NoHo West Venture LLC		14,962,383							14,962,383	
		Trailside MM Member LLC		13,943,938							13,943,938	
	90-0991195	Gateway Mezzanine Partners II LP		13,403,711							13,403,711	
	36-4868350	Barings Asset-Based Income Fund (US) LP		11,542,277							11,542,277	
		Miami Douglas One GP LLC		10,686,801							10,686,801	
	45-2632610	Cornerstone Permanent Mortgage Fund		10,162,321							10,162,321	
	61-1750537	Cornerstone Permanent Mortgage Fund II		10,124,481							10,124,481	
	82-3307907	Cornbrook PRS Holdings LLC		8,898,697							8,898,697	
		EM Opportunities LLC		7,692,011							7,692,011	
	82-2783393	Danville Riverwalk Venture, LLC		6,792,165							6,792,165	
	38-4010344	Barings North American Private Loan Fund LP		5,190,187							5,190,187	
	36-4823011	50 Liberty LLC		4,955,570							4,955,570	
	04-1590850	MM Copper Hill Road LLC		4,521,308							4,521,308	
	35-2531693	Cornerstone Permanent Mortgage Fund III		4,360,521							4,360,521	
	98-1332384	Barings Real Estate Credit Strategies VII LP		4,310,737							4,310,737	
	04-1590850	MM Island Member LLC		2,401,000							2,401,000	
	82-3393166	Portland 400 Sixth Manager LLC		2,327,500							2,327,500	
	82-3867745	Barings Global Real Assets Fund LP		2,060,212							2,060,212	
		EIP Holdings I LLC		1,303,448							1,303,448	
	82-1563809	CCB Montford Park LLC		796,800							796,800	
	82-3281588	Via Ceresio Milan LLC		699,488							699,488	
		Tamiami Citrus, LLC		627,760							627,760	
	80-0948028	One Harbor Shore LLC		610,850							610,850	
	04-1590850	Berkshire Way LLC		500,000							500,000	
	20-3347091	Fan Pier Development LLC		221,000							221,000	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 2 - SUMMARY OF INSURER'S TRANSACTIONS WITH ANY AFFILIATES

1	2	3	4	5	6	7	8	9	10	11	12	13
NAIC Company Code	ID Number	Names of Insurers and Parent, Subsidiaries or Affiliates	Shareholder Dividends	Capital Contributions	Purchases, Sales or Exchanges of Loans, Securities, Real Estate, Mortgage Loans or Other Investments	Income/ (Disbursements) Incurred in Connection with Guarantees or Undertakings for the Benefit of any Affiliate(s)	Management Agreements and Service Contracts	Income/ (Disbursements) Incurred Under Reinsurance Agreements	*	Any Other Material Activity Not in the Ordinary Course of the Insurer's Business	Totals	Reinsurance Recoverable/ (Payable) on Losses and/or Reserve Credit Taken/(Liability)
	56-2630592	Cornerstone Fort Pierce Development LLC		184,311							184,311	
		Braemar Energy Ventures I, L.P.		65,079							65,079	
	81-4382111	Budapester Strasse LLC		17,846							17,846	
	04-3313782	MassMutual International LLC		6,298							6,298	
	27-1933828	MassMutual RetireSMART 2015 Fund	(54)								(54)	
		PACO France Logistics 3 LLC		(63)							(63)	
	04-3584140	MassMutual Select Small Company Value Fund	(185)								(185)	
	47-3055009	Milestone Acquisition Holding, LLC.		(1,183)							(1,183)	
	01-0821120	MassMutual Select Diversified Value Fund	(1,780)								(1,780)	
	42-1710935	MassMutual Select Mid-Cap Value Fund	(5,746)								(5,746)	
		Barings US Loan Fund Series		(7,242)							(7,242)	
	71-1018134	Great Lakes II LLC		(34,469)							(34,469)	
	81-3000420	MM Debt Participations LLC		(200,000)							(200,000)	
	30-0336246	Tower Square Capital Partners II, L.P.		(265,775)							(265,775)	
	20-8856877	Somerset Special Opportunities Fund L.P.		(303,663)							(303,663)	
	81-4258759	CRA Aircraft Holding LLC		(340,000)							(340,000)	
	20-4819358	Johnston Groves LLC		(364,452)							(364,452)	
	47-5322979	Timberland Forest Holding LLC		(370,000)							(370,000)	
		Barings European Core Property Fund SCSp		(420,277)							(420,277)	
		Aland Royalty Holdings LP		(522,325)							(522,325)	
	35-2484550	Twenty Two Liberty LLC		(650,000)							(650,000)	
	80-0691253	Gateway Mezzanine Partners I, L.P.		(748,743)							(748,743)	
	46-2344300	Intermodal Holdings II LLC		(751,500)							(751,500)	
	95-4207717	Cornerstone California Mortgage Fund I LLC		(857,636)							(857,636)	
		Chassis Acquisition Holding LLC		(900,000)							(900,000)	
	32-0160190	Tower Square Capital Partners II-A, L.P.		(1,008,043)							(1,008,043)	
	46-3122029	WeHo Domain LLC		(1,116,271)							(1,116,271)	
		PACO France Logistics 2 LLC		(1,272,614)							(1,272,614)	
		CML Special Situations Investor LLC		(1,319,037)							(1,319,037)	
	47-1993493	Waterloo London Holdings LLC		(1,668,880)							(1,668,880)	
	27-2977720	Sawgrass Village Shopping Center LLC		(2,020,625)							(2,020,625)	
	06-1563535	The MassMutual Trust Company, FSB	(2,500,000)								(2,500,000)	
	26-1611591	Fallon Cornerstone One MPD LLC		(2,608,029)							(2,608,029)	
	98-1332384	Barings Global Energy Infrastructure Fund I LP		(2,977,155)							(2,977,155)	
	36-4770946	Cornerstone High Yield Venture LP		(4,400,000)							(4,400,000)	
		PACO France Logistics LLC		(4,746,661)							(4,746,661)	
	81-0890084	CREA Madison Member LLC		(4,950,000)							(4,950,000)	
	37-1708623	Great Lakes III, L.P.		(5,095,649)							(5,095,649)	
	04-1590850	MML Mezzanine Investor II, LLC		(6,333,163)							(6,333,163)	
	46-3880526	Farringdon London Holdings LLC		(7,647,010)							(7,647,010)	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 2 - SUMMARY OF INSURER'S TRANSACTIONS WITH ANY AFFILIATES

1	2	3	4	5	6	7	8	9	10	11	12	13
NAIC Company Code	ID Number	Names of Insurers and Parent, Subsidiaries or Affiliates	Shareholder Dividends	Capital Contributions	Purchases, Sales or Exchanges of Loans, Securities, Real Estate, Mortgage Loans or Other Investments	Income/ (Disbursements) Incurred in Connection with Guarantees or Undertakings for the Benefit of any Affiliate(s)	Management Agreements and Service Contracts	Income/ (Disbursements) Incurred Under Reinsurance Agreements	*	Any Other Material Activity Not in the Ordinary Course of the Insurer's Business	Totals	Reinsurance Recoverable/ (Payable) on Losses and/or Reserve Credit Taken/(Liability)
	37-1506417	Babson Capital Loan Strategies Fund, L.P.		(7,787,936)							(7,787,936)	
	81-4065378	Remington L & W Holdings LLC		(7,953,475)							(7,953,475)	
	82-1512591	KKR MM Project Vector LP		(8,543,289)							(8,543,289)	
	81-0841854	Barings CLO Investment Partners LP		(8,694,732)							(8,694,732)	
	45-4606547	UK LIW Manager LLC		(9,861,756)							(9,861,756)	
	04-1590850	Wood Creek Venture Fund LLC		(12,094,778)							(12,094,778)	
		Barings Real Estate European Value Add I SCSp		(12,889,698)							(12,889,698)	
	46-5432619	Cornerstone Real Estate Fund X LP		(13,689,195)							(13,689,195)	
	95-4207717	Cornerstone California Mortgage Fund III LLC		(13,796,792)							(13,796,792)	
	04-1590850	MML Mezzanine Investor III, LLC		(15,084,607)							(15,084,607)	
	04-1590850	MML Private Equity Fund Investor LLC		(15,353,500)							(15,353,500)	
		Babson Global Private Loan Fund		(19,429,960)							(19,429,960)	
	82-2285211	Calgary Railway Holding LLC		(19,891,522)							(19,891,522)	
	46-5437441	Barings/LAZ Parking Fund LP		(20,447,473)							(20,447,473)	
		MML Special Situations Investor LLC		(20,664,906)							(20,664,906)	
	82-3250684	Unna, Dortmund Holding LLC		(28,036,688)							(28,036,688)	
	41-2280129	Tower Square Capital Partners IIIA, L.P.		(30,557,751)							(30,557,751)	
	45-5401109	Washington Gateway Apartments Venture LLC		(39,333,609)							(39,333,609)	
	27-0105644	Jefferies Finance LLC		(75,000,000)							(75,000,000)	
	26-0073611	MassMutual Asset Finance LLC			(108,496,395)						(108,496,395)	
	04-3356880	MML Investment Advisers, LLC	(74,429,230)	(74,429,230)							(148,858,459)	
	04-1590850	Insurance Road LLC	(150,000,000)	(39,119,187)							(189,119,187)	
	04-2854319	MassMutual Holding LLC	(500,000,000)	290,272,507							(209,727,493)	
	80-0875475	Barings Finance LLC			(215,195,000)						(215,195,000)	
9999999	Control Totals								XXX			

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

The following supplemental reports are required to be filed as part of your statement filing unless specifically waived by the domiciliary state. However, in the event that your domiciliary state waives the filing requirement, your response of WAIVED 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.

	Responses
MARCH FILING	
1. Will the Supplemental Compensation Exhibit be filed with the state of domicile by March 1?	YES
2. Will the confidential Risk-based Capital Report be filed with the NAIC by March 1?	YES
3. Will the confidential Risk-based Capital Report be filed with the state of domicile, if required, by March 1?	YES
4. Will an actuarial opinion be filed by March 1?	YES
APRIL FILING	
5. Will Management's Discussion and Analysis be filed by April 1?	YES
6. Will the Life, Health & Annuity Guaranty Association Model Act Assessment Base Reconciliation Exhibit be filed with the state of domicile and the NAIC by April 1? (Not applicable to fraternal benefit societies)	YES
7. Will the Adjustments to the Life, Health & Annuity Guaranty Association Model Act Assessment Base Reconciliation Exhibit (if required) be filed with the state of domicile and the NAIC by April 1? (Not applicable to fraternal benefit societies)	YES
8. Will the Supplemental Investment Risks Interrogatories be filed by April 1?	YES
JUNE FILING	
9. Will an audited financial report be filed by June 1?	YES
10. Will Accountant's Letter of Qualifications be filed with the state of domicile and electronically with the NAIC by June 1?	YES
AUGUST FILING	
11. 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?	YES

The following supplemental reports are required to be filed as part of your annual statement filing **if your company is engaged in the type of business covered by the supplement. 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.

MARCH FILING	
12. Will Schedule SIS (Stockholder Information Supplement) be filed with the state of domicile by March 1? (Not applicable to fraternal benefit societies) ...	NO
13. Will the Medicare Supplement Insurance Experience Exhibit be filed with the state of domicile and the NAIC by March 1?	YES
14. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC by March 1?	NO
15. Will the actuarial opinion on participating and non-participating policies as required in Interrogatories 1 and 2 to Exhibit 5 be filed with the state of domicile and electronically with the NAIC by March 1?	YES
16. Will the actuarial opinion on non-guaranteed elements as required in interrogatory #3 to Exhibit 5 be filed with the state of domicile and electronically with the NAIC by March 1?	YES
17. Will the actuarial opinion on X-Factors be filed with the state of domicile and electronically with the NAIC by March 1?	YES
18. Will the actuarial opinion on Separate Accounts Funding Guaranteed Minimum Benefit be filed with the state of domicile and electronically with the NAIC by March 1?	NO
19. Will the actuarial opinion on Synthetic Guaranteed Investment Contracts be filed with the state of domicile and electronically with the NAIC by March 1?	NO
20. Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC by March 1?	NO
21. 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 by March 1?	NO
22. 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 by March 1?	NO
23. 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 by March 1?	NO
24. 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 by March 1?	NO
25. Will the C-3 RBC Certifications required under C-3 Phase I be filed with the state of domicile and electronically with the NAIC by March 1?	YES
26. Will the C-3 RBC Certifications required under C-3 Phase II be filed with the state of domicile and electronically with the NAIC by March 1?	YES

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

- 27. Will the Actuarial Certifications Related to Annuity Nonforfeiture Ongoing Compliance for Equity Indexed Annuities be filed with the state of domicile and electronically with the NAIC by March 1? NO
- 28. Will the actuarial opinion required by the Modified Guaranteed Annuity Model Regulation be filed with the state of domicile and electronically with the NAIC by March 1? NO
- 29. Will the Actuarial Certifications Related to Hedging required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1? YES
- 30. Will the Financial Officer Certification Related to Clearly Defined Hedging Strategy required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1? YES
- 31. Will the Management Certification That the Valuation Reflects Management's Intent required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1? YES
- 32. Will the Actuarial Certification Related to the Reserves required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1? YES
- 33. Will the Actuarial Certification regarding the use of 2001 Preferred Class Tables required by the Model Regulation Permitting the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserve Liabilities be filed with the state of domicile and electronically with the NAIC by March 1? YES
- 34. Will the Worker's Compensation Carve-Out Supplement be filed by March 1? (Not applicable to fraternal benefit societies) NO
- 35. Will Supplemental Schedule O be filed with the state of domicile and the NAIC by March 1? YES
- 36. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC by March 1? NO
- 37. Will an approval from the reporting entity's state of domicile for relief related to the five-year rotation requirement for lead audit partner be filed electronically with the NAIC by March 1? NO
- 38. Will an approval from the reporting entity's state of domicile for relief related to the one-year cooling off period for independent CPA be filed electronically with the NAIC by March 1? NO
- 39. Will an approval from the reporting entity's state of domicile for relief related to the Requirements for Audit Committees be filed electronically with the NAIC by March 1? NO
- 40. Will the VM-20 Reserves Supplement be filed with the state of domicile and the NAIC by March 1? YES

APRIL FILING

- 41. Will the confidential Regulatory Asset Adequacy Issues Summary (RAAIS) required by the Valuation Manual be filed with the state of domicile by April 1? YES
- 42. Will the Long-Term Care Experience Reporting Forms be filed with the state of domicile and the NAIC by April 1? YES
- 43. Will the Credit Insurance Experience Exhibit be filed with the state of domicile and the NAIC by April 1? (Not applicable to fraternal benefit societies) ... NO
- 44. Will the Accident and Health Policy Experience Exhibit be filed by April 1? YES
- 45. Will the Supplemental Health Care Exhibit (Parts 1, 2 and 3) be filed with the state of domicile and the NAIC by April 1? NO
- 46. Will the regulator only (non-public) Supplemental Health Care Exhibit's Expense Allocation Report be filed with the state of domicile and the NAIC by April 1? NO
- 47. Will the confidential Actuarial Memorandum required by Actuarial Guideline XXXVIII 8D be filed with the state of domicile by April 30? NO
- 48. Will the Supplemental Term and Universal Life Insurance Reinsurance Exhibit be filed with the state of domicile and the NAIC by April 1? YES
- 49. Will the Variable Annuities Supplement be filed with the state of domicile and the NAIC by April 1? YES

AUGUST FILING

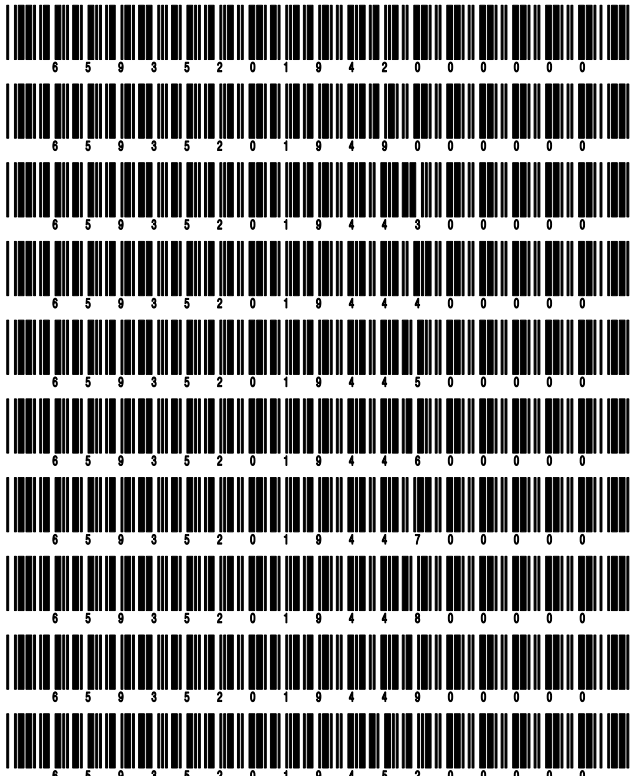
- 50. Will Management's Report of Internal Control Over Financial Reporting be filed with the state of domicile by August 1? YES

Explanations:

- 12. As a mutual company this not required
- 14. Not required
- 18. Not required
- 19. Not required
- 20. Not required
- 21. Not required
- 22. Not required
- 23. Not required
- 24. Not required
- 27. Not required
- 28. Not required
- 34. This line of business is not written by the company.
- 36. This line of business is not written by the company.
- 37. Not required
- 38. Not required
- 39. Not required
- 43. This line of business is not written by the company.
- 45. Not required
- 46. No expense were allocated to these lines of business.
- 47. Not required.

Bar Codes:

- 12. SIS Stockholder Information Supplement [Document Identifier 420]
- 14. Trusteed Surplus Statement [Document Identifier 490]
- 18. Actuarial Opinion on Separate Accounts Funding Guaranteed Minimum Benefit [Document Identifier 443]
- 19. Actuarial Opinion on Synthetic Guaranteed Investment Contracts [Document Identifier 444]
- 20. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
- 21. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]
- 22. Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
- 23. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
- 24. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]
- 27. Actuarial Certifications Related to Annuity Nonforfeiture Ongoing Compliance for Equity Indexed Annuities [Document Identifier 452]



SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

28. Modified Guaranteed Annuity Model Regulation [Document Identifier 453]



34. Workers' Compensation Carve-Out Supplement [Document Identifier 495]



36. Medicare Part D Coverage Supplement [Document Identifier 365]



37. Relief from the five-year rotation requirement for lead audit partner [Document Identifier 224]



38. Relief from the one-year cooling off period for independent CPA [Document Identifier 225]



39. Relief from the Requirements for Audit Committees [Document Identifier 226]



43. Credit Insurance Experience Exhibit [Document Identifier 230]



45. Supplemental Health Care Exhibit (Parts 1, 2 and 3) [Document Identifier 216]



46. Supplemental Health Care Exhibit's Expense Allocation Report [Document Identifier 217]



47. Actuarial Memorandum Required by Actuarial Guideline XXXVIII 8D [Document Identifier 435]



OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Assets Line 25

	Current Year			Prior Year
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	4 Net Admitted Assets
2504. Investment in trust	27,672,460		27,672,460	26,641,910
2505. Pension plan asset	642,321,439	642,321,439		
2506. Cash advances to agents	238,573,733	238,573,733		
2507. Intangible assets	78,381,391	78,381,391		
2508. Commissions and expenses on long-term lease	70,517,403	70,517,403		
2509. Bills receivable	347,725	347,725		
2597. Summary of remaining write-ins for Line 25 from overflow page	1,057,814,151	1,030,141,691	27,672,460	26,641,910

Additional Write-ins for Liabilities Line 25

	1 Current Year	2 Prior Year
2504. Funds awaiting escheat and other miscellaneous liabilities	89,764,821	78,826,501
2505. Deferred income liability	14,159,691	15,151,127
2597. Summary of remaining write-ins for Line 25 from overflow page	103,924,512	93,977,628

Additional Write-ins for Summary of Operations Line 8.3

	1 Current Year	2 Prior Year
08.304. Revenue sharing	70,699,722	118,220,703
08.305. Miscellaneous	43,132,268	15,704,499
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	113,831,990	133,925,202

Additional Write-ins for Summary of Operations Line 27

	1 Current Year	2 Prior Year
2704. Ceded income on funds withheld	204,914,037	200,347,847
2705. Change in liability for employee/agent benefit plans	78,261,701	(8,510,950)
2706. Miscellaneous charges to operations	40,063,004	15,536,263
2797. Summary of remaining write-ins for Line 27 from overflow page	323,238,742	207,373,160

Additional Write-ins for Summary of Operations Line 53

	1 Current Year	2 Prior Year
5304. Miscellaneous	6,298	
5397. Summary of remaining write-ins for Line 53 from overflow page	6,298	

Additional Write-ins for Exhibit of Nonadmitted Assets Line 25

	1 Current Year Total Nonadmitted Assets	2 Prior Year Total Nonadmitted Assets	3 Change in Total Nonadmitted Assets (Col. 2 - Col. 1)
2504. Fully refundable deposits, prepayments and miscellaneous assets	80,304,461	237,903,620	157,599,159
2505. Intangible assets	78,381,391	91,769,205	13,387,814
2506. Commissions and expenses on long-term lease	70,517,403	50,722,875	(19,794,528)
2507. Bills receivable	347,725	438,399	90,674
2508. Employee insurance plan advances	13,617	14,113	496
2597. Summary of remaining write-ins for Line 25 from overflow page	229,564,597	380,848,212	151,283,615

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company
OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Analysis of Operations - Summary Line 8.3

	1	2	3	4	5	6	7	8	9
	Total	Individual Life	Group Life	Individual Annuities	Group Annuities	Accident and Health	Fraternal	Other Lines of Business	YRT Mortality Risk Only
08.304. Revenue sharing	70,699,722	1,658,434	174,816	20,326,743	48,539,729				
08.305. Miscellaneous	43,132,268	6,159,354	292,109	(462,726)	36,684,785	458,746			
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	113,831,990	7,817,788	466,925	19,864,017	85,224,514	458,746			

Additional Write-ins for Analysis of Operations - Summary Line 27

	1	2	3	4	5	6	7	8	9
	Total	Individual Life	Group Life	Individual Annuities	Group Annuities	Accident and Health	Fraternal	Other Lines of Business	YRT Mortality Risk Only
2704. Ceded income on funds withheld	204,914,037	204,914,037							
2705. Change in liability for employee/agent benefit plans	78,261,701	78,261,771		(70)					
2706. Miscellaneous charges to operations	40,063,004	16,750,239	2,267,733	2,962,352	16,912,269	1,170,411			
2797. Summary of remaining write-ins for Line 27 from overflow page	323,238,742	299,926,047	2,267,733	2,962,282	16,912,269	1,170,411			

Additional Write-ins for Analysis of Operations - Individual Life Insurance Line 8.3

	1	2	3	4	5	6	7	8	9	10	11	12
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life With Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life (c)	Other Individual Life	YRT Mortality Risk Only
08.304. Management and administrative fees	4,422,728		4,521,308				58,805		(157,385)			
08.305. Revenue sharing	1,658,434								1,658,434			
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	6,081,162		4,521,308				58,805		1,501,049			

Additional Write-ins for Analysis of Operations - Individual Life Insurance Line 27

	1	2	3	4	5	6	7	8	9	10	11	12
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life With Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life (c)	Other Individual Life	YRT Mortality Risk Only
2704. Reinsurance ceded adjustment	(13,812,078)			(7,336,685)			(5,218,316)		(1,257,077)			
2797. Summary of remaining write-ins for Line 27 from overflow page	(13,812,078)			(7,336,685)			(5,218,316)		(1,257,077)			

Additional Write-ins for Analysis of Operations - Group Life Insurance Line 8.3

	1	2	3	4	5	6	7	8	9
	Total	Whole Life	Term Life	Universal Life	Variable Life	Variable Universal Life	Credit Life (d)	Other Group Life (a)	YRT Mortality Risk Only
08.304. Revenue sharing	174,816					174,816			
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	174,816					174,816			

Additional Write-ins for Analysis of Operations - Individual Annuities Line 8.3

	1	Deferred			6	7	
		2	3	4			5
	Total	Fixed Annuities	Indexed Annuities	Variable Annuities with Guarantees	Variable Annuities Without Guarantees	Life Contingent Payout (Immediate and Annuityizations)	Other Annuities
08.304. Miscellaneous	(462,726)	278,344		(986,739)	(53,606)	299,275	
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	(462,726)	278,344		(986,739)	(53,606)	299,275	

OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Analysis of Operations - Group Annuities Line 8.3

	1 Total	Deferred				6 Life Contingent Payout (Immediate and Annuitizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities with Guarantees	5 Variable Annuities Without Guarantees		
08.304. Change in corporate owned life insurance	9,595,285					9,595,285	
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	9,595,285					9,595,285	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SUMMARY INVESTMENT SCHEDULE

Investment Categories	Gross Investment Holdings		Admitted Assets as Reported in the Annual Statement			
	1 Amount	2 Percentage of Column 1 Line 13	3 Amount	4 Securities Lending Reinvested Collateral Amount	5 Total (Col. 3 + 4) Amount	6 Percentage of Column 5 Line 13
1. Long-Term Bonds (Schedule D, Part 1):						
1.01 U.S. governments	4,361,714,999	2.292	4,361,714,999		4,361,714,999	2.292
1.02 All other governments	1,588,826,548	0.835	1,588,826,548		1,588,826,548	0.835
1.03 U.S. states, territories and possessions, etc. guaranteed	547,324,996	0.288	547,324,996		547,324,996	0.288
1.04 U.S. political subdivisions of states, territories, and possessions, guaranteed	516,803,981	0.272	516,803,981		516,803,981	0.272
1.05 U.S. special revenue and special assessment obligations, etc. non-guaranteed	5,806,853,598	3.051	5,806,853,598		5,806,853,598	3.052
1.06 Industrial and miscellaneous	74,613,886,797	39.202	74,613,886,797		74,613,886,797	39.214
1.07 Hybrid securities	295,371,318	0.155	295,371,318		295,371,318	0.155
1.08 Parent, subsidiaries and affiliates	6,499,768,623	3.415	6,499,768,623		6,499,768,623	3.416
1.09 SVO identified funds	10,059,967	0.005	10,059,967		10,059,967	0.005
1.10 Unaffiliated Bank loans	7,666,020,062	4.028	7,666,020,062		7,666,020,062	4.029
1.11 Total long-term bonds	101,906,630,889	53.541	101,906,630,889		101,906,630,889	53.558
2. Preferred stocks (Schedule D, Part 2, Section 1):						
2.01 Industrial and miscellaneous (Unaffiliated)	748,884,136	0.393	748,884,136		748,884,136	0.394
2.02 Parent, subsidiaries and affiliates		0.000				0.000
2.03 Total preferred stocks	748,884,136	0.393	748,884,136		748,884,136	0.394
3. Common stocks (Schedule D, Part 2, Section 2):						
3.01 Industrial and miscellaneous Publicly traded (Unaffiliated)	265,120,114	0.139	265,120,114		265,120,114	0.139
3.02 Industrial and miscellaneous Other (Unaffiliated)	270,125,007	0.142	270,125,007		270,125,007	0.142
3.03 Parent, subsidiaries and affiliates Publicly traded		0.000				0.000
3.04 Parent, subsidiaries and affiliates Other	16,713,885,643	8.781	16,713,696,596		16,713,696,596	8.784
3.05 Mutual funds	859,870,200	0.452	859,870,200		859,870,200	0.452
3.06 Unit investment trusts		0.000				0.000
3.07 Closed-end funds	46,812,068	0.025	46,812,068		46,812,068	0.025
3.08 Total common stocks	18,155,813,032	9.539	18,155,623,985		18,155,623,985	9.542
4. Mortgage loans (Schedule B):						
4.01 Farm mortgages		0.000				0.000
4.02 Residential mortgages	3,310,547,119	1.739	3,310,547,119		3,310,547,119	1.740
4.03 Commercial mortgages	24,162,347,747	12.695	24,162,347,747		24,162,347,747	12.699
4.04 Mezzanine real estate loans		0.000				0.000
4.05 Total mortgage loans	27,472,894,866	14.434	27,472,894,866		27,472,894,866	14.439
5. Real estate (Schedule A):						
5.01 Properties occupied by company	209,287,678	0.110	209,287,678		209,287,678	0.110
5.02 Properties held for production of income	148,924,938	0.078	148,924,938		148,924,938	0.078
5.03 Properties held for sale		0.000				0.000
5.04 Total real estate	358,212,616	0.188	358,212,616		358,212,616	0.188
6. Cash, cash equivalents and short-term investments:						
6.01 Cash (Schedule E, Part 1)	205,877,895	0.108	205,877,895		205,877,895	0.108
6.02 Cash equivalents (Schedule E, Part 2)	2,428,048,838	1.276	2,428,048,838		2,428,048,838	1.276
6.03 Short-term investments (Schedule DA)	1,159,172,265	0.609	1,159,172,265		1,159,172,265	0.609
6.04 Total cash, cash equivalents and short-term investments	3,793,098,998	1.993	3,793,098,998		3,793,098,998	1.994
7. Contract loans	14,725,436,175	7.737	14,724,907,074		14,724,907,074	7.739
8. Derivatives (Schedule DB)	12,063,706,294	6.338	12,063,706,294		12,063,706,294	6.340
9. Other invested assets (Schedule BA)	9,072,179,122	4.766	9,011,826,432		9,011,826,432	4.736
10. Receivables for securities	2,037,001,924	1.070	2,037,001,924		2,037,001,924	1.071
11. Securities Lending (Schedule DL, Part 1)		0.000		XXX	XXX	XXX
12. Other invested assets (Page 2, Line 11)		0.000				0.000
13. Total invested assets	190,333,858,052	100.000	190,272,787,214		190,272,787,214	100.000

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE A - VERIFICATION BETWEEN YEARS

Real Estate

1.	Book/adjusted carrying value, December 31 of prior year		488,306,553
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition (Part 2, Column 6)	78,792,713	
	2.2 Additional investment made after acquisition (Part 2, Column 9)	99,590,730	178,383,443
3.	Current year change in encumbrances:		
	3.1 Totals, Part 1, Column 13	(59,341,976)	
	3.2 Totals, Part 3, Column 11	605,766	(58,736,210)
4.	Total gain (loss) on disposals, Part 3, Column 18		74,240,741
5.	Deduct amounts received on disposals, Part 3, Column 15		191,891,888
6.	Total foreign exchange change in book/adjusted carrying value:		
	6.1 Totals, Part 1, Column 15		
	6.2 Totals, Part 3, Column 13		
7.	Deduct current year's other than temporary impairment recognized:		
	7.1 Totals, Part 1, Column 12		
	7.2 Totals, Part 3, Column 10	40,793,428	40,793,428
8.	Deduct current year's depreciation:		
	8.1 Totals, Part 1, Column 11	86,636,748	
	8.2 Totals, Part 3, Column 9	4,659,847	91,296,595
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)		358,212,616
10.	Deduct total nonadmitted amounts		
11.	Statement value at end of current period (Line 9 minus Line 10)		358,212,616

SCHEDULE B - VERIFICATION BETWEEN YEARS

Mortgage Loans

1.	Book value/recorded investment excluding accrued interest, December 31 of prior year		23,623,807,529
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition (Part 2, Column 7)	5,802,607,047	
	2.2 Additional investment made after acquisition (Part 2, Column 8)	407,941,377	6,210,548,424
3.	Capitalized deferred interest and other:		
	3.1 Totals, Part 1, Column 12	43,567,792	
	3.2 Totals, Part 3, Column 11	4,218,032	47,785,824
4.	Accrual of discount		8,298,786
5.	Unrealized valuation increase (decrease):		
	5.1 Totals, Part 1, Column 9		
	5.2 Totals, Part 3, Column 8		
6.	Total gain (loss) on disposals, Part 3, Column 18		2,756,536
7.	Deduct amounts received on disposals, Part 3, Column 15		2,514,218,880
8.	Deduct amortization of premium and mortgage interest points and commitment fees		3,184,496
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest:		
	9.1 Totals, Part 1, Column 13	97,101,143	
	9.2 Totals, Part 3, Column 13		97,101,143
10.	Deduct current year's other than temporary impairment recognized:		
	10.1 Totals, Part 1, Column 11		
	10.2 Totals, Part 3, Column 10		
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)		27,472,894,866
12.	Total valuation allowance		
13.	Subtotal (Line 11 plus 12)		27,472,894,866
14.	Deduct total nonadmitted amounts		
15.	Statement value of mortgages owned at end of current period (Line 13 minus Line 14)		27,472,894,866

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE BA - VERIFICATION BETWEEN YEARS

Other Long-Term Invested Assets

1.	Book/adjusted carrying value, December 31 of prior year	8,643,322,029
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 8)	546,154,933
2.2	Additional investment made after acquisition (Part 2, Column 9)	1,054,111,991
		1,600,266,925
3.	Capitalized deferred interest and other:	
3.1	Totals, Part 1, Column 16	
3.2	Totals, Part 3, Column 12	
4.	Accrual of discount	
5.	Unrealized valuation increase (decrease):	
5.1	Totals, Part 1, Column 13	482,600,240
5.2	Totals, Part 3, Column 9	290,089,070
		772,689,310
6.	Total gain (loss) on disposals, Part 3, Column 19	126,189,366
7.	Deduct amounts received on disposals, Part 3, Column 16	2,102,972,280
8.	Deduct amortization of premium and depreciation	741,103
9.	Total foreign exchange change in book/adjusted carrying value:	
9.1	Totals, Part 1, Column 17	24,929,236
9.2	Totals, Part 3, Column 14	44,897,190
		69,826,426
10.	Deduct current year's other than temporary impairment recognized:	
10.1	Totals, Part 1, Column 15	28,401,550
10.2	Totals, Part 3, Column 11	8,000,000
		36,401,550
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	9,072,179,122
12.	Deduct total nonadmitted amounts	60,352,690
13.	Statement value at end of current period (Line 11 minus Line 12)	9,011,826,432

SCHEDULE D - VERIFICATION BETWEEN YEARS

Bonds and Stocks

1.	Book/adjusted carrying value, December 31 of prior year	110,650,590,353
2.	Cost of bonds and stocks acquired, Part 3, Column 7	29,778,484,140
3.	Accrual of discount	255,360,217
4.	Unrealized valuation increase (decrease):	
4.1	Part 1, Column 12	(6,557,231)
4.2	Part 2, Section 1, Column 15	(192,614)
4.3	Part 2, Section 2, Column 13	4,525,792,449
4.4	Part 4, Column 11	(14,274,036)
		4,504,768,568
5.	Total gain (loss) on disposals, Part 4, Column 19	197,349,566
6.	Deduction consideration for bonds and stocks disposed of, Part 4, Column 7	24,633,640,825
7.	Deduct amortization of premium	117,639,005
8.	Total foreign exchange change in book/adjusted carrying value:	
8.1	Part 1, Column 15	190,435,791
8.2	Part 2, Section 1, Column 19	4,549,600
8.3	Part 2, Section 2, Column 16	(722,182)
8.4	Part 4, Column 15	30,636,531
		224,899,740
9.	Deduct current year's other than temporary impairment recognized:	
9.1	Part 1, Column 14	96,366,244
9.2	Part 2, Section 1, Column 17	
9.3	Part 2, Section 2, Column 14	7,671,156
9.4	Part 4, Column 13	7,078,286
		111,115,686
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Note 5Q, Line 2	62,270,989
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	120,811,328,057
12.	Deduct total nonadmitted amounts	189,047
13.	Statement value at end of current period (Line 11 minus Line 12)	120,811,139,010

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - SUMMARY BY COUNTRY

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

Description		1 Book/Adjusted Carrying Value	2 Fair Value	3 Actual Cost	4 Par Value of Bonds
BONDS					
Governments (Including all obligations guaranteed by governments)	1. United States	4,361,714,999	4,944,896,041	3,812,491,410	4,793,725,184
	2. Canada	76,646,004	92,829,867	80,477,536	71,754,000
	3. Other Countries	1,512,180,544	1,668,938,536	1,535,355,362	1,476,129,450
	4. Totals	5,950,541,547	6,706,664,444	5,428,324,308	6,341,608,634
U.S. States, Territories and Possessions (Direct and guaranteed)	5. Totals	547,324,996	603,388,265	561,546,066	529,669,821
U.S. Political Subdivisions of States, Territories and Possessions (Direct and guaranteed)	6. Totals	516,803,981	568,413,978	521,959,310	530,775,500
U.S. Special Revenue and Special Assessment Obligations and all Non- Guaranteed Obligations of Agencies and Authorities of Governments and their Political Subdivisions	7. Totals	5,806,853,598	6,593,876,737	5,055,790,392	6,682,212,425
Industrial and Miscellaneous, SVO Identified Funds, Unaffiliated Bank Loans and Hybrid Securities (unaffiliated)	8. United States	47,407,866,485	51,204,759,519	47,403,177,344	47,247,366,191
	9. Canada	1,672,893,802	1,796,108,403	1,680,801,743	1,636,348,510
	10. Other Countries	33,504,577,857	35,204,378,211	33,857,946,751	33,859,087,835
	11. Totals	82,585,338,144	88,205,246,133	82,941,925,838	82,742,802,536
Parent, Subsidiaries and Affiliates	12. Totals	6,499,768,623	6,657,136,589	5,177,510,694	6,592,297,970
	13. Total Bonds	101,906,630,889	109,334,726,146	99,687,056,608	103,419,366,886
PREFERRED STOCKS					
Industrial and Miscellaneous (unaffiliated)	14. United States	619,188,248	636,784,027	619,204,290	
	15. Canada				
	16. Other Countries	129,695,888	149,916,587	155,242,288	
	17. Totals	748,884,136	786,700,614	774,446,578	
Parent, Subsidiaries and Affiliates	18. Totals				
	19. Total Preferred Stocks	748,884,136	786,700,614	774,446,578	
COMMON STOCKS					
Industrial and Miscellaneous (unaffiliated)	20. United States	796,209,003	796,209,003	734,270,618	
	21. Canada	1,423,659	1,423,659	1,423,659	
	22. Other Countries	644,294,727	644,294,727	551,675,147	
	23. Totals	1,441,927,389	1,441,927,389	1,287,369,424	
Parent, Subsidiaries and Affiliates	24. Totals	16,713,885,643	16,713,885,643	4,418,094,682	
	25. Total Common Stocks	18,155,813,032	18,155,813,032	5,705,464,106	
	26. Total Stocks	18,904,697,168	18,942,513,646	6,479,910,684	
	27. Total Bonds and Stocks	120,811,328,057	128,277,239,792	106,166,967,292	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - PART 1A - SECTION 1

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

NAIC Designation	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 11.7	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed (a)
1. U.S. Governments												
1.1 NAIC 1	188,870,304	1,570,735,135	998,143,607	98,511,564	1,505,454,387	XXX	4,361,714,997	4.1	5,854,233,621	5.8	4,361,428,336	286,661
1.2 NAIC 2						XXX						
1.3 NAIC 3						XXX						
1.4 NAIC 4						XXX						
1.5 NAIC 5						XXX						
1.6 NAIC 6						XXX						
1.7 Totals	188,870,304	1,570,735,135	998,143,607	98,511,564	1,505,454,387	XXX	4,361,714,997	4.1	5,854,233,621	5.8	4,361,428,336	286,661
2. All Other Governments												
2.1 NAIC 1	5,002,844	73,587,041	118,375,183	6,006,292	31,349,393	XXX	234,320,753	0.2	286,738,122	0.3	128,481,199	105,839,554
2.2 NAIC 2	15,882,134	187,523,077	333,075,776	273,782,805	317,540,829	XXX	1,127,804,621	1.1	1,006,628,942	1.0	706,342,074	421,462,547
2.3 NAIC 3		14,264,001	41,150,056		22,801,043	XXX	78,215,100	0.1	106,851,664	0.1	409,032	77,806,068
2.4 NAIC 4	8,680,011	36,887,766	53,806,149	22,136,154	14,211,385	XXX	135,721,465	0.1	86,438,228	0.1	34,209,292	101,512,173
2.5 NAIC 5			3,000,000		9,764,609	XXX	12,764,609	0.0			7,090,789	5,673,820
2.6 NAIC 6						XXX						
2.7 Totals	29,564,989	312,261,885	549,407,164	301,925,251	395,667,259	XXX	1,588,826,548	1.5	1,486,656,956	1.5	876,532,386	712,294,162
3. U.S. States, Territories and Possessions etc., Guaranteed												
3.1 NAIC 1	44,189,986	205,826,598	99,828,539	145,125,461	26,380,184	XXX	521,350,768	0.5	581,134,205	0.6	521,350,768	
3.2 NAIC 2		3,987,643	9,891,645	11,872,441		XXX	25,751,729	0.0	32,173,836	0.0	25,751,729	
3.3 NAIC 3						XXX						
3.4 NAIC 4						XXX						
3.5 NAIC 5						XXX						
3.6 NAIC 6					222,500	XXX	222,500	0.0	222,500	0.0	222,500	
3.7 Totals	44,189,986	209,814,241	109,720,184	156,997,902	26,602,684	XXX	547,324,997	0.5	613,530,541	0.6	547,324,997	
4. U.S. Political Subdivisions of States, Territories and Possessions, Guaranteed												
4.1 NAIC 1	107,403,133	54,398,245	122,426,322	169,461,825	57,905,645	XXX	511,595,170	0.5	541,919,894	0.5	511,595,170	
4.2 NAIC 2	83,000	558,000	3,277,313	313,000		XXX	4,231,313	0.0	5,238,146	0.0	4,231,313	
4.3 NAIC 3	10,077	50,387	95,735	370,341	450,960	XXX	977,500	0.0			977,500	
4.4 NAIC 4						XXX						
4.5 NAIC 5						XXX						
4.6 NAIC 6						XXX						
4.7 Totals	107,496,210	55,006,632	125,799,370	170,145,166	58,356,605	XXX	516,803,983	0.5	547,158,040	0.5	516,803,983	
5. U.S. Special Revenue & Special Assessment Obligations, etc., Non-Guaranteed												
5.1 NAIC 1	128,940,412	1,597,472,333	1,235,192,569	2,000,495,883	478,749,623	XXX	5,440,850,820	5.2	5,526,130,809	5.5	5,437,405,072	3,445,748
5.2 NAIC 2	13,722,697	59,734,064	100,877,285	60,006,040	36,418,287	XXX	270,758,373	0.3	305,396,394	0.3	241,947,066	28,811,307
5.3 NAIC 3	1,735,342	11,462,308	14,734,098	18,097,523	4,790,740	XXX	50,820,011	0.0	49,589,380	0.0	38,168,124	12,651,887
5.4 NAIC 4	1,823,672	5,106,328	7,072,837	1,177,276	1,176,248	XXX	16,356,361	0.0	17,971,805	0.0	8,264,587	8,091,774
5.5 NAIC 5	855,565	4,751,032	8,960,113	3,797,473	4,659,525	XXX	23,023,708	0.0	28,498,278	0.0	10,982,034	12,041,674
5.6 NAIC 6					5,044,307	XXX	5,044,307	0.0	1,226,951	0.0	3,730,007	1,314,300
5.7 Totals	147,077,688	1,678,526,065	1,366,836,902	2,083,574,195	530,838,730	XXX	5,806,853,580	5.5	5,928,813,617	5.9	5,740,496,890	66,356,690

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

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

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

NAIC Designation	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 11.7	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed (a)
6. Industrial & Miscellaneous (Unaffiliated)												
6.1 NAIC 1	2,759,681,422	9,081,290,176	10,532,158,310	6,282,725,513	10,029,176,357	XXX	38,685,031,778	36.8	34,689,022,311	34.4	14,688,592,099	23,996,439,679
6.2 NAIC 2	3,674,174,484	8,162,170,226	11,164,782,596	5,688,531,066	7,061,010,640	XXX	35,750,669,012	34.0	34,702,305,952	34.4	11,038,848,934	24,711,820,078
6.3 NAIC 3	92,597,319	729,771,821	670,680,414	222,118,527	153,580,952	XXX	1,868,749,033	1.8	1,930,264,737	1.9	702,339,495	1,166,409,538
6.4 NAIC 4	105,743,624	336,271,210	222,460,274	30,104,495	8,519,313	XXX	703,098,916	0.7	861,694,102	0.9	359,013,816	344,085,100
6.5 NAIC 5	29,967,890	200,646,988	181,018,134	10,729,080	57,600,089	XXX	479,962,181	0.5	337,395,900	0.3	124,057,329	355,904,852
6.6 NAIC 6	67,556,829	16,185,755	62,447,461	28,988,198	227,793,867	XXX	402,972,110	0.4	134,628,810	0.1	106,714,299	296,257,811
6.7 Totals	6,729,721,568	18,526,336,176	22,833,547,189	12,263,196,879	17,537,681,218	XXX	77,890,483,030	74.1	72,655,311,812	72.0	27,019,565,972	50,870,917,058
7. Hybrid Securities												
7.1 NAIC 1	12,514,053	1,600,030	595,760	1,109,429	51,061,991	XXX	66,881,263	0.1	42,617,917	0.0	64,685,473	2,195,790
7.2 NAIC 2		36,252,747	51,051,545	53,087,835	25,998,402	XXX	166,390,529	0.2	190,605,813	0.2	121,309,908	45,080,621
7.3 NAIC 3		2,088,233	9,567,924	9,717,340	21,072,781	XXX	42,446,278	0.0	43,133,491	0.0	14,604,030	27,842,248
7.4 NAIC 4		9,405,000				XXX	9,405,000	0.0	10,844,383	0.0	2,970,000	6,435,000
7.5 NAIC 5					5,486,000	XXX	5,486,000	0.0	5,486,000	0.0		5,486,000
7.6 NAIC 6			1,084,993	3,677,255		XXX	4,762,248	0.0				4,762,248
7.7 Totals	12,514,053	49,346,010	62,300,222	67,591,859	103,619,174	XXX	295,371,318	0.3	292,687,604	0.3	203,569,411	91,801,907
8. Parent, Subsidiaries and Affiliates												
8.1 NAIC 1	65,128,488	372,609,487	637,756,209	1,152,686		XXX	1,076,646,870	1.0	4,794,112,622	4.8		1,076,646,870
8.2 NAIC 2	643,183,576	1,137,133,086				XXX	1,780,316,662	1.7	2,057,545,733	2.0		1,780,316,662
8.3 NAIC 3	3,417,004,662	198,200,000				XXX	3,615,204,662	3.4	367,340,635	0.4		3,615,204,662
8.4 NAIC 4						XXX			49,531,395	0.0		
8.5 NAIC 5			8,616,303	4,086,967		XXX	12,703,270	0.0	48,204,135	0.0		12,703,270
8.6 NAIC 6				14,897,158		XXX	14,897,158	0.0	209,282,601	0.2		14,897,158
8.7 Totals	4,125,316,726	1,707,942,573	646,372,512	20,136,811		XXX	6,499,768,622	6.2	7,526,017,121	7.5		6,499,768,622
9. SVO Identified Funds												
9.1 NAIC 1	XXX	XXX	XXX	XXX	XXX							
9.2 NAIC 2	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	10,043,280	0.0	10,059,967	
9.3 NAIC 3	XXX	XXX	XXX	XXX	XXX							
9.4 NAIC 4	XXX	XXX	XXX	XXX	XXX							
9.5 NAIC 5	XXX	XXX	XXX	XXX	XXX							
9.6 NAIC 6	XXX	XXX	XXX	XXX	XXX							
9.7 Totals	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	10,043,280	0.0	10,059,967	
10. Unaffiliated Bank Loans												
10.1 NAIC 1		282,236,038	400,273,798	168,087,635	2,064,601,686	XXX	2,915,199,157	2.8	2,111,037,849	2.1		2,915,199,157
10.2 NAIC 2	47,500,000	248,314,396	546,234,788	374,352,606	658,773,086	XXX	1,875,174,876	1.8	1,411,985,606	1.4		1,875,174,876
10.3 NAIC 3		220,570,401	112,585,509	61,585,215	187,091,959	XXX	581,833,084	0.6	354,446,905	0.4		581,833,084
10.4 NAIC 4	33,776,184	580,639,849	170,202,361		88,109,591	XXX	872,727,985	0.8	978,083,032	1.0		872,727,985
10.5 NAIC 5	2,500,198	1,115,707,380	224,510,001		41,902,523	XXX	1,384,620,102	1.3	1,076,791,960	1.1		1,384,620,102
10.6 NAIC 6	36,157	16,513,440	18,000,000		1,915,251	XXX	36,464,848	0.0	5,255,838	0.0		36,464,848
10.7 Totals	83,812,539	2,463,981,504	1,471,806,457	604,025,456	3,042,394,096	XXX	7,666,020,052	7.3	5,937,601,190	5.9		7,666,020,052

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

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

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

NAIC Designation	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 11.7	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed (a)
11. Total Bonds Current Year												
11.1 NAIC 1	(d) 3,311,730,642	13,239,755,083	14,144,750,297	8,872,676,288	14,244,679,266		53,813,591,576	51.2	XXX	XXX	25,713,538,117	28,100,053,459
11.2 NAIC 2	(d) 4,394,545,891	9,835,673,239	12,209,190,948	6,461,945,793	8,099,741,244	10,059,967	41,011,157,082	39.0	XXX	XXX	12,148,490,991	28,862,666,091
11.3 NAIC 3	(d) 3,511,347,400	1,176,407,151	848,813,736	311,888,946	389,788,435		6,238,245,668	5.9	XXX	XXX	756,498,181	5,481,747,487
11.4 NAIC 4	(d) 150,023,491	968,310,153	453,541,621	53,417,925	112,016,537		1,737,309,727	1.7	XXX	XXX	404,457,695	1,332,852,032
11.5 NAIC 5	(d) 33,323,653	1,321,105,400	426,104,551	18,613,520	119,412,746		(c) 1,918,559,870	1.8	XXX	XXX	142,130,152	1,776,429,718
11.6 NAIC 6	(d) 67,592,986	32,699,195	81,532,454	47,562,611	234,975,925		(c) 464,363,171	0.4	XXX	XXX	110,666,806	353,696,365
11.7 Totals	11,468,564,063	26,573,950,221	28,163,933,607	15,766,105,083	23,200,614,153	10,059,967	105,183,227,09	100.0			39,275,781,942	65,907,445,152
11.8 Line 11.7 as a % of Col. 7	10.9	25.3	26.8	15.0	22.1	0.0	(b) 4 100.0	XXX	XXX	XXX	37.3	62.7
12. Total Bonds Prior Year												
12.1 NAIC 1	4,252,444,714	16,557,542,756	13,506,794,674	8,435,311,834	11,674,853,372		XXX	XXX	54,426,947,350	54.0	26,445,495,300	27,981,452,050
12.2 NAIC 2	4,435,906,154	9,343,225,834	12,041,241,161	6,394,016,447	7,497,490,826	10,043,280	XXX	XXX	39,721,923,702	39.4	13,447,371,421	26,274,552,281
12.3 NAIC 3	39,887,922	1,308,959,875	1,090,963,141	275,015,253	136,800,621		XXX	XXX	2,851,626,812	2.8	633,847,986	2,217,778,826
12.4 NAIC 4	65,960,372	970,884,590	909,493,098	21,110,478	37,114,407		XXX	XXX	2,004,562,945	2.0	461,754,075	1,542,808,870
12.5 NAIC 5	56,062,696	685,664,456	557,252,687	77,020,363	120,376,071		XXX	XXX	(c) 1,496,376,273	1.5	108,707,038	1,387,669,235
12.6 NAIC 6	49,326,338	37,784,108	57,606,368	4,179,206	201,720,680		XXX	XXX	(c) 350,616,700	0.3	8,747,078	341,869,622
12.7 Totals	8,899,588,196	28,904,061,619	28,163,351,129	15,206,653,581	19,668,355,977	10,043,280	XXX	XXX	100,852,053,78	100.0	41,105,922,898	59,746,130,884
12.8 Line 12.7 as a % of Col. 9	8.8	28.7	27.9	15.1	19.5	0.0	XXX	XXX	(b) 2 100.0	XXX	40.8	59.2
13. Total Publicly Traded Bonds												
13.1 NAIC 1	1,087,014,946	5,491,324,237	5,200,364,118	5,115,105,528	8,819,729,288		25,713,538,117	24.4	26,445,495,300	26.2	25,713,538,117	XXX
13.2 NAIC 2	346,211,197	1,928,774,893	2,586,763,262	1,993,943,548	5,282,738,126	10,059,967	12,148,490,993	11.5	13,447,371,421	13.3	12,148,490,993	XXX
13.3 NAIC 3	10,501,032	238,400,710	228,932,499	119,087,506	159,576,434		756,498,181	0.7	633,847,986	0.6	756,498,181	XXX
13.4 NAIC 4	47,358,011	227,612,826	102,535,807	15,136,300	11,814,750		404,457,694	0.4	461,754,075	0.5	404,457,694	XXX
13.5 NAIC 5	2,894,785	38,385,230	71,472,463	1,637,301	27,740,374		142,130,153	0.1	108,707,038	0.1	142,130,153	XXX
13.6 NAIC 6	2,924	6,905	2,955,632	10,583	107,690,761		110,666,805	0.1	8,747,078	0.0	110,666,805	XXX
13.7 Totals	1,493,982,895	7,924,504,801	8,193,023,781	7,244,920,766	14,409,289,733	10,059,967	39,275,781,943	37.3	41,105,922,898	40.8	39,275,781,943	XXX
13.8 Line 13.7 as a % of Col. 7	3.8	20.2	20.9	18.4	36.7	0.0	100.0	XXX	XXX	XXX	100.0	XXX
13.9 Line 13.7 as a % of Line 11.7, Col. 7, Section 11	1.4	7.5	7.8	6.9	13.7	0.0	37.3	XXX	XXX	XXX	37.3	XXX
14. Total Privately Placed Bonds												
14.1 NAIC 1	2,224,715,696	7,748,430,846	8,944,386,179	3,757,570,760	5,424,949,978		28,100,053,459	26.7	27,981,452,050	27.7	XXX	28,100,053,459
14.2 NAIC 2	4,048,334,694	7,906,898,346	9,622,427,686	4,468,002,245	2,817,003,118		28,862,666,089	27.4	26,274,552,281	26.1	XXX	28,862,666,089
14.3 NAIC 3	3,500,846,368	938,006,441	619,881,237	192,801,440	230,212,001		5,481,747,487	5.2	2,217,778,826	2.2	XXX	5,481,747,487
14.4 NAIC 4	102,665,480	740,697,327	351,005,814	38,281,625	100,201,787		1,332,852,033	1.3	1,542,808,870	1.5	XXX	1,332,852,033
14.5 NAIC 5	30,428,868	1,282,720,170	354,632,088	16,976,219	91,672,372		1,776,429,717	1.7	1,387,669,235	1.4	XXX	1,776,429,717
14.6 NAIC 6	67,590,062	32,692,290	78,576,822	47,552,028	127,285,164		353,696,366	0.3	341,869,622	0.3	XXX	353,696,366
14.7 Totals	9,974,581,168	18,649,445,420	19,970,909,826	8,521,184,317	8,791,324,420		65,907,445,151	62.7	59,746,130,884	59.2	XXX	65,907,445,151
14.8 Line 14.7 as a % of Col. 7	15.1	28.3	30.3	12.9	13.3		100.0	XXX	XXX	XXX	XXX	100.0
14.9 Line 14.7 as a % of Line 11.7, Col. 7, Section 11	9.5	17.7	19.0	8.1	8.4		62.7	XXX	XXX	XXX	XXX	62.7

(a) Includes \$ 22,418,699,608 freely tradable under SEC Rule 144 or qualified for resale under SEC Rule 144A.
 (b) Includes \$ 2,305,116,648 current year of bonds with Z designations and \$ 3,587,566,853 prior year of bonds with Z designations. The letter "Z" means the NAIC designation was not assigned by the Securities Valuation Office (SVO) at the date of the statement.
 (c) Includes \$ 782,443,691 current year, \$ 669,688,836 prior year of bonds with 5GI designations and \$ 320,872,085 current year, \$ 288,289,588 prior year of bonds with 6* designations. "5GI" means the NAIC designation was assigned by the (SVO) in reliance on the insurer's certification that the issuer is current in all principal and interest payments. "6*" means the NAIC designation was assigned by the SVO due to inadequate certification of principal and interest payments.
 (d) Includes the following amount of short-term and cash equivalent bonds by NAIC designation: NAIC 1 \$ 960,669,863 ; NAIC 2 \$ 2,315,926,407 ; NAIC 3 \$; NAIC 4 \$; NAIC 5 \$; NAIC 6 \$

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - PART 1A - SECTION 2

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

Distribution by Type	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 11.08	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed
1. U.S. Governments												
1.01 Issuer Obligations	168,405,617	1,523,125,629	974,556,552	85,754,303	1,504,025,452	XXX	4,255,867,553	4.0	5,727,361,305	5.7	4,255,867,552	1
1.02 Residential Mortgage-Backed Securities	13,620,639	32,704,616	15,723,278	6,552,618	484,690	XXX	69,085,842	0.1	87,664,519	0.1	68,799,181	286,661
1.03 Commercial Mortgage-Backed Securities	340,197	1,217,605	1,235,501	2,352,688	769,959	XXX	5,915,950	0.0	5,585,677	0.0	5,915,950	
1.04 Other Loan-Backed and Structured Securities	6,503,851	13,687,284	6,628,277	3,851,956	174,286	XXX	30,845,654	0.0	33,622,123	0.0	30,845,654	
1.05 Totals	188,870,304	1,570,735,134	998,143,608	98,511,565	1,505,454,387	XXX	4,361,714,999	4.1	5,854,233,624	5.8	4,361,428,337	286,662
2. All Other Governments												
2.01 Issuer Obligations	29,564,989	312,261,884	549,407,164	301,925,251	395,667,259	XXX	1,588,826,547	1.5	1,486,656,954	1.5	876,532,387	712,294,160
2.02 Residential Mortgage-Backed Securities						XXX						
2.03 Commercial Mortgage-Backed Securities						XXX						
2.04 Other Loan-Backed and Structured Securities						XXX						
2.05 Totals	29,564,989	312,261,884	549,407,164	301,925,251	395,667,259	XXX	1,588,826,547	1.5	1,486,656,954	1.5	876,532,387	712,294,160
3. U.S. States, Territories and Possessions, Guaranteed												
3.01 Issuer Obligations	44,189,986	209,814,241	109,720,185	156,997,902	26,602,684	XXX	547,324,998	0.5	613,530,541	0.6	547,324,998	
3.02 Residential Mortgage-Backed Securities						XXX						
3.03 Commercial Mortgage-Backed Securities						XXX						
3.04 Other Loan-Backed and Structured Securities						XXX						
3.05 Totals	44,189,986	209,814,241	109,720,185	156,997,902	26,602,684	XXX	547,324,998	0.5	613,530,541	0.6	547,324,998	
4. U.S. Political Subdivisions of States, Territories and Possessions, Guaranteed												
4.01 Issuer Obligations	107,496,210	55,006,632	125,799,370	170,145,167	58,356,605	XXX	516,803,984	0.5	547,158,040	0.5	516,803,984	
4.02 Residential Mortgage-Backed Securities						XXX						
4.03 Commercial Mortgage-Backed Securities						XXX						
4.04 Other Loan-Backed and Structured Securities						XXX						
4.05 Totals	107,496,210	55,006,632	125,799,370	170,145,167	58,356,605	XXX	516,803,984	0.5	547,158,040	0.5	516,803,984	
5. U.S. Special Revenue & Special Assessment Obligations etc., Non-Guaranteed												
5.01 Issuer Obligations	59,530,924	1,460,703,176	1,224,937,026	2,020,548,430	526,261,515	XXX	5,291,981,071	5.0	5,256,266,386	5.2	5,226,012,008	65,969,063
5.02 Residential Mortgage-Backed Securities	86,040,092	216,707,834	141,712,609	63,025,764	4,577,215	XXX	512,063,514	0.5	639,819,868	0.6	511,675,888	387,626
5.03 Commercial Mortgage-Backed Securities	1,472,131	1,011,119	144,322			XXX	2,627,572	0.0	32,727,362	0.0	2,627,572	
5.04 Other Loan-Backed and Structured Securities	34,541	103,936	42,945			XXX	181,422	0.0			181,422	
5.05 Totals	147,077,688	1,678,526,065	1,366,836,902	2,083,574,194	530,838,730	XXX	5,806,853,579	5.5	5,928,813,616	5.9	5,740,496,890	66,356,689
6. Industrial and Miscellaneous												
6.01 Issuer Obligations	5,376,455,473	11,439,661,577	16,278,467,020	10,847,059,321	17,030,021,994	XXX	60,971,665,385	58.0	59,442,962,155	58.9	23,353,621,443	37,618,043,942
6.02 Residential Mortgage-Backed Securities	144,677,873	455,797,931	265,778,336	237,725,793	99,983,659	XXX	1,203,963,592	1.1	972,231,204	1.0	986,530,897	217,432,695
6.03 Commercial Mortgage-Backed Securities	85,986,046	1,088,024,804	1,441,436,906	75,383,228	16,064,608	XXX	2,706,895,592	2.6	1,897,104,183	1.9	1,555,407,118	1,151,488,474
6.04 Other Loan-Backed and Structured Securities	1,122,602,175	5,542,851,863	4,847,864,927	1,103,028,536	391,610,956	XXX	13,007,958,457	12.4	10,343,014,226	10.3	1,124,006,514	11,883,951,943
6.05 Totals	6,729,721,567	18,526,336,175	22,833,547,189	12,263,196,878	17,537,681,217	XXX	77,890,483,026	74.1	72,655,311,768	72.0	27,019,565,972	50,870,917,054
7. Hybrid Securities												
7.01 Issuer Obligations	12,514,053	49,346,010	61,215,230	63,914,604	103,619,174	XXX	290,609,071	0.3	292,687,600	0.3	203,569,411	87,039,660
7.02 Residential Mortgage-Backed Securities						XXX						
7.03 Commercial Mortgage-Backed Securities						XXX						
7.04 Other Loan-Backed and Structured Securities			1,084,993	3,677,255		XXX	4,762,248	0.0				4,762,248
7.05 Totals	12,514,053	49,346,010	62,300,223	67,591,859	103,619,174	XXX	295,371,319	0.3	292,687,600	0.3	203,569,411	91,801,908
8. Parent, Subsidiaries and Affiliates												
8.01 Issuer Obligations	678,669,313	1,468,752,005	500,582,895			XXX	2,648,004,213	2.5	6,463,236,278	6.4		2,648,004,213
8.02 Residential Mortgage-Backed Securities						XXX			906,816	0.0		
8.03 Commercial Mortgage-Backed Securities			93,096,552	19,476,843		XXX	112,573,395	0.1	295,555,415	0.3		112,573,395
8.04 Other Loan-Backed and Structured Securities	983,751	3,270,985	2,885,295	659,969		XXX	7,800,000	0.0	766,318,614	0.8		7,800,000
8.05 Affiliated Bank Loans - Issued	3,445,663,662	235,919,583	49,807,771			XXX	3,731,391,016	3.5				3,731,391,016
8.06 Affiliated Bank Loans - Acquired						XXX						
8.07 Totals	4,125,316,726	1,707,942,573	646,372,513	20,136,812		XXX	6,499,768,624	6.2	7,526,017,123	7.5		6,499,768,624

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - PART 1A - SECTION 2 (Continued)

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

Distribution by Type	1 1 Year or Less	2 Over 1 Year Through 5 Years	3 Over 5 Years Through 10 Years	4 Over 10 Years Through 20 Years	5 Over 20 Years	6 No Maturity Date	7 Total Current Year	8 Col. 7 as a % of Line 11.08	9 Total from Col. 7 Prior Year	10 % From Col. 8 Prior Year	11 Total Publicly Traded	12 Total Privately Placed
9. SVO Identified Funds												
9.01 Exchange Traded Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	10,043,280	0.0	10,059,967	
9.02 Bond Mutual Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX							
9.03 Totals	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	10,043,280	0.0	10,059,967	
10. Unaffiliated Bank Loans												
10.01 Unaffiliated Bank Loans - Issued	36,157	164,378,201	150,786,969	134,081,585	1,159,471,235	XXX	1,608,754,147	1.5	156,947,550	0.2		1,608,754,147
10.02 Unaffiliated Bank Loans - Acquired	83,776,382	2,299,603,303	1,321,019,489	469,943,870	1,882,922,861	XXX	6,057,265,905	5.8	5,780,653,639	5.7		6,057,265,905
10.03 Totals	83,812,539	2,463,981,504	1,471,806,458	604,025,455	3,042,394,096	XXX	7,666,020,052	7.3	5,937,601,189	5.9		7,666,020,052
11. Total Bonds Current Year												
11.01 Issuer Obligations	6,476,826,565	16,518,671,154	19,824,685,442	13,646,344,978	19,644,554,683	XXX	76,111,082,822	72.4	XXX	XXX	34,979,731,783	41,131,351,039
11.02 Residential Mortgage-Backed Securities	244,338,604	705,210,381	423,214,223	307,304,175	105,045,564	XXX	1,785,112,948	1.7	XXX	XXX	1,567,005,966	218,106,982
11.03 Commercial Mortgage-Backed Securities	87,798,374	1,090,253,528	1,535,913,281	97,212,759	16,834,567	XXX	2,828,012,509	2.7	XXX	XXX	1,563,950,640	1,264,061,869
11.04 Other Loan-Backed and Structured Securities	1,130,124,318	5,559,914,068	4,858,506,437	1,111,217,716	391,785,242	XXX	13,051,547,781	12.4	XXX	XXX	1,155,033,590	11,896,514,191
11.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	XXX	XXX	10,059,967	
11.06 Affiliated Bank Loans	3,445,663,662	235,919,583	49,807,771			XXX	3,731,391,016	3.5	XXX	XXX		3,731,391,016
11.07 Unaffiliated Bank Loans	83,812,539	2,463,981,504	1,471,806,458	604,025,455	3,042,394,096	XXX	7,666,020,052	7.3	XXX	XXX		7,666,020,052
11.08 Totals	11,468,564,062	26,573,950,218	28,163,933,612	15,766,105,083	23,200,614,152	10,059,967	105,183,227,095	100.0	XXX	XXX	39,275,781,946	65,907,445,149
11.09 Line 11.08 as a % of Col. 7	10.9	25.3	26.8	15.0	22.1	0.0	100.0	XXX	XXX	XXX	37.3	62.7
12. Total Bonds Prior Year												
12.01 Issuer Obligations	7,598,257,458	20,874,948,937	19,983,752,091	12,526,292,315	18,846,608,458	XXX	XXX	XXX	79,829,859,259	79.2	37,385,631,579	42,444,227,680
12.02 Residential Mortgage-Backed Securities	233,688,517	631,578,118	390,781,333	339,929,715	104,644,724	XXX	XXX	XXX	1,700,622,407	1.7	1,594,770,189	105,852,218
12.03 Commercial Mortgage-Backed Securities	58,400,665	1,070,951,919	1,031,635,723	60,256,661	10,087,669	XXX	XXX	XXX	2,230,972,637	2.2	1,172,387,094	1,058,585,543
12.04 Other Loan-Backed and Structured Securities	963,924,969	4,185,813,300	4,525,839,673	1,064,772,276	402,604,745	XXX	XXX	XXX	11,142,954,963	11.0	943,090,792	10,199,864,171
12.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	10,043,280	XXX	XXX	10,043,280	0.0	10,043,280	
12.06 Affiliated Bank Loans						XXX	XXX	XXX				
12.07 Unaffiliated Bank Loans	45,676,584	2,140,769,346	2,231,342,312	1,215,402,612	304,410,335	XXX	XXX	XXX	5,937,601,189	5.9		5,937,601,189
12.08 Totals	8,899,588,193	28,904,061,620	28,163,351,132	15,206,653,579	19,668,355,931	10,043,280	XXX	XXX	100,852,053,735	100.0	41,105,922,934	59,746,130,801
12.09 Line 12.08 as a % of Col. 9	8.8	28.7	27.9	15.1	19.5	0.0	XXX	XXX	100	XXX	40.8	59.2
13. Total Publicly Traded Bonds												
13.01 Issuer Obligations	1,163,064,040	6,377,468,156	6,384,301,763	6,768,268,985	14,286,628,839	XXX	34,979,731,783	33.3	37,385,631,579	37.1	34,979,731,783	XXX
13.02 Residential Mortgage-Backed Securities	225,013,267	578,022,944	375,792,554	289,655,559	98,521,641	XXX	1,567,005,965	1.5	1,594,770,189	1.6	1,567,005,965	XXX
13.03 Commercial Mortgage-Backed Securities	14,536,908	574,277,445	938,837,542	22,532,796	13,765,949	XXX	1,563,950,640	1.5	1,172,387,094	1.2	1,563,950,640	XXX
13.04 Other Loan-Backed and Structured Securities	91,368,681	394,736,256	494,091,921	164,463,426	10,373,305	XXX	1,155,033,589	1.1	943,090,792	0.9	1,155,033,589	XXX
13.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX	10,059,967	10,059,967	0.0	10,043,280	0.0	10,059,967	XXX
13.06 Affiliated Bank Loans						XXX						XXX
13.07 Unaffiliated Bank Loans						XXX						XXX
13.08 Totals	1,493,982,896	7,924,504,801	8,193,023,780	7,244,920,766	14,409,289,734	10,059,967	39,275,781,944	37.3	41,105,922,934	40.8	39,275,781,944	XXX
13.09 Line 13.08 as a % of Col. 7	3.8	20.2	20.9	18.4	36.7	0.0	100.0	XXX	XXX	XXX	100.0	XXX
13.10 Line 13.08 as a % of Line 11.08, Col. 7, Section 11	1.4	7.5	7.8	6.9	13.7	0.0	37.3	XXX	XXX	XXX	37.3	XXX
14. Total Privately Placed Bonds												
14.01 Issuer Obligations	5,313,762,525	10,141,202,998	13,440,383,679	6,878,075,993	5,357,925,844	XXX	41,131,351,039	39.1	42,444,227,680	42.1	XXX	41,131,351,039
14.02 Residential Mortgage-Backed Securities	19,325,337	127,187,437	47,421,669	17,648,616	6,523,923	XXX	218,106,983	0.2	105,852,218	0.1	XXX	218,106,983
14.03 Commercial Mortgage-Backed Securities	73,261,466	515,976,083	597,075,739	74,679,963	3,068,618	XXX	1,264,061,869	1.2	1,058,585,543	1.0	XXX	1,264,061,869
14.04 Other Loan-Backed and Structured Securities	1,038,755,637	5,165,177,812	4,364,414,516	946,754,290	381,411,937	XXX	11,896,514,192	11.3	10,199,864,171	10.1	XXX	11,896,514,192
14.05 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX						XXX	
14.06 Affiliated Bank Loans	3,445,663,662	235,919,583	49,807,771			XXX	3,731,391,016	3.5			XXX	3,731,391,016
14.07 Unaffiliated Bank Loans	83,812,539	2,463,981,504	1,471,806,458	604,025,455	3,042,394,096	XXX	7,666,020,052	7.3	5,937,601,189	5.9	XXX	7,666,020,052
14.08 Totals	9,974,581,166	18,649,445,417	19,970,909,832	8,521,184,317	8,791,324,418		65,907,445,151	62.7	59,746,130,801	59.2	XXX	65,907,445,151
14.09 Line 14.08 as a % of Col. 7	15.1	28.3	30.3	12.9	13.3		100.0	XXX	XXX	XXX	XXX	100.0
14.10 Line 14.08 as a % of Line 11.08, Col. 7, Section 11	9.5	17.7	19.0	8.1	8.4		62.7	XXX	XXX	XXX	XXX	62.7

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SCHEDULE DA - VERIFICATION BETWEEN YEARS

Short-Term Investments

	1	2	3	4	5
	Total	Bonds	Mortgage Loans	Other Short-term Investment Assets (a)	Investments in Parent, Subsidiaries and Affiliates
1. Book/adjusted carrying value, December 31 of prior year	447,734,452	447,734,452			
2. Cost of short-term investments acquired	3,175,979,903	3,175,979,903			
3. Accrual of discount	18,740,444	18,740,444			
4. Unrealized valuation increase (decrease)					
5. Total gain (loss) on disposals	109,655	109,655			
6. Deduct consideration received on disposals	2,483,392,190	2,483,392,190			
7. Deduct amortization of premium					
8. Total foreign exchange change in book/adjusted carrying value					
9. Deduct current year's other than temporary impairment recognized					
10. Book adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	1,159,172,265	1,159,172,265			
11. Deduct total nonadmitted amounts					
12. Statement value at end of current period (Line 10 minus Line 11)	1,159,172,265	1,159,172,265			

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

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SCHEDULE DB - PART A - VERIFICATION BETWEEN YEARS

Options, Caps, Floors, Collars, Swaps and Forwards

1. Book/adjusted carrying value, December 31, prior year (Line 9, prior year)	3,628,605,132
2. Cost paid/(consideration received) on additions:	
2.1 Current year paid/(consideration received) at time of acquisition, still open, Section 1, Column 12	176,613,866
2.2 Current year paid/(consideration received) at time of acquisition, terminated, Section 2, Column 14	125,520,185
	302,134,051
3. Unrealized valuation increase/(decrease):	
3.1 Section 1, Column 17	(899,231,917)
3.2 Section 2, Column 19	(96,766,328)
	(995,998,245)
4. SSAP No. 108 Adjustments	
5. Total gain (loss) on termination recognized, Section 2, Column 22	503,173,530
6. Considerations received/(paid) on terminations, Section 2, Column 15	871,714,790
7. Amortization:	
7.1 Section 1, Column 19	(1,230,927)
7.2 Section 2, Column 21	(1,900,435)
	(3,131,362)
8. Adjustment to the book/adjusted carrying value of hedged item:	
8.1 Section 1, Column 20	
8.2 Section 2, Column 23	
9. Total foreign exchange change in book/adjusted carrying value:	
9.1 Section 1, Column 18	
9.2 Section 2, Column 20	
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6+7+8+9)	2,563,068,316
11. Deduct nonadmitted assets	
12. Statement value at end of current period (Line 10 minus Line 11)	2,563,068,316

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1. Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year).....	
2. Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cumulative Cash Change Column)	
3.1 Add:	
Change in variation margin on open contracts - Highly effective hedges	
3.11 Section 1, Column 15, current year minus	
3.12 Section 1, Column 15, prior year	
Change in variation margin on open contracts - All other	
3.13 Section 1, Column 18, current year minus	(107,780,033)
3.14 Section 1, Column 18, prior year	200,720,383
	(308,500,416)
	(308,500,416)
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	(107,780,033)
3.24 Section 1, Column 19, prior year plus	200,720,383
3.25 SSAP No. 108 Adjustments	(308,500,416)
	(308,500,416)
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year (Section 2, Column 15)	524,841,169
4.2 Less:	
4.21 Amount used to adjust basis of hedged item (Section 2, Column 17) ..	
4.22 Amount recognized (Section 2, Column 16)	524,841,169
4.23 SSAP No. 108 Adjustments	524,841,169
4.3 Subtotal (Line 4.1 minus Line 4.2)	
5. Dispositions gains (losses) on contracts terminated in prior year:	
5.1 Total gain (loss) recognized for terminations in prior year	
5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	107,780,033
6. Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	(107,780,033)
7. Deduct total nonadmitted amounts	
8. Statement value at end of current period (Line 6 minus Line 7)	(107,780,033)

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2	50,000,000	13,070,275	17,622,739	10/01/2012	10/01/2042	Interest Rate Swap	4,630,814		42086P-AC-7	Kingsland Ltd-SERIES 18-8A CLASS A	1	13,070,275	12,991,925
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		11,593,077	12,290,954	10/01/2012	10/01/2042	Interest Rate Swap			320808-AD-0	FIRST MARYLAND CAP I-LIMITED GUARANTEE NOTE	2	11,593,077	12,290,954
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		17,930,191	18,021,311	10/01/2012	10/01/2042	Interest Rate Swap			38136M-AC-2	Goldentree Loan Management US Clo 2 Ltd	1	17,930,191	18,021,311
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		10,000,000	9,974,680	10/01/2012	10/01/2042	Interest Rate Swap			09629L-AE-5	BLUEMOUNTAIN CLO XXIII L-BLUEM 2018-23A B	1	10,000,000	9,974,680
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		5,000,000	4,849,415	10/01/2012	10/01/2042	Interest Rate Swap			03328Y-AG-9	Anchorage Capital CLO Lt-ANCHC 2018-1RA C	1	5,000,000	4,849,415
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3	50,000,000	2,483,711	7,058,591	10/01/2012	10/01/2042	Interest Rate Swap	4,574,880		77277L-A7-2	ROCKALL CLO BV Variable Funding Note- USD	1	2,483,711	2,483,711
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		4,299,293	4,423,654	10/01/2012	10/01/2042	Interest Rate Swap			83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B	1	4,299,293	4,423,654
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		5,470,000	5,405,749	10/01/2012	10/01/2042	Interest Rate Swap			883310-AE-4	THAYER PARK CLO LTD.-THAYR 2017-1A B	1	5,470,000	5,405,749
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		6,430,000	6,410,839	10/01/2012	10/01/2042	Interest Rate Swap			77342K-AA-8	ROCKFORD TOWER CLO 2018-ROCKT 2018-2A A	1	6,430,000	6,410,839
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		8,000,000	7,917,192	10/01/2012	10/01/2042	Interest Rate Swap			09628F-AE-9	BlueMountain Fuji US Clo-SERIES 2017-3A CLASS B	1	8,000,000	7,917,192
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		4,000,000	3,997,704	10/01/2012	10/01/2042	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	4,000,000	3,997,704
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		15,000,000	14,890,035	10/01/2012	10/01/2042	Interest Rate Swap			88432U-AC-0	Wind River CLO Ltd-SERIES 18-3A CLASS A2	1	15,000,000	14,890,035
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	3		6,800,000	6,764,980	10/01/2012	10/01/2042	Interest Rate Swap			03762Y-AH-0	Apidos Clo XXV-APID 2016-25A A2R	1	6,800,000	6,764,980
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	264,000,000	19,165,000	42,555,637	11/29/2012	11/29/2042	Interest Rate Swap	23,473,046		14316R-ZZ-6	Carlyle US CLO 2017-5 Re Term Loan	1	19,165,000	19,082,591
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,392,488	6,500,545	11/29/2012	11/29/2042	Interest Rate Swap			83149F-AD-6	SLM Student Loan Trust 2006-6	1	6,392,488	6,500,545
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,500,000	15,474,596	11/29/2012	11/29/2042	Interest Rate Swap			375415-AA-4	GILBERT PARK CLO LTD-SERIES 17-1A CLASS A	1	15,500,000	15,474,596
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	12,941,154	11/29/2012	11/29/2042	Interest Rate Swap			14310D-AY-3	CARLYLE GLOBAL MKT STRATEGIES CLO 2013-2 LTD MEZZ SEC2 DEF NT	1	13,500,000	12,941,154
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,100,000	12,891,147	11/29/2012	11/29/2042	Interest Rate Swap			67097Q-AC-9	OPC CLO 2017-14 Ltd-SERIES 17-14A CLASS A1B	1	13,100,000	12,891,147
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		77,570,358	79,590,841	11/29/2012	11/29/2042	Interest Rate Swap			57542Z-AO-7	MASSMUTUAL ASSET FIN LLC SR SEC2 REV NT	3	77,570,358	79,590,841
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		89,907,111	89,916,012	11/29/2012	11/29/2042	Interest Rate Swap			126611-AL-6	CVP CASCADE CLO LTD-CVPC 2014-2A A1R	1	89,907,111	89,916,012
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,200,000	6,121,539	11/29/2012	11/29/2042	Interest Rate Swap			94950G-AE-7	WELLFLEET CLO LTD-WELF 2017-1A B	1	6,200,000	6,121,539
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,525,000	5,464,706	11/29/2012	11/29/2042	Interest Rate Swap			01748R-AE-5	ALLEGRO CLO V LTD-SERIES 17-1A CLASS MEZ, FLT	1	5,525,000	5,464,706
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,822,400	11/29/2012	11/29/2042	Interest Rate Swap			38137M-AK-3	Goldentree Loan Oppor tun-GLD12 2016-12A AJR	1	15,000,000	14,822,400
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,376,574	11/29/2012	11/29/2042	Interest Rate Swap			03767M-AJ-7	Apidos CLO-APID 2018-29A B	1	4,500,000	4,376,574
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,968,385	11/29/2012	11/29/2042	Interest Rate Swap			17181T-AA-9	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	5,000,000	4,968,385
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,050,000	1,087,380	11/29/2012	11/29/2042	Interest Rate Swap			72403*-MP-4	PIONEERS GATE LLC 2017-9 DT Warehouse Class B	2	1,050,000	1,087,380
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	12,000,000	24,225,605	12/27/2012	12/27/2042	Interest Rate Swap	12,366,233		67112K-AC-3	OPC CLO Ltd-SEREIS 18-15A CLASS A3	1	12,000,000	11,859,372
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,916,964	12/27/2012	12/27/2042	Interest Rate Swap			83609R-AE-1	SOUND POINT CLO LTD-SNDPT 2017-1A C	1	4,000,000	3,916,964
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,800,000	22,758,960	12/27/2012	12/27/2042	Interest Rate Swap			14315J-YY-9	Carlyle US CLO 2017-3 Ri Term Loan	1	22,800,000	22,758,960
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,170,272	12/27/2012	12/27/2042	Interest Rate Swap			03330A-AC-6	Anchorage Capital CLO 3-ANCHC 2014-3RA B	1	3,200,000	3,170,272
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		33,000,000	32,798,172	12/27/2012	12/27/2042	Interest Rate Swap			87271L-AJ-1	TIAA CLO I Ltd-TIA 2016-1A AR	1	33,000,000	32,798,172

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,800,000	8,670,966	12/27/2012	12/27/2042	Interest Rate Swap			14310D-AW-7	Carlyle Global Market St-SERIES 2013-2A CLASS BR	1	8,800,000	8,670,966
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,901,506	16,074,790	12/27/2012	12/27/2042	Interest Rate Swap			24820R-AA-6	Statoil ASA-SENIOR UNSECURED NOTE CIFC Funding 2017-IV Ltd-SERIES 17-4A CLASS B	1	13,901,506	16,074,790
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,958,558	4,926,880	12/27/2012	12/27/2042	Interest Rate Swap			12551J-AG-1	WACHOVIA STUDENT LOAN TR-WSLT 2005-1 B	1	4,958,558	4,926,880
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	13,017,081	25,219,185	12/27/2012	12/27/2042	Interest Rate Swap		12,366,233	92977H-AG-3	ATRIUM CDO CORP-SERIES 9A CLASS BR	1	13,017,081	12,852,952
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,990,000	19,020,479	12/27/2012	12/27/2042	Interest Rate Swap			04964K-AN-1	VOYA CLO LTD-VOYA 2014-2A A2AR Denali Capital CLO X LLC-DEN10	1	18,990,000	19,020,479
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,810,000	18,648,591	12/27/2012	12/27/2042	Interest Rate Swap			92912V-AQ-8	Denali Capital CLO X LLC-DEN10	1	18,810,000	18,648,591
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,366,951	5,380,054	12/27/2012	12/27/2042	Interest Rate Swap			24823B-AK-6	Babson CLO Ltd/Cayman Is-BABSN 2018-3A A2	1	5,366,951	5,380,054
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,000,000	22,591,658	12/27/2012	12/27/2042	Interest Rate Swap			06760P-AE-1	Madison Park Funding Ltd-SERIES 18-28A CLASS B	1	23,000,000	22,591,658
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,500,000	9,413,009	12/27/2012	12/27/2042	Interest Rate Swap			55821A-AE-8	Shackleton 2015-VII-R CL-SERIES 2015-7RA CLASS B	1	9,500,000	9,413,009
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,975,408	12/27/2012	12/27/2042	Interest Rate Swap			81883A-AC-3	ARROWMARK COLORADO HOLDI-SERIES 17-7A CLASS B	1	8,000,000	7,975,408
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,967,044	12/27/2012	12/27/2042	Interest Rate Swap			28622J-AB-3	Goldentree Loan Managem-GLM 2018-3A B1	1	4,000,000	3,967,044
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	6,000,000	18,887,517	12/28/2012	12/28/2042	Interest Rate Swap		12,958,959	38138B-AG-5	Marble Point CLO XIV Ltd-HP14 2018-2A A	1	6,000,000	5,928,558
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		29,915,127	29,879,280	12/28/2012	12/28/2042	Interest Rate Swap			56608K-AA-1	TICP CLO VI 2016-2 Ltd-SERIES 2016-6A CLASS BR	1	29,915,127	29,879,280
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,002,500	12/28/2012	12/28/2042	Interest Rate Swap			87246M-AJ-1	MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS BR	1	10,000,000	10,002,500
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,000,280	12/28/2012	12/28/2042	Interest Rate Swap			55818X-BA-0	WIND RIVER CLO LTD-WINDR 2017-1A B	1	7,000,000	7,000,280
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,050,000	10,993,026	12/28/2012	12/28/2042	Interest Rate Swap			88432M-AC-8	Crestline Denali CLO XIV-SERIES16-1A CLASS A1R	1	11,050,000	10,993,026
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,000,000	22,921,754	12/28/2012	12/28/2042	Interest Rate Swap			22615M-AL-6	Tryon Park CLO Ltd-TPCLO 2013-1A	1	23,000,000	22,921,754
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,964,720	12/28/2012	12/28/2042	Interest Rate Swap			89852T-AN-8	TICP CLO VI 2016-5 LTD-TICP 2016-5A A2R	1	8,000,000	7,964,720
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,000,000	2,973,207	12/28/2012	12/28/2042	Interest Rate Swap			87248K-AS-3	Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	3,000,000	2,973,207
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	992,019	12/28/2012	12/28/2042	Interest Rate Swap			94950J-AA-9	HPS LOAN MANAGEMENT 13-2-HLM 13A-18 A2	1	1,000,000	992,019
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,964,332	12/28/2012	12/28/2042	Interest Rate Swap			40437L-AE-2	Voya CLO Ltd-SERIES 18-1A CLASS B Wellfleet CLO Ltd-SERIES 18-1A CLASS A	1	4,000,000	3,964,332
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,060,000	4,851,579	12/28/2012	12/28/2042	Interest Rate Swap			92917A-AE-6	BABSON CLO LTD 2015-II-SERIES 15-2A CLASS AR	1	5,060,000	4,851,579
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	59,000,000	71,488,080	12/28/2012	12/28/2042	Interest Rate Swap		12,958,959	94950J-AA-9	Ares XXXIR CLO Ltd-SERIES 14-31RA CLASS B	1	59,000,000	58,529,121
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,200,000	14,199,830	12/28/2012	12/28/2042	Interest Rate Swap			06759F-AB-2	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS B1R	1	14,200,000	14,199,830
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,838,780	12/28/2012	12/28/2042	Interest Rate Swap			04017T-AE-9	CIFC Funding 2018-I Ltd-SERIES 18-1A CLASS C	1	20,000,000	19,838,780
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,713,653	12/28/2012	12/28/2042	Interest Rate Swap			55818Y-BE-0	Benefit Street Partners -BSP 2018-15A A2A	1	12,700,000	12,713,653
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,200,000	4,054,865	12/28/2012	12/28/2042	Interest Rate Swap			12551R-AE-8	BlueMountain CLO 2015-4 -SERIES 15-4A CLASS A2R	1	4,200,000	4,054,865
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,100,000	1,093,253	12/28/2012	12/28/2042	Interest Rate Swap			08179M-AC-3	Nelnet Student Loan Trus-SERIES 19-3A CLASS B	1	1,100,000	1,093,253
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	20,000,000	32,682,199	12/28/2012	12/28/2042	Interest Rate Swap		12,958,959	09628N-AQ-5	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	20,000,000	19,723,240
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,050,000	12,091,027	12/28/2012	12/28/2042	Interest Rate Swap			64031D-AB-6		1	12,050,000	12,091,027
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,238,925	11,906,136	12/28/2012	12/28/2042	Interest Rate Swap			63939F-AC-4		1	12,238,925	11,906,136

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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 Corp Bonds	1		8,913,000	8,551,023	12/28/2012	12/28/2042	Interest Rate Swap				78447Y-AD-4	SLM STUDENT LOAN TRUST-SLMA 2013-3	1	8,913,000	8,551,023
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,958,455	12/28/2012	12/28/2042	Interest Rate Swap				12550G-AE-3	CIFC Funding Ltd-CIFC 2018-5A B	1	5,000,000	4,958,455
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,900,000	8,900,445	12/28/2012	12/28/2042	Interest Rate Swap				55820T-AC-2	MADISON PARK FUNDING LTD-SERIES 2017-23A CLASS B	1	8,900,000	8,900,445
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,650,000	8,639,776	12/28/2012	12/28/2042	Interest Rate Swap				33882G-AC-2	FLATIRON CLO LTD-FLAT 2017-1A C	1	8,650,000	8,639,776
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	996,038	12/28/2012	12/28/2042	Interest Rate Swap				48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2	1	1,000,000	996,038
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,099,916	12/28/2012	12/28/2042	Interest Rate Swap				09626U-AQ-1	BLUEMOUNTAIN CLO LTD-BLUEM 2013-1A BR	1	4,250,000	4,099,916
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,796,879	15,356,727	12/28/2012	12/28/2042	Interest Rate Swap				78447M-AD-0	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	15,796,879	15,356,727
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,255,296	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	4,255,296
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	9,550,000	15,985,263	12/28/2012	12/28/2042	Interest Rate Swap		6,479,479		04965F-AG-6	Atrium XV-SERIES 15A CLASS B	1	9,550,000	9,505,784
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,001,210	12/28/2012	12/28/2042	Interest Rate Swap				55819B-AL-4	MADISON PARK FUNDING XVI-SERIES 15-18A CLASS A1R	1	10,000,000	10,001,210
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,552,224	9,779,814	12/28/2012	12/28/2042	Interest Rate Swap				63940A-AD-0	NAVIENT STUDENT LOAN TRU-SERIES 17-4A CLASS B	1	9,552,224	9,779,814
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,200,000	9,227,434	12/28/2012	12/28/2042	Interest Rate Swap				03328W-AN-8	Anchorage Capital CLO 9-SERIES 16-9A CLASS CR	1	9,200,000	9,227,434
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,700,000	1,760,520	12/28/2012	12/28/2042	Interest Rate Swap				72403*-MP-4	PIONEERS GATE LLC 2017-9 DT Warehouse Class B	2	1,700,000	1,760,520
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,100,000	1,093,253	12/28/2012	12/28/2042	Interest Rate Swap				08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,093,253
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,498,565	12/28/2012	12/28/2042	Interest Rate Swap				13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-1RA B	1	2,500,000	2,498,565
57629*AJU	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,400,000	6,384,102	12/28/2012	12/28/2042	Interest Rate Swap				77342K-AC-4	Rockford Tower CLO 2018-2 Ltd	1	6,400,000	6,384,102
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,000,000	16,394,559	12/28/2012	12/28/2042	Interest Rate Swap		6,479,479		24380L-AE-3	DEER CREEK CLO LTD 2017-SERIES 17-1A CLASS B	1	10,000,000	9,915,080
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	29,882,760	12/28/2012	12/28/2042	Interest Rate Swap				04624H-AC-1	ASSURANT CLO III LTD-SERIES 2018-2A CLASS A	1	30,000,000	29,882,760
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,505,217	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	13,505,217
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,850,000	4,830,522	12/28/2012	12/28/2042	Interest Rate Swap				08179H-AB-6	BENEFIT STREET PARTNERS -SERIES 2017-12A CLASS A2	1	4,850,000	4,830,522
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,000,000	16,487,829	12/28/2012	12/28/2042	Interest Rate Swap		6,479,479		87232A-AE-4	TFLAT 2018-1A B	1	10,000,000	10,008,350
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,844,542	7,514,408	12/28/2012	12/28/2042	Interest Rate Swap				784170-ZZ-8	SFR FTTH SAS Term Loan	3	7,844,542	7,514,408
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,920,000	8,922,417	12/28/2012	12/28/2042	Interest Rate Swap				10302V-BC-8	BOWMAN PARK CLO LTD-BOIWK 2014-1A B1R	1	8,920,000	8,922,417
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,850,000	6,781,575	12/28/2012	12/28/2042	Interest Rate Swap				674000-AQ-7	OAKTREE CLO LTD-SERIES 14-1A CLASS A2R	1	6,850,000	6,781,575
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,840,000	6,836,368	12/28/2012	12/28/2042	Interest Rate Swap				88433R-AE-2	WIND RIVER CLO LTD-SERIES 17-2A CLASS B	1	6,840,000	6,836,368
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,997,200	12/28/2012	12/28/2042	Interest Rate Swap				50188Y-AB-0	LCM LTD PARTNERSHIP-LCM 24A B	1	5,000,000	4,997,200
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,100,000	1,093,253	12/28/2012	12/28/2042	Interest Rate Swap				08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,093,253
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,600,000	4,456,590	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	4,456,590
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	5,400,000	11,861,227	12/28/2012	12/28/2042	Interest Rate Swap		6,479,479		12548J-AE-2	CIFC FUNDING LTD-SERIES 17-3A CLASS A2	1	5,400,000	5,381,748
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,900,000	11,631,738	12/28/2012	12/28/2042	Interest Rate Swap				74988L-AC-8	ALM XIV Ltd-SERIES 14-14A CLASS A2R2	1	11,900,000	11,631,738
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,650,000	4,679,658	12/28/2012	12/28/2042	Interest Rate Swap				29001L-AG-6	Elmwood CLO II Ltd-ELMW2 2019-2A C	1	4,650,000	4,679,658

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,430,705	12/28/2012	12/28/2042	Interest Rate Swap			50184K-AW-8	LGM LTD PARTNERSHIP-SERIES 13A CLASS CR	1	4,500,000	4,430,705
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,400,000	4,514,607	12/28/2012	12/28/2042	Interest Rate Swap			57542Z-AO-7	MASMUTUAL ASSET FIN LLC SR SECD REV NT	3	4,400,000	4,514,607
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,200,000	11,062,162	12/28/2012	12/28/2042	Interest Rate Swap			08181B-AS-6	Benefit Street Partners -SERIES 16-9A CLASS BR	1	11,200,000	11,062,162
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,896,904	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	7,896,904
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	20,000,000	25,736,499	12/31/2012	12/31/2042	Interest Rate Swap		5,841,059	36248M-AJ-6	GT Loan Financing I Ltd -SERIES 2013-1A CLASS AR	1	20,000,000	19,895,440
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,837,500	20,706,224	12/31/2012	12/31/2042	Interest Rate Swap			14315J-MM-8	Carlyle US CLO 2013-2 Re Term Loan	1	20,837,500	20,706,224
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,550,000	7,377,671	12/31/2012	12/31/2042	Interest Rate Swap			74982L-AS-9	RACE POINT CLO LTD-SERIES 13-8A CLASS CR	1	7,550,000	7,377,671
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,850,000	5,814,028	12/31/2012	12/31/2042	Interest Rate Swap			64131Q-AC-4	NEUBERGER BERMAN LOAN AD-SERIES 2017-26A CLASS B	1	5,850,000	5,814,028
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	9,900,000	15,658,948	12/31/2012	12/31/2042	Interest Rate Swap		5,841,059	67707C-AE-8	Oak Hill Credit Partners-OAKC 2014-10RA A2A	1	9,900,000	9,817,889
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	24,895,700	12/31/2012	12/31/2042	Interest Rate Swap			67104L-AF-4	CHA Loan Funding 2013-2 -OHALF 2013-2A BR	1	25,000,000	24,895,700
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,841,261	12/31/2012	12/31/2042	Interest Rate Swap			38137P-AU-4	Goldentree Loan Opportun-SERIES 2015-10A CLASS BR	1	13,850,000	13,841,261
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,000,000	2,000,000	12/31/2012	12/31/2042	Interest Rate Swap			94184B-DE-9	Waters Corporation Gtd Senior Note Series H	2	2,000,000	2,000,000
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,800,000	3,618,740	12/31/2012	12/31/2042	Interest Rate Swap			74988L-AJ-3	ALM XIV Ltd-SERIES 14-14A CLASS BR2	1	3,800,000	3,618,740
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	25,000,000	30,841,059	12/31/2012	12/31/2042	Interest Rate Swap		5,841,059	50079E-MO-4	KREF Lending VII 2018-3 Term Loan	1	25,000,000	25,000,000
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,833,785	12/31/2012	12/31/2042	Interest Rate Swap			48250W-AJ-4	KKR CLO 14 Ltd-KKR 14 BR	1	15,000,000	14,833,785
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,955,345	12/31/2012	12/31/2042	Interest Rate Swap			87248K-AS-3	TICOP CLO VI 2016-5 LTD-TICOP 2016-5A A2R	1	5,000,000	4,955,345
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,350,000	4,351,984	12/31/2012	12/31/2042	Interest Rate Swap			020053-AS-3	ALM LOAN FUNDING-SERIES 13-8A CLASS A1R	1	4,350,000	4,351,984
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,019,910	992,178	12/31/2012	12/31/2042	Interest Rate Swap			63939F-AC-4	Navient Student Loan Tru-SERIES 15-1 CLASS B	1	1,019,910	992,178
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,800,000	7,809,188	12/31/2012	12/31/2042	Interest Rate Swap			05875J-AB-5	Ballyrock CLO 2019-1 Ltd-BALLY 2019-1A A2	1	7,800,000	7,809,188
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,967,044	12/31/2012	12/31/2042	Interest Rate Swap			28622J-AB-3	ARROWMARK COLORADO HOLDI-SERIES 17-7A CLASS B	1	4,000,000	3,967,044
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	8,800,000	14,563,337	12/31/2012	12/31/2042	Interest Rate Swap		5,841,059	38137P-AS-9	Goldentree Loan Opportun-SERIES 2015-10A CLASS AJR	1	8,800,000	8,722,278
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,400,000	7,315,914	12/31/2012	12/31/2042	Interest Rate Swap			92916M-AC-5	VOYA CLO LTD-VOYA 2017-1A B	1	7,400,000	7,315,914
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,450,000	5,457,625	12/31/2012	12/31/2042	Interest Rate Swap			55819M-AE-6	Madison Park Funding Ltd-MDPK 2019-33A B	1	5,450,000	5,457,625
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,295,723	12/31/2012	12/31/2042	Interest Rate Swap			55819T-AU-5	Madison Park Funding XX -SERIES 2016-20A CLASS CR	1	7,500,000	7,295,723
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,745,752	12/31/2012	12/31/2042	Interest Rate Swap			03328Y-AE-4	Anchorage Capital CLO Lt-ANCHC 2018-1RA B	1	13,900,000	13,745,752
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,455,002	7,451,074	12/31/2012	12/31/2042	Interest Rate Swap			64034C-AB-5	Wenet Student Loan Tru-NSLT 2019-1A B	1	7,455,002	7,451,074
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	9,952,257	15,746,999	12/31/2012	12/31/2042	Interest Rate Swap		5,841,059	46616K-AE-4	JFIN CLO 2013 LTD SR SECD DEF NT CL B	1	9,952,257	9,905,940
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,853,584	12/31/2012	12/31/2042	Interest Rate Swap			83608G-AQ-9	Sound Point CLO II Ltd-SNDPT 2013-1A A2R	1	8,000,000	7,853,584
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,753,745	12/31/2012	12/31/2042	Interest Rate Swap			05682V-AC-9	Bain Capital Credit CLO -SERIES 18-2A CLASS A2	1	15,000,000	14,753,745
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,000,220	12/31/2012	12/31/2042	Interest Rate Swap			50188Q-AE-1	LGM XIX LTD PARTNERSHIP DEF MEZZ NT CL C	1	10,000,000	10,000,220
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,300,000	8,301,610	12/31/2012	12/31/2042	Interest Rate Swap			00900P-AE-5	AIMCO CLO Series 2018-B-SERIES 18-BA CLASS B	1	8,300,000	8,301,610

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,100,000	1,093,253	12/31/2012	12/31/2042	Interest Rate Swap			08179M-AC-3	Benefit Street Partners -BSP 2018-15A A2A	1	1,100,000	1,093,253
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,000,000	15,852,269	12/31/2012	12/31/2042	Interest Rate Swap	5,841,059		87248W-AC-2	TIOP CLO VIII LTD-SERIES 2017-8A CLASS A2	1	10,000,000	10,011,210
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,430,000	3,317,506	12/31/2012	12/31/2042	Interest Rate Swap			674000-AS-3	OAKTREE CLO LTD-SERIES 14-1A CLASS BR	1	3,430,000	3,317,506
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,888,949	12/31/2012	12/31/2042	Interest Rate Swap			48251F-AB-7	KKR FINANCIAL CLO LTD-SERIES 17 CLASS B	1	5,900,000	5,888,949
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,000,000	11,874,684	12/31/2012	12/31/2042	Interest Rate Swap			92917J-AE-7	VOYA CLO 2018-2 Ltd-VOYA 2018-2A B1	1	12,000,000	11,874,684
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,650,000	22,468,800	12/31/2012	12/31/2042	Interest Rate Swap			14315C-ZZ-0	Carlyle US CLO 2017-4 Ri Term Loan	1	22,650,000	22,468,800
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	7,400,000	14,730,485	04/09/2013	04/09/2043	Interest Rate Swap	7,320,214		55954H-AE-2	Magnetite CLO Ltd-SERIES 19-22A CLASS B	1	7,400,000	7,410,271
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,600,000	5,535,538	04/09/2013	04/09/2043	Interest Rate Swap			12550Y-AG-9	CIFC FUNDING LTD-CIFC 2017-2A C	1	5,600,000	5,535,538
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,280,000	4,277,526	04/09/2013	04/09/2043	Interest Rate Swap			09629C-AE-5	BLUEMOUNTAIN CLO LTD-SERIES 17-1A CLASS B	1	4,280,000	4,277,526
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,250,276	04/09/2013	04/09/2043	Interest Rate Swap			00163K-AS-7	ALM LOAN FUNDING-ALM 2013-TRA A2R	1	4,250,000	4,250,276
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,000,000	5,981,556	04/09/2013	04/09/2043	Interest Rate Swap			81883A-AC-3	Shackleton 2015-VII-R CL-SERIES 2015-7RA CLASS B	1	6,000,000	5,981,556
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,473,068	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	7,473,068
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,100,000	6,027,831	04/09/2013	04/09/2043	Interest Rate Swap			94951M-AC-7	WELLFLEET CLO 2017-2 LTD-SERIES 17-2A CLASS A2	1	6,100,000	6,027,831
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,302,803	04/09/2013	04/09/2043	Interest Rate Swap			64130H-AE-1	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A C	1	4,330,000	4,302,803
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,560,651	04/09/2013	04/09/2043	Interest Rate Swap			64129J-AQ-3	NEUBERGER BERMAN CLO LTD-NEUB 2013-14A A1R	1	13,560,000	13,560,651
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	29,417,032	36,164,717	04/09/2013	04/09/2043	Interest Rate Swap	7,985,687		784170-ZZ-8	SFR FTTH SAS Term Loan	3	29,417,032	28,179,030
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,500,000	18,148,963	04/09/2013	04/09/2043	Interest Rate Swap			50188G-AX-1	LCM XVIII LP-LCM 18A A2R	1	18,500,000	18,148,963
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,800,000	12,801,152	04/09/2013	04/09/2043	Interest Rate Swap			67102Q-AK-4	QHA CREDIT PARTNERS LTD-SERIES 2012-7A CLASS B1R	1	12,800,000	12,801,152
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,000,000	1,977,604	04/09/2013	04/09/2043	Interest Rate Swap			62848F-AC-6	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	2,000,000	1,977,604
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	26,000,000	33,114,581	04/09/2013	04/09/2043	Interest Rate Swap	7,363,401		83609Y-AC-0	Sounds Point CLO IV-R LT-SERIES 13-3RA CLASS A	1	26,000,000	25,751,180
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,823,736	4,666,975	04/09/2013	04/09/2043	Interest Rate Swap			78442G-QA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	4,823,736	4,666,975
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,775,000	10,695,060	04/09/2013	04/09/2043	Interest Rate Swap			74982L-AQ-3	RACE POINT CLO LTD-SERIES 13-8A CLASS BR	1	10,775,000	10,695,060
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,350,000	15,205,710	04/09/2013	04/09/2043	Interest Rate Swap			14315J-RR-2	Carlyle US CLO 2013-4 Re Term Loan	1	15,350,000	15,205,710
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	4,450,000	11,813,610	04/09/2013	04/09/2043	Interest Rate Swap	7,363,401		55820R-AG-7	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS C	2	4,450,000	4,450,209
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,950,000	1,950,010	04/09/2013	04/09/2043	Interest Rate Swap			55954K-AE-5	MAGNETITE CLO LTD-SERIES 2017-19A CLASS C	1	1,950,000	1,950,010
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,850,000	22,815,497	04/09/2013	04/09/2043	Interest Rate Swap			14311C-RR-1	Carlyle US CLO 2017-1 Ri Term Loan	1	22,850,000	22,815,497
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,960,250	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	9,960,250
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,400,000	6,376,205	04/09/2013	04/09/2043	Interest Rate Swap			67112R-AG-9	QHA Credit Funding 3 LTD-OAKC 2019-3A B1	1	6,400,000	6,376,205
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,800,000	4,776,235	04/09/2013	04/09/2043	Interest Rate Swap			09627F-AE-0	BlueMountain CLO Ltd-SERIES 2019-25A CLASS B	1	4,800,000	4,776,235
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,300,000	3,304,267	04/09/2013	04/09/2043	Interest Rate Swap			06761C-AC-3	Babson CLO Ltd 2016-11-BABSON 2016-2A BR	1	3,300,000	3,304,267
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	995,590	04/09/2013	04/09/2043	Interest Rate Swap			89852T-AN-8	Tryon Park CLO Ltd-TPCLO 2013-1A A1JR	1	1,000,000	995,590

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	999,426	04/09/2013	04/09/2043	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANYC 2012-1RA B	1	1,000,000	999,426
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	30,000,000	37,166,235	04/09/2013	04/09/2043	Interest Rate Swap		7,166,235	50079B-MM-8	KREF Lending VII 2018-1 Term Loan - BENEFIT STREET PARTNERS -BSP 2017-	1	30,000,000	30,000,000
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,968,065	04/09/2013	04/09/2043	Interest Rate Swap			08179C-AE-1	11A A2A BALLYROCK CLO 2018-1 LTD-SERIES	1	15,000,000	14,968,065
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,790,037	04/09/2013	04/09/2043	Interest Rate Swap			05875H-AC-7	2018-1A CLASS A2 MYERS PARK CLO LTD-MYERS 2018-1A A2	1	13,900,000	13,790,037
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	988,802	04/09/2013	04/09/2043	Interest Rate Swap			62848F-AC-6	Marble Point CLO XI Ltd-MP11 2017-2A A	1	1,000,000	988,802
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	21,900,000	29,529,853	04/09/2013	04/09/2043	Interest Rate Swap		7,817,711	56607F-AA-3	NORTHSTAR EDUCATION FINA-SERIES 04-2 CLASS B	1	21,900,000	21,712,142
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,306,371	17,530,093	04/09/2013	04/09/2043	Interest Rate Swap			66704J-BD-9	NORTHSTAR EDUCATION FINA-SERIES 05-1 CLASS B	1	19,306,371	17,530,093
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,751,920	16,135,392	04/09/2013	04/09/2043	Interest Rate Swap			66704J-BK-3	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	16,751,920	16,135,392
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,500,000	3,459,414	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	3,459,414
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,048,720	04/09/2013	04/09/2043	Interest Rate Swap			22615E-AE-0	MYERS PARK CLO LTD-MYERS 2018-1A A2	1	3,200,000	3,048,720
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	988,802	04/09/2013	04/09/2043	Interest Rate Swap			62848F-AC-6	Alllegro CLO VII Ltd-ALLEG 2018-1A A	1	1,000,000	988,802
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	34,500,000	40,732,156	04/09/2013	04/09/2043	Interest Rate Swap		6,523,301	01750C-AA-1	KKR CLO 14 Ltd-KKR 14 AR	1	34,500,000	34,208,855
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	6,964,307	04/09/2013	04/09/2043	Interest Rate Swap			48250W-AG-0	Waters Corporation Gtd Senior Note Series H	2	7,000,000	6,964,307
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,100,000	7,100,000	04/09/2013	04/09/2043	Interest Rate Swap			941848-D8-9	Carlyle Global Market St-CGMS 2014-2RA A2	1	7,100,000	7,100,000
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,912,775	04/09/2013	04/09/2043	Interest Rate Swap			14314L-AE-5	CVP CASCADE CLO LTD-CVPC 2013-CLO1 A1R	1	5,000,000	4,912,775
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	12,281,032	18,811,788	04/09/2013	04/09/2043	Interest Rate Swap		6,523,301	126612-AJ-9	DRYDEN 64 CLO LTD-DRSLF 2018-64A A	1	12,281,032	12,288,487
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,850,000	22,622,711	04/09/2013	04/09/2043	Interest Rate Swap			26251L-AC-8	Babson CLO Ltd 2016-II-BABSN 2016-2A BR	1	22,850,000	22,622,711
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,400,000	3,404,396	04/09/2013	04/09/2043	Interest Rate Swap			06761C-AC-3	Neuberger Berman CLO Ltd-NEUB 2019-32A B	1	3,400,000	3,404,396
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,509,510	04/09/2013	04/09/2043	Interest Rate Swap			64132D-AC-2	MASSMUTUAL ASSET FIN LLC SR SECD REV NT	3	7,500,000	7,509,510
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,104,188	04/09/2013	04/09/2043	Interest Rate Swap			57542Z-AA-7	VOYA CLO LTD-SERIES 2017-3A CLASS A1B	1	4,000,000	4,104,188
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	6,800,000	24,492,339	03/05/2014	03/05/2034	Interest Rate Swap		17,774,843	92915Q-AE-3	THL CREDIT WIND RIVER 20-SERIES 2017-3A CLASS B	1	6,800,000	6,717,496
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,780,000	6,776,142	03/05/2014	03/05/2034	Interest Rate Swap			88434G-AC-9	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS BR	1	6,780,000	6,776,142
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,920,000	4,886,662	03/05/2014	03/05/2034	Interest Rate Swap			48249V-AS-0	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS AR	1	4,920,000	4,886,662
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,100,000	21,101,836	03/05/2014	03/05/2034	Interest Rate Swap			55818Y-BA-8	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A1R	1	21,100,000	21,101,836
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,015,000	21,001,361	03/05/2014	03/05/2034	Interest Rate Swap			48249V-AN-1	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS A	1	21,015,000	21,001,361
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,800,000	20,799,854	03/05/2014	03/05/2034	Interest Rate Swap			22616C-AA-1	KKR CLO 14 Ltd-KKR 14 AR	1	20,800,000	20,799,854
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	6,964,307	03/05/2014	03/05/2034	Interest Rate Swap			48250W-AG-0	MADISON PARK FUNDING LTD-MDPK 2014-12A CR	1	7,000,000	6,964,307
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,200,000	12,231,854	03/05/2014	03/05/2034	Interest Rate Swap			55818P-AS-9	FORT BENNING FAIM-UNSECURED	1	12,200,000	12,231,854
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	20,456,838	39,700,770	03/05/2014	03/05/2034	Interest Rate Swap		17,800,020	346845-AC-4	Bain Capital Credit CLO -BCC 2019-2A B	1	20,456,838	21,900,750
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,012,840	03/05/2014	03/05/2034	Interest Rate Swap			05682L-AC-1	Goldentree Loan Managem-GLM 2019-4A B	1	15,000,000	15,012,840
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,011,460	03/05/2014	03/05/2034	Interest Rate Swap			38137Y-AG-6		1	15,000,000	15,011,460

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,200,000	4,205,720	03/05/2014	03/05/2034	Interest Rate Swap			05682L-AE-7	Bain Capital Credit CLO -BCC 2019-2A C	1	4,200,000	4,205,720
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,850,000	10,844,293	03/05/2014	03/05/2034	Interest Rate Swap			883310-AC-8	THAYER PARK CLO LTD.-THAYR 2017-1A A2	1	10,850,000	10,844,293
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,001,065	03/05/2014	03/05/2034	Interest Rate Swap			87250C-AA-5	TICP CLO Ltd	1	15,000,000	15,001,065
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,001,260	03/05/2014	03/05/2034	Interest Rate Swap			44932V-AA-0	ICG US CLO Ltd-SERIES 19-1A CLASS A1A	1	20,000,000	20,001,260
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	2,800,000	38,278,675	05/19/2014	05/19/2044	Interest Rate Swap		35,469,413	48661Y-AA-2	Kayne CLO 4 Ltd-SERIES 19-4A CLASS B1	1	2,800,000	2,809,262
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		45,000,000	44,875,575	05/19/2014	05/19/2044	Interest Rate Swap			13876J-AC-6	Canyon Capital CLO Ltd-CANYC 2012-18A A	1	45,000,000	44,875,575
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,100,000	8,922,532	05/19/2014	05/19/2044	Interest Rate Swap			40436V-AC-5	HIGHBRIDGE LOAN MANAGEME-HLM 11A-17 C	1	9,100,000	8,922,532
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,950,000	8,835,198	05/19/2014	05/19/2044	Interest Rate Swap			50184N-AP-7	LDM LTD PARTNERSHIP-SERIES 15A CLASS CR	1	8,950,000	8,835,198
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,000,000	6,003,684	05/19/2014	05/19/2044	Interest Rate Swap			06761K-AG-6	Babson CLO Ltd/Cayman Is-SERIES 19-3A CLASS C	1	6,000,000	6,003,684
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,100,000	12,954,223	05/19/2014	05/19/2044	Interest Rate Swap			75884B-AC-2	Regatta X Funding Ltd-SERIES 2017-3A CLASS B	1	13,100,000	12,954,223
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		44,897,891	44,628,750	05/19/2014	05/19/2044	Interest Rate Swap			42086P-AC-7	Kingsland Ltd-SERIES 18-8A CLASS A	1	44,897,891	44,628,750
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,900,000	22,861,070	05/19/2014	05/19/2044	Interest Rate Swap			14315J-ZZ-5	Carlyle US CLO 2017-2 Ri Term Loan	1	22,900,000	22,861,070
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	38,690,368	05/19/2014	05/19/2034	Interest Rate Swap		18,687,708	67105V-AW-4	OHA CREDIT PARTNERS LTD-OAKC 2013-9A B1R	1	20,000,000	20,002,660
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	49,688,850	05/19/2014	05/19/2034	Interest Rate Swap			77342J-AA-1	Rockford Tower CLO 2018--SERIES 18-1A CLASS A	1	50,000,000	49,688,850
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	6,915,902	05/19/2014	05/19/2034	Interest Rate Swap			64130P-AE-3	Neuberger Berman CLO Ltd-NEUB 2018-28A B	1	7,000,000	6,915,902
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,001,280	05/19/2014	05/19/2034	Interest Rate Swap			13080B-AB-7	SYMPHONY CLO LTD-SERIES 13-12A CLASS B1R	1	20,000,000	20,001,280
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,900,000	19,840,738	05/19/2014	05/19/2034	Interest Rate Swap			39808P-AL-0	Greywolf CLO V Ltd-GIWOLF 2015-1A A1R	1	19,900,000	19,840,738
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,000,000	8,930,502	05/19/2014	05/19/2034	Interest Rate Swap			04017Q-AE-5	ARES CLO Ltd-SERIES 18-28RA CLASS B	1	9,000,000	8,930,502
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	28,834,423	64,419,138	05/19/2014	05/19/2044	Interest Rate Swap		35,757,563	42086P-AC-7	Kingsland Ltd-SERIES 18-8A CLASS A	1	28,834,423	28,661,575
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,049,967	17,268,422	05/19/2014	05/19/2044	Interest Rate Swap			83715R-AG-7	SOUTH CAROLINA STUDENT L-SERIES 2014-1 CLASS B	1	17,049,967	17,268,422
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,974,708	05/19/2014	05/19/2044	Interest Rate Swap			17181T-AA-9	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	4,000,000	3,974,708
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,901,211	5,829,272	05/19/2014	05/19/2044	Interest Rate Swap			38021B-AG-5	GOAL CAPITAL FUNDING TRU-SERIES 2006-1 CLASS B	1	5,901,211	5,829,272
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,176,786	4,015,007	05/19/2014	05/19/2044	Interest Rate Swap			42982T-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	4,176,786	4,015,007
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,874,450	05/19/2014	05/19/2044	Interest Rate Swap			69703P-AC-3	Palmer Square CLO 2018-1-PLMRS 2018-1A A2	1	10,000,000	9,874,450
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,050,000	8,948,341	05/19/2014	05/19/2044	Interest Rate Swap			06760E-AE-6	Babson CLO Ltd 2013-I-SERIES 2013-1A CLASS CR	1	9,050,000	8,948,341
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,500,000	9,454,803	05/19/2014	05/19/2044	Interest Rate Swap			63940D-AD-4	Navient Student Loan Tru-SERIES 18-1A CLASS B	1	9,500,000	9,454,803
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,750,000	7,616,282	05/19/2014	05/19/2044	Interest Rate Swap			64131T-AG-9	Neuberger Berman CLO XVI-SERIES 17-16SA CLASS C	1	7,750,000	7,616,282
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,292,393	05/19/2014	05/19/2044	Interest Rate Swap			03330A-AE-2	Anchorage Capital CLO 3-ANCHC 2014-3RA C	1	7,500,000	7,292,393
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,889,016	05/19/2014	05/19/2044	Interest Rate Swap			38137H-BW-7	Goldentree Loan Opportun-SERIES 2015-11A CLASS BR2	1	8,000,000	7,889,016
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,953,648	05/19/2014	05/19/2044	Interest Rate Swap			39808P-AN-6	Greywolf CLO V Ltd-GIWOLF 2015-1A A2R	1	8,000,000	7,953,648
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,050,000	7,737,910	05/19/2014	05/19/2044	Interest Rate Swap			06760G-AC-5	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS B	1	8,050,000	7,737,910

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,800,000	5,597,400	05/19/2014	05/19/2044	Interest Rate Swap			01749B-AC-3	Alllegro CLO VI Ltd-ALLEG 2017-2A C	1	5,800,000	5,597,400
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,000,000	15,856,448	05/19/2014	05/19/2044	Interest Rate Swap			06760X-AC-8	BARINGS CLO LTD 2018-IV-SERIES 18-4A CLASS A2	1	16,000,000	15,856,448
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,700,000	3,704,843	05/19/2014	05/19/2044	Interest Rate Swap			05875J-AC-3	Ballyrock CLO 2019-1 Ltd	1	3,700,000	3,704,843
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	8,650,000	44,280,061	05/19/2014	05/19/2044	Interest Rate Swap		35,705,844	55818R-BC-9	Madison Park Funding XIV-MDPK 2014-14A CR	1	8,650,000	8,574,217
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,239,847	2,152,788	05/19/2014	05/19/2044	Interest Rate Swap			784424-AE-3	SLC STUDENT LOAN TRUST 2-SERIES 07-1 CLASS B	1	2,239,847	2,152,788
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,400,000	10,419,885	05/19/2014	05/19/2044	Interest Rate Swap			64132J-AG-0	NEUB 2019-31A B	1	10,400,000	10,419,885
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,000,000	3,003,096	05/19/2014	05/19/2044	Interest Rate Swap			27830X-AG-1	EATON 2019-1A C	1	3,000,000	3,003,096
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,400,000	12,417,149	05/19/2014	05/19/2044	Interest Rate Swap			38138D-AG-1	Goldentree Loan Managem-GLM 2019-5A B	1	12,400,000	12,417,149
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,000,000	15,907,904	05/19/2014	05/19/2044	Interest Rate Swap			69688A-AA-9	Palmer Square CLO 2013-2-SERIES 13-2A CLASS AARR	1	16,000,000	15,907,904
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,851,136	05/19/2014	05/19/2044	Interest Rate Swap			11014P-AB-1	BRISTOL PARK CLO LTD-SERIES 2016-1A CLASS B	1	13,850,000	13,851,136
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,010,480	05/19/2014	05/19/2044	Interest Rate Swap			13887W-AC-4	CANYC 2019-2A B	1	8,000,000	8,010,480
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,948,846	1,967,684	05/19/2014	05/19/2044	Interest Rate Swap			23340L-AA-2	DRB PRIME STUDENT LOAN T-SERIES 2015-B CLASS A1	1	1,948,846	1,967,684
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		67,094,223	68,167,731	05/19/2014	05/19/2044	Interest Rate Swap			22101F-AA-6	CORVIAS CAMPUS LIVING - HU, LLC - Sr Secd Note	2	67,094,223	68,167,731
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,500,000	6,510,134	05/19/2014	05/19/2044	Interest Rate Swap			13887W-AE-0	CANYC 2019-2A C	1	6,500,000	6,510,134
57629*BJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	133,500,000	167,317,417	05/19/2014	05/19/2044	Interest Rate Swap		35,351,198	858102-AX-4	Steele Creek CLO 2016-1 -SERIES 2016-1A CLASS AR	1	133,500,000	131,966,219
57629*BJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,969,850	05/19/2014	05/19/2044	Interest Rate Swap			04625A-AC-8	ASSURANT CLO I LTD-SERIES 17-1A CLASS B	1	10,000,000	9,969,850
57629*BJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	6,964,307	05/19/2014	05/19/2044	Interest Rate Swap			48250W-AG-0	KKR CLO 14 Ltd-KKR 14 AR	1	7,000,000	6,964,307
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	130,000,000	164,352,018	05/19/2014	05/19/2044	Interest Rate Swap		35,351,198	85816W-AC-8	Steele Creek CLO 2014-1 -SERIES 14-1RA CLASS A	1	130,000,000	129,000,820
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,001,455	05/19/2014	05/19/2044	Interest Rate Swap			88322U-AM-1	THACHER PARK CLO-THRPK 2014-1A BR Harbor Park CLO, Ltd-HAR-HARB 2018-1A B1	1	15,000,000	15,001,455
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,200,000	5,189,688	05/19/2014	05/19/2044	Interest Rate Swap			41154X-AG-0	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	5,200,000	5,189,688
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	5,000,000	40,378,690	05/19/2014	05/19/2044	Interest Rate Swap		35,410,305	17181T-AA-9	ATLAS SENIOR LOAN FUND L-SERIES 2017-8A CLASS B	1	5,000,000	4,968,385
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,300,000	25,273,384	05/19/2014	05/19/2044	Interest Rate Swap			04943A-AC-3	KREF Lending VII 2018-3 Term Loan Harbour Aircraft Investm Series 2017-1 C	1	25,300,000	25,273,384
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	25,000,000	05/19/2014	05/19/2044	Interest Rate Swap			500798-MO-4	OHA Loan Funding 2013-2 -OHALF	1	25,000,000	25,000,000
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,134,287	19,609,859	05/19/2014	05/19/2044	Interest Rate Swap			64301U-ZZ-0	Wellfleet CLO 2016-1 Ltd-WELF 2016-1A CR	1	19,134,287	19,609,859
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		79,100,000	78,720,162	05/19/2014	05/19/2044	Interest Rate Swap			67104L-AE-7	2013-2A AR	1	79,100,000	78,720,162
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,834,436	05/19/2014	05/19/2044	Interest Rate Swap			94949R-AW-7	LOM 30A B	1	4,000,000	3,834,436
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,203,651	05/19/2014	05/19/2044	Interest Rate Swap			50200Y-AG-3	Kingsland Ltd-SERIES 18-8A CLASS A	1	3,200,000	3,203,651
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	44,897,891	80,053,832	05/19/2014	05/19/2044	Interest Rate Swap		35,425,082	42086P-AC-7	EATON 2019-1A B	1	44,897,891	44,628,750
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,100,000	11,129,937	05/19/2014	05/19/2044	Interest Rate Swap			27830X-AE-6	Alllegro CLO Ltd-ALLEG 2019-1A B	1	11,100,000	11,129,937
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,700,000	2,707,101	05/19/2014	05/19/2044	Interest Rate Swap			01750F-AC-0	EGIS ASSET BACKED SECUR-SERIES 2005-4 CLASS M1	1	2,700,000	2,707,101
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,796,775	4,843,926	05/19/2014	05/19/2044	Interest Rate Swap			00764M-GG-6		1	4,796,775	4,843,926

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,294,396	3,171,924	05/19/2014	05/19/2044	Interest Rate Swap			247358-CC-6	EAIV Delta MSN 15181	1	3,294,396	3,171,924
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,028,410	05/19/2014	05/19/2044	Interest Rate Swap			67707C-AJ-7	Oak Hill Credit Partners-OAKC 2014-10RA B	1	15,000,000	15,028,410
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,525,341	05/19/2014	05/19/2044	Interest Rate Swap			64130H-AA-9	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A A	1	13,560,000	13,525,341
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,600,000	13,585,434	05/19/2014	05/19/2044	Interest Rate Swap			64130H-AC-5	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A B1	1	13,600,000	13,585,434
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,010,095	05/19/2014	05/19/2044	Interest Rate Swap			817176-AN-0	SENECA PARK CLO LTD-SPARK 2014-1A B1R	1	15,000,000	15,010,095
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,800,000	15,958,000	05/19/2014	05/19/2044	Interest Rate Swap			50512F-AE-2	LA Stadium Finance Co Sr Secured Series C	2	15,800,000	15,958,000
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,914,233	4,974,202	05/19/2014	05/19/2044	Interest Rate Swap			64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	4,914,233	4,974,202
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,400,000	5,404,045	05/19/2014	05/19/2044	Interest Rate Swap			48252U-AC-1	KKR Clo 25 Ltd	1	5,400,000	5,404,045
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	135,000,000	72,500,000	105,028,156	05/19/2014	05/19/2044	Interest Rate Swap		32,294,851	29001L-AA-9	ELMWOOD CLO II LTD NT CL A	1	72,500,000	72,733,305
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,800,000	23,813,614	05/19/2014	05/19/2044	Interest Rate Swap			42086V-AC-4	Hayfin Kingsland X Ltd-SERIES 2019-1A CLASS B1	1	23,800,000	23,813,614
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,600,000	7,607,782	05/19/2014	05/19/2044	Interest Rate Swap			00901A-AC-1	Aimco CDO	1	7,600,000	7,607,782
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,600,000	5,564,591	05/19/2014	05/19/2044	Interest Rate Swap			17181T-AA-9	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A1	1	5,600,000	5,564,591
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,700,000	26,964,066	05/19/2014	05/19/2044	Interest Rate Swap			38176D-AJ-8	Golub Capital Partners C-GOCAP 2015-26A A2R	1	27,700,000	26,964,066
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	85,000,000	17,759,093	30,726,599	05/09/2014	05/09/2034	Interest Rate Swap		13,874,295	77277L-B8-9	ROCKALL CLO BV Variable Funding Note - GBP	1	17,759,093	16,852,304
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,894,595	05/09/2014	05/09/2034	Interest Rate Swap			03765W-BC-1	Apollo Credit Funding IV-SERIES 4A CLASS A1BR	1	15,000,000	14,894,595
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,562,455	05/09/2014	05/09/2034	Interest Rate Swap			04016P-AC-2	ARES CLO LTD-SERIES 17-43A CLASS B	1	13,570,000	13,562,455
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,460,639	05/09/2014	05/09/2034	Interest Rate Swap			22616C-AC-7	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS B	1	13,570,000	13,460,639
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,529,561	05/09/2014	05/09/2034	Interest Rate Swap			77342K-AA-8	ROCKFORD TOWER CLO 2018-ROCKT 2018-2A A	1	13,570,000	13,529,561
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,727,246	05/09/2014	05/09/2034	Interest Rate Swap			05683L-AG-1	Bain Capital Credit CLO -SERIES 1A CLASS C	1	3,900,000	3,727,246
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,173,032	7,829,074	05/09/2014	05/09/2034	Interest Rate Swap			784170-ZZ-8	SFR FTTH SAS Term Loan	3	8,173,032	7,829,074
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	13,100,000	41,944,430	07/22/2014	07/22/2044	Interest Rate Swap		29,039,738	67707B-AB-6	OHA Credit Partners XV L-SERIES 17-15A CLASS B	1	13,100,000	12,904,692
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,300,000	13,266,950	07/22/2014	07/22/2044	Interest Rate Swap			75888F-AE-5	Regatta XIII Funding LLC-SERIES 18-2A CLASS A2	1	13,300,000	13,266,950
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,974,584	07/22/2014	07/22/2044	Interest Rate Swap			67115W-AG-5	OHA Credit Funding I LTD-SERIES 18-1A CLASS B	1	8,000,000	7,974,584
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,936,625	07/22/2014	07/22/2044	Interest Rate Swap			17180W-AC-9	CIFC Funding 2018-II Ltd-CIFC 2018-2A A2	1	15,000,000	14,936,625
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,424,346	07/22/2014	07/22/2044	Interest Rate Swap			03329A-AE-5	Anchorage Capital CLO Lt-SERIES 2014-SRA CLASS B	1	13,500,000	13,424,346
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,874,516	07/22/2014	07/22/2044	Interest Rate Swap			57542Z-AO-7	REVENUE NT MASSMUTUAL ASSET FIN LLC SR SECD	3	6,700,000	6,874,516
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		35,000,000	34,912,885	07/22/2014	07/22/2044	Interest Rate Swap			14315J-AL-3	CARLYLE GLOBAL MARKET ST-SERIES 17-2A CLASS A1B	1	35,000,000	34,912,885
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,812,597	07/22/2014	07/22/2044	Interest Rate Swap			40436X-AG-2	HIGHBRIDGE LOAN MANAGEMEN-SERIES 2014 CLASS BR	1	5,900,000	5,812,597
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,500,000	14,435,229	07/22/2014	07/22/2044	Interest Rate Swap			553205-AC-9	MP CLO III LTD-MIP3 2013-1A AR	1	14,500,000	14,435,229
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	48,947,561	07/22/2014	07/22/2044	Interest Rate Swap		29,052,121	36248M-AJ-6	GT Loan Financing I Ltd -SERIES 2013-1A CLASS AR	1	20,000,000	19,895,440
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,896,125	07/22/2014	07/22/2044	Interest Rate Swap			48251M-AS-5	KKR CLO 15 Ltd-KKR 15 A2R	1	15,000,000	14,896,125

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,590,000	19,594,192	07/22/2014	07/22/2044	Interest Rate Swap			88433R-AC-6	WIND RIVER CLO LTD-SERIES 17-2A CLASS A	1	19,590,000	19,594,192
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,500,000	19,499,805	07/22/2014	07/22/2044	Interest Rate Swap			04016P-AA-6	ARES CLO LTD-ARES 2017-43A A CEDAR FUNDING LTD-SERIES 13-1A	1	19,500,000	19,499,805
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,483,825	07/22/2014	07/22/2044	Interest Rate Swap			15032T-AW-6	CLASS BR CIFC FUNDING LTD-SERIES 17-4A CLASS A2	1	8,500,000	8,483,825
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,953,920	07/22/2014	07/22/2044	Interest Rate Swap			12551J-AE-6	BABSON CLO LTD-SERIES 17-1A CLASS C	1	8,000,000	7,953,920
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,100,000	07/22/2014	07/22/2044	Interest Rate Swap			06760B-AJ-1	MARBLE POINT CLO X LTD-SERIES 2017-1A CLASS B	1	5,100,000	5,100,000
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,085,562	07/22/2014	07/22/2044	Interest Rate Swap			566061-AE-7	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS CR	1	5,100,000	5,085,562
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,400,000	3,391,962	04/09/2013	04/09/2043	Interest Rate Swap			55818Y-BG-5	OH4 CREDIT PARTNERS LTD-SERIES 2012-7A CLASS CR	1	3,400,000	3,391,962
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,975,000	2,975,024	04/09/2013	04/09/2043	Interest Rate Swap			67102Q-AP-3	Alllegro CLO Ltd-ALLEG 2019-1A B	1	2,975,000	2,975,024
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,600,000	5,614,728	04/09/2013	04/09/2043	Interest Rate Swap			01750F-AC-0	KREF Lending VII 2018-5 Term Loan Harbor Park CLO, Ltd-HARB 2018-1A C	1	5,600,000	5,614,728
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,000,000	04/09/2013	04/09/2043	Interest Rate Swap			500798-MQ-9	Steele Creek Clo 2018-2 -SERIES 2018-2A CLASS A	1	20,000,000	20,000,000
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	3,949,784	04/09/2013	04/09/2043	Interest Rate Swap			41154X-AL-9	Carlyle US CLO 2013-1 Re Term Loan	1	4,000,000	3,949,784
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	17,000,000	46,054,076	07/22/2014	07/22/2044	Interest Rate Swap		29,052,121	04014W-AL-9	MADISON PARK FUNDING LTD-MDPK 2014-12A BTR	1	17,000,000	17,001,955
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,969,059	15,901,856	07/22/2014	07/22/2044	Interest Rate Swap			85816L-AA-6	MASSMUTUAL ASSET FIN LLC SR SEC0 REV NT	1	15,969,059	15,901,856
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,550,000	22,516,175	07/22/2014	07/22/2044	Interest Rate Swap			14315J-SS-9	Goldentree Loan Managem-GLM 2017-1A C	1	22,550,000	22,516,175
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	17,003,332	07/22/2014	07/22/2044	Interest Rate Swap			55818P-AN-0	LON LTD PARTNERSHIP-SERIES 15A CLASS BR	1	17,000,000	17,003,332
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,900,000	8,105,772	07/22/2014	07/22/2044	Interest Rate Swap			57542Z-AO-7	MOSAIC CO/THE-SENIOR UNSECURED NOTE	2	7,900,000	8,105,772
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,900,000	6,833,008	07/22/2014	07/22/2044	Interest Rate Swap			38136F-AL-7	RRPF Engine Leasing Ltd Senior Secured	2	6,900,000	6,833,008
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,650,000	5,628,564	07/22/2014	07/22/2044	Interest Rate Swap			50184N-AN-2	Ballyrock CDO Ltd	1	5,650,000	5,628,564
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,024,798	9,146,465	07/22/2014	07/22/2044	Interest Rate Swap			61945C-AA-1	ARES CLO Ltd-SERIES 18-28RA CLASS B	1	9,024,798	9,146,465
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,000,000	22,661,233	07/22/2014	07/22/2044	Interest Rate Swap			67332F-AG-8	REGATTA VIII FUNDING LTD-SERIES 2017-1A CLASS B	1	23,000,000	22,661,233
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,028,720	07/22/2014	07/22/2044	Interest Rate Swap			05875M-AE-2	AIMCO-AIMCO 2017-AA A	1	10,000,000	10,028,720
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	7,000,000	35,948,535	07/22/2014	07/22/2044	Interest Rate Swap		29,002,589	04017Q-AE-5	ARES CLO Ltd-SERIES 14-31RA CLASS A2	1	7,000,000	6,945,946
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,600,000	7,578,196	07/22/2014	07/22/2044	Interest Rate Swap			75888K-AC-8	DRYDEN SENIOR LOAN FUND-SERIES 17-49A CLASS B	1	7,600,000	7,578,196
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,460,000	7,460,910	07/22/2014	07/22/2044	Interest Rate Swap			00900C-AA-2	Kingsland Ltd-SERIES 18-8A CLASS A	1	7,460,000	7,460,910
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		28,400,000	27,970,677	07/22/2014	07/22/2044	Interest Rate Swap			04017T-AC-3	BAIN CAPITAL CREDIT CLO -SERIES 2017-2A CLASS AR	1	28,400,000	27,970,677
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,800,000	11,760,777	07/22/2014	07/22/2044	Interest Rate Swap			26244Q-AB-9	Wind River CLO Ltd-SERIES 18-3A CLASS B	1	11,800,000	11,760,777
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		41,904,698	41,653,500	07/22/2014	07/22/2044	Interest Rate Swap			42086P-AC-7	EAIV Delta MSN 15166	1	41,904,698	41,653,500
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,500,000	12,490,163	07/22/2014	07/22/2044	Interest Rate Swap			05683H-AC-9	STATE BOARD OF REGENTS 0-SERIES	1	12,500,000	12,490,163
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,500,000	9,487,451	07/22/2014	07/22/2044	Interest Rate Swap			88432U-AE-6	USBR 2017-1 CLASS B	2	9,500,000	9,487,451
57629*BI10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	3,230,959	32,128,619	07/22/2014	07/22/2044	Interest Rate Swap		29,014,972	247358-XT-6	STATE BOARD OF REGENTS 0-SERIES	1	3,230,959	3,113,647
57629*BI10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,991,180	6,903,935	07/22/2014	07/22/2044	Interest Rate Swap			91754R-ZG-5	USBR 2017-1 CLASS B	2	6,991,180	6,903,935

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,918,607	4,751,701	07/22/2014	07/22/2044	Interest Rate Swap			78443K-AK-2	SLM STUDENT LOAN TRUST 2-SERIES 06-9 CLASS B	1	4,918,607	4,751,701
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,200,000	15,161,924	07/22/2014	07/22/2044	Interest Rate Swap			87248K-AL-8	TICOP CLO VI 2016-5 Ltd-TICOP 2016-5A BR	1	15,200,000	15,161,924
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,224,952	4,019,941	07/22/2014	07/22/2044	Interest Rate Swap			57643L-FG-6	MASTR ASSET BACKED SECUR-SERIES 2004-OPT2 CLASS A1	1	4,224,952	4,019,941
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,295,000	5,263,977	07/22/2014	07/22/2044	Interest Rate Swap			037666-AG-7	APIDOS CLO-SERIES 17-26A CLASS B	1	5,295,000	5,263,977
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,967,208	12,001,020	07/22/2014	07/22/2044	Interest Rate Swap			55819X-AC-6	Madison Park Funding XXI-MDPK 2016-22A B	1	11,967,208	12,001,020
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,300,000	16,299,707	07/22/2014	07/22/2044	Interest Rate Swap			33882G-AA-6	FLATIRON CLO LTD-FLAT 2017-1A A CEDAR FUNDING LTD-SERIES 14-4A CLASS BR	1	16,300,000	16,299,707
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,280,000	16,139,732	07/22/2014	07/22/2044	Interest Rate Swap			150323-AQ-6	ATLAS SENIOR LOAN FUND L-SERIES 17-8A CLASS C	1	16,280,000	16,139,732
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,410,000	9,400,157	07/22/2014	07/22/2044	Interest Rate Swap			04943A-AE-9	Highbridge Loan Managem-SERIES 4A-2014 CLASS A2R	1	9,410,000	9,400,157
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,900,000	11,811,178	07/22/2014	07/22/2044	Interest Rate Swap			44330G-AE-3	TICOP CLO XIII Ltd-TICOP 2019-13A B	1	11,900,000	11,811,178
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,003,592	07/22/2014	07/22/2044	Interest Rate Swap			87250A-AC-5	PHEAA Student Loan Trust 2014 MYERS PARK CLO LTD-MYERS 2018-1A A2	1	8,000,000	8,003,592
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,139,937	5,120,797	07/22/2014	07/22/2044	Interest Rate Swap			69340J-AB-8	AIMCO CLO Series 2018-B-SERIES 18-8A CLASS C	1	5,139,937	5,120,797
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	988,802	07/22/2014	07/22/2044	Interest Rate Swap			62848F-AC-6	VOYA CLO 2019-4 Ltd-VOYA 2019-4A B FLOATING COUPO	1	1,000,000	988,802
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,965,045	07/22/2014	07/22/2044	Interest Rate Swap			00900P-AG-0	SLM STUDENT LOAN TRUST 2-SERIES 06-7 CLASS B	1	5,000,000	4,965,045
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,750,000	11,791,689	07/22/2014	07/22/2044	Interest Rate Swap			92918B-AE-3	VOYA CLO 2017-4 LTD-SERIES 17-4A CLASS B	1	11,750,000	11,791,689
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,907,282	21,232,670	08/27/2014	08/27/2044	Interest Rate Swap		10,671,562	78443G-AJ-4	CARLYLE GLOBAL MARKET ST-CGMS 2017-1A A2	1	10,907,282	10,561,108
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,900,000	7,784,589	08/27/2014	08/27/2044	Interest Rate Swap			92916Q-AC-6	STEEL CREEK CLO LTD-SERIES 15-1A CLASS BR	1	7,900,000	7,784,589
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,845,350	08/27/2014	08/27/2044	Interest Rate Swap			14314B-AC-1	VOYA CLO LTD-VOYA 2014-2A A1R	1	15,000,000	14,845,350
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,560,000	8,511,730	08/27/2014	08/27/2044	Interest Rate Swap			85816B-CQ-1	CVP CASCADE CLO LTD-CVPC 2013-CLO1 A1R	1	8,560,000	8,511,730
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,050,000	9,027,800	08/27/2014	08/27/2044	Interest Rate Swap			92912V-AN-5	KREF Lending VII 2018-1 Term Loan	1	9,050,000	9,027,800
57629*CA7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	29,814,797	40,524,334	08/27/2014	08/27/2044	Interest Rate Swap		10,691,439	126612-AJ-9	Babson CLO Ltd/Cayman Is-SERIES 19-3A CLASS B	1	29,814,797	29,832,895
57629*CA7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	25,000,000	08/27/2014	08/27/2044	Interest Rate Swap			50079E-IM-8	Palmer Square CLO 2015-1-PLMRS 2015-1A A2R2	1	25,000,000	25,000,000
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	17,400,000	28,086,237	08/27/2014	08/27/2044	Interest Rate Swap		10,641,745	06761K-AE-1	COOP CLO Ltd-SERIES 18-15A CLASS A2	1	17,400,000	17,444,492
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,007,905	08/27/2014	08/27/2044	Interest Rate Swap			69689A-AW-0	Babson CLO Ltd 2016-II-BABSON 2016-2A BR	1	15,000,000	15,007,905
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,250,000	14,041,095	08/27/2014	08/27/2044	Interest Rate Swap			67112K-AB-5	Ballyrock CDO Ltd Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A1	1	14,250,000	14,041,095
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,300,000	3,304,267	08/27/2014	08/27/2044	Interest Rate Swap			06761C-AC-3	ALM XIV Ltd-SERIES 14-14A CLASS A1R2	1	3,300,000	3,304,267
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,920,326	08/27/2014	08/27/2044	Interest Rate Swap			05875M-AG-7	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS A1	1	5,900,000	5,920,326
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	22,449,945	32,985,662	08/27/2014	08/27/2044	Interest Rate Swap		10,606,959	94949J-AA-3	Kingsland VI Ltd-KING 2013-6A AR AUST & NZ BANKING GROUP-SUBORDINATED NOTE	1	22,449,945	22,378,703
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,900,000	15,764,993	08/27/2014	08/27/2044	Interest Rate Swap			74988L-AA-2		1	15,900,000	15,764,993
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,475,000	16,253,840	08/27/2014	08/27/2044	Interest Rate Swap			06760G-AA-9		1	16,475,000	16,253,840
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	100,000,000	131,233,543	09/08/2014	09/08/2044	Interest Rate Swap		31,911,243	42086Q-AA-9		1	100,000,000	99,322,300
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,465,000	28,977,750	09/08/2014	09/08/2044	Interest Rate Swap			Z22066-36-8		1	21,465,000	28,977,750

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,400,000	8,410,500	09/08/2014	09/08/2044	Interest Rate Swap			48252Y-AE-9	KKR CLO 23 Ltd-KKR 23 B Ares XXXVIII CLO Ltd-SERIES 2015-38A CLASS CR	1	8,400,000	8,410,500
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,750,000	2,652,826	09/08/2014	09/08/2044	Interest Rate Swap			04015U-AK-4	WIND RIVER CLO LTD-SERIES 17-2A CLASS C1	1	2,750,000	2,652,826
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,590,000	2,577,128	09/08/2014	09/08/2044	Interest Rate Swap			88433R-AG-7	AIMCO CLO Series 2015-A-SERIES 15-AA CLASS CR	1	2,590,000	2,577,128
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,448,125	09/08/2014	09/08/2044	Interest Rate Swap			00900L-AJ-3	Carlyle Global Market St-SERIES 14-3RA CLASS A1B	1	2,500,000	2,448,125
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,336,421	09/08/2014	09/08/2044	Interest Rate Swap			14315L-AC-8	KREF 2018-FL1 Ltd-KREF 2018-FL1 C	1	10,500,000	10,336,421
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,770,000	4,772,980	09/08/2014	09/08/2044	Interest Rate Swap			48275P-AG-6	Madison Park Funding XVI-MDPK 2015-18A BR	1	4,770,000	4,772,980
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	9,831,405	17,137,516	10/06/2014	10/06/2034	Interest Rate Swap		7,262,626	55819B-AN-0	Barings CLO Ltd 2018-I-SERIES 18-1A CLASS A2	1	9,831,405	9,874,890
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,100,000	19,782,199	10/06/2014	10/06/2034	Interest Rate Swap			06760G-AB-7	Rockford Tower CLO 2017-ROCKT 2017-3A A	1	20,100,000	19,782,199
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,100,000	20,065,448	10/06/2014	10/06/2034	Interest Rate Swap			77341D-AA-5	SENECA PARK CLO LTD-SPARK 2014-1A CR	1	20,100,000	20,065,448
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,001,080	10/06/2014	10/06/2034	Interest Rate Swap			817176-AS-9	Edline Student Loan Fund-ESLFT 2017-A A	1	5,000,000	5,001,080
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	34,509,659	54,750,254	10/06/2014	10/06/2044	Interest Rate Swap		20,723,592	28108R-AA-0	TCP DLF VIII 2018 CLO, LLC - Class A	1	34,509,659	34,026,662
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,754,098	4,727,000	10/06/2014	10/06/2044	Interest Rate Swap			87289B-AA-2	CBAM 2017-2 LTD-SERIES 17-2A CLASS B1	1	4,754,098	4,727,000
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,900,000	4,907,326	10/06/2014	10/06/2044	Interest Rate Swap			12481K-AC-2	SYMPHONY CLO LTD-SERIES 13-12A CLASS CR	1	4,900,000	4,907,326
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,950,000	2,950,401	10/06/2014	10/06/2044	Interest Rate Swap			13080B-AD-3	WELLFLEET CLO LTD-WELF 2017-1A A2	1	2,950,000	2,950,401
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,971,520	10/06/2014	10/06/2044	Interest Rate Swap			94950G-AC-1	Magnetite VIII Ltd-MAGNE 2014-8A BR2	1	20,000,000	19,971,520
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,925,555	10/06/2014	10/06/2044	Interest Rate Swap			55952Y-AR-8	THL Credit Wind River 20-SERIES 18-2A CLASS A2	1	15,000,000	14,925,555
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,400,000	4,364,188	10/06/2014	10/06/2044	Interest Rate Swap			88434H-AE-3	TICOP CLO X LTD-SERIES 18-10A CLASS C	1	4,400,000	4,364,188
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,600,000	3,512,945	10/06/2014	10/06/2044	Interest Rate Swap			87249C-AE-1	ARES L CLO Ltd-SERIES 19-53A CLASS B	1	3,600,000	3,512,945
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,700,000	3,704,270	10/06/2014	10/06/2044	Interest Rate Swap			04009G-AE-7	Anchorage Capital CLO 9-SERIES 16-9A CLASS BR	1	3,700,000	3,704,270
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,005,975	10/06/2014	10/06/2044	Interest Rate Swap			03328W-AL-2	Navient Student Loan Trust 2019-7 PRRF Engine Leasing Ltd Senior Secured	2	5,000,000	5,005,975
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,500,000	10/06/2014	10/06/2044	Interest Rate Swap			64034W-AD-7	NTC CAPITAL I-UNSECURED BOND CULLEN/FROST CAP TR II-SUBORDINATED NOTE	2	10,500,000	10,500,000
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2	175,000,000	60,000,000	94,224,414	10/10/2014	10/10/2044	Interest Rate Swap		33,622,734	67332F-AD-5	BLENMOUNTAIN CLO LTD-SERIES 2015-1A CLASS A2R	1	60,000,000	60,601,680
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		27,713,468	28,555,811	10/10/2014	10/10/2044	Interest Rate Swap			629394-AA-5	CHENANGO PARK CLO LTD-SERIES 18-1A CLASS A1B	1	27,713,468	28,555,811
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		21,088,356	20,613,260	10/10/2014	10/10/2044	Interest Rate Swap			230000-AB-7	Taconic Park CLO Ltd 201-SERIES 2016-1A CLASS A2	1	21,088,356	20,613,260
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		20,500,000	20,500,861	10/10/2014	10/10/2044	Interest Rate Swap			09627X-AW-1	GRIPPEN PARK CLO LTD-SERIES 17-1A CLASS B	1	20,500,000	20,500,861
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		16,200,000	15,921,652	10/10/2014	10/10/2044	Interest Rate Swap			16409T-AC-3	Dryden XXVIII Senior Loa-DRSLF 2013-28A A2LR	1	16,200,000	15,921,652
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		16,100,000	16,101,047	10/10/2014	10/10/2044	Interest Rate Swap			873549-AC-3	SLMA 2005-9 STUDENT LN-BKD NT CL B	1	16,100,000	16,101,047
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		7,000,000	6,967,037	10/10/2014	10/10/2044	Interest Rate Swap			39862E-AB-0	TIAA CLO I Ltd-TIA 2016-1A AR	1	7,000,000	6,967,037
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		3,550,000	3,547,966	10/10/2014	10/10/2044	Interest Rate Swap			26251B-AN-6		1	3,550,000	3,547,966
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		5,440,794	5,642,428	10/10/2014	10/10/2044	Interest Rate Swap			78442G-RC-2		1	5,440,794	5,642,428
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	80,000,000	103,539,004	11/04/2014	11/04/2044	Interest Rate Swap		24,028,284	87271L-AJ-1		1	80,000,000	79,510,720

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,890,540	11/04/2014	11/04/2044	Interest Rate Swap			55819D-AE-6	Madison Park Funding XXX-HDPK 2018-31A A2A	1	20,000,000	19,890,540
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		35,000,000	34,865,075	11/04/2014	11/04/2044	Interest Rate Swap			22616T-AA-4	Crestline Denali CLO XVI-DEN17 2018-1A A	1	35,000,000	34,865,075
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	110,000,000	121,747,460	11/04/2014	11/04/2044	Interest Rate Swap		24,053,270	06761N-AE-5	Barings Middle Market CL-BMM 2018-11 COM	2	110,000,000	97,694,190
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,445,000	22,335,693	11/04/2014	11/04/2044	Interest Rate Swap			08181J-AA-0	Benefit Street Partners -SERIES 18-5BA CLASS A1A	1	22,445,000	22,335,693
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,000,000	996,038	11/04/2014	11/04/2044	Interest Rate Swap			48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2	1	1,000,000	996,038
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	34,504,886	58,952,093	11/04/2014	11/04/2044	Interest Rate Swap		24,253,163	50188G-AT-0	LCM XVIII LP-LCM 18A A1R Kingsland Ltd-SERIES 18-8A CLASS A	1	34,504,886	34,698,930
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		45,895,622	45,620,500	11/04/2014	11/04/2044	Interest Rate Swap			42086P-AC-7	GOLUB CAPITAL PARTNERS C-SERIES 13-16A CLASS A1R	1	45,895,622	45,620,500
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,001,680	11/04/2014	11/04/2044	Interest Rate Swap			38172X-AG-4	2018-1RA A1	1	30,000,000	30,001,680
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,200,000	1,195,246	11/04/2014	11/04/2044	Interest Rate Swap			48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2 ANCHORAGE CAPITAL CLO 1-ANCHC	1	1,200,000	1,195,246
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,197,299	15,275,199	11/04/2014	11/04/2044	Interest Rate Swap			03328Y-AA-2	ORANGE GROVE ENERGY, L.P DELAYED	1	15,197,299	15,275,199
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	13,795,142	37,827,222	11/04/2014	11/04/2044	Interest Rate Swap		24,278,149	66776M-ZZ-9	DRAW TE	2	13,795,142	13,549,073
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,878,400	2,786,545	11/04/2014	11/04/2044	Interest Rate Swap			247358-BB-9	EAIV Delta MSN 15153	1	2,878,400	2,786,545
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,219,530	3,113,965	11/04/2014	11/04/2044	Interest Rate Swap			247358-DD-3	EAIV Delta MSN 15161	1	3,219,530	3,113,965
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,886,946	2,795,747	11/04/2014	11/04/2044	Interest Rate Swap			247358-PP-3	Delta Air Lines Inc. - MSN 15147	1	2,886,946	2,795,747
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,887,061	2,766,713	11/04/2014	11/04/2044	Interest Rate Swap			247358-RR-7	EAIV 2017 Delta MSN 15146	1	2,887,061	2,766,713
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,219,530	3,113,965	11/04/2014	11/04/2044	Interest Rate Swap			247358-RW-6	EAIV Delta MSN 15162	1	3,219,530	3,113,965
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,500,000	20,515,601	11/04/2014	11/04/2044	Interest Rate Swap			01750F-AA-4	Allegro CLO Ltd-ALLEG 2019-1A A	1	20,500,000	20,515,601
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,400,000	17,424,482	11/04/2014	11/04/2044	Interest Rate Swap			12482N-AA-9	CBAM Ltd-CBAM 2019-10A A1A Symphony CLO XXI Ltd-SYMP 2019-21A	1	17,400,000	17,424,482
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,505,440	11/04/2014	11/04/2044	Interest Rate Swap			87166R-AE-7	B	1	8,500,000	8,505,440
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,671,839	6,673,193	11/04/2014	11/04/2044	Interest Rate Swap			29108Q-AY-8	EMERSON PARK CLO LTD-SERIES 13-1A	1	6,671,839	6,673,193
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,500,000	23,485,500	11/04/2014	11/04/2044	Interest Rate Swap			61093*-AA-7	BIF II SAFE HARBOR HOLDINGS LLC	2	22,500,000	23,485,500
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		40,000,000	40,000,000	11/04/2014	11/04/2044	Interest Rate Swap			500798-MQ-4	KREF Lending VII 2018-3 Term Loan	1	40,000,000	40,000,000
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,000,000	34,363,409	11/04/2014	11/04/2044	Interest Rate Swap		24,353,109	48253H-AE-5	KKR CLO 26 LLC-SERIES 26 CLASS B1 BAIN CAPITAL CREDIT CLO -SERIES 18-2A CLASS A1	1	10,000,000	10,010,300
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		28,500,000	28,502,850	11/04/2014	11/04/2044	Interest Rate Swap			05682V-AA-3	KREF Lending VII - Term Loan Series 2019-6	1	28,500,000	28,502,850
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		60,000,000	60,000,000	11/04/2014	11/04/2044	Interest Rate Swap			500798-MR-7	Goldentree Loan Managem-GLM 2019-5A C	1	60,000,000	60,000,000
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,300,000	11,313,255	11/04/2014	11/04/2044	Interest Rate Swap			38138D-AJ-5	2019-11A B	1	11,300,000	11,313,255
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,022,570	11/04/2014	11/04/2044	Interest Rate Swap			03330N-AC-8	Anchorage Capital CLO 11-ANCHC 2019-11A B	1	10,000,000	10,022,570
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,010,020	11/04/2014	11/04/2044	Interest Rate Swap			68700G-AC-6	Palmer Square CLO 2019-1-SERIES 19-1A CLASS A2	1	10,000,000	10,010,020
57629*Q02	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	40,523,538	65,037,507	11/04/2014	11/04/2044	Interest Rate Swap		24,503,028	46617N-AQ-0	JFIN CLO LTD-SERIES 14-2A CLASS A1AR	1	40,523,538	40,534,479
57629*Q02	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,700,000	4,717,597	11/04/2014	11/04/2044	Interest Rate Swap			03330N-AE-4	2019-11A C	1	4,700,000	4,717,597
57629*Q02	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,490,000	10,463,471	11/04/2014	11/04/2044	Interest Rate Swap			40437L-AG-7	HPS Loan Management 13-2-HLM 13A-18	1	10,490,000	10,463,471

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,889,120	11/04/2014	11/04/2044	Interest Rate Swap			404360-AL-6	HPS Loan Management 9-20-HLM 9A-2016 A1BR	1	10,000,000	9,889,120
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,375,000	6,376,058	11/04/2014	11/04/2044	Interest Rate Swap			04622A-AC-1	Assurant CLO IV LTD	1	6,375,000	6,376,058
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,500,000	3,510,742	11/04/2014	11/04/2044	Interest Rate Swap			12482N-AG-6	CBAM 2019-10 Ltd	1	3,500,000	3,510,742
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,007,390	11/04/2014	11/04/2044	Interest Rate Swap			44932V-AE-2	ICG US CLO 2019-1 LTD	1	10,000,000	10,007,390
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,009,650	11/04/2014	11/04/2044	Interest Rate Swap			92918F-AB-0	Voya CLO 2019-3 Ltd	1	10,000,000	10,009,650
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,014,850	11/04/2014	11/04/2044	Interest Rate Swap			67098D-AG-8	OHA Credit Funding 4 Ltd	1	15,000,000	15,014,850
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,000,000	6,004,626	11/04/2014	11/04/2044	Interest Rate Swap			67098D-AJ-2	OHA Credit Funding 4 Ltd	1	6,000,000	6,004,626
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	25,000,000	11/04/2014	11/04/2044	Interest Rate Swap			500798-MQ-9	KREF Lending VII LLC	1	25,000,000	25,000,000
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	16,600,000	40,753,843	11/04/2014	11/04/2044	Interest Rate Swap		24,478,041	92915P-AK-1	Voya CLO 2014-1 Ltd-INGIM 2014-1A ABR2	1	16,600,000	16,275,802
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,660,000	13,665,724	11/04/2014	11/04/2044	Interest Rate Swap			05363U-AW-3	AVERY POINT IV CLO LTD-SERIES 14-1A CLASS CR	1	13,660,000	13,665,724
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,660,000	13,659,604	11/04/2014	11/04/2044	Interest Rate Swap			04964K-AS-0	ATRIUM CDO CORP-SERIES 9A CLASS CR	1	13,660,000	13,659,604
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	12,714,013	11/04/2014	11/04/2044	Interest Rate Swap			G7332F-AH-6	RRPF Engine Leasing Ltd Senior Secured	2	13,000,000	12,714,013
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,834,220	11/04/2014	11/04/2044	Interest Rate Swap			04941Y-AJ-8	Atlas Senior Loan Fund X-ATCLO 2018-11A B	1	10,000,000	9,834,220
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	17,020,485	11/04/2014	11/04/2044	Interest Rate Swap			03328W-AJ-7	Anchorage Capital CLO 9 -SERIES 16-9A CLASS AR	1	17,000,000	17,020,485
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,500,000	12,533,575	11/04/2014	11/04/2044	Interest Rate Swap			26252N-AE-9	Dryden Senior Loan Fund-DRSLF 2019-72A B	1	12,500,000	12,533,575
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,980	11/04/2014	11/04/2044	Interest Rate Swap			12550Y-AC-8	CIFC FUNDING LTD-CIFC 2017-2A A Wellfleet CLO 2018-3 Ltd-SERIES 18-3A CLASS A2	1	20,000,000	19,999,980
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,465,658	11/04/2014	11/04/2044	Interest Rate Swap			94951D-AJ-2	Elmwood CLO III Ltd-ELMIII 2019-3A B	1	7,500,000	7,465,658
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,006,510	11/04/2014	11/04/2044	Interest Rate Swap			29002H-AE-9	MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS A2R	1	10,000,000	10,006,510
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	12,740,000	37,269,059	11/04/2014	11/04/2044	Interest Rate Swap		24,528,014	55818X-AY-9	Apidos CLO-APID 2019-31A B	1	12,740,000	12,741,045
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,100,000	7,106,227	11/04/2014	11/04/2044	Interest Rate Swap			03767V-AD-0	Octagon Investment Partn-SERIES 19-3A CLASS B1	1	7,100,000	7,106,227
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,400,000	4,404,418	11/04/2014	11/04/2044	Interest Rate Swap			67576P-AE-7	APIDOS CLO-SERIES 17-26A CLASS A2	1	4,400,000	4,404,418
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,240,000	12,240,294	11/04/2014	11/04/2044	Interest Rate Swap			03766G-AE-2	CATSKILL PARK CLO LTD -SERIES 17-1A CLASS A2	1	12,240,000	12,240,294
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,980,000	11,980,228	11/04/2014	11/04/2044	Interest Rate Swap			149420-AE-1	THL Credit Wind River 20-SERIES 18-2A CLASS A2	1	11,980,000	11,980,228
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,959,305	11/04/2014	11/04/2044	Interest Rate Swap			88434H-AE-3	KKR FINANCIAL CLO LTD-SERIES 9 CLASS AR	1	5,000,000	4,959,305
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,100,000	21,099,810	11/04/2014	11/04/2044	Interest Rate Swap			48250L-AL-3	Denali Capital CLO XII L-DEN12 2016-1A A1R	1	21,100,000	21,099,810
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,100,000	22,894,872	11/04/2014	11/04/2044	Interest Rate Swap			24824T-AQ-3	Highbridge Loan Managem-SERIES 12A-18 CLASS A1B	1	23,100,000	22,894,872
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,250,000	10,092,396	11/04/2014	11/04/2044	Interest Rate Swap			44330Q-AB-7	HIGHBRIDGE LOAN MANAGEM-HLM 11A-17 A	1	10,250,000	10,092,396
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,100,000	18,093,013	11/04/2014	11/04/2044	Interest Rate Swap			40436V-AA-9	GRIDIRON FDG LLC Term Facility	1	18,100,000	18,093,013
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	29,642,470	49,829,152	12/16/2014	12/16/2044	Interest Rate Swap		19,587,846	39808C-AB-4	NORTHSTAR EDUCATION FINA-SERIES 07-1 CLASS B	1	29,642,470	30,241,306
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,263,662	24,722,944	12/16/2014	12/16/2044	Interest Rate Swap			66704J-CB-2	Magnetite XX Ltd-MAGNE 2018-20A A	1	27,263,662	24,722,944
57629*002	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,317,872	17,386,283	12/16/2014	12/16/2044	Interest Rate Swap			55955A-AA-4		1	17,317,872	17,386,283

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,800	12/16/2014	12/16/2044	Interest Rate Swap			03331J-AA-0	Anchorage Capital CLO Lt-ANCH 2018-10A A1A	1	20,000,000	19,999,800
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,200,000	15,910,117	12/16/2014	12/16/2044	Interest Rate Swap			06760J-AE-5	Barings CLO Ltd 2018-11-SERIES 2018-2A CLAS A1B	1	16,200,000	15,910,117
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,621,938	12/16/2014	12/16/2044	Interest Rate Swap			06760B-AC-6	BABSON CLO LTD-SERIES 17-1A CLASS A2	1	6,700,000	6,621,938
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,960,000	4,937,427	12/16/2014	12/16/2044	Interest Rate Swap			55820R-AE-2	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS B	1	4,960,000	4,937,427
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,575,000	2,520,183	12/16/2014	12/16/2044	Interest Rate Swap			08179H-AC-4	Benefit Street Partners -BSP 2017-12A B	1	2,575,000	2,520,183
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,008,500	12/16/2014	12/16/2044	Interest Rate Swap			79410U-AQ-4	SALEM FIELDS CLO LTD SR SEC2 NT CL A-2-R	1	10,000,000	10,008,500
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,475,000	4,480,061	12/16/2014	12/16/2044	Interest Rate Swap			033291-AC-9	ANCHC 2019-13A B	1	4,475,000	4,480,061
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,425,000	6,269,072	12/16/2014	12/16/2044	Interest Rate Swap			08180X-AQ-5	Benefit Street Partners -BSP 2015-8A A1BR	1	6,425,000	6,269,072
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,000,000	6,016,590	12/16/2014	12/16/2044	Interest Rate Swap			08182B-AE-8	Benefit Street Partners CLO L	1	6,000,000	6,016,590
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	25,000,000	44,286,912	12/16/2014	12/16/2044	Interest Rate Swap		19,286,912	500798-MO-4	KREF Lending VII 2018-3 Term Loan	1	25,000,000	25,000,000
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,470,000	14,470,376	12/16/2014	12/16/2044	Interest Rate Swap			55820R-AC-6	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS A2	1	14,470,000	14,470,376
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		34,903,961	34,714,610	12/16/2014	12/16/2044	Interest Rate Swap			04941Y-AC-3	Atlas Senior Loan Fund X-SERIES 18-11A CLASS A1L	1	34,903,961	34,714,610
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		65,000,000	64,745,980	12/16/2014	12/16/2044	Interest Rate Swap			04624W-AC-1	ASSURANT CLO III LTD-SERIES 2018-2A CLASS A	1	65,000,000	64,745,980
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,434,747	9,301,222	12/16/2014	12/16/2044	Interest Rate Swap			48252W-AC-7	KKR CLO LTD 22-SERIES 22A CLASS B	1	9,434,747	9,301,222
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,001,869	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AN-4	BABSON CLO LTD-BABSN 2014-1A BR	1	7,000,000	7,001,869
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,045,000	2,013,973	12/16/2014	12/16/2044	Interest Rate Swap			056162-AQ-3	Babson CLO Ltd 2015-1-BABSN 2015-1A BR	1	2,045,000	2,013,973
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,758,169	12/16/2014	12/16/2044	Interest Rate Swap			69703P-AE-9	Palmer Square CLO 2018-1-PLMRS 2018-1A B	1	3,900,000	3,758,169
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	36,000,000	72,198,877	12/16/2014	12/16/2044	Interest Rate Swap		32,796,877	39808C-AA-3	Gridiron Fdg LLC Sr Secd Nt	2	36,000,000	39,402,000
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,900,000	25,482,622	12/16/2014	12/16/2044	Interest Rate Swap			14307P-AE-5	Carlyle Global Market St-SERIES C17A CLASS A1BR	1	25,900,000	25,482,622
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,500,000	23,502,844	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AL-8	BABSON CLO LTD-BABSN 2014-1A A2R	1	23,500,000	23,502,844
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,100,000	22,874,382	12/16/2014	12/16/2044	Interest Rate Swap			83610K-AA-1	SOUND POINT CLO LTD-SERIES 2017-2A CLASS A	1	23,100,000	22,874,382
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,800,000	23,393,874	12/16/2014	12/16/2044	Interest Rate Swap			57542Z-AQ-7	MASSMUTUAL ASSET FIN LLC SR SEC2 REV NT	3	22,800,000	23,393,874
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	25,000,000	12/16/2014	12/16/2044	Interest Rate Swap			500798-MQ-9	KREF Lending VII 2018-5 Term Loan	1	25,000,000	25,000,000
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,783,285	13,839,140	12/16/2014	12/16/2044	Interest Rate Swap			92917A-AA-4	VOYA 2018-1A A1	1	13,783,285	13,839,140
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,774,600	12/16/2014	12/16/2044	Interest Rate Swap			58806P-AC-2	MERCER FIELD CLO LP-MERCL 2017-1A A2	1	20,000,000	19,774,600
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,500,000	11,365,456	12/16/2014	12/16/2044	Interest Rate Swap			64034B-AB-7	Wellnet Student Loan Trus-NSLT 2018-5A B	1	11,500,000	11,365,456
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,449,945	22,378,703	12/16/2014	12/16/2044	Interest Rate Swap			94949J-AA-3	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A1	1	22,449,945	22,378,703
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,950,000	5,960,668	12/16/2014	12/16/2044	Interest Rate Swap			10302V-BG-9	BOWMAN PARK CLO LTD-BOWPK 2014-1A CR	1	5,950,000	5,960,668
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,490,171	8,483,476	12/16/2014	12/16/2044	Interest Rate Swap			03328Q-AN-1	ANCHORAGE CAPITAL CLO LT-SERIES 2015-6A CLASS AR	1	8,490,171	8,483,476
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,500,675	12/16/2014	12/16/2044	Interest Rate Swap			38136F-AG-8	Goldentree Loan Managem-GLM 2017-1A B1	1	13,500,000	13,500,675
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,100,000	10,927,650	12/16/2014	12/16/2044	Interest Rate Swap			12481Q-AE-5	Obam 2018-5 Ltd-SERIES 18-5A CLASS B1	1	11,100,000	10,927,650

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Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*CU3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	328,073,426	368,462,704	12/16/2014	12/16/2044	Interest Rate Swap		31,843,920	57542Z-A0-7	MASSMUTUAL ASSET FIN LLC SR SEC0 REV NT	3	328,073,426	336,618,784
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	200,000,000	16,880,459	41,941,037	12/16/2014	12/16/2044	Interest Rate Swap		25,073,891	03328Q-AN-1	ANCHORAGE CAPITAL CLO LT-SERIES 2015-6A CLASS AR	1	16,880,459	16,867,146
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,942,020	12/16/2014	12/16/2044	Interest Rate Swap			94950J-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	5,000,000	4,942,020
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,780,000	6,743,815	12/16/2014	12/16/2044	Interest Rate Swap			33882G-AB-4	FLATIRON CLO LTD-FLAT 2017-1A B ... GALLATIN CLO LTD-SERIES 17-1A CLASS B	1	6,780,000	6,743,815
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,750,000	9,746,178	12/16/2014	12/16/2044	Interest Rate Swap			36361U-AC-4	OHA Credit Funding 1 LTD-SERIES 18-1A CLASS A2	1	9,750,000	9,746,178
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,400,000	10,314,086	12/16/2014	12/16/2044	Interest Rate Swap			67115W-AE-0	Dryden 58 Clo Ltd-DRSLF 2018-58A A1	1	10,400,000	10,314,086
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,676,098	21,805,872	12/16/2014	12/16/2044	Interest Rate Swap			26245R-AA-8	BENEFIT STREET PARTNERS -SERIES 2017-12A CLASS A1	1	21,676,098	21,805,872
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,675,000	9,663,032	12/16/2014	12/16/2044	Interest Rate Swap			08179H-AA-8	RR 2 LTD-SERIES 17-2A CLASS A2	1	9,675,000	9,663,032
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,499,898	12/16/2014	12/16/2044	Interest Rate Swap			78109Q-AE-8	OAKTREE CLO LTD-SERIES 14-1A CLASS A1R	1	8,500,000	8,499,898
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,120,000	17,123,818	12/16/2014	12/16/2044	Interest Rate Swap			67400Q-AN-4	Carlyle US CLO 2013-3 Re Term Loan	1	17,120,000	17,123,818
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,075,000	18,937,660	12/16/2014	12/16/2044	Interest Rate Swap			14315J-NN-5	FACEP 2013-8A	1	19,075,000	18,937,660
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,350,868	21,351,132	12/16/2014	12/16/2044	Interest Rate Swap			74982L-AN-0	MASSMUTUAL ASSET FIN LLC SR SEC0	1	21,350,868	21,351,132
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		56,000,000	57,458,637	12/16/2014	12/16/2044	Interest Rate Swap			57542Z-A0-7	REV NT	3	56,000,000	57,458,637
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,400,000	6,334,291	12/16/2014	12/16/2044	Interest Rate Swap			00900L-AH-7	AIMCO CLO Series 2015-A-SERIES 15-AA CLASS BR	1	6,400,000	6,334,291
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	4,958,558	9,962,989	02/05/2015	02/05/2045	Interest Rate Swap		5,036,109	12551J-AG-1	CIFC Funding 2017-IV Ltd-SERIES 17-4A CLASS B	1	4,958,558	4,926,880
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,020,000	9,962,786	02/05/2015	02/05/2045	Interest Rate Swap			92912V-AS-4	VOYA CLO LTD-VOYA 2014-2A BR MANUF & TRADERS TRUST CO-	1	10,020,000	9,962,786
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,510,189	10,499,853	02/05/2015	02/05/2045	Interest Rate Swap			564759-0B-7	SUBORDINATED NOTE	1	10,510,189	10,499,853
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,521,870	02/05/2015	02/05/2045	Interest Rate Swap			87806L-AE-6	TC1-CENT CLO 2016-1 LTD.-SERIES 17-1A CLASS A2	1	13,500,000	13,521,870
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,521,668	02/05/2015	02/05/2045	Interest Rate Swap			06760B-AE-2	BABSON CLO LTD-SERIES 17-1A CLASS B1	1	13,500,000	13,521,668
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,600,000	9,416,905	02/05/2015	02/05/2045	Interest Rate Swap			63941R-AC-4	NAVSL 2019-2A B	1	9,600,000	9,416,905
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,623,140	02/05/2015	02/05/2045	Interest Rate Swap			40436X-AE-7	HIGHBRIDGE LOAN MANAGEME-SERIES 2014 CLAS A2R	1	12,700,000	12,623,140
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,200,000	11,203,730	02/05/2015	02/05/2045	Interest Rate Swap			05682Q-AC-0	BAIN CAPITAL CREDIT CLO -SERIES 17-1A CLASS A1	1	11,200,000	11,203,730
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,740,525	02/05/2015	02/05/2045	Interest Rate Swap			09628J-AN-1	BlueMountain CLO 2015-3 -BLUEM 2015-3A A2R	1	13,900,000	13,740,525
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,300,000	11,301,480	02/05/2015	02/05/2045	Interest Rate Swap			053633-AH-6	EVERY POINT CLO LTD-SERIES 13-3A CLASS B1R	1	11,300,000	11,301,480
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,226,426	5,006,474	02/05/2015	02/05/2045	Interest Rate Swap			784170-ZZ-8	SFR FTTH SAS Term Loan	3	5,226,426	5,006,474
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,400,000	7,207,519	02/05/2015	02/05/2045	Interest Rate Swap			55821T-AC-1	Madison Park Funding Ltd-SERIES 18-30A CLASS B	1	7,400,000	7,207,519
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,085,000	1,080,215	02/05/2015	02/05/2045	Interest Rate Swap			89852T-AN-8	Tryon Park CLO Ltd-TPCLO 2013-1A A1JR	1	1,085,000	1,080,215
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,516,982	12,689,807	02/05/2015	02/05/2045	Interest Rate Swap			67706X-AG-8	OHA Credit Partners XIV -OAKC 2017-14A B FLOATING COUP	1	12,516,982	12,689,807
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	5,280,000	10,111,117	02/05/2015	02/05/2045	Interest Rate Swap		4,831,085	00900C-AE-4	AIMCO-AIMCO 2017-AA C	1	5,280,000	5,280,032
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,180,328	3,162,200	02/05/2015	02/05/2045	Interest Rate Swap			87289B-AA-2	TOP DLF VIII 2018 CLO, LLC - Class A	1	3,180,328	3,162,200
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,100,000	32,107,158	02/05/2015	02/05/2045	Interest Rate Swap			05363U-AU-7	EVERY POINT IV CLO LTD-SERIES 14-1A CLASS BR	1	32,100,000	32,107,158

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,022,543	23,854,242	02/05/2015	02/05/2045	Interest Rate Swap			66704J-AY-4	NORTHSTAR EDUCATION FINA-SERIES 2004-1 CLASS B1	1	25,022,543	23,854,242
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,000,000	26,818,452	02/05/2015	02/05/2045	Interest Rate Swap			75887X-AA-5	Regatta Funding Ltd.-REG11 2018-1A	1	27,000,000	26,818,452
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,900,000	11,823,995	02/05/2015	02/05/2045	Interest Rate Swap			449258-AA-0	1CG US QLO 2018-1 LTD-SERIES 2018-1A CLASS A1	1	11,900,000	11,823,995
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,999,850	02/05/2015	02/05/2045	Interest Rate Swap			64132M-AC-2	Neuberger Berman CLO Ltd-NEUB 2018-30A A2	1	10,000,000	9,999,850
57629*CZ2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,200,000	11,185,619	02/05/2015	02/05/2045	Interest Rate Swap			17181T-AC-5	CIFC Funding 2018-IV Ltd-SERIES 18-4A CLASS A2	1	11,200,000	11,185,619
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	4,392,943	9,222,541	02/05/2015	02/05/2045	Interest Rate Swap		5,014,473	784170-ZZ-8	SFR FTTH SAS Term Loan	3	4,392,943	4,208,068
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,804,055	02/05/2015	02/05/2045	Interest Rate Swap			55818R-BA-3	Madison Park Funding XIV-MDPK 2014-14A BRR	1	15,000,000	14,804,055
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,600,000	11,426,487	02/05/2015	02/05/2045	Interest Rate Swap			04942J-AE-1	Atlas Senior Loan Fund X-ATOLO 2018-10A B	1	11,600,000	11,426,487
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,090,000	18,090,217	02/05/2015	02/05/2045	Interest Rate Swap			77340E-AC-0	ROCKFORD TOWER CLO LTD-ROCKT 2017-1A B	1	18,090,000	18,090,217
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,730,000	5,706,112	02/05/2015	02/05/2045	Interest Rate Swap			64129J-AU-4	NEUBERGER BERMAN CLO LTD-NEUB 2013-14A B1R	1	5,730,000	5,706,112
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,900,000	25,312,743	02/05/2015	02/05/2045	Interest Rate Swap			04016V-AC-9	ARES XLVII CLO Ltd-SERIES 18-47A CLASS A2	1	25,900,000	25,312,743
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,300,000	4,300,077	02/05/2015	02/05/2045	Interest Rate Swap			87248T-AE-5	TICP CLO LTD-SERIES 2017 CLASS 7A OCP CLO 2017-14 Ltd-SERIES 17-14A CLASS A2	1	4,300,000	4,300,077
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,400,000	11,228,612	02/05/2015	02/05/2045	Interest Rate Swap			670970-AE-5	Benefit Street Partners -SERIES 18-14A CLASS A2	1	11,400,000	11,228,612
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,400,000	13,037,905	02/05/2015	02/05/2045	Interest Rate Swap			08179L-AC-5	Wellfleet CLO Ltd-SERIES 18-1A CLASS B	1	13,400,000	13,037,905
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,942,020	02/05/2015	02/05/2045	Interest Rate Swap			94950J-AC-5	Carlyle Global Market St-SERIES 18-4A CLASS A2	1	5,000,000	4,942,020
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,001,351	02/05/2015	02/05/2045	Interest Rate Swap			14315R-AE-1	ATLAS SENIOR LOAN FUND L-SERIES 17-8A CLASS C	1	7,000,000	7,001,351
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,100,000	3,069,121	02/05/2015	02/05/2045	Interest Rate Swap			04943A-AG-4	Flatiron CLO Ltd-SERIES 19-1A CLASS B	1	3,100,000	3,069,121
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,526,843	02/05/2015	02/05/2045	Interest Rate Swap			33883J-AC-5	BAIN CAPITAL CREDIT CLO -SERIES 2017-2A CLASS AR	1	7,500,000	7,526,843
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	45,000,000	49,648,112	02/05/2015	02/05/2045	Interest Rate Swap		4,683,527	05683H-AC-9	MAGNETITE CLO LTD-SERIES 17-19A CLASS B	1	45,000,000	44,964,585
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,325,000	7,325,073	02/05/2015	02/05/2045	Interest Rate Swap			55954K-AC-9	VOYA CLO LTD-SERIES 2017-3A CLASS A2	1	7,325,000	7,325,073
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,176,341	02/05/2015	02/05/2045	Interest Rate Swap			92915Q-AG-8	HPS Loan Management 9-20-HLM 9A-2016 A2R	1	7,200,000	7,176,341
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,750,000	12,718,406	02/05/2015	02/05/2045	Interest Rate Swap			40436Q-AN-2	TICP CLO Ltd-TICP 2018-11A A Babson CLO Ltd 2013-I-SERIES 2013-1A CLASS AR	1	12,750,000	12,718,406
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,000,000	24,855,125	02/05/2015	02/05/2045	Interest Rate Swap			87249Q-AA-8	Statoil ASA-SENIOR UNSECURED NOTE SMB PRIVATE ED LN TR 201-SMB PRIVATE ED LN TR 2016-A NT	1	25,000,000	24,855,125
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,399,199	14,411,008	02/05/2015	02/05/2045	Interest Rate Swap			06760E-AA-4	NAVIENT STUDENT LOAN TRU-SERIES 16-2 CLASS A3	1	14,399,199	14,411,008
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,127,487	24,430,440	02/05/2015	02/05/2045	Interest Rate Swap			24820R-AA-6	ECMC GROUP STUDENT LOAN -SERIES 2016-1A CLASS A	1	21,127,487	24,430,440
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	17,167,220	31,308,713	12/05/2016	12/05/2046	Interest Rate Swap		13,924,338	78449F-AC-5	Atlas Senior Loan Fund V-SERIES 16-7A CLASS A1R	1	17,167,220	17,384,375
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,420,000	22,945,359	12/05/2016	12/05/2046	Interest Rate Swap			63940F-AC-1	Oak Hill Credit Partners-SERIES 15-12A CLASS A2R	1	22,420,000	22,945,359
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,941,591	9,941,402	12/05/2016	12/05/2046	Interest Rate Swap			26827X-AA-1	VOYA CLO LTD-VOYA 2017-1A A2	1	9,941,591	9,941,402
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,500,000	23,488,086	12/05/2016	12/05/2046	Interest Rate Swap			04941T-AS-9	VOYA CLO LTD-VOYA 2017-1A A2	1	23,500,000	23,488,086
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,500,000	11,438,970	12/05/2016	12/05/2046	Interest Rate Swap			92916M-AB-7	Oak Hill Credit Partners-SERIES 15-12A CLASS A2R	1	11,500,000	11,438,970
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,861,940	12/05/2016	12/05/2046	Interest Rate Swap			67109Y-AN-4		1	10,000,000	9,861,940

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,221,564	12/05/2016	12/05/2046	Interest Rate Swap			85816B-CS-7	STEELE CREEK CLO LTD-SERIES 15-1A CLASS CR	1	4,330,000	4,221,564
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,200,000	4,030,072	12/05/2016	12/05/2046	Interest Rate Swap			08180X-AU-6	Benefit Street Partners -BSP 2015-8A BR	1	4,200,000	4,030,072
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,380,000	6,306,547	12/05/2016	12/05/2046	Interest Rate Swap			22616C-AE-3	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS C	1	6,380,000	6,306,547
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,926,300	12/05/2016	12/05/2046	Interest Rate Swap			04965L-AE-8	ATRIUM XIV LLC-ATRM 14A A2A	1	10,000,000	9,926,300
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,005,975	12/05/2016	12/05/2046	Interest Rate Swap			03328W-AL-2	Anchorage Capital CLO 9 -SERIES 16-9A CLASS BR	1	5,000,000	5,005,975
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,400,000	9,410,998	12/05/2016	12/05/2046	Interest Rate Swap			08186P-AC-7	Benefit Street Partners CLO X	1	9,400,000	9,410,998
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	13,875,000	27,825,919	12/05/2016	12/05/2046	Interest Rate Swap		13,950,919	70163#-AA-0	Parliament Funding I LLC-Variable Funding Notes	2	13,875,000	13,875,000
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,600,000	5,552,318	12/05/2016	12/05/2046	Interest Rate Swap			64034N-AB-1	NSLT 2019-2A B	1	5,600,000	5,552,318
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,000,000	12/05/2016	12/05/2046	Interest Rate Swap			50079B-MN-6	KREF Lending VII 2018-2 Term Loan -SMB PRIVATE EDUCATION LO-SMB 2015-B	1	30,000,000	30,000,000
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,906,540	12,061,708	12/05/2016	12/05/2046	Interest Rate Swap			78448Q-AD-0	A3 SLM STUDENT LOAN TRUST-SERIES 2002-7CLASS A11	1	11,906,540	12,061,708
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,443,883	1,499,492	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EX-0	BRAZOS HIGHER EDUCATION -SER 2006-2 STUDENT LN REV NT	1	1,443,883	1,499,492
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,435,736	9,465,716	12/05/2016	12/05/2046	Interest Rate Swap			10620N-AX-6	SOUTH CAROLINA STUDENT L-SERIES 14-1 CLASS A2	1	9,435,736	9,465,716
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,846,317	9,883,020	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AF-9	ACCESS GROUP INC-SERIES 2003-A CLASS A3	1	9,846,317	9,883,020
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		798,240	797,948	12/05/2016	12/05/2046	Interest Rate Swap			00432C-AV-3	THACHER PARK CLO-THRPK 2014-1A CR	1	798,240	797,948
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,001,715	12/05/2016	12/05/2046	Interest Rate Swap			88322U-AN-9	Regatta Funding Ltd.-REG11 2018-1A B	1	5,000,000	5,001,715
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	12,913,979	12/05/2016	12/05/2046	Interest Rate Swap			75887X-AC-1	ROCKALL CLO BV Variable Funding Note- USD	1	13,000,000	12,913,979
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,626,289	4,626,289	12/05/2016	12/05/2046	Interest Rate Swap			77277L-A7-2	CIFC Funding 2018-I Ltd-SERIES 18-1A CLASS B	1	4,626,289	4,626,289
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,350,000	7,252,142	12/05/2016	12/05/2046	Interest Rate Swap			12551R-AC-2	THL Credit Wind River 20-SERIES 18-2A CLASS A2	1	7,350,000	7,252,142
57629*DJK	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,959,305	12/05/2016	12/05/2046	Interest Rate Swap			88434H-AE-3	TCP DLF VIII 2018 CLO Combo Note	2	5,000,000	4,959,305
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	19,828,951	33,573,875	12/05/2016	12/05/2046	Interest Rate Swap		13,602,720	MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN NAVIENT STUDENT LOAN TRU-SERIES 2016-6A CLASS A3	1	19,828,951	19,971,155
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		65,300,000	66,165,055	12/05/2016	12/05/2046	Interest Rate Swap			63940L-AC-8	MONTANA HIGHER EDUCATION-SERIES 12-1 CLASS A3	1	65,300,000	66,165,055
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,523,681	21,741,569	12/05/2016	12/05/2046	Interest Rate Swap			61205P-AL-3	ATRIUM XIV LLC-ATRM 14A A2A SLM STUDENT LOAN TRUST-SERIES 2002-7 CLASS A10	1	21,523,681	21,741,569
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,926,300	12/05/2016	12/05/2046	Interest Rate Swap			04965L-AE-8	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A10	1	10,000,000	9,926,300
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		105,738	106,242	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EW-2	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A14	1	105,738	106,242
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,822,947	1,848,960	12/05/2016	12/05/2046	Interest Rate Swap			429827-AK-4	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A2	1	1,822,947	1,848,960
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,198,794	1,226,010	12/05/2016	12/05/2046	Interest Rate Swap			429827-AP-3	SOUTH CAROLINA STUDENT L-SR UNSECURED	1	1,198,794	1,226,010
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,122,010	1,187,397	12/05/2016	12/05/2046	Interest Rate Swap			429827-AB-4	NELNET STUDENT LOAN TRUS-SERIES 2015-2A CLASS B	1	1,122,010	1,187,397
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,864,648	1,885,576	12/05/2016	12/05/2046	Interest Rate Swap			83715A-AJ-8	PENNSYLVANIA ST HGR EDU -SERIES 2006 CL B	1	1,864,648	1,885,576
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,715,601	1,811,835	12/05/2016	12/05/2046	Interest Rate Swap			640330-AC-3		1	1,715,601	1,811,835
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		993,114	1,002,315	12/05/2016	12/05/2046	Interest Rate Swap			709163-GJ-2		1	993,114	1,002,315

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,021,582	1,070,356	12/05/2016	12/05/2046	Interest Rate Swap			17284L-AB-0	CIT EDUCATION LOAN TRUST-SERIES 2007-1 CLASS B	1	1,021,582	1,070,356
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,345,717	1,342,237	12/05/2016	12/05/2046	Interest Rate Swap			78448C-AH-2	SLM STUDENT LOAN TRUST-SERIES 2013-6 CLASS B	1	1,345,717	1,342,237
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,180,000	3,079,944	12/05/2016	12/05/2046	Interest Rate Swap			056162-AS-9	Babson CLO Ltd 2015-I-BABSN 2015-IA CR	1	3,180,000	3,079,944
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	13,652,093	27,355,378	12/05/2016	12/05/2046	Interest Rate Swap		13,605,378	MXPO01-TT-1	AEROVIAS DE MEXICO SA USD TERM LN	1	13,652,093	13,750,000
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,285,111	6,474,065	12/05/2016	12/05/2046	Interest Rate Swap			78448R-AD-8	SMB PRIVATE ED LN TR 2015-C LN BCK NT CL A-3	1	6,285,111	6,474,065
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,519,991	5,665,689	12/05/2016	12/05/2046	Interest Rate Swap			78448P-AD-2	SMB PRIVATE ED LOAN TR 2015-A LN BACKED NT A-3	1	5,519,991	5,665,689
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,000,000	12/05/2016	12/05/2046	Interest Rate Swap			500798-MM-6	KREF Lending VII 2018-2 Term Loan	1	30,000,000	30,000,000
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,317,277	1,321,240	12/05/2016	12/05/2046	Interest Rate Swap			78446D-AC-3	SLM STUDENT LOAN TRUST-SERIES 2011-A CLASS A3	1	1,317,277	1,321,240
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,217,860	16,186,131	12/05/2016	12/05/2046	Interest Rate Swap			840555-DA-1	SOUTH TX HIGHER ED AUTH REV SER 1 CL A-3	1	16,217,860	16,186,131
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,870,880	6,942,536	12/05/2016	12/05/2046	Interest Rate Swap			00432C-CW-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3	1	6,870,880	6,942,536
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,021,266	11,273,541	12/05/2016	12/05/2046	Interest Rate Swap			28148W-AC-7	EDUCATIONAL FUNDING OF T-SERIES 2011-1 CLASS B	1	10,021,266	11,273,541
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,334,737	6,440,885	12/05/2016	12/05/2046	Interest Rate Swap			00400V-AB-3	ACADEMIC LOAN FUNDING TR-ALFT 2012-1A A2	1	6,334,737	6,440,885
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		662,744	690,007	12/05/2016	12/05/2046	Interest Rate Swap			462592-AD-8	IOWA STUDENT LOAN LIQUID-SERIES 2005-1 CLASS B	1	662,744	690,007
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,185,982	8,887,457	12/05/2016	12/05/2046	Interest Rate Swap			78442G-QA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	9,185,982	8,887,457
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,667,885	1,774,178	12/05/2016	12/05/2046	Interest Rate Swap			38021F-AB-7	GOAL CAPITAL FUNDING TRU-SERIES 2015-1 CLASS B	2	1,667,885	1,774,178
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,688,933	1,776,379	12/05/2016	12/05/2046	Interest Rate Swap			28138J-AB-0	EDUCATIONAL SERVICES OF -SERIES 15-2 CLASS B	1	1,688,933	1,776,379
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,160,819	2,082,953	12/05/2016	12/05/2046	Interest Rate Swap			78442G-GM-2	SLM STUDENT LOAN TRUST 2003-4 LN BKD CTF CL B	2	2,160,819	2,082,953
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,359,434	1,356,551	12/05/2016	12/05/2046	Interest Rate Swap			28090A-AB-5	EDUCATIONAL SERVICES OF -2014-4 SERIES B	1	1,359,434	1,356,551
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		230,515	230,682	12/05/2016	12/05/2046	Interest Rate Swap			83401L-AA-2	SOCIAL PROFESSIONAL LOAN-SERIES 2015-A CLASS A1	1	230,515	230,682
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,085,477	12/05/2016	12/05/2046	Interest Rate Swap			03767M-AE-8	ApiDos CLO-SERIES 18-29A CLASS A1B	1	7,200,000	7,085,477
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,800,000	8,635,625	12/05/2016	12/05/2046	Interest Rate Swap			39729R-AC-2	Greenwood Park CLO Ltd-SERIES 18-1A CLASS B	1	8,800,000	8,635,625
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	4,997,130	12/05/2016	12/05/2046	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANVC 2012-18A B	1	5,000,000	4,997,130
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	7,541,880	19,285,710	12/06/2016	12/06/2046	Interest Rate Swap		12,278,552	281397-AP-4	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A1	1	7,541,880	7,007,158
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,914,554	12,000,000	12/05/2016	12/05/2046	Interest Rate Swap			MXPO01-TT-1	AEROVIAS DE MEXICO SA USD TERM LN	1	11,914,554	12,000,000
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,813,496	2,874,068	12/06/2016	12/06/2046	Interest Rate Swap			66705R-AA-7	NORTHSTAR EDUCATION FINA-NEF 2016-1A	1	2,813,496	2,874,068
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,657,135	6,443,751	12/06/2016	12/06/2046	Interest Rate Swap			281397-AB-5	EDUCATION LOAN ASSET-BAC-SERIES 2003-1 CLASS A2	1	6,657,135	6,443,751
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,589,046	6,813,988	12/06/2016	12/06/2046	Interest Rate Swap			64031Q-CK-5	MELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R1	2	6,589,046	6,813,988
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,421,313	5,009,667	12/06/2016	12/06/2046	Interest Rate Swap			106238-LJ-5	BRAZOS TX HGR EDU AUTH REVENUE BOND	1	4,421,313	5,009,667
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,721,984	5,893,689	12/06/2016	12/06/2046	Interest Rate Swap			28108Q-AB-0	EDL INC STUDENT LOAN FUND-SERIES 2012-1 CLASS B	1	5,721,984	5,893,689
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,450,000	4,008,516	12/06/2016	12/06/2046	Interest Rate Swap			281397-AQ-2	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A2	1	4,450,000	4,008,516
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,183,689	2,196,673	12/06/2016	12/06/2046	Interest Rate Swap			38021E-AA-2	GOAL CAPITAL FUNDING TR 2010-1 STUDENT LN BKD NT	1	2,183,689	2,196,673

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,394,077	4,001,749	12/06/2016	12/06/2046	Interest Rate Swap			640310-CM-1	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R2	2	3,394,077	4,001,749
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,885,189	15,315,756	12/06/2016	12/06/2046	Interest Rate Swap			83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B	1	14,885,189	15,315,756
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,639,292	12/06/2016	12/06/2046	Interest Rate Swap			26251L-AE-4	Dryden 64 CLO Ltd-DRSLF 2018-64A B	1	13,900,000	13,639,292
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,894,455	1,926,593	12/06/2016	12/06/2046	Interest Rate Swap			23341K-AA-3	DRB PRIME STUDENT LOAN T-SERIES 2015-D CLASS A1	1	1,894,455	1,926,593
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,852,201	9,313,181	12/06/2016	12/06/2046	Interest Rate Swap			64031C-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2012-2A CLASS B	1	8,852,201	9,313,181
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,259,718	15,845,625	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS B	1	16,259,718	15,845,625
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,105,263	8,393,810	12/06/2016	12/06/2046	Interest Rate Swap			72403*-MP-4	PIONEERS GATE LLC 2017-9 DT Warehouse Class B	2	8,105,263	8,393,810
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,959,280	12/06/2016	12/06/2046	Interest Rate Swap			03328T-AS-4	ANCHORAGE CAPITAL CLO 7 -ANHC 2015-7A B1R	1	8,000,000	7,959,280
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,000,000	2,986,770	12/06/2016	12/06/2046	Interest Rate Swap			89852T-AN-8	Tryon Park CLO Ltd-TPCLO 2013-1A A1JR	1	3,000,000	2,986,770
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,921,675	23,570,956	12/06/2016	12/06/2046	Interest Rate Swap		12,570,956	MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN SOUTH CAROLINA STUDENT L-SERIES	1	10,921,675	11,000,000
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,636,285	9,759,751	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AG-7	2014-1 CLASS B	1	9,636,285	9,759,751
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,143,022	6,459,935	12/06/2016	12/06/2046	Interest Rate Swap			784420-AE-1	SLC STUDENT LOAN TRUST-SERIES 2005-1 CLASS B	1	6,143,022	6,459,935
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,962,037	5,012,582	12/06/2016	12/06/2046	Interest Rate Swap			78442G-OT-6	SLM STUDENT LOAN TRUST-SERIES 2005-8 CLASS B	1	4,962,037	5,012,582
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,191,537	5,243,698	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PD-2	SLM STUDENT LOAN TRUST-SERIES 2005-3 CLASS B	1	5,191,537	5,243,698
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,736,900	1,768,095	12/06/2016	12/06/2046	Interest Rate Swap			49326B-AU-0	KEYCORP STUDENT LOAN TRU-SERIES 1999-B CLASS CTFS	1	1,736,900	1,768,095
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,675,844	6,582,883	12/06/2016	12/06/2046	Interest Rate Swap			78446C-AB-7	SLM STUDENT LOAN TRUST-SERIES 2013-2 CLASS B	1	6,675,844	6,582,883
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,955,000	6,820,523	12/06/2016	12/06/2046	Interest Rate Swap			63938E-AE-4	NAVIENT STUDENT LOAN TRU-SERIES 2014-1 CLASS B	1	6,955,000	6,820,523
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,320,045	4,386,494	12/06/2016	12/06/2046	Interest Rate Swap			64031A-AJ-5	NELNET STUDENT LOAN TRUS-SERIES 2006-3 CLASS B	1	4,320,045	4,386,494
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,220,936	6,673,788	12/06/2016	12/06/2046	Interest Rate Swap			63939L-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 2015-3 CLASS B	1	6,220,936	6,673,788
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,514,797	6,333,274	12/06/2016	12/06/2046	Interest Rate Swap			78447M-AD-0	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	6,514,797	6,333,274
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,398,848	5,599,875	12/06/2016	12/06/2046	Interest Rate Swap			64033J-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2014-1A CLASS B	1	5,398,848	5,599,875
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,120,610	3,159,873	12/06/2016	12/06/2046	Interest Rate Swap			194266-AE-2	COLLEGE LOAN CORPORATION-SERIES 2005-2 CLASS B	1	3,120,610	3,159,873
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,499,409	4,725,443	12/06/2016	12/06/2046	Interest Rate Swap			64033N-AB-2	NELNET STUDENT LOAN TRUS-SERIES 2014-5A CLASS B	1	4,499,409	4,725,443
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,456,689	2,499,773	12/06/2016	12/06/2046	Interest Rate Swap			78442G-LJ-3	SLM STUDENT LOAN TRUST-SERIES 2004-3 CLASS B	1	2,456,689	2,499,773
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,650,000	3,554,854	12/06/2016	12/06/2046	Interest Rate Swap			64032A-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2012-1A CLASS B	1	3,650,000	3,554,854
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,170,675	3,390,114	12/06/2016	12/06/2046	Interest Rate Swap			64032F-AH-7	NELNET STUDENT LOAN TRUS-SERIES 2007-2A CLASS A4A2	1	3,170,675	3,390,114
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,292,536	3,332,715	12/06/2016	12/06/2046	Interest Rate Swap			64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	3,292,536	3,332,715
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,240,000	3,221,920	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	3,221,920
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,750,000	14,639,287	12/06/2016	12/06/2046	Interest Rate Swap			03767M-AG-3	Apidos CLO-SERIES 18-29A CLASS A2	1	14,750,000	14,639,287
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,401,986	12/06/2016	12/06/2046	Interest Rate Swap			55952Y-AT-4	Magnetite VIII Ltd-MAGNE 2014-8A CR2	1	4,500,000	4,401,986
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,593,323	12/06/2016	12/06/2046	Interest Rate Swap			04015U-AJ-7	Ares XXXVIII CLO Ltd-SERIES 15-38A CLASS BR	1	6,700,000	6,593,323

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,000,000	2,988,114	12/06/2016	12/06/2046	Interest Rate Swap			48250R-BN-5	KKR CLO 12 Ltd-KKR 12 BR2	1	3,000,000	2,988,114
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	15,000,000	27,185,335	12/06/2016	12/06/2046	Interest Rate Swap		12,185,515	48251B-AL-4	KKR CLO 16 Ltd-SERIES 16 CLASS A1R	1	15,000,000	14,999,820
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,300,000	11,349,234	12/05/2016	12/05/2046	Interest Rate Swap			29001L-AC-5	Elmwood CLO II Ltd-ELMW2 2019-2A B	1	11,300,000	11,349,234
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		992,880	1,000,000	12/05/2016	12/05/2046	Interest Rate Swap			MXP001-TT-1	AEROVIAS DE MEXICO SA USD TERM LN	1	992,880	1,000,000
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,845,203	9,885,100	12/06/2016	12/06/2046	Interest Rate Swap			92917A-AA-4	VOYA 2018-1A A1	1	9,845,203	9,885,100
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,500,000	1,499,139	12/06/2016	12/06/2046	Interest Rate Swap			13876J-AE-2	Canyon Capital CLO Ltd-CANYC 2012-1RA B	1	1,500,000	1,499,139
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,050,000	11,029,215	12/06/2016	12/06/2046	Interest Rate Swap			03331J-AJ-1	Anchorage Capital CLO Lt-ANCHC 2018-10A B	1	11,050,000	11,029,215
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,575,000	12,489,138	12/06/2016	12/06/2046	Interest Rate Swap			056162-AN-0	Babson CLO Ltd 2015-I-BABSN 2015-1A AR	1	12,575,000	12,489,138
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,250,000	7,270,003	12/06/2016	12/06/2046	Interest Rate Swap			40439D-AE-8	Highbridge Loan Managem-HLM 15A-19 B	1	7,250,000	7,270,003
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,096,075	12/06/2016	12/06/2046	Interest Rate Swap			78448A-AD-5	SLM STUDENT LOAN TRUST-SERIES 2013-4 CLASS B	1	3,200,000	3,096,075
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,568,465	1,711,319	12/06/2016	12/06/2046	Interest Rate Swap			00432C-DE-8	ACCESS GROUP INC-SERIES 2006-1 CLASS B	1	1,568,465	1,711,319
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,400,000	5,406,863	12/06/2016	12/06/2046	Interest Rate Swap			87250C-AE-7	TICOP CLO Ltd	1	5,400,000	5,406,863
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,527,413	1,490,891	12/06/2016	12/06/2046	Interest Rate Swap			49326B-BW-5	KEYCORP STUDENT LOAN TRU-SERIES 2004-A CLASS 1B	1	1,527,413	1,490,891
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		606,747	602,449	12/06/2016	12/06/2046	Interest Rate Swap			429827-AR-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B1	1	606,747	602,449
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,033,145	1,954,395	12/06/2016	12/06/2046	Interest Rate Swap			429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	2,033,145	1,954,395
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,961,164	2,138,759	12/06/2016	12/06/2046	Interest Rate Swap			64033T-AB-9	MELNET STUDENT LOAN TRUS-SERIES 2015-3A CLASS B	1	1,961,164	2,138,759
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,371,388	1,330,123	12/06/2016	12/06/2046	Interest Rate Swap			19458L-BD-1	COLLEGIATE FUNDING SERVI-SERIES 2005-A CLASS B	1	1,371,388	1,330,123
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,892,840	2,041,435	12/06/2016	12/06/2046	Interest Rate Swap			00435T-AB-7	ACCESS GROUP INC-SERIES 2015-1 CLASS B	1	1,892,840	2,041,435
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,664,136	2,585,122	12/06/2016	12/06/2046	Interest Rate Swap			78442G-RY-4	SLM STUDENT LOAN TRUST-SERIES 2006-2 CLASS B	1	2,664,136	2,585,122
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,223,849	3,442,251	12/06/2016	12/06/2046	Interest Rate Swap			194267-AM-2	COLLEGE LOAN CORPORATION-SERIES 2007-1 CLASS B2	1	3,223,849	3,442,251
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,121,524	1,975,063	12/06/2016	12/06/2046	Interest Rate Swap			92978J-AH-6	WACHOVIA STUDENT LOAN TR-SERIES 2006-1 CLASS B	1	2,121,524	1,975,063
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,634,101	1,680,082	12/06/2016	12/06/2046	Interest Rate Swap			83715R-AH-5	SOUTH CAROLINA STUDENT L-SERIES 15-A CLASS A	1	1,634,101	1,680,082
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,493,291	2,437,907	12/06/2016	12/06/2046	Interest Rate Swap			28137T-AB-9	EDUCATIONAL SERVICES OF -SERIES 2014-2 CLASS B	1	2,493,291	2,437,907
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,684,235	1,642,918	12/06/2016	12/06/2046	Interest Rate Swap			78443B-AK-2	SLM STUDENT LOAN TRUST-SERIES 2006-10 CLASS B	1	1,684,235	1,642,918
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,390,136	2,415,554	12/06/2016	12/06/2046	Interest Rate Swap			69340Q-AB-2	PENNSYLVANIA HIGHER EDUC-SERIES 2015-1A CLASS B	1	2,390,136	2,415,554
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,166,927	2,205,902	12/06/2016	12/06/2046	Interest Rate Swap			28137H-AB-5	EDUCATIONAL SERVICES OF -SERIES 2015-1 CLASS B	1	2,166,927	2,205,902
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		744,517	783,194	12/06/2016	12/06/2046	Interest Rate Swap			00432C-AR-2	ACCESS GROUP-STUDENT LN REVENUE NT	1	744,517	783,194
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,078,765	7,074,524	12/06/2016	12/06/2046	Interest Rate Swap			63939D-AD-7	NAVIENT STUDENT LOAN TRUST 2014-8 CL B	1	7,078,765	7,074,524
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,900,000	9,791,427	12/06/2016	12/06/2046	Interest Rate Swap			69688X-AU-5	Palmer Square CLO 2014-1-SERIES 2014-1A CLASS A2RR	1	9,900,000	9,791,427
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	23,500,000	35,359,998	12/06/2016	12/06/2046	Interest Rate Swap		12,190,831	92558V-AC-8	Vibrant CLO Ltd-SERIES 18-9A CLASS A2	1	23,500,000	23,169,167
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,800,000	10,691,276	12/06/2016	12/06/2046	Interest Rate Swap			94949J-AC-9	Wellfleet CLO 2018-2 Ltd-WELF 2018-2A A2	1	10,800,000	10,691,276

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,571,837	13,338,548	12/06/2016	12/06/2046	Interest Rate Swap			04017E-AE-2	ARES XXXIIR CLO LTD-SERIES 14-32RA CLASS A1B	1	13,571,837	13,338,548
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,790,000	8,625,741	12/06/2016	12/06/2046	Interest Rate Swap			55951P-BC-0	Magnetite VII Ltd-MAGNE 2012-7A A2P2	1	8,790,000	8,625,741
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,457,514	12/06/2016	12/06/2046	Interest Rate Swap			40436V-AB-7	HIGHBRIDGE LOAN MANAGEM-HLM 11A-17	1	13,560,000	13,457,514
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,045,154	13,812,533	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PL-4	SLM STUDENT LOAN TRUST-SERIES 2005-4 CLASS B	1	14,045,154	13,812,533
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,974,187	7,955,504	12/06/2016	12/06/2046	Interest Rate Swap			79410U-AN-1	SBF 2016-2A A1R	1	7,974,187	7,955,504
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,427,048	12/06/2016	12/06/2046	Interest Rate Swap			50189P-AN-2	LOM LTD PARTNERSHIP-SERIES 25A CLASS C2	1	2,500,000	2,427,048
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,128,447	14,094,892	12/06/2016	12/06/2046	Interest Rate Swap			24702F-ZZ-3	Del Conduit Funding-B L.L.C. - Revolver	2	14,128,447	14,094,892
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,698,164	10,459,207	12/06/2016	12/06/2046	Interest Rate Swap			66704J-AJ-7	NorInstar Education Fina-REVENUE BONDS	1	10,698,164	10,459,207
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,750,000	6,660,691	12/06/2016	12/06/2046	Interest Rate Swap			77341D-AE-7	Rockford Tower CLO 2017--SERIES 17-3A CLASS B	1	6,750,000	6,660,691
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1	250,000,000	10,736,270	30,199,278	09/15/2017	09/15/2047	Interest Rate Swap		19,090,570	03073E-AM-7	AmeriSourceBergen Corp-SENIOR UNSECURED	2	10,736,270	11,108,708
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		28,560,851	34,034,326	09/15/2017	09/15/2047	Interest Rate Swap			055450-AH-3	BHP Billiton Finance USA-DEBENTURE	1	28,560,851	34,034,326
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		12,522,690	12,887,443	09/15/2017	09/15/2047	Interest Rate Swap			12572Q-AG-0	CME GROUP INC-SR UNSECURED	1	12,522,690	12,887,443
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		19,646,734	20,686,400	09/15/2017	09/15/2047	Interest Rate Swap			29364N-AS-7	ENERGY MISSISSIPPI INC-SECURED NOTE	1	19,646,734	20,686,400
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		25,670,807	32,243,182	09/15/2017	09/15/2047	Interest Rate Swap			313747-AF-4	FEDERAL REALTY INVESTMEN-NOTE REID	1	25,670,807	32,243,182
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		443,568	446,076	09/15/2017	09/15/2047	Interest Rate Swap			375558-AI-3	GILEAD SCIENCES INC-SENIOR UNSECURED NOTE	1	443,568	446,076
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		28,508,584	29,709,485	09/15/2017	09/15/2047	Interest Rate Swap			75972Y-AA-9	RENAISSANCE FINANCE-SR UNSECURED	1	28,508,584	29,709,485
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		5,370,319	5,693,096	09/15/2017	09/15/2047	Interest Rate Swap			884315-AG-7	THOMAS & BETTS CORP-NOTE	1	5,370,319	5,693,096
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		19,117,138	19,527,983	09/15/2017	09/15/2047	Interest Rate Swap			958587-BJ-5	WEST MASS ELECTRIC CO-SENIOR UNSECURED NOTE	1	19,117,138	19,527,983
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		3,200,000	3,048,720	09/15/2017	09/15/2047	Interest Rate Swap			22615E-AE-0	Crestline Denali CLO Ltd-SERIES 2018-1A CLASS C	1	3,200,000	3,048,720
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		8,000,000	7,874,184	09/15/2017	09/15/2047	Interest Rate Swap			67104L-AG-2	OHA Loan Funding 2013-2 -OHALF 2013-2A CR	1	8,000,000	7,874,184
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		7,000,000	6,967,037	09/15/2017	09/15/2047	Interest Rate Swap			39862E-AB-0	GRIPPEN PARK CLO LTD-SERIES 17-1A CLASS B	1	7,000,000	6,967,037
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		6,681,724	6,843,226	09/15/2017	09/15/2047	Interest Rate Swap			05348E-AR-0	AvalonBay Communities Inc	1	6,681,724	6,843,226
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		999,384	1,016,830	09/15/2017	09/15/2047	Interest Rate Swap			907818-DG-0	Union Pacific Corp	1	999,384	1,016,830
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		15,166,804	16,881,301	09/15/2017	09/15/2047	Interest Rate Swap			00206R-GL-0	AT&T Inc-SENIOR UNSECURED	2	15,166,804	16,881,301
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		24,025,333	25,590,916	09/15/2017	09/15/2047	Interest Rate Swap			00928Q-AQ-4	AIRCASLE LTD-SENIOR UNSECURED	2	24,025,333	25,590,916
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		23,349,696	24,152,193	09/15/2017	09/15/2047	Interest Rate Swap			29365T-AF-1	Entergy Texas Inc-SECURED	2	23,349,696	24,152,193
57629*DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		24,074,741	24,497,718	09/15/2017	09/15/2047	Interest Rate Swap			90933J-AA-9	UNITED AIRLINES 2016-2 C-FIRST LIEN	2	24,074,741	24,497,718
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	1,482,835	21,090,654	09/15/2017	09/15/2047	Interest Rate Swap		19,497,976	031162-CJ-7	AMGEN INC-SENIOR UNSECURED	2	1,482,835	1,592,678
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		16,568,786	17,629,914	09/15/2017	09/15/2047	Interest Rate Swap			44107T-AT-3	HOST HOTELS & RESORTS LP-SENIOR UNSECURED NOTE	2	16,568,786	17,629,914
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		33,294,106	35,136,971	09/15/2017	09/15/2047	Interest Rate Swap			445658-CD-7	JB HUNT TRANSPRT SVCS-SENIOR UNSECURED NOTE	2	33,294,106	35,136,971
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		34,922,986	38,271,231	09/15/2017	09/15/2047	Interest Rate Swap			456866-AM-4	INGERSOLL-RAND CO-DEBENTURE	2	34,922,986	38,271,231

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		28,913,984	29,335,460	09/15/2017	09/15/2047	Interest Rate Swap			664397-AK-2	EVERSOURCE ENERGY-UNSECURED NOTE	2	28,913,984	29,335,460
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		19,391,910	19,770,052	09/15/2017	09/15/2047	Interest Rate Swap			760759-AP-5	Republic Services Inc-SENIOR UNSECURED NOTE	2	19,391,910	19,770,052
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		37,908,490	39,714,784	09/15/2017	09/15/2047	Interest Rate Swap			94106L-BA-6	Waste Management Inc-SR UNSECURED	2	37,908,490	39,714,784
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		26,942,799	27,893,208	09/15/2017	09/15/2047	Interest Rate Swap			A05830-4I-6	SPARC EM SPC PANAMA METR-SECURED	2	26,942,799	27,893,208
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,912,315	25,370,513	09/15/2017	09/15/2047	Interest Rate Swap			25389J-AQ-9	DIGITAL REALTY TRUST LP-SENIOR UNSECURED	2	22,912,315	25,370,513
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		23,014,138	25,083,420	09/15/2017	09/15/2047	Interest Rate Swap			465077-AK-1	ISRAEL ELECTRIC CORP LTD-SECURED NOTE	2	23,014,138	25,083,420
57629*DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		15,153,008	16,170,188	09/15/2017	09/15/2047	Interest Rate Swap			919794-AB-3	VALLEY NATIONAL BANCORP-SUBORDINATED NOTE	2	15,153,008	16,170,188
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	6,748,459	26,652,966	09/15/2017	09/15/2047	Interest Rate Swap		19,715,259	00287Y-AL-3	AbbVie Inc-SENIOR UNSECURED NOTE	2	6,748,459	6,937,707
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		5,271,474	5,528,796	09/15/2017	09/15/2047	Interest Rate Swap			00507U-AS-0	ACTAVIS FUNDING SCS-SENIOR UNSECURED NOTE	2	5,271,474	5,528,796
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		6,778,224	7,225,164	09/15/2017	09/15/2047	Interest Rate Swap			195869-AP-7	COLONIAL PIPELINE CO-SR UNSECURED	1	6,778,224	7,225,164
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		53,691,239	58,488,841	09/15/2017	09/15/2047	Interest Rate Swap			254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED	2	53,691,239	58,488,841
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		11,495,536	11,849,411	09/15/2017	09/15/2047	Interest Rate Swap			444859-BA-9	Humana Inc-SENIOR UNSECURED NOTE	2	11,495,536	11,849,411
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		23,412,963	23,728,601	09/15/2017	09/15/2047	Interest Rate Swap			61945C-AA-1	MOSAIC CO/THE-SENIOR UNSECURED NOTE	2	23,412,963	23,728,601
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		24,556,807	25,581,283	09/15/2017	09/15/2047	Interest Rate Swap			718549-AB-4	PHILLIPS 66 PARTNERS LP-SENIOR UNSECURED	2	24,556,807	25,581,283
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		26,507,293	27,349,393	09/15/2017	09/15/2047	Interest Rate Swap			756109-AN-4	REALTY INCOME CORP-SENIOR UNSECURED NOTE RE1D	1	26,507,293	27,349,393
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		15,645,840	16,156,561	09/15/2017	09/15/2047	Interest Rate Swap			09247X-AJ-0	BlackRock Inc-SENIOR UNSECURED NOTE	1	15,645,840	16,156,561
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		19,495,306	19,875,464	09/15/2017	09/15/2047	Interest Rate Swap			760759-AP-5	Republic Services Inc-SENIOR UNSECURED NOTE	2	19,495,306	19,875,464
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		8,800,000	8,592,232	09/15/2017	09/15/2047	Interest Rate Swap			05683L-AC-0	Bain Capital Credit CLO -BCC 2018-1A A2	1	8,800,000	8,592,232
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		14,836,718	15,355,586	09/15/2017	09/15/2047	Interest Rate Swap			224044-CG-0	COX COMMUNICATIONS INC-SENIOR UNSECURED	2	14,836,718	15,355,586
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,457,862	23,911,998	09/15/2017	09/15/2047	Interest Rate Swap			709599-AZ-7	Penske Truck Leasing Co -SENIOR UNSECURED	2	22,457,862	23,911,998
57629*DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,732,978	23,877,804	09/15/2017	09/15/2047	Interest Rate Swap			98389B-AV-2	Xcel Energy Inc-SENIOR UNSECURED	2	21,732,978	23,877,804
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	21,164,876	41,007,622	09/15/2017	09/15/2047	Interest Rate Swap		19,226,372	00774M-AB-1	AERCAP IRELAND CAPITAL D-SENIOR UNSECURED	2	21,164,876	21,781,250
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,882,855	22,856,319	09/15/2017	09/15/2047	Interest Rate Swap			378272-AL-2	GLENCORE FUNDING LLC-SR UNSECURED	2	21,882,855	22,856,319
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,886,403	23,595,931	09/15/2017	09/15/2047	Interest Rate Swap			45167R-AF-1	IDEX Corp-SENIOR UNSECURED NOTE	2	22,886,403	23,595,931
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,094,641	22,338,326	09/15/2017	09/15/2047	Interest Rate Swap			49245P-AA-4	KERRY GROUP FIN SERVICES-SENIOR UNSECURED NOTE	2	22,094,641	22,338,326
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,571,975	23,078,563	09/15/2017	09/15/2047	Interest Rate Swap			67103H-AF-4	O'REILLY AUTOMOTIVE INC-SENIOR UNSECURED	2	21,571,975	23,078,563
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		1,049,619	1,077,489	09/15/2017	09/15/2047	Interest Rate Swap			72925P-AD-7	PLUM CREEK TIMBERLANDS-SENIOR UNSECURED NOTE	2	1,049,619	1,077,489
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		14,641,220	15,527,792	09/15/2017	09/15/2047	Interest Rate Swap			92343V-BR-4	Verizon Communications I-SENIOR UNSECURED NOTE	2	14,641,220	15,527,792
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		1,658,402	1,781,949	09/15/2017	09/15/2047	Interest Rate Swap			806851-AG-6	SCHLUMBERGER HLDGS CORP-SR UNSECURED	2	1,658,402	1,781,949
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		579,703	602,021	09/15/2017	09/15/2047	Interest Rate Swap			92936M-AB-3	YPPP FINANCE 2010-SENIOR UNSECURED NOTE	2	579,703	602,021
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		10,987,169	11,038,540	09/15/2017	09/15/2047	Interest Rate Swap			98310W-AL-2	WYNDHAM WORLDWIDE CORP-SENIOR UNSECURED NOTE	3	10,987,169	11,038,540

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		19,170,749	20,339,420	09/15/2017	09/15/2047	Interest Rate Swap			756250-AD-1	Reckitt Benckiser Treasu-SENIOR UNSECURED	1	19,170,749	20,339,420
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		23,014,138	25,083,420	09/15/2017	09/15/2047	Interest Rate Swap			465077-AK-1	ISRAEL ELECTRIC CORP LTD-SECURED NOTE	2	23,014,138	25,083,420
57629*DN8	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		79,247,396	79,683,257	09/15/2017	09/15/2047	Interest Rate Swap			72403Z-NK-6	PIONEERS GATE LLC 2019-5 KABB NOTE	1	79,247,396	79,683,257
Need to File with the NAIC	Sovereign Bond of Peru	1Z	5,000,000	10,922,021	11,353,834	09/03/2019	09/03/2049	5 Yr Credit Default Swap	108,802	142,896	912810-PP-5	US TREAS N/B-NOTE	1	10,813,219	11,210,938
Need to File with the NAIC	Sovereign Bond of Mexico	1Z	20,000,000	21,096,449	23,931,880	09/03/2019	09/03/2049	5 Yr Credit Default Swap	(102,894)	197,505	912833-LL-2	US TREASURY-STRIP COUPON RECEIPT	1	21,199,343	23,734,375
Need to File with the NAIC	Sovereign Bond of Brazil	1Z	5,000,000	19,914,463	22,530,454	06/20/2019	12/20/2024	5 Yr Credit Default Swap	(73,950)	2,330	912810-RV-2	US TREASURY N/B-UNSECURED	1	19,988,413	22,528,124
Need to File with the NAIC	Sovereign Bond of Columbia	1Z	30,000,000	30,106,243	34,188,107	06/20/2019	12/20/2024	5 Yr Credit Default Swap	123,624	395,921	912810-RV-2	US TREASURY N/B-UNSECURED	1	29,982,619	33,792,186
Need to File with the NAIC	Sovereign Bond of India	1Z	40,000,000	31,262,909	35,614,639	06/20/2019	12/20/2024	5 Yr Credit Default Swap	280,869	686,047	912810-RV-2	US TREASURY N/B-UNSECURED	1	30,982,040	34,918,592
Need to File with the NAIC	Sovereign Bond of India	1Z		14,877,332	16,488,282	06/20/2019	12/20/2024	5 Yr Credit Default Swap			912810-RU-4	US TREASURY N/B-UNSECURED	1	14,877,332	16,488,282
Need to File with the NAIC	Sovereign Bond of Malaysia	1Z	10,000,000	15,113,543	16,797,506	06/20/2019	12/20/2024	5 Yr Credit Default Swap	236,211	309,224	912810-RU-4	US TREASURY N/B-UNSECURED	1	14,877,332	16,488,282
Need to File with the NAIC	Credit Default Indices (CDIG033/CDX.NA.IG.33)	2Z	483,000,000	272,499,758	281,275,383	09/20/2019	12/20/2024	5 Yr Credit Default Swap Index	9,067,759	12,522,258	912828-PX-2	US TREAS N/B-NOTE	1	263,431,999	268,753,125
Need to File with the NAIC	Credit Default Indices (CDIG033/CDX.NA.IG.33)	2Z		267,232,510	277,094,046	06/20/2019	12/20/2024	5 Yr Credit Default Swap Index			76116F-AG-2	RFSCP PRINCIPAL STRIP	1	267,232,510	277,094,046
Need to File with the NAIC	Credit Default Indices (CDIG033/CDX.NA.IG.33)	2Z	617,000,000	462,293,155	475,840,092	09/20/2019	12/20/2024	5 Yr Credit Default Swap Index	11,553,993	15,996,342	912828-PX-2	US TREAS N/B-NOTE	1	450,739,162	459,843,750
Need to File with the NAIC	Credit Default Indices (CDIG033/CDX.NA.IG.33)	2Z		87,584,923	119,907,813	09/20/2019	12/20/2024	5 Yr Credit Default Swap Index			912810-QK-7	US TREASURY N/B-BOND	1	87,584,923	119,907,813
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1	130,000,000	33,228,598	908,574	11/07/2018	11/07/2048	Interest Rate Swap		(36,946,917)	873050-CM-1	TTX CO-SENIOR UNSECURED	1	33,228,598	37,855,491
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1		31,916,572	36,979,552	11/07/2018	11/07/2048	Interest Rate Swap			341081-FR-3	Florida Power & Light Co-SECURED	1	31,916,572	36,979,552
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1		26,553,077	31,720,453	11/07/2018	11/07/2048	Interest Rate Swap			45866F-AH-7	Intercontinental Exchang-SENIOR UNSECURED	1	26,553,077	31,720,453
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1		26,136,932	30,393,404	11/07/2018	11/07/2048	Interest Rate Swap			010392-FS-2	Alabama Power Co-SENIOR UNSECURED	1	26,136,932	30,393,404
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1		26,942,155	29,976,951	11/07/2018	11/07/2048	Interest Rate Swap			976843-BJ-0	WISCONSIN PUBLIC SERVICE-SECURED	1	26,942,155	29,976,951
57629*DZ1	Evergreen Basket of Floating Rate Corporate Bonds	1		10,595,051	11,797,478	11/07/2018	11/07/2048	Interest Rate Swap			235851-AR-3	DANAHER CORP-SR UNSECURED	1	10,595,051	11,797,478
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1	170,000,000	42,300,000	(897,356)	11/07/2018	11/07/2048	Interest Rate Swap		(48,505,583)	45174X-AA-0	IHC Health Services Inc-SECURED	1	42,300,000	47,608,227
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1		41,500,000	43,184,568	11/07/2018	11/07/2048	Interest Rate Swap			91412N-AK-6	UNIVERSITY OF CHICAGO-UNSECURED BOND	1	41,500,000	43,184,568
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1		40,932,273	46,345,711	11/07/2018	11/07/2048	Interest Rate Swap			906548-CN-0	Union Electric Co-SECURED	1	40,932,273	46,345,711
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1		41,030,084	48,614,926	11/07/2018	11/07/2048	Interest Rate Swap			575718-AB-7	MASS INSTITUTE OF TECH-UNSECURED BOND	1	41,030,084	48,614,926
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1		29,491,552	33,838,751	11/07/2018	11/07/2048	Interest Rate Swap			391380-AC-9	GREAT-WEST LIFE CO FINANC-SENIOR UNSECURED	1	29,491,552	33,838,751
57629*DY4	Evergreen Basket of Floating Rate Corporate Bonds	1		28,824,745	36,549,755	11/07/2018	11/07/2048	Interest Rate Swap			717081-CY-7	Pfizer Inc-SENIOR UNSECURED NOTE	1	28,824,745	36,549,755
57629*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1	200,000,000	54,182,721	5,351,920	11/07/2018	11/07/2048	Interest Rate Swap		(56,931,004)	882508-BD-5	Texas Instruments Inc-SENIOR UNSECURED	1	54,182,721	62,282,924
57629*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1		50,406,418	58,447,123	11/07/2018	11/07/2048	Interest Rate Swap			745332-CG-9	PUGET SOUND ENERGY INC-SECURED	1	50,406,418	58,447,123
57629*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1		48,652,625	57,458,820	11/07/2018	11/07/2048	Interest Rate Swap			81373P-AA-1	Securian Financial Group-SENIOR UNSECURED	1	48,652,625	57,458,820
57629*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1		52,045,420	60,136,365	11/07/2018	11/07/2048	Interest Rate Swap			92826C-AF-9	VISA INC-SR UNSECURED	1	52,045,420	60,136,365

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1		28,776,178	33,898,168	11/07/2018	11/07/2048	Interest Rate Swap				049560-AP-0	Atmos Energy Corp-SENIOR UNSECURED	1	28,776,178	33,898,168
57629*DX6	Evergreen Basket of Floating Rate Corporate Bonds	1		10,488,129	12,469,146	11/07/2018	11/07/2048	Interest Rate Swap				594918-BE-3	MICROSOFT CORP-SR UNSECURED	1	10,488,129	12,469,146
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1	300,000,000	56,728,631	(16,601,522)	11/08/2018	11/08/2048	Interest Rate Swap		(84,452,598)		125720-AH-8	OME Group Inc-SENIOR UNSECURED	1	56,728,631	67,851,076
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		58,675,986	65,636,329	11/08/2018	11/08/2048	Interest Rate Swap				00440E-AW-7	ACE INA HOLDINGS-SR UNSECURED	1	58,675,986	65,636,329
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		53,308,054	61,631,153	11/08/2018	11/08/2048	Interest Rate Swap				30231G-AW-2	EXXON MOBIL CORPORATION-SR UNSECURED	1	53,308,054	61,631,153
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		55,997,938	64,172,478	11/08/2018	11/08/2048	Interest Rate Swap				037833-BX-7	APPLE INC-SENIOR UNSECURED	1	55,997,938	64,172,478
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		58,339,712	62,058,669	11/08/2018	11/08/2048	Interest Rate Swap				91324P-CR-1	UNITEDHEALTH GROUP INC-SR UNSECURED	1	58,339,712	62,058,669
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		58,709,925	65,737,006	11/08/2018	11/08/2048	Interest Rate Swap				023135-AQ-9	AMAZON.COM INC-SR UNSECURED	1	58,709,925	65,737,006
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		11,193,250	12,868,339	11/08/2018	11/08/2048	Interest Rate Swap				438516-BS-4	Honeywell International -SENIOR UNSECURED	1	11,193,250	12,868,339
57629*DIW8	Evergreen Basket of Floating Rate Corporate Bonds	1		20,628,941	23,854,086	11/08/2018	11/08/2048	Interest Rate Swap				20825C-AQ-7	ConocoPhillips-NOTE	1	20,628,941	23,854,086
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2	320,000,000	101,949,225	28,153,635	11/08/2018	11/08/2048	Interest Rate Swap		(90,369,467)		82620K-AT-0	SIEMENS FINANCIERINGSMAT-SENIOR UNSECURED	1	101,949,225	118,523,102
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		73,226,547	81,357,114	11/08/2018	11/08/2048	Interest Rate Swap				585055-BU-9	MEDTRONIC INC-SR UNSECURED	1	73,226,547	81,357,114
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		68,019,640	81,165,092	11/08/2018	11/08/2048	Interest Rate Swap				141781-BF-0	CARGILL INC-SR UNSECURED	1	68,019,640	81,165,092
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		45,412,263	54,439,541	11/08/2018	11/08/2048	Interest Rate Swap				023135-BM-7	Amazon.com Inc-SENIOR UNSECURED	1	45,412,263	54,439,541
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		48,358,621	52,820,101	11/08/2018	11/08/2048	Interest Rate Swap				899043-AA-1	TUFTS UNIVERSITY-UNSECURED BOND	1	48,358,621	52,820,101
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		18,485,003	22,476,020	11/08/2018	11/08/2048	Interest Rate Swap				40728T-AA-1	HAMILTON COLLEGE-UNSECURED	1	18,485,003	22,476,020
12607*AD2	Evergreen Basket of Floating Rate Corporate Bonds	2		34,348,608	39,145,823	11/08/2018	11/08/2048	Interest Rate Swap				438516-BB-1	HONEYWELL INTERNATIONAL -SENIOR UNSECURED NOTE	1	34,348,608	39,145,823
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1	160,000,000	40,354,993	(1,471,106)	11/08/2018	11/08/2048	Interest Rate Swap		(45,256,407)		575634-AT-7	MASSACHUSETTS ELECTRIC-SENIOR UNSECURED	1	40,354,993	43,785,301
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		30,123,520	31,901,354	11/08/2018	11/08/2048	Interest Rate Swap				45138L-BD-4	IDAHO POWER CORP-SECURED NOTE	1	30,123,520	31,901,354
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		28,876,852	32,873,530	11/08/2018	11/08/2048	Interest Rate Swap				292460-AB-1	Empresa de Transporte de-SENIOR UNSECURED	1	28,876,852	32,873,530
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		28,338,110	32,344,101	11/08/2018	11/08/2048	Interest Rate Swap				771196-BH-4	ROCHE HOLDING INC-SENIOR UNSECURED NOTE	1	28,338,110	32,344,101
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		29,311,531	33,415,088	11/08/2018	11/08/2048	Interest Rate Swap				437076-BH-4	Home Depot Inc/The-SENIOR UNSECURED	1	29,311,531	33,415,088
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		28,275,000	31,820,006	11/08/2018	11/08/2048	Interest Rate Swap				578454-AD-2	MAYO CLINIC-UNSECURED	1	28,275,000	31,820,006
57629*DQ1	Evergreen Basket of Floating Rate Corporate Bonds	1		15,403,687	17,546,838	11/08/2018	11/08/2048	Interest Rate Swap				571676-AH-8	Mars Inc-SENIOR UNSECURED	1	15,403,687	17,546,838
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1	320,000,000	60,048,351	(22,308,558)	11/08/2018	11/08/2048	Interest Rate Swap		(90,369,467)		009279-AC-4	AIRBUS SE-SENIOR UNSECURED	1	60,048,351	68,060,909
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		68,432,639	73,440,305	11/08/2018	11/08/2048	Interest Rate Swap				701094-AL-8	Parker-Hannifin Corp-SENIOR UNSECURED	2	68,432,639	73,440,305
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		61,778,681	68,539,846	11/08/2018	11/08/2048	Interest Rate Swap				23338V-AE-6	DTE Electric Co-SECURED	1	61,778,681	68,539,846
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		62,057,364	66,014,682	11/08/2018	11/08/2048	Interest Rate Swap				66989H-AH-1	NOVARTIS CAPITAL CORP-SR UNSECURED	1	62,057,364	66,014,682
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		41,603,032	53,371,675	11/08/2018	11/08/2048	Interest Rate Swap				594918-CB-8	MICROSOFT CORP-SENIOR UNSECURED	1	41,603,032	53,371,675
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		23,532,229	27,026,224	11/08/2018	11/08/2048	Interest Rate Swap				69351U-AV-5	PPL Electric Utilities C-SECURED	1	23,532,229	27,026,224
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		22,925,493	26,978,425	11/08/2018	11/08/2048	Interest Rate Swap				084664-CQ-2	Berkshire Hathaway Finan-SENIOR UNSECURED	1	22,925,493	26,978,425

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		21,443,366	23,530,000	11/08/2018	11/08/2048	Interest Rate Swap			110122-AX-6	Bristol-Myers Squibb Co-SR UNSECURED	1	21,443,366	23,530,000
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		14,292,083	16,551,234	11/08/2018	11/08/2048	Interest Rate Swap			594918-BT-0	MICROSOFT CORP-SENIOR UNSECURED	1	14,292,083	16,551,234
57629*DR9	Evergreen Basket of Floating Rate Corporate Bonds	1		30,479,487	41,995,391	11/08/2018	11/08/2048	Interest Rate Swap			693506-BC-0	PPG INDUSTRIES INC-SENIOR UNSECURED BOND	1	30,479,487	41,995,391
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1	140,000,000	36,292,189	5,471,070	12/03/2018	12/03/2048	Interest Rate Swap		(34,899,260)	039483-BM-3	ARCHER-DANIELS-MIDLAND C-SENIOR UNSECURED	1	36,292,189	40,370,330
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		27,487,132	32,352,040	12/03/2018	12/03/2048	Interest Rate Swap			00401M-AB-2	ABU DHABI CRUDE OIL PIPE-SECURED	1	27,487,132	32,352,040
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		28,594,518	32,403,700	12/03/2018	12/03/2048	Interest Rate Swap			207597-EH-4	Connecticut Light & Powe-SECURED ESTEE LAUDER CO INC-SENIOR UNSECURED	1	28,594,518	32,403,700
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		27,290,562	29,694,025	12/03/2018	12/03/2048	Interest Rate Swap			29736R-AG-5	UNSECURED	1	27,290,562	29,694,025
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		25,121,048	31,542,975	12/03/2018	12/03/2048	Interest Rate Swap			04351L-AA-8	ASCENSION HEALTH-UNSECURED BOND AEP Transmission Co LLC-SENIOR UNSECURED	1	25,121,048	31,542,975
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		9,997,799	11,489,700	12/03/2018	12/03/2048	Interest Rate Swap			00115A-AJ-8	UNSECURED	1	9,997,799	11,489,700
57629*DS7	Evergreen Basket of Floating Rate Corporate Bonds	1		15,821,714	19,095,027	12/03/2018	12/03/2048	Interest Rate Swap			91481C-AA-8	UNIVERSITY OF PENNSYLVAN-SENIOR UNSECURED NOTE	1	15,821,714	19,095,027
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1	160,000,000	34,367,671	2,471,244	12/03/2018	12/03/2048	Interest Rate Swap		(39,633,579)	02361D-AR-1	Ameren Illinois Co-SECURED	1	34,367,671	37,162,335
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		37,027,945	41,767,302	12/03/2018	12/03/2048	Interest Rate Swap			468223-AT-9	Jackson Laboratory/The-UNSECURED	1	37,027,945	41,767,302
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		35,028,320	40,897,255	12/03/2018	12/03/2048	Interest Rate Swap			743315-AS-2	PROGRESSIVE CORP-SENIOR UNSECURED	1	35,028,320	40,897,255
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		35,239,036	40,275,935	12/03/2018	12/03/2048	Interest Rate Swap			17858P-AB-7	City of Hope-SENIOR UNSECURED	1	35,239,036	40,275,935
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		35,017,166	37,839,305	12/03/2018	12/03/2048	Interest Rate Swap			44107H-AE-2	NY Society for Relief of-SECURED	1	35,017,166	37,839,305
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		10,161,940	11,517,360	12/03/2018	12/03/2048	Interest Rate Swap			458140-AV-2	INTEL CORP-SENIOR UNSECURED	1	10,161,940	11,517,360
57629*DT5	Evergreen Basket of Floating Rate Corporate Bonds	1		10,330,577	11,686,108	12/03/2018	12/03/2048	Interest Rate Swap			87612E-BG-0	Target Corp-SENIOR UNSECURED SIMON PROPERTY GROUP LP-SENIOR UNSECURED	1	10,330,577	11,686,108
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1	160,000,000	36,788,038	8,547,357	12/10/2018	12/10/2048	Interest Rate Swap		(33,627,204)	828807-CZ-8	UNSECURED	1	36,788,038	42,174,561
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		34,636,330	39,620,525	12/10/2018	12/10/2048	Interest Rate Swap			12189L-BB-6	BURLINGTN NORTH SANTA FE-SENIOR UNSECURED	1	34,636,330	39,620,525
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		29,549,808	32,366,970	12/10/2018	12/10/2048	Interest Rate Swap			391382-AB-4	GREAT-WEST LIFE CO FINANC-SENIOR UNSECURED	1	29,549,808	32,366,970
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		14,628,802	17,519,222	12/10/2018	12/10/2048	Interest Rate Swap			038222-AM-7	APPLIED MATERIALS INC-SENIOR UNSECURED	1	14,628,802	17,519,222
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		30,294,882	34,411,800	12/10/2018	12/10/2048	Interest Rate Swap			210518-DB-9	Consumers Energy Co-SECURED INDIANAPOLIS PWR & LIGHT-SECURED	1	30,294,882	34,411,800
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		29,657,165	33,545,640	12/10/2018	12/10/2048	Interest Rate Swap			455434-BR-0	BOND	1	29,657,165	33,545,640
57629*DU2	Evergreen Basket of Floating Rate Corporate Bonds	1		7,037,518	8,199,110	12/10/2018	12/10/2048	Interest Rate Swap			136375-CK-6	Canadian National Railwa-SENIOR UNSECURED	1	7,037,518	8,199,110
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z	200,000,000	103,174,741	108,597,413	01/07/2019	01/07/2049	Interest Rate Swap		(30,345,787)	931142-CS-0	WAL-MART STORES INC-SENIOR NOTE	1	103,174,741	138,943,200
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		71,736,573	86,453,343	01/07/2019	01/07/2049	Interest Rate Swap			755111-BU-4	Raytheon Co-SENIOR UNSECURED NOTE	1	71,736,573	86,453,343
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		44,185,706	57,723,483	01/07/2019	01/07/2049	Interest Rate Swap			873050-CB-5	TTX CO-UNSECURED NOTE	1	44,185,706	57,723,483
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z	250,000,000	75,414,928	49,559,123	01/07/2019	01/07/2049	Interest Rate Swap		(37,398,068)	458140-AK-6	INTEL CORP-SENIOR UNSECURED NOTE	1	75,414,928	86,957,191
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		91,804,083	113,004,282	01/07/2019	01/07/2049	Interest Rate Swap			437076-AS-1	Home Depot Inc/The-SENIOR UNSECURED NOTE	1	91,804,083	113,004,282
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		49,057,684	55,261,122	01/07/2019	01/07/2049	Interest Rate Swap			341081-FG-7	FLORIDA POWER & LIGHT CO-SECURED BOND	1	49,057,684	55,261,122
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		60,070,111	72,254,629	01/07/2019	01/07/2049	Interest Rate Swap			038222-AG-0	APPLIED MATERIALS INC-SENIOR UNSECURED NOTE	1	60,070,111	72,254,629

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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 Floating Rate Corporate Bonds	1Z	175,000,000	78,945,862	56,951,262	01/31/2019	01/31/2049	Interest Rate Swap	(32,303,381)		055451-AV-0	BHP Billiton Finance USA-SR UNSECURED	1	78,945,862	89,254,643
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		65,903,040	75,002,210	01/31/2019	01/31/2049	Interest Rate Swap			478165-AG-8	JOHNSON (S.C.) & SON INC-SENIOR UNSECURED NOTE	1	65,903,040	75,002,210
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		54,600,281	72,581,106	01/31/2019	01/31/2049	Interest Rate Swap			78409V-AB-0	S&P GLOBAL INC-SENIOR UNSECURED NOTE	1	54,600,281	72,581,106
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z	150,000,000	47,213,386	29,162,893	02/04/2019	02/04/2049	Interest Rate Swap	(25,611,367)		057224-AZ-0	BAKER HUGHES INC-SENIOR NOTE	1	47,213,386	54,774,260
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		45,708,153	49,855,905	02/04/2019	02/04/2049	Interest Rate Swap			891160-MJ-9	Toronto-Dominion Bank/Th-SUBORDINATED	1	45,708,153	49,855,905
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		71,481,564	78,311,370	02/04/2019	02/04/2049	Interest Rate Swap			278865-AM-2	Ecolab Inc-SENIOR UNSECURED NOTE	1	71,481,564	78,311,370
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		18,818,725	21,788,631	02/04/2019	02/04/2049	Interest Rate Swap			532457-BR-8	ELI LILLY & CO-SENIOR UNSECURED	1	18,818,725	21,788,631
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z	165,000,000	59,478,906	42,551,864	02/04/2019	02/04/2049	Interest Rate Swap	(28,990,468)		68389X-AM-7	ORACLE CORP-SENIOR UNSECURED NOTE	1	59,478,906	71,542,332
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		65,628,614	74,665,400	02/04/2019	02/04/2049	Interest Rate Swap			149123-CB-5	Caterpillar Inc-SENIOR UNSECURED BOND	1	65,628,614	74,665,400
Awaiting PPN	Evergreen Basket of Floating Rate Corporate Bonds	1Z		66,427,443	79,958,723	02/04/2019	02/04/2049	Interest Rate Swap			377372-AE-7	GLAXOSMITHKLINE CAP INC-SR UNSECURED	1	66,427,443	79,958,723
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	266,735,060	62,639,551	88,746,573	07/31/2019	07/31/2049	TRS Bond Index	9,215,538		539830-AM-9	Lockheed Martin Corp-SENIOR UNSECURED NOTE	1	62,639,551	79,531,035
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		17,430,161	18,330,883	07/31/2019	07/31/2049	TRS Bond Index			133131-AV-4	CAMDEN PROPERTY TRUST-SENIOR UNSECURED NOTE REID	1	17,430,161	18,330,883
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		16,737,728	17,245,683	07/31/2019	07/31/2049	TRS Bond Index			023770-AA-8	AMER AIRLN 15-1 A PTT-SECURED	1	16,737,728	17,245,683
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		14,537,105	14,848,944	07/31/2019	07/31/2049	TRS Bond Index			89153V-AB-5	Total Capital Internatio-SENIOR UNSECURED NOTE	1	14,537,105	14,848,944
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,058,206	5,241,882	07/31/2019	07/31/2049	TRS Bond Index			485134-BN-9	KANSAS CITY POWER & LT-SENIOR UNSECURED NOTE	1	5,058,206	5,241,882
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		16,848,770	18,867,412	07/31/2019	07/31/2049	TRS Bond Index			521070-AJ-4	Lazard Group LLC-SENIOR UNSECURED	1	16,848,770	18,867,412
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		16,820,000	17,008,601	07/31/2019	07/31/2049	TRS Bond Index			78403D-AL-4	SBA TOWER TRUST-FIRST LIEN	1	16,820,000	17,008,601
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		16,006,526	19,007,460	07/31/2019	07/31/2049	TRS Bond Index			767201-AD-8	RIO TINTO FIN USA LTD-SENIOR UNSECURED NOTE	1	16,006,526	19,007,460
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		15,976,797	16,716,902	07/31/2019	07/31/2049	TRS Bond Index			02376U-AA-3	AMER AIRLS INC 2016-1 CL AA CTF	1	15,976,797	16,716,902
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		15,779,117	15,913,423	07/31/2019	07/31/2049	TRS Bond Index			039483-BB-7	Archer-Daniels-Midland C-SENIOR UNSECURED NOTE	1	15,779,117	15,913,423
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,983,072	9,419,247	07/31/2019	07/31/2049	TRS Bond Index			278265-AD-5	Eaton Vance Corp-SENIOR UNSECURED NOTE	1	8,983,072	9,419,247
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		15,743,214	15,745,813	07/31/2019	07/31/2049	TRS Bond Index			03076C-AH-9	Ameriprise Financial Inc-SENIOR UNSECURED	1	15,743,214	15,745,813
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		15,355,701	16,638,560	07/31/2019	07/31/2049	TRS Bond Index			92928Q-AE-8	WEA Finance LLC-SENIOR UNSECURED	1	15,355,701	16,638,560
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,917,874	12,651,891	07/31/2019	07/31/2049	TRS Bond Index			373298-CF-3	GEORGIA-PACIFIC LLC-SENIOR UNSECURED NOTE	1	11,917,874	12,651,891
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		14,895,811	15,791,630	07/31/2019	07/31/2049	TRS Bond Index			45866F-AA-2	INTERCONTINENTAL EXCHANGE-SENIOR UNSECURED NOTE	1	14,895,811	15,791,630
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		14,728,413	14,736,015	07/31/2019	07/31/2049	TRS Bond Index			00724F-AB-7	Adobe Systems Inc-SENIOR UNSECURED NOTE	1	14,728,413	14,736,015
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	266,875,000	22,342,814	31,242,962	07/31/2019	07/31/2049	TRS Bond Index	8,622,016		143658-BA-9	CARNIVAL CORP-SENIOR UNSECURED NOTE	1	22,342,814	22,620,946
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		17,163,244	18,346,796	07/31/2019	07/31/2049	TRS Bond Index			571748-AZ-5	Marsh & McLennan Cos Inc-SR UNSECURED	1	17,163,244	18,346,796
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		20,212,578	22,950,879	07/31/2019	07/31/2049	TRS Bond Index			524671-AA-2	LEGRAND FRANCE SA-SENIOR UNSECURED NOTE	1	20,212,578	22,950,879
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		20,074,689	21,396,668	07/31/2019	07/31/2049	TRS Bond Index			69353R-EQ-7	PNC Bank NA-SENIOR UNSECURED	1	20,074,689	21,396,668
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		17,155,657	17,793,362	07/31/2019	07/31/2049	TRS Bond Index			10373Q-AL-4	BP Capital Markets Ameri-SENIOR UNSECURED	1	17,155,657	17,793,362

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		3,573,267	3,884,220	07/31/2019	07/31/2049	TRS Bond Index			00440E-AV-9	ACE INA HOLDINGS-SR UNSECURED	1	3,573,267	3,884,220
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		19,355,594	20,638,598	07/31/2019	07/31/2049	TRS Bond Index			521070-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED	1	19,355,594	20,638,598
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,888,203	12,682,458	07/31/2019	07/31/2049	TRS Bond Index			808513-AX-3	Charles Schwab Corp/The-SENIOR UNSECURED	1	11,888,203	12,682,458
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		18,815,791	20,157,336	07/31/2019	07/31/2049	TRS Bond Index			780082-AD-5	Royal Bank of Canada-SUBORDINATED	1	18,815,791	20,157,336
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		18,523,771	19,712,500	07/31/2019	07/31/2049	TRS Bond Index			00830Y-AB-7	Africa Finance Corp-SENIOR UNSECURED	1	18,523,771	19,712,500
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		18,242,831	18,578,898	07/31/2019	07/31/2049	TRS Bond Index			65557F-AA-4	Nordea Bank AB-UNSECURED NOTE	1	18,242,831	18,578,898
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		18,130,960	19,870,560	07/31/2019	07/31/2049	TRS Bond Index			74340X-BH-3	Prologis LP-SENIOR UNSECURED	1	18,130,960	19,870,560
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,449,699	12,920,637	07/31/2019	07/31/2049	TRS Bond Index			845743-BP-7	SOUTHWESTERN PUBLIC SERV-SECURED	1	12,449,699	12,920,637
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,198,287	13,291,011	07/31/2019	07/31/2049	TRS Bond Index			693476-BL-6	PNC FUNDING CORP-SENIOR NOTE	1	13,198,287	13,291,011
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		17,515,247	18,314,452	07/31/2019	07/31/2049	TRS Bond Index			084670-BS-6	BERKSHIRE HATHAWAY INC-SENIOR UNSECURED	1	17,515,247	18,314,452
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		30,003,133	34,494,461	07/31/2019	07/31/2049	TRS Bond Index			911312-AJ-5	UNITED PARCEL SERVICE IN-SENIOR UNSECURED NOTE	1	30,003,133	34,494,461
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	250,000,000	103,664,298	110,918,179	07/31/2019	07/31/2049	Interest Rate Swap		7,253,881	90139P-AB-5	Twin Brook Capital Funding I WSPV, LLC	1	103,664,298	103,664,298
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		101,008,072	101,008,072	07/31/2019	07/31/2049	Interest Rate Swap			90139Q-AB-3	Twin Brook Capital Funding II WSPV, LLC	1	101,008,072	101,008,072
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		46,000,000	46,533,600	07/31/2019	07/31/2049	Interest Rate Swap			72403Z-NL-4	PIONEERS GATE LLC 2019-6 AXIS Note	1	46,000,000	46,533,600
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	250,000,000	107,600,000	115,424,933	07/31/2019	07/31/2049	Interest Rate Swap		7,738,853	72403Z-NH-3	PIONEERS GATE LLC 2019-2 MPOF Note	1	107,600,000	107,686,080
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		64,144,737	65,472,533	07/31/2019	07/31/2049	Interest Rate Swap			72403*-MN-9	PIONEERS GATE LLC 2017-8 DT Warehouse Class A	1	64,144,737	65,472,533
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		78,593,750	78,357,969	07/31/2019	07/31/2049	Interest Rate Swap			72403Z-NI-1	PIONEERS GATE LLC 2019-3 BWCONA Note	1	78,593,750	78,357,969
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	275,000,000	28,144,566	38,534,201	07/30/2019	07/30/2020	Interest Rate Swap		8,046,485	22822R-BH-2	Crown Castle Towers LLC-SECURED	1	28,144,566	30,487,716
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		27,470,941	31,157,675	07/30/2019	07/30/2020	Interest Rate Swap			448814-EJ-8	HYDRO-QUEBEC-NOTE	1	27,470,941	31,157,675
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		20,144,380	21,659,416	07/30/2019	07/30/2020	Interest Rate Swap			756250-AE-9	Reckitt Benckiser Treasu-SENIOR UNSECURED	1	20,144,380	21,659,416
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		24,958,913	32,205,850	07/30/2019	07/30/2020	Interest Rate Swap			244199-AW-5	Deere & Co-BOND	1	24,958,913	32,205,850
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		15,288,954	15,726,351	07/30/2019	07/30/2020	Interest Rate Swap			854502-AD-3	STANLEY BLACK & DECKER-SENIOR UNSECURED NOTE	1	15,288,954	15,726,351
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		24,034,565	24,186,069	07/30/2019	07/30/2020	Interest Rate Swap			808513-AD-7	CHARLES SCHWAB CORP-SENIOR NOTE	1	24,034,565	24,186,069
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		23,998,485	23,998,512	07/30/2019	07/30/2020	Interest Rate Swap			24422E-RY-7	John Deere Capital Corp-SENIOR UNSECURED NOTE	1	23,998,485	23,998,512
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		23,910,460	26,642,690	07/30/2019	07/30/2020	Interest Rate Swap			11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED	1	23,910,460	26,642,690
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		18,630,903	19,112,129	07/30/2019	07/30/2020	Interest Rate Swap			80687P-AA-4	Schneider Electric SE-SENIOR UNSECURED NOTE	1	18,630,903	19,112,129
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		23,155,515	24,734,417	07/30/2019	07/30/2020	Interest Rate Swap			00830Y-AC-5	Africa Finance Corp-SENIOR UNSECURED	1	23,155,515	24,734,417
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		23,107,447	24,071,108	07/30/2019	07/30/2020	Interest Rate Swap			46625H-JD-3	JPMorgan Chase & Co-SENIOR UNSECURED NOTE	1	23,107,447	24,071,108
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		23,079,632	25,213,530	07/30/2019	07/30/2020	Interest Rate Swap			11271L-AA-0	BROOKFIELD FINANCE INC-SENIOR UNSECURED	1	23,079,632	25,213,530
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	250,000,000	12,191,342	19,547,487	07/30/2019	06/08/2020	Interest Rate Swap		7,200,904	00038A-AB-9	ABB TREASURY CENTER USA-SENIOR UNSECURED NOTE	1	12,191,342	12,346,583
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,309,197	13,123,313	07/30/2019	06/08/2020	Interest Rate Swap			207597-EJ-0	Connecticut Light & Powe-SECURED	1	12,309,197	13,123,313

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,888,070	12,160,039	07/30/2019	06/08/2020	Interest Rate Swap			38141G-GS-7	Goldman Sachs Group Inc/-SENIOR UNSECURED NOTE	1	11,888,070	12,160,039
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,643,257	8,900,579	07/30/2019	06/08/2020	Interest Rate Swap			771196-BK-7	ROCHE HOLDING INC-SR UNSECURED	1	8,643,257	8,900,579
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,750,000	11,815,638	07/30/2019	06/08/2020	Interest Rate Swap			78403D-AK-6	SBA TOWER TRUST-FIRST LIEN FEDERAL REALTY INVESTMEN-SENIOR UNSECURED NOTE REID	1	11,750,000	11,815,638
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,148,598	9,385,168	07/30/2019	06/08/2020	Interest Rate Swap			313747-AS-6	UNSECURED NOTE REID	1	9,148,598	9,385,168
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,762,172	5,843,027	07/30/2019	06/08/2020	Interest Rate Swap			022650-AA-6	Amal Ltd Ex Im Bk Gtd Sr Nt	1	5,762,172	5,843,027
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,596,309	12,009,434	07/30/2019	06/08/2020	Interest Rate Swap			655855-FA-7	SOUTHERN RAILWAY CO-DEBENTURE CINTAS CORPORATION NO. 2-SENIOR UNSECURED NOTE	1	11,596,309	12,009,434
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,712,579	6,785,361	07/30/2019	06/08/2020	Interest Rate Swap			17252M-AK-6	UNSECURED NOTE	1	6,712,579	6,785,361
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,013,276	6,541,332	07/30/2019	06/08/2020	Interest Rate Swap			78409V-AD-6	S&P GLOBAL INC-SR UNSECURED	1	6,013,276	6,541,332
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,359,677	12,531,030	07/30/2019	06/08/2020	Interest Rate Swap			78409V-AM-6	S&P Global Inc-SENIOR UNSECURED	1	11,359,677	12,531,030
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,152,201	11,102,550	07/30/2019	06/08/2020	Interest Rate Swap			67080L-AA-3	Nuveen LLC-SENIOR UNSECURED AMER AIRLN 14-1 A PTT-SECURED NOTE	1	11,152,201	11,102,550
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,679,207	5,926,270	07/30/2019	06/08/2020	Interest Rate Swap			02377A-AA-6	UNSECURED NOTE	1	5,679,207	5,926,270
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,029,918	11,047,160	07/30/2019	06/08/2020	Interest Rate Swap			12572Q-AJ-4	CME Group Inc-SENIOR UNSECURED CAMDEN PROPERTY TRUST-SENIOR UNSECURED NOTE REID	1	11,029,918	11,047,160
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,279,678	5,455,930	07/30/2019	06/08/2020	Interest Rate Swap			133131-AT-9	UNSECURED NOTE REID	1	5,279,678	5,455,930
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,499,358	10,579,840	07/30/2019	06/08/2020	Interest Rate Swap			828807-DE-4	Simon Property Group LP-SENIOR UNSECURED	1	10,499,358	10,579,840
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,182,473	10,231,820	07/30/2019	06/08/2020	Interest Rate Swap			250847-EG-1	DTE Electric Co-SECURED BOND	1	10,182,473	10,231,820
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,174,656	12,760,930	07/30/2019	06/08/2020	Interest Rate Swap			039483-AN-2	Archer-Daniels-Midland C-NOTE PARTNERS HEALTHCARE SYST-UNSECURED	1	10,174,656	12,760,930
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,115,792	10,226,040	07/30/2019	06/08/2020	Interest Rate Swap			70213H-AB-4	NOTE	1	10,115,792	10,226,040
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,070,262	10,817,403	07/30/2019	06/08/2020	Interest Rate Swap			369550-BG-2	General Dynamics Corp-SENIOR UNSECURED	1	10,070,262	10,817,403
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,554,646	10,068,000	07/30/2019	06/08/2020	Interest Rate Swap			05580M-80-1	B. Riley Financial Inc-SENIOR UNSECURED	2	10,554,646	10,068,000
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,020,551	11,233,730	07/30/2019	06/08/2020	Interest Rate Swap			448814-DX-8	HYDRO-QUEBEC-DEBENTURE	1	10,020,551	11,233,730
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,981,937	10,199,527	07/30/2019	06/08/2020	Interest Rate Swap			278865-AL-4	Ecolab Inc-SENIOR UNSECURED NOTE	1	9,981,937	10,199,527
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		4,277,988	4,456,142	07/30/2019	06/08/2020	Interest Rate Swap			46625H-KC-3	JPMorgan Chase & Co-SR UNSECURED	1	4,277,988	4,456,142
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,636,537	10,428,547	07/30/2019	06/08/2020	Interest Rate Swap			33829T-AA-4	FIVE CORNERS FUNDING TRS-UNSECURED NOTE	1	9,636,537	10,428,547
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		3,446,673	3,660,453	07/30/2019	06/08/2020	Interest Rate Swap			009363-AQ-5	AIRGAS INC-SENIOR UNSECURED NOTE	1	3,446,673	3,660,453
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,716,243	5,919,426	07/30/2019	06/08/2020	Interest Rate Swap			29364W-AM-0	ENTERGY LOUISIANA LLC 1ST MTD BD	1	5,716,243	5,919,426
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,697,915	5,851,922	07/30/2019	06/08/2020	Interest Rate Swap			29365T-AC-8	ENTERGY TEXAS INC-BOND	1	5,697,915	5,851,922
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	150,000,000	20,112,621	24,753,909	08/01/2019	08/01/2049	Interest Rate Swap		4,269,205	72403*-AK-8	PIONEERS GATE LLC 2017 2 GSCF 2011-2A-1	1	20,112,621	20,484,704
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		115,981,422	116,770,096	08/01/2019	08/01/2049	Interest Rate Swap			72403*-BA-9	PIONEERS GATE LLC 2019-1 ONDK Note	1	115,981,422	116,770,096
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		15,806,962	16,020,356	08/01/2019	08/01/2049	Interest Rate Swap			72403Z-MY-7	PIONEERS GATE LLC 2017-4 Alkali Term Loan	1	15,806,962	16,020,356
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	250,000,000	3,496,134	10,940,843	08/01/2019	08/01/2049	Interest Rate Swap		7,200,904	74340X-AW-1	PROLOGIS LP-SENIOR UNSECURED NOTE REID	1	3,496,134	3,739,939
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		3,532,305	3,769,210	08/01/2019	08/01/2049	Interest Rate Swap			45866F-AD-6	INTERCONTINENTALEXCHANGE-SENIOR UNSECURED	1	3,532,305	3,769,210

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,400,000	9,402,981	08/01/2019	08/01/2049	Interest Rate Swap			78403D-AJ-9	SBA TOWER TRUST-SR UNSECURED	1	9,400,000	9,402,981
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,391,864	10,248,433	08/01/2019	08/01/2049	Interest Rate Swap			64952W-CX-9	New York Life Global Fun-SECURED Virginia Electric & Powe-SENIOR	1	9,391,864	10,248,433
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,664,494	10,489,745	08/01/2019	08/01/2049	Interest Rate Swap			927804-FZ-2	UNSECURED UNION PACIFIC CORP-SENIOR UNSECURED	1	9,664,494	10,489,745
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,217,898	9,788,526	08/01/2019	08/01/2049	Interest Rate Swap			907818-DV-7	NOTE	1	9,217,898	9,788,526
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,187,149	9,905,512	08/01/2019	08/01/2049	Interest Rate Swap			55922Z-AR-5	Magna International Inc-SR UNSECURED	1	9,187,149	9,905,512
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,994,366	9,246,249	08/01/2019	08/01/2049	Interest Rate Swap			857477-AL-7	State Street Corp-SUBORDINATED NOTE	1	8,994,366	9,246,249
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		3,104,631	3,174,905	08/01/2019	08/01/2049	Interest Rate Swap			084664-BQ-3	BERKSHIRE HATHAWAY FIN-SENIOR NOTE	1	3,104,631	3,174,905
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,909,045	9,426,026	08/01/2019	08/01/2049	Interest Rate Swap			05348E-AU-3	AVALONBAY COMMUNITIES IN-SR UNSECURED	1	8,909,045	9,426,026
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,085,840	11,108,990	08/01/2019	08/01/2049	Interest Rate Swap			863871-AM-1	STUDENT LOAN MKTG ASSOC-ZERO CPN BND	1	9,085,840	11,108,990
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,439,970	6,931,358	08/01/2019	08/01/2049	Interest Rate Swap			91159H-HR-4	US Bancorp-SENIOR UNSECURED	1	6,439,970	6,931,358
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,700,000	9,142,795	08/01/2019	08/01/2049	Interest Rate Swap			680033-AC-1	Old National Bancorp/IN-SENIOR UNSECURED NOTE	1	8,700,000	9,142,795
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,696,353	6,230,542	08/01/2019	08/01/2049	Interest Rate Swap			22160K-AM-7	Costco Wholesale Corp-SENIOR UNSECURED	1	5,696,353	6,230,542
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,424,122	8,428,285	08/01/2019	08/01/2049	Interest Rate Swap			209111-EZ-2	Consolidated Edison Co o-SENIOR UNSECURED NOTE	1	8,424,122	8,428,285
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,449,002	8,739,818	08/01/2019	08/01/2049	Interest Rate Swap			126410-LK-3	CSX TRANSPORTATION INC-DEBENTURE	1	8,449,002	8,739,818
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,295,755	6,469,694	08/01/2019	08/01/2049	Interest Rate Swap			70109H-AK-1	Parker-Hannifin Corp-NOTE	2	6,295,755	6,469,694
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,423,186	8,909,623	08/01/2019	08/01/2049	Interest Rate Swap			0010EP-AN-8	AEP TEXAS CENTRAL CO-SR UNSECURED	1	8,423,186	8,909,623
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,398,748	8,417,732	08/01/2019	08/01/2049	Interest Rate Swap			95709T-AD-2	WESTAR ENERGY INC-NOTE	1	8,398,748	8,417,732
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,332,981	8,400,311	08/01/2019	08/01/2049	Interest Rate Swap			24422E-RE-1	John Deere Capital Corp-SENIOR UNSECURED NOTE	1	8,332,981	8,400,311
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,224,409	8,761,905	08/01/2019	08/01/2049	Interest Rate Swap			448814-CS-0	HYDRO-QUEBEC-DEBENTURE	1	8,224,409	8,761,905
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,148,636	8,453,066	08/01/2019	08/01/2049	Interest Rate Swap			46625H-JC-5	JPMorgan Chase & Co-NOTE	1	8,148,636	8,453,066
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,846,891	8,559,644	08/01/2019	08/01/2049	Interest Rate Swap			69353R-FG-8	PNC Bank NA-SENIOR UNSECURED	1	7,846,891	8,559,644
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,007,239	6,254,166	08/01/2019	08/01/2049	Interest Rate Swap			92826C-AD-4	VISA INC-SR UNSECURED	1	6,007,239	6,254,166
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,804,562	8,644,573	08/01/2019	08/01/2049	Interest Rate Swap			45866F-AF-1	Intercontinental Exchang-SENIOR UNSECURED	1	7,804,562	8,644,573
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		2,104,129	2,138,743	08/01/2019	08/01/2049	Interest Rate Swap			144141-DA-3	DUKE ENERGY PROGRESS INC-SECURED	1	2,104,129	2,138,743
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,395,008	7,417,917	08/01/2019	08/01/2049	Interest Rate Swap			26875P-AG-6	EOG Resources Inc-SENIOR UNSECURED NOTE	1	7,395,008	7,417,917
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,407,524	7,852,066	08/01/2019	08/01/2049	Interest Rate Swap			94974B-GH-7	Wells Fargo & Co-SR UNSECURED	1	7,407,524	7,852,066
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		2,279,915	2,497,450	08/01/2019	08/01/2049	Interest Rate Swap			74460D-AC-3	Public Storage-SENIOR UNSECURED	1	2,279,915	2,497,450
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,266,036	7,459,432	08/01/2019	08/01/2049	Interest Rate Swap			377373-AD-7	GLAXOSMITHKLINE CAP LTD-SR UNSECURED	1	7,266,036	7,459,432
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,078,288	7,241,198	08/01/2019	08/01/2049	Interest Rate Swap			478111-AB-3	JOHNS HOPKINS HEALTH SYS-SENIOR UNSECURED NOTE	1	7,078,288	7,241,198
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,826,599	5,744,949	08/01/2019	08/01/2049	Interest Rate Swap			037833-CR-9	Apple Inc-SENIOR UNSECURED	1	5,826,599	5,744,949
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,972,714	6,089,821	08/01/2019	08/01/2049	Interest Rate Swap			09681L-AJ-9	BOC Aviation Ltd-SENIOR UNSECURED	1	5,972,714	6,089,821

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,894,106	6,557,508	08/01/2019	08/01/2049	Interest Rate Swap			133131-AW-2	Camden Property Trust-SENIOR UNSECURED	1	5,894,106	6,557,508
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,897,552	6,218,933	08/01/2019	08/01/2049	Interest Rate Swap			571748-AX-0	Marsh & McLennan Cos Inc-SENIOR UNSECURED NOTE	1	5,897,552	6,218,933
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		4,530,725	4,588,466	08/01/2019	08/01/2049	Interest Rate Swap			20030N-BD-2	COMCAST CORP-SR UNSECURED	1	4,530,725	4,588,466
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z	150,000,000	24,532,991	14,617,312	08/01/2019	08/01/2049	Interest Rate Swap		(10,715,817)	443510-AF-9	Hubbell Inc-SENIOR UNSECURED NOTE	2	24,532,991	25,333,129
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		25,858,468	26,592,334	08/01/2019	08/01/2049	Interest Rate Swap			489170-AC-4	Kenametal Inc-SENIOR UNSECURED NOTE	2	25,858,468	26,592,334
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		25,375,000	26,834,063	08/01/2019	08/01/2049	Interest Rate Swap			03666H-AA-9	Antares Holdings LP-SENIOR UNSECURED	2	25,375,000	26,834,063
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		14,500,191	14,936,037	08/01/2019	08/01/2049	Interest Rate Swap			445658-CE-5	JIB HUNT TRANSPRT SVCS-SR UNSECURED	2	14,500,191	14,936,037
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		16,524,889	17,827,936	08/01/2019	08/01/2049	Interest Rate Swap			708696-BY-4	Pennsylvania Electric Co-SENIOR UNSECURED	2	16,524,889	17,827,936
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		24,331,058	26,874,518	08/01/2019	08/01/2049	Interest Rate Swap			806851-AK-7	Schlumberger Holdings Co-SENIOR UNSECURED	2	24,331,058	26,874,518
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		24,048,977	25,374,053	08/01/2019	08/01/2049	Interest Rate Swap			10510K-AC-1	BRAMBLES USA INC-SR UNSECURED	2	24,048,977	25,374,053
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z	200,000,000	20,823,870	4,247,215	08/01/2019	08/01/2049	Interest Rate Swap		(18,752,421)	883556-BX-9	Thermo Fisher Scientific-SENIOR UNSECURED	2	20,823,870	22,999,636
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		30,753,409	31,326,588	08/01/2019	08/01/2049	Interest Rate Swap			45167R-AE-4	IDEX Corp-SENIOR UNSECURED NOTE	2	30,753,409	31,326,588
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		20,850,924	22,818,377	08/01/2019	08/01/2049	Interest Rate Swap			579780-AN-7	MCCORMICK & CO INC/MID-SENIOR UNSECURED	2	20,850,924	22,818,377
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		30,241,707	30,329,759	08/01/2019	08/01/2049	Interest Rate Swap			90932K-AA-7	United Airlines 2019-2 C-FIRST LIEN	2	30,241,707	30,329,759
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		29,770,294	31,030,033	08/01/2019	08/01/2049	Interest Rate Swap			25389J-AL-0	DIGITAL REALTY TRUST LP-SR UNSECURED	2	29,770,294	31,030,033
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		29,743,490	32,090,756	08/01/2019	08/01/2049	Interest Rate Swap			22822V-AE-1	CROWN CASTLE INTL CORP-SENIOR UNSECURED	2	29,743,490	32,090,756
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		29,406,741	30,861,543	08/01/2019	08/01/2049	Interest Rate Swap			378272-AF-5	GLENCORE FUNDING LLC-SENIOR UNSECURED NOTE	2	29,406,741	30,861,543
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		29,241,986	31,323,203	08/01/2019	08/01/2049	Interest Rate Swap			05369A-AA-9	Aviation Capital Group L-SENIOR UNSECURED	2	29,241,986	31,323,203
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z	200,000,000	46,128,143	24,440,971	08/30/2019	08/30/2034	Interest Rate Swap		(25,970,113)	984851-AF-2	Yara International ASA-SENIOR UNSECURED	2	46,128,143	50,411,084
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		36,146,769	40,151,592	08/30/2019	08/30/2034	Interest Rate Swap			28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURED	2	36,146,769	40,151,592
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		37,043,533	40,269,669	08/30/2019	08/30/2034	Interest Rate Swap			361448-BC-6	GATX Corp-SENIOR UNSECURED	2	37,043,533	40,269,669
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		35,565,078	36,714,582	08/30/2019	08/30/2034	Interest Rate Swap			120568-AX-8	BUNGE LTD FINANCE CORP-SENIOR UNSECURED	2	35,565,078	36,714,582
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		33,819,941	34,653,174	08/30/2019	08/30/2034	Interest Rate Swap			00908P-AC-1	Air Canada 2017-1 Class -SECURED	2	33,819,941	34,653,174
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2Z		22,537,939	24,862,573	08/30/2019	08/30/2034	Interest Rate Swap			171340-AN-2	CHURCH & DWIGHT CO INC-SENIOR UNSECURED	2	22,537,939	24,862,573
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	306,000,000	100,000,000	72,581,217	08/30/2019	08/30/2039	Interest Rate Swap		(36,959,983)	30290Y-AC-5	FS Global Credit Opportu-FS GLOBAL CREDIT	1	100,000,000	109,541,200
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		36,351,734	40,563,495	08/30/2019	08/30/2039	Interest Rate Swap			801060-AD-6	Sanofi-SENIOR UNSECURED	1	36,351,734	40,563,495
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,390,043	7,931,218	08/30/2019	08/30/2039	Interest Rate Swap			00108W-AH-3	AEP Texas Inc-SENIOR UNSECURED	1	7,390,043	7,931,218
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		27,800,000	30,561,485	08/30/2019	08/30/2039	Interest Rate Swap			892331-AD-1	Toyota Motor Corp-SENIOR UNSECURED	1	27,800,000	30,561,485
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		30,533,001	33,612,427	08/30/2019	08/30/2039	Interest Rate Swap			79466L-AF-1	salesforce.com Inc-SENIOR UNSECURED	1	30,533,001	33,612,427
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		30,050,985	32,733,380	08/30/2019	08/30/2039	Interest Rate Swap			369550-BC-1	General Dynamics Corp-SENIOR UNSECURED	1	30,050,985	32,733,380
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		28,917,263	31,010,196	08/30/2019	08/30/2039	Interest Rate Swap			892330-AC-5	Toyota Industries Corp-SENIOR UNSECURED	1	28,917,263	31,010,196

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		28,494,670	28,836,438	08/30/2019	08/30/2039	Interest Rate Swap			223030-AN-0	COVIDIEN INTL FINANCE SA-SENIOR UNSECURED NOTE	1	28,494,670	28,836,438
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,057,570	7,402,388	08/30/2019	08/30/2039	Interest Rate Swap			313747-AU-1	Federal Realty Investmen-SENIOR UNSECURED	1	7,057,570	7,402,388
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,996,227	7,154,259	08/30/2019	08/30/2039	Interest Rate Swap			219868-BS-4	CORP ANDINA DE FOMENTO-SENIOR UNSECURED NOTE	1	6,996,227	7,154,259
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,650,209	5,857,555	08/30/2019	08/30/2039	Interest Rate Swap			879240-AQ-2	COMCAST CABLE HOLDINGS-SENIOR UNSECURED NOTE	1	5,650,209	5,857,555
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		5,507,130	5,527,942	08/30/2019	08/30/2039	Interest Rate Swap			91324P-BP-6	UnitedHealth Group Inc-SENIOR UNSECURED NOTE	1	5,507,130	5,527,942
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,588,195	6,792,969	08/30/2019	08/30/2039	Interest Rate Swap			023765-AA-8	AMER AIRLINE 16-2 AA PTT-FIRST LIEN	1	6,588,195	6,792,969
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z	255,000,000	14,353,827	(15,126,392)	08/30/2019	08/30/2049	Interest Rate Swap		(29,529,424)	857477-AG-8	State Street Corp-SENIOR UNSECURED NOTE	1	14,353,827	14,403,032
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,980,475	10,761,628	08/30/2019	08/30/2049	Interest Rate Swap			06406R-AF-4	Bank of New York Mellon -SENIOR UNSECURED	1	9,980,475	10,761,628
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,529,865	10,594,343	08/30/2019	08/30/2049	Interest Rate Swap			982526-AQ-8	WM WIRIGLEY JR CO-SENIOR UNSECURED NOTE	1	10,529,865	10,594,343
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,447,987	13,716,822	08/30/2019	08/30/2049	Interest Rate Swap			90932P-AA-6	UNITED AIR 2014-1 A PTT-SECURED NOTE	1	13,447,987	13,716,822
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,808,380	15,102,614	08/30/2019	08/30/2049	Interest Rate Swap			606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURED	1	13,808,380	15,102,614
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,560,860	13,928,814	08/30/2019	08/30/2049	Interest Rate Swap			808513-AG-0	CHARLES SCHWAB CORP-SENIOR UNSECURED NOTE	1	13,560,860	13,928,814
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,165,298	13,175,369	08/30/2019	08/30/2049	Interest Rate Swap			010392-FC-7	ALABAMA POWER CO-SENIOR UNSECURED NOTE	1	13,165,298	13,175,369
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		13,052,381	13,114,751	08/30/2019	08/30/2049	Interest Rate Swap			45138L-AX-1	IDAHO POWER CORP-SECURED MORTGAGE NOTE	1	13,052,381	13,114,751
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,966,342	13,741,807	08/30/2019	08/30/2049	Interest Rate Swap			143658-AF-9	CARNIVAL CORP-SENIOR UNSECURED NOTE	1	12,966,342	13,741,807
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,766,476	8,249,506	08/30/2019	08/30/2049	Interest Rate Swap			857477-AN-3	State Street Corp-SR UNSECURED	1	7,766,476	8,249,506
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		8,500,000	9,193,430	08/30/2019	08/30/2049	Interest Rate Swap			631005-BH-7	Narragansett Electric Co-SENIOR UNSECURED	1	8,500,000	9,193,430
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,667,501	13,519,308	08/30/2019	08/30/2049	Interest Rate Swap			532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED	1	12,667,501	13,519,308
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,043,952	11,112,245	08/30/2019	08/30/2049	Interest Rate Swap			064159-HM-1	BANK NOVA SCOTIA B C SR NT	1	11,043,952	11,112,245
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		9,710,071	9,860,322	08/30/2019	08/30/2049	Interest Rate Swap			06366R-JJ-5	BANK OF MONTREAL-SR UNSECURED	1	9,710,071	9,860,322
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,485,987	13,564,487	08/30/2019	08/30/2049	Interest Rate Swap			09062X-AF-0	BIODEN INC-SR UNSECURED	1	12,485,987	13,564,487
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,404,904	13,303,273	08/30/2019	08/30/2049	Interest Rate Swap			46625H-JY-7	JPMorgan Chase & Co-SUBORDINATED NOTE	1	12,404,904	13,303,273
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		3,795,384	3,901,464	08/30/2019	08/30/2049	Interest Rate Swap			059165-ED-8	BALTIMORE GAS & ELECTRIC-SENIOR UNSECURED NOTE	1	3,795,384	3,901,464
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,872,327	7,100,199	08/30/2019	08/30/2049	Interest Rate Swap			806854-AH-8	Schlumberger Investment -SR UNSECURED	1	6,872,327	7,100,199
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,923,699	8,639,383	08/30/2019	08/30/2049	Interest Rate Swap			452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED	1	7,923,699	8,639,383
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		12,688,881	13,004,230	08/30/2019	08/30/2049	Interest Rate Swap			10112R-AS-3	BOSTON PROPERTIES LP-SENIOR UNSECURED NOTE REID	1	12,688,881	13,004,230
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		10,215,775	10,552,263	08/30/2019	08/30/2049	Interest Rate Swap			10112R-AU-8	BOSTON PROPERTIES LP-SENIOR UNSECURED NOTE REID	1	10,215,775	10,552,263
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,597,136	6,792,601	08/30/2019	08/30/2049	Interest Rate Swap			17252M-AL-4	CINTAS CORPORATION NO. 2-UNSECURED NOTE	1	6,597,136	6,792,601
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		17,347,347	19,241,173	08/30/2019	08/30/2049	Interest Rate Swap			254687-CP-9	Walt Disney Co/The-SENIOR UNSECURED	1	17,347,347	19,241,173
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		7,324,541	7,787,085	08/30/2019	08/30/2049	Interest Rate Swap			313747-AY-3	Federal Realty Investmen-SENIOR UNSECURED	1	7,324,541	7,787,085
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		11,181,000	11,046,400	08/30/2019	08/30/2049	Interest Rate Swap			477143-AJ-0	JetBlue 2019-1 Class A P-FIRST LIEN	1	11,181,000	11,046,400

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ANNUAL STATEMENT FOR THE YEAR 2019 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of December 31 of Current Year

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 Inverse Floating Rate Corporate Bonds	1Z		6,002,816	6,005,748	08/30/2019	08/30/2049	Interest Rate Swap				55608J-AC-2	Macquarie Group Ltd-SENIOR UNSECURED NOTE	1	6,002,816	6,005,748
Need to File with the NAIC	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1Z		6,492,393	7,054,574	08/30/2019	08/30/2049	Interest Rate Swap				670346-AP-0	Nucor Corp-SENIOR UNSECURED	1	6,492,393	7,054,574
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z	89,000,000	75,000,000	64,522,517	09/03/2019	09/03/2049	Interest Rate Swap		(10,319,983)		72403Z-NW-2	PIONEERS GATE LLC 2019-7 CSWC Lev II Note	1	75,000,000	74,842,500
Need to File with the NAIC	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1Z		50,000,000	50,150,000	09/03/2019	09/03/2049	Interest Rate Swap				72403Z-NW-0	Pioneers Gate 2019-8 OPTN	1	50,000,000	50,150,000
999999999 - Totals					17,941,758,489		19,394,499,430		XXX		XXX		XXX		17,920,564,075	18,782,596,970

ANNUAL STATEMENT FOR THE YEAR 2019 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	122	13,581,622,879	123	14,401,415,772	106	13,414,000,000	117	16,572,610,060	122	13,581,622,879
2. Add: Opened or Acquired Transactions.....	16	2,150,000,000			22	4,368,610,060			38	6,518,610,060
3. Add: Increases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
4. Less: Closed or Disposed of Transactions.....	15	1,330,207,107	17	987,415,772	11	1,210,000,000			43	3,527,622,879
5. Less: Positions Disposed of for Failing Effectiveness Criteria.....										
6. Less: Decreases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
7. Ending Inventory	123	14,401,415,772	106	13,414,000,000	117	16,572,610,060	117	16,572,610,060	117	16,572,610,060

ANNUAL STATEMENT FOR THE YEAR 2019 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.....	2,563,068,316
2. Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance .....	.....
3. Total (Line 1 plus Line 2)	2,563,068,316
4. Part D, Section 1, Column 5	12,063,706,294
5. Part D, Section 1, Column 6	(9,608,418,011)
6. Total (Line 3 minus Line 4 minus Line 5)	107,780,033
	Fair Value Check
7. Part A, Section 1, Column 16	3,153,776,453
8. Part B, Section 1, Column 13	(107,780,033)
9. Total (Line 7 plus Line 8)	3,045,996,420
10. Part D, Section 1, Column 8	13,502,125,885
11. Part D, Section 1, Column 9	(10,456,129,466)
12. Total (Line 9 minus Line 10 minus Line 11)	1
	Potential Exposure Check
13. Part A, Section 1, Column 21	4,844,274,071
14. Part B, Section 1, Column 20	124,495,250
15. Part D, Section 1, Column 11	4,968,769,321
16. Total (Line 13 plus Line 14 minus Line 15) .....	.....

SCHEDULE E - PART 2 - VERIFICATION BETWEEN YEARS

(Cash Equivalents)

	1	2	3	4
	Total	Bonds	Money Market Mutual funds	Other (a)
1. Book/adjusted carrying value, December 31 of prior year	3,695,132,944	3,325,196,197	369,936,748	
2. Cost of cash equivalents acquired	96,638,059,768	86,537,942,622	10,100,117,146	
3. Accrual of discount				
4. Unrealized valuation increase (decrease)	52,476,788	52,446,788	30,000	
5. Total gain (loss) on disposals	72,598	73,826	(1,228)	
6. Deduct consideration received on disposals	97,957,693,260	87,798,235,428	10,159,457,832	
7. Deduct amortization of premium				
8. Total foreign exchange change in book/adjusted carrying value				
9. Deduct current year's other than temporary impairment recognized				
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	2,428,048,838	2,117,424,005	310,624,833	
11. Deduct total nonadmitted amounts				
12. Statement value at end of current period (Line 10 minus Line 11)	2,428,048,838	2,117,424,005	310,624,833	

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