



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

ANNUAL STATEMENT

FOR THE YEAR ENDED DECEMBER 31, 2018
OF THE CONDITION AND AFFAIRS OF THE

MML Bay State Life Insurance Company

NAIC Group Code 0435 0435 NAIC Company Code 70416 Employer's ID Number 43-0581430
(Current) (Prior)

Organized under the Laws of Connecticut, State of Domicile or Port of Entry CT

Country of Domicile United States of America

Incorporated/Organized 04/01/1935 Commenced Business 07/01/1894

Statutory Home Office 100 Bright Meadow Boulevard, Enfield, CT, US 06082
(Street and Number) (City or Town, State, Country and Zip Code)

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

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

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

Internet Website Address www.massmutual.com

Statutory Statement Contact Yiji S. Starr, 617-695-4651
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OFFICERS

President and Chief Executive Officer Roger William Crandall Treasurer Todd Garrett Picken
Secretary Pia Denise Flanagan Apointed Actuary Douglas Wright Taylor

OTHER

Elizabeth Ward Chicares, Executive Vice President and Chief Financial Officer Michael Robert Fanning, Executive Vice President Melvin Timothy Corbett, Executive Vice President

DIRECTORS OR TRUSTEES

Roger William Crandall - Chairman Michael Robert Fanning Elizabeth Ward Chicares
Michael James O'Connor

State of Massachusetts SS:
County of Hampden

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

Roger William Crandall
President and Chief Executive Officer

Pia Denise Flanagan
Secretary

Todd Garrett Picken
Treasurer

Subscribed and sworn to before me this _____ day of _____

- a. Is this an original filing? Yes [X] No []
b. If no,
1. State the amendment number.....
2. Date filed
3. Number of pages attached.....

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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)	356,491,073		356,491,073	312,452,230
2. Stocks (Schedule D):				
2.1 Preferred stocks				
2.2 Common stocks				
3. Mortgage loans on real estate (Schedule B):				
3.1 First liens	2,744,083		2,744,083	3,187,846
3.2 Other than first liens				
4. Real estate (Schedule A):				
4.1 Properties occupied by the company (less \$				
encumbrances)				
4.2 Properties held for the production of income (less				
\$				
encumbrances)				
4.3 Properties held for sale (less \$				
encumbrances)				
5. Cash (\$				
(673,159), Schedule E - Part 1), cash equivalents				
(\$				
18,087,966, Schedule E - Part 2) and short-term				
investments (\$	24,369,505		24,369,505	55,147,328
6,954,698, Schedule DA)				
6. Contract loans (including \$	96,005,102		96,005,102	94,484,714
premium notes)				
7. Derivatives (Schedule DB)				
8. Other invested assets (Schedule BA)	9,834		9,834	
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)	479,619,597		479,619,597	465,272,118
13. Title plants less \$				
charged off (for Title insurers				
only)				
14. Investment income due and accrued	5,385,974	102,032	5,283,942	4,805,870
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	1,531	684	847	128
15.2 Deferred premiums and agents' balances and installments booked but				
deferred and not yet due (including \$				
earned but unbilled premiums)	(2,730,723)		(2,730,723)	(2,877,328)
15.3 Accrued retrospective premiums (\$				
) and				
contracts subject to redetermination (\$				
)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	4,130,048		4,130,048	4,374,621
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	13,806,257		13,806,257	19,410,141
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon	3,610,080		3,610,080	2,872,829
18.2 Net deferred tax asset	2,880,184	2,859,786	20,398	1,644,775
19. Guaranty funds receivable or on deposit	211,557		211,557	208,300
20. Electronic data processing equipment and software				
21. Furniture and equipment, including health care delivery assets				
(\$				
)				
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	142,525		142,525	146,234
24. Health care (\$				
) and other amounts receivable				
25. Aggregate write-ins for other than invested assets				14,347
26. Total assets excluding Separate Accounts, Segregated Accounts and				
Protected Cell Accounts (Lines 12 to 25)	507,057,030	2,962,502	504,094,528	495,872,034
27. From Separate Accounts, Segregated Accounts and Protected Cell				
Accounts	4,355,595,947		4,355,595,947	4,464,676,157
28. Total (Lines 26 and 27)	4,862,652,977	2,962,502	4,859,690,475	4,960,548,191
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. Miscellaneous other assets				14,347
2502.				
2503.				
2598. Summary of remaining write-ins for Line 25 from overflow page				
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)				14,347

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Year	2 Prior Year
1. Aggregate reserve for life contracts \$ 143,984,461 (Exh. 5, Line 9999999) less \$ included in Line 6.3 (including \$126,346,998 Modco Reserve)	143,984,461	140,786,199
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	15,076,197	12,986,104
3. Liability for deposit-type contracts (Exhibit 7, Line 14, Col. 1) (including \$ Modco Reserve)		
4. Contract claims:		
4.1 Life (Exhibit 8, Part 1, Line 4.4, Col. 1 less sum of Cols. 9, 10 and 11)	4,572,737	3,480,132
4.2 Accident and health (Exhibit 8, Part 1, Line 4.4, sum of Cols. 9, 10 and 11)		
5. Policyholders' dividends \$ and coupons \$ due and unpaid (Exhibit 4, Line 10)		
6. Provision for policyholders' dividends and coupons payable in following calendar year - estimated amounts:		
6.1 Dividends apportioned for payment (including \$ Modco)		
6.2 Dividends 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 \$ accident and health premiums (Exhibit 1, Part 1, Col. 1, sum of lines 4 and 14)	2,248	3,498
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	16,219,972	12,886,554
9.3 Other amounts payable on reinsurance, including \$ assumed and \$ 2,700,187 ceded	2,700,187	9,083,537
9.4 Interest maintenance reserve (IMR, Line 6)	(110,399)	111,930
10. Commissions to agents due or accrued-life and annuity contracts \$ 44,095 accident and health \$ and deposit-type contract funds \$	44,095	356,002
11. Commissions and expense allowances payable on reinsurance assumed		
12. General expenses due or accrued (Exhibit 2, Line 12, Col. 6)		11,322
13. Transfers to Separate Accounts due or accrued (net) (including \$ (422,329) accrued for expense allowances recognized in reserves, net of reinsured allowances)	8,489,420	14,939,160
14. Taxes, licenses and fees due or accrued, excluding federal income taxes (Exhibit 3, Line 9, Col. 5)	226,442	229,978
15.1 Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 Net deferred tax liability		
16. Unearned investment income		
17. Amounts withheld or retained by company as agent or trustee	16,209	(18,048)
18. Amounts held for agents' account, including \$ agents' credit balances		
19. Remittances and items not allocated	(5,726,699)	(345,934)
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above		
22. Borrowed money \$ and interest thereon \$		
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve (AVR, Line 16, Col. 7)	5,711,963	5,070,022
24.02 Reinsurance in unauthorized and certified (\$) companies		
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers		
24.04 Payable to parent, subsidiaries and affiliates	2,931,676	618,012
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance		
24.08 Derivatives		
24.09 Payable for securities		
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	24,163	367,198
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	194,162,672	200,565,666
27. From Separate Accounts Statement	4,355,595,947	4,464,676,157
28. Total liabilities (Lines 26 and 27)	4,549,758,619	4,665,241,824
29. Common capital stock	2,500,200	2,500,200
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds		
32. Surplus notes		
33. Gross paid in and contributed surplus (Page 3, Line 33, Col. 2 plus Page 4, Line 51.1, Col. 1)	143,736,914	143,736,914
34. Aggregate write-ins for special surplus funds		
35. Unassigned funds (surplus)	163,694,742	149,069,253
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)	307,431,656	292,806,167
38. Totals of Lines 29, 30 and 37 (Page 4, Line 55)	309,931,856	295,306,367
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	4,859,690,475	4,960,548,191
DETAILS OF WRITE-INS		
2501. Funds awaiting escheat	119,378	49,117
2502. Miscellaneous liabilities	(95,215)	318,081
2503.		
2598. Summary of remaining write-ins for Line 25 from overflow page		
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)	24,163	367,198
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.		
3402.		
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 thru 3403 plus 3498)(Line 34 above)		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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)	870,930	1,590,674
2. Considerations for supplementary contracts with life contingencies		
3. Net investment income (Exhibit of Net Investment Income, Line 17)	17,075,474	17,590,030
4. Amortization of Interest Maintenance Reserve (IMR, Line 5)	32,756	128,972
5. Separate Accounts net gain from operations excluding unrealized gains or losses		
6. Commissions and expense allowances on reinsurance ceded (Exhibit 1, Part 2, Line 26.1, Col. 1)	10,345,001	9,249,829
7. Reserve adjustments on reinsurance ceded	(71,778,871)	(70,296,124)
8. Miscellaneous Income:		
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	68,342,969	66,928,950
8.2 Charges and fees for deposit-type contracts		
8.3 Aggregate write-ins for miscellaneous income	(459,034)	(733,810)
9. Total (Lines 1 to 8.3)	24,429,225	24,458,521
10. Death benefits	39,065,983	38,511,447
11. Matured endowments (excluding guaranteed annual pure endowments)		
12. Annuity benefits (Exhibit 8, Part 2, Line 6.4, Cols. 4 + 8)	1,792,311	1,346,506
13. Disability benefits and benefits under accident and health contracts	337,560	300,176
14. Coupons, guaranteed annual pure endowments and similar benefits		
15. Surrender benefits and withdrawals for life contracts	5,415,612	4,350,669
16. Group conversions		
17. Interest and adjustments on contract or deposit-type contract funds	1,097,250	766,371
18. Payments on supplementary contracts with life contingencies		
19. Increase in aggregate reserves for life and accident and health contracts	3,198,261	2,248,073
20. Totals (Lines 10 to 19)	50,906,977	47,523,242
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only) (Exhibit 1, Part 2, Line 31, Col. 1)	2,322,735	2,895,218
22. Commissions and expense allowances on reinsurance assumed (Exhibit 1, Part 2, Line 26.2, Col. 1)		
23. General insurance expenses (Exhibit 2, Line 10, Cols. 1, 2, 3 and 4)	10,066,014	7,788,671
24. Insurance taxes, licenses and fees, excluding federal income taxes (Exhibit 3, Line 7, Cols. 1 + 2 + 3)	869,465	1,146,318
25. Increase in loading on deferred and uncollected premiums	(531)	(523)
26. Net transfers to or (from) Separate Accounts net of reinsurance	(58,908,475)	(44,052,055)
27. Aggregate write-ins for deductions	(1,910,613)	(3,076,085)
28. Totals (Lines 20 to 27)	3,345,572	12,224,787
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	21,083,653	12,233,735
30. Dividends to policyholders		
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	21,083,653	12,233,735
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	2,857,783	(2,569,559)
33. Net gain from operations after dividends to policyholders and federal income taxes and before realized capital gains or (losses) (Line 31 minus Line 32)	18,225,870	14,803,294
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$(55,422) (excluding taxes of \$(50,393) transferred to the IMR)	49,710	18,418
35. Net income (Line 33 plus Line 34)	18,275,580	14,821,712
CAPITAL AND SURPLUS ACCOUNT		
36. Capital and surplus, December 31, prior year (Page 3, Line 38, Col. 2)	295,306,367	288,294,439
37. Net income (Line 35)	18,275,580	14,821,712
38. Change in net unrealized capital gains (losses) less capital gains tax of \$(4,323)	(16,263)	(41,250)
39. Change in net unrealized foreign exchange capital gain (loss)		
40. Change in net deferred income tax	(7,440,784)	(9,606,984)
41. Change in nonadmitted assets	5,748,988	5,024,048
42. Change in liability for reinsurance in unauthorized and certified companies		
43. Change in reserve on account of change in valuation basis, (increase) or decrease		
44. Change in asset valuation reserve	(641,940)	(72,527)
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		
47. Other changes in surplus in Separate Accounts Statement		
48. Change in surplus notes		
49. Cumulative effect of changes in accounting principles		
50. Capital changes:		
50.1 Paid in		
50.2 Transferred from surplus (Stock Dividend)		
50.3 Transferred to surplus		
51. Surplus adjustment:		
51.1 Paid in		
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	(1,300,092)	(3,113,071)
54. Net change in capital and surplus for the year (Lines 37 through 53)	14,625,489	7,011,928
55. Capital and surplus, December 31, current year (Lines 36 + 54) (Page 3, Line 38)	309,931,856	295,306,367
DETAILS OF WRITE-INS		
08.301. Management and administrative fees	(1,603,485)	(1,655,871)
08.302. Revenue sharing	967,209	859,897
08.303. Miscellaneous	177,242	62,164
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)	(459,034)	(733,810)
2701. Reinsurance ceded adjustment	(1,987,125)	(3,117,355)
2702. Miscellaneous charges to operations	76,512	41,270
2703.		
2798. Summary of remaining write-ins for Line 27 from overflow page		
2799. Totals (Lines 2701 thru 2703 plus 2798)(Line 27 above)	(1,910,613)	(3,076,085)
5301. Reinsurance ceded adjustment	(1,987,125)	(3,117,355)
5302. Other changes to surplus	687,033	4,284
5303.		
5398. Summary of remaining write-ins for Line 53 from overflow page		
5399. Totals (Lines 5301 thru 5303 plus 5398)(Line 53 above)	(1,300,092)	(3,113,071)

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

CASH FLOW

	1	2
	Current Year	Prior Year
Cash from Operations		
1. Premiums collected net of reinsurance	1,226,936	1,840,797
2. Net investment income	17,008,350	16,830,381
3. Miscellaneous income	6,359,647	19,907,820
4. Total (Lines 1 through 3)	24,594,933	38,578,998
5. Benefit and loss related payments	44,255,740	51,271,430
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(52,458,735)	(36,494,573)
7. Commissions, expenses paid and aggregate write-ins for deductions	12,161,385	13,304,648
8. Dividends paid to policyholders		
9. Federal and foreign income taxes paid (recovered) net of \$(27,583) tax on capital gains (losses)	2,802,185	18,995,860
10. Total (Lines 5 through 9)	6,760,575	47,077,365
11. Net cash from operations (Line 4 minus Line 10)	17,834,358	(8,498,367)
Cash from Investments		
12. Proceeds from investments sold, matured or repaid:		
12.1 Bonds	37,733,621	23,506,216
12.2 Stocks		
12.3 Mortgage loans	440,677	822,757
12.4 Real estate		
12.5 Other invested assets		
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	888	25
12.7 Miscellaneous proceeds		98,499
12.8 Total investment proceeds (Lines 12.1 to 12.7)	38,175,186	24,427,497
13. Cost of investments acquired (long-term only):		
13.1 Bonds	81,854,118	25,608,139
13.2 Stocks		
13.3 Mortgage loans	1,329	4,700
13.4 Real estate		
13.5 Other invested assets	9,834	
13.6 Miscellaneous applications		
13.7 Total investments acquired (Lines 13.1 to 13.6)	81,865,281	25,612,839
14. Net increase (decrease) in contract loans and premium notes	1,520,388	(663,059)
15. Net cash from investments (Line 12.8 minus Line 13.7 minus Line 14)	(45,210,483)	(522,283)
Cash from Financing and Miscellaneous Sources		
16. Cash provided (applied):		
16.1 Surplus notes, capital notes		
16.2 Capital and paid in surplus, less treasury stock		
16.3 Borrowed funds		
16.4 Net deposits on deposit-type contracts and other insurance liabilities	1,680,304	1,162,504
16.5 Dividends to stockholders		
16.6 Other cash provided (applied)	(5,082,002)	313,849
17. Net cash from financing and miscellaneous sources (Lines 16.1 to 16.4 minus Line 16.5 plus Line 16.6)	(3,401,698)	1,476,353
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)	(30,777,823)	(7,544,297)
19. Cash, cash equivalents and short-term investments:		
19.1 Beginning of year	55,147,328	62,691,625
19.2 End of year (Line 18 plus Line 19.1)	24,369,505	55,147,328
Note: Supplemental disclosures of cash flow information for non-cash transactions:		
20.0001. Bond conversions and refinancing	960,099	2,109,583

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
ANALYSIS OF OPERATIONS BY LINES OF BUSINESS

	1 Total	2 Industrial Life	Ordinary			6 Credit Life (Group and Individual)	Group		Accident and Health			12 Aggregate of All Other Lines of Business
			3 Life Insurance	4 Individual Annuities	5 Supplementary Contracts		7 Life Insurance (a)	8 Annuities	9 Group	10 Credit (Group and Individual)	11 Other	
1. Premiums and annuity considerations for life and accident and health contracts	870,930		1,475,281	16,855			(621,206)					
2. Considerations for supplementary contracts with life contingencies												
3. Net investment income	17,075,474		14,931,531	63,723	125,825		1,954,395					
4. Amortization of Interest Maintenance Reserve (IMR)	32,756		26,952	172	342		5,290					
5. Separate Accounts net gain from operations excluding unrealized gains or losses												
6. Commissions and expense allowances on reinsurance ceded	10,345,001		4,352,812				5,992,189					
7. Reserve adjustments on reinsurance ceded	(71,778,871)		(59,846,429)				(11,932,442)					
8. Miscellaneous Income:												
8.1 Fees associated with income from investment management, administration and contract guarantees from Separate Accounts	68,342,969		37,422,721	587,199			30,333,049					
8.2 Charges and fees for deposit-type contracts												
8.3 Aggregate write-ins for miscellaneous income	(459,037)		1,038,840	98,968			(1,596,845)					
9. Totals (Lines 1 to 8.3)	24,429,221		(598,292)	766,917	126,167		24,134,430					
10. Death benefits	39,065,983		1,444,546				37,621,436					
11. Matured endowments (excluding guaranteed annual pure endowments)												
12. Annuity benefits	1,792,311			1,792,311								
13. Disability benefits and benefits under accident and health contracts	337,560		337,560									
14. Coupons, guaranteed annual pure endowments and similar benefits												
15. Surrender benefits and withdrawals for life contracts	5,415,612		518,524	4,876,218			20,870					
16. Group conversions												
17. Interest and adjustments on contract or deposit-type contract funds	1,097,250		14,147	13,917	409,790		659,396					
18. Payments on supplementary contracts with life contingencies												
19. Increase in aggregate reserves for life and accident and health contracts	3,198,261		3,052,169	51,556			94,537					
20. Totals (Lines 10 to 19)	50,906,977		5,366,946	6,734,002	409,790		38,396,239					
21. Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)	2,322,735		957,810	41,527			1,323,398					
22. Commissions and expense allowances on reinsurance assumed												
23. General insurance expenses	10,066,014		6,424,262	285,510	18,797		3,337,445					
24. Insurance taxes, licenses and fees, excluding federal income taxes	869,465		796,571	7,091	570		65,234					
25. Increase in loading on deferred and uncollected premiums	(531)		(531)									
26. Net transfers to or (from) Separate Accounts net of reinsurance	(58,908,475)		(18,947,350)	(6,237,618)			(33,723,507)					
27. Aggregate write-ins for deductions	(1,910,613)		(1,931,438)	6,574			14,251					
28. Totals (Lines 20 to 27)	3,345,572		(7,333,729)	837,085	429,157		9,413,060					
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	21,083,649		6,735,437	(70,168)	(302,990)		14,721,370					
30. Dividends to policyholders												
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	21,083,649		6,735,437	(70,168)	(302,990)		14,721,370					
32. Federal income taxes incurred (excluding tax on capital gains)	2,857,783		223,561	(25,856)	(64,535)		2,724,613					
33. Net gain from operations after dividends to policyholders and federal income taxes and before realized capital gains or (losses) (Line 31 minus Line 32)	18,225,866		6,511,876	(44,312)	(238,455)		11,996,757					
DETAILS OF WRITE-INS												
08.301. Management and administrative fees	(1,603,488)						(1,603,488)					
08.302. Revenue sharing	967,209		868,241	98,968								
08.303. Miscellaneous	177,242		170,599				6,643					
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)	(459,037)		1,038,840	98,968			(1,596,845)					
2701. Reinsurance ceded adjustment	(1,987,125)		(1,987,125)									
2702. Miscellaneous charges to operations	76,512		55,687	6,574			14,251					
2703.												
2798. Summary of remaining write-ins for Line 27 from overflow page												
2799. Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	(1,910,613)		(1,931,438)	6,574			14,251					

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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR

	1 Total	2 Industrial Life	Ordinary			6 Credit Life (Group and Individual)	Group	
			3 Life Insurance	4 Individual Annuities	5 Supplementary Contracts		7 Life Insurance	8 Annuities
Involving Life or Disability Contingencies (Reserves)								
(Net of Reinsurance Ceded)								
1. Reserve December 31, prior year	140,786,199		135,461,363	3,846,058			1,478,778	
2. Tabular net premiums or considerations	156,144		762,394	16,855			(623,105)	
3. Present value of disability claims incurred					XXX			
4. Tabular interest	5,530,087		5,428,755	101,332				
5. Tabular less actual reserve released	393,933			393,933				
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	XXX	XXX	XXX	XXX
7. Other increases (net)	4,500,226		947,314	(354,363)			3,907,275	
8. Totals (Lines 1 to 7)	151,366,589		142,599,826	4,003,815			4,762,948	
9. Tabular cost	25,779,005		4,120,183		XXX		21,658,822	
10. Reserves released by death	40,516,723		6,294,600	XXX	XXX		34,222,123	XXX
11. Reserves released by other terminations (net)	45,064,665		40,164,145	4,879,650			20,870	
12. Annuity, supplementary contract and disability payments involving life contingencies	1,807,246		337,560	1,469,686				
13. Net transfers to or (from) Separate Accounts	(105,785,511)		(46,830,194)	(6,243,135)			(52,712,182)	
14. Total Deductions (Lines 9 to 13)	7,382,128		4,086,294	106,201			3,189,633	
15. Reserve December 31, current year	143,984,461		138,513,532	3,897,614			1,573,315	

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

EXHIBIT OF NET INVESTMENT INCOME

	1 Collected During Year	2 Earned During Year
1. U.S. Government bonds	(a) 602,492	621,812
1.1 Bonds exempt from U.S. tax	(a)	
1.2 Other bonds (unaffiliated)	(a) 11,527,170	12,032,625
1.3 Bonds of affiliates	(a) 249,106	239,333
2.1 Preferred stocks (unaffiliated)	(b)	
2.11 Preferred stocks of affiliates	(b)	
2.2 Common stocks (unaffiliated)		
2.21 Common stocks of affiliates		
3. Mortgage loans	(c) 149,921	149,921
4. Real estate	(d)	
5. Contract loans	5,054,537	4,974,560
6. Cash, cash equivalents and short-term investments	(e) 861,003	861,003
7. Derivative instruments	(f)	
8. Other invested assets		
9. Aggregate write-ins for investment income	(825,100)	(790,618)
10. Total gross investment income	17,619,128	18,088,637
11. Investment expenses		(g) 1,007,123
12. Investment taxes, licenses and fees, excluding federal income taxes		(g) 6,041
13. Interest expense		(h)
14. Depreciation on real estate and other invested assets		(i)
15. Aggregate write-ins for deductions from investment income		
16. Total deductions (Lines 11 through 15)		1,013,163
17. Net investment income (Line 10 minus Line 16)		17,075,474
DETAILS OF WRITE-INS		
0901. Miscellaneous Income	(825,100)	(790,618)
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)	(825,100)	(790,618)
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 \$ 725,547 accrual of discount less \$ 531,656 amortization of premium and less \$ 619,351 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 \$ 583 accrual of discount less \$ 4,998 amortization of premium and less \$ paid for accrued interest on purchases.
- (d) Includes \$ for company's occupancy of its own buildings; and excludes \$ interest on encumbrances.
- (e) Includes \$ 850,377 accrual of discount less \$ amortization of premium and less \$ 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 \$ interest on surplus notes and \$ interest on capital notes.
- (i) Includes \$ 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					
1.1 Bonds exempt from U.S. tax					
1.2 Other bonds (unaffiliated)	(240,855)	(17,033)	(257,888)		
1.3 Bonds of affiliates				(20,586)	
2.1 Preferred stocks (unaffiliated)					
2.11 Preferred stocks of affiliates					
2.2 Common stocks (unaffiliated)					
2.21 Common stocks of affiliates					
3. Mortgage loans					
4. Real estate					
5. Contract loans					
6. Cash, cash equivalents and short-term investments	888		888		
7. Derivative instruments					
8. Other invested assets					
9. Aggregate write-ins for capital gains (losses)	11,322		11,322		
10. Total capital gains (losses)	(228,645)	(17,033)	(245,678)	(20,586)	
DETAILS OF WRITE-INS					
0901. Miscellaneous gain and loss	11,322		11,322		
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)	11,322		11,322		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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

	1 Total	2 Industrial Life	Ordinary		5 Credit Life (Group and Individual)	Group		Accident and Health			11 Aggregate of All Other Lines of Business
			3 Life Insurance	4 Individual Annuities		6 Life Insurance	7 Annuities	8 Group	9 Credit (Group and Individual)	10 Other	
FIRST YEAR (other than single)											
1. Uncollected											
2. Deferred and accrued											
3. Deferred, accrued and uncollected:											
3.1 Direct											
3.2 Reinsurance assumed											
3.3 Reinsurance ceded											
3.4 Net (Line 1 + Line 2)											
4. Advance											
5. Line 3.4 - Line 4											
6. Collected during year:											
6.1 Direct											
6.2 Reinsurance assumed											
6.3 Reinsurance ceded	.60		.60								
6.4 Net	(60)		(60)								
7. Line 5 + Line 6.4	(60)		(60)								
8. Prior year (uncollected + deferred and accrued - advance)											
9. First year premiums and considerations:											
9.1 Direct											
9.2 Reinsurance assumed											
9.3 Reinsurance ceded	.60		.60								
9.4 Net (Line 7 - Line 8)	(60)		(60)								
SINGLE											
10. Single premiums and considerations:											
10.1 Direct											
10.2 Reinsurance assumed											
10.3 Reinsurance ceded											
10.4 Net											
RENEWAL											
11. Uncollected	1,738		1,738								
12. Deferred and accrued	(15,704,808)		(2,548,907)			(13,155,900)					
13. Deferred, accrued and uncollected:											
13.1 Direct	(16,140,498)		79,473			(16,219,971)					
13.2 Reinsurance assumed											
13.3 Reinsurance ceded	(437,429)		2,626,643			(3,064,071)					
13.4 Net (Line 11 + Line 12)	(15,703,070)		(2,547,170)			(13,155,900)					
14. Advance	2,248		2,248								
15. Line 13.4 - Line 14	(15,705,317)		(2,549,418)			(13,155,900)					
16. Collected during year:											
16.1 Direct	33,026,875		32,968,738	16,855		41,283					
16.2 Reinsurance assumed											
16.3 Reinsurance ceded	31,799,879		31,638,296			161,583					
16.4 Net	1,226,996		1,330,442	16,855		(120,300)					
17. Line 15 + Line 16.4	(14,478,321)		(1,218,976)	16,855		(13,276,200)					
18. Prior year (uncollected + deferred and accrued - advance)	(15,349,311)		(2,694,316)			(12,654,995)					
19. Renewal premiums and considerations:											
19.1 Direct	29,684,289		32,959,569	16,855		(3,292,135)					
19.2 Reinsurance assumed											
19.3 Reinsurance ceded	28,813,299		31,484,227			(2,670,929)					
19.4 Net (Line 17 - Line 18)	870,990		1,475,341	16,855		(621,206)					
TOTAL											
20. Total premiums and annuity considerations:											
20.1 Direct	29,684,289		32,959,569	16,855		(3,292,135)					
20.2 Reinsurance assumed											
20.3 Reinsurance ceded	28,813,359		31,484,287			(2,670,929)					
20.4 Net (Lines 9.4 + 10.4 + 19.4)	870,930		1,475,281	16,855		(621,206)					

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

	1 Total	2 Industrial Life	Ordinary		5 Credit Life (Group and Individual)	Group		Accident and Health			11 Aggregate of All Other Lines of Business
			3 Life Insurance	4 Individual Annuities		6 Life Insurance	7 Annuities	8 Group	9 Credit (Group and Individual)	10 Other	
DIVIDENDS AND COUPONS APPLIED (included in Part 1)											
21. To pay renewal premiums											
22. All other											
REINSURANCE COMMISSIONS AND EXPENSE ALLOWANCES INCURRED											
23. First year (other than single):											
23.1 Reinsurance ceded											
23.2 Reinsurance assumed											
23.3 Net ceded less assumed											
24. Single:											
24.1 Reinsurance ceded											
24.2 Reinsurance assumed											
24.3 Net ceded less assumed											
25. Renewal:											
25.1 Reinsurance ceded	10,345,001		4,352,812			5,992,189					
25.2 Reinsurance assumed											
25.3 Net ceded less assumed	10,345,001		4,352,812			5,992,189					
26. Totals:											
26.1 Reinsurance ceded (Page 6, Line 6)	10,345,001		4,352,812			5,992,189					
26.2 Reinsurance assumed (Page 6, Line 22)											
26.3 Net ceded less assumed	10,345,001		4,352,812			5,992,189					
COMMISSIONS INCURRED (direct business only)											
27. First year (other than single)	(42,337)		(42,337)								
28. Single											
29. Renewal	2,365,072		1,000,147	41,527		1,323,398					
30. Deposit-type contract funds											
31. Totals (to agree with Page 6, Line 21)	2,322,735		957,810	41,527		1,323,398					

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
EXHIBIT 2 - GENERAL EXPENSES

	Insurance				5 Investment	6 Total
	1 Life	2 Accident and Health		4 All Other Lines of Business		
		2 Cost Containment	3 All Other			
1. Rent	420,286				4,324	424,611
2. Salaries and wages	3,999,268				41,149	4,040,417
3.11 Contributions for benefit plans for employees	539,122				5,547	544,670
3.12 Contributions for benefit plans for agents	461,420				4,748	466,168
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	36,914				380	37,294
3.32 Other agent welfare						
4.1 Legal fees and expenses	65,488				674	66,161
4.2 Medical examination fees	74,881				770	75,652
4.3 Inspection report fees						
4.4 Fees of public accountants and consulting actuaries	23,651				243	23,894
4.5 Expense of investigation and settlement of policy claims	16,577				171	16,748
5.1 Traveling expenses	83,588				860	84,448
5.2 Advertising	288,771				2,971	291,743
5.3 Postage, express, telegraph and telephone	123,536				1,271	124,807
5.4 Printing and stationery	86,949				895	87,844
5.5 Cost or depreciation of furniture and equipment	115,209				1,185	116,394
5.6 Rental of equipment	228,240				2,348	230,589
5.7 Cost or depreciation of EDP equipment and software	490,024				5,042	495,066
6.1 Books and periodicals	20,051				206	20,258
6.2 Bureau and association fees	17,697				182	17,880
6.3 Insurance, except on real estate	32,781				337	33,119
6.4 Miscellaneous losses	28,692				295	28,987
6.5 Collection and bank service charges	20,152				207	20,360
6.6 Sundry general expenses	24,989				257	25,246
6.7 Group service and administration fees	1,075,762				11,069	1,086,831
6.8 Reimbursements by uninsured plans						
7.1 Agency expense allowance	1,015,792				10,452	1,026,244
7.2 Agents' balances charged off (less \$ recovered)						
7.3 Agency conferences other than local meetings	102,407				1,054	103,461
9.1 Real estate expenses						
9.2 Investment expenses not included elsewhere					910,272	910,272
9.3 Aggregate write-ins for expenses	673,763				213	673,976
10. General expenses incurred	10,066,014				1,007,123 (a)	11,073,136
11. General expenses unpaid December 31, prior year	579,913				49,421	629,334
12. General expenses unpaid December 31, current year	2,665,035				266,641	2,931,676
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)	7,980,892				789,903	8,770,794
DETAILS OF WRITE-INS						
09.301. Management services income	653,099					653,099
09.302. Miscellaneous	20,664				213	20,877
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)	673,763				213	673,976

(a) Includes management fees of \$ 10,420,037 to affiliates and \$ to non-affiliates.

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

	Insurance			4 Investment	5 Total
	1 Life	2 Accident and Health	3 All Other Lines of Business		
1. Real estate taxes					
2. State insurance department licenses and fees	70,600				70,600
3. State taxes on premiums	518,500				518,500
4. Other state taxes, including \$ for employee benefits	56,502				56,502
5. U.S. Social Security taxes	223,863			6,041	229,904
6. All other taxes					
7. Taxes, licenses and fees incurred	869,465			6,041	875,505
8. Taxes, licenses and fees unpaid December 31, prior year	229,319			659	229,978
9. Taxes, licenses and fees unpaid December 31, current year	224,880			1,562	226,442
10. Taxes, licenses and fees paid during year (Lines 7 + 8 - 9)	873,904			5,137	879,041

EXHIBIT 4 - DIVIDENDS OR REFUNDS

	1 Life	2 Accident and Health
	1. Applied to pay renewal premiums	
2. Applied to shorten the endowment or premium-paying period		
3. Applied to provide paid-up additions		
4. Applied to provide paid-up annuities		
5. Total Lines 1 through 4		
6. Paid in cash		
7. Left on deposit		
8. Aggregate write-ins for dividend or refund options		
9. Total Lines 5 through 8		
10. Amount due and unpaid		
11. Provision for dividends or refunds payable in the following calendar year		
12. Terminal dividends		
13. Provision for deferred dividend contracts		
14. Amount provisionally held for deferred dividend contracts (included on Line 3)		
15. Total Lines 10 through 14		
16. Total from prior year		
17. Total dividends or refunds (Lines 9 + 15 - 16)		
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)		

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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. 58 CET 4.00% NLP	503,699		503,699		
0100002. 58 CSO 4.00% MOD CRVM	10,825		10,825		
0100003. 58 CSO 4.50% CRVM	5,516		5,516		
0100004. 80 CSO 3.00%	1,600,000				1,600,000
0100005. 80 CSO 4.00%	6,093				6,093
0100006. 80 CSO 4.50% CRVM	88,933,946		88,933,946		
0100007. 80 CSO 5.50% CRVM	59,845,767		59,845,767		
0199997. Totals (Gross)	150,905,846		149,299,753		1,606,093
0199998. Reinsurance ceded	21,437,820		21,405,042		32,778
0199999. Life Insurance: Totals (Net)	129,468,026		127,894,711		1,573,315
0200001. 1994 MGDB Table 1Y/FIG	2,354,733	XXX	2,354,733	XXX	
0200002. a-2000 4.25%	28,380	XXX	28,380	XXX	
0200003. a-2000 4.50%	2,852	XXX	2,852	XXX	
0200004. a-2000 5.50%	78,589	XXX	78,589	XXX	
0200005. a-2012 3.75%	334,205	XXX	334,205	XXX	
0200006. a-2012 4.00%	325,161	XXX	325,161	XXX	
0299997. Totals (Gross)	3,123,920	XXX	3,123,920	XXX	
0299998. Reinsurance ceded		XXX		XXX	
0299999. Annuities: Totals (Net)	3,123,920	XXX	3,123,920	XXX	
0399998. Reinsurance ceded					
0399999. SCWLC: Totals (Net)					
0400001. 59 ADB + 58 CSO 4.50%	1,662		1,662		
0400002. 59 ADB + 58 CSO 5.50%	278		278		
0499997. Totals (Gross)	1,940		1,940		
0499998. Reinsurance ceded					
0499999. Accidental Death Benefits: Totals (Net)	1,940		1,940		
0500001. 120% 52 INTERCO DISA 4.50%	34,992		34,992		
0500002. 120% 52 INTERCO DISA 5.50%	7,652		7,652		
0500003. 35-39 INTERCO + 58 CSO 3.50%	5,787		5,787		
0599997. Totals (Gross)	48,431		48,431		
0599998. Reinsurance ceded					
0599999. Disability-Active Lives: Totals (Net)	48,431		48,431		
0600001. 52 DISAB TABLE BEN 5 3.50%	17,629		17,629		
0600002. 52 DISAB TABLE BEN 5 4.00%	283,715		283,715		
0600003. 52 DISAB TABLE BEN 5 4.50%	5,950,442		5,950,442		
0600004. 52 DISAB TABLE BEN 5 5.50%	2,276,754		2,276,754		
0699997. Totals (Gross)	8,528,540		8,528,540		
0699998. Reinsurance ceded					
0699999. Disability-Disabled Lives: Totals (Net)	8,528,540		8,528,540		
0700001. AG43 Reserve	773,694		773,694		
0700002. MIN. DEATH BENEFIT	88,115		88,115		
0700003. POLICY LOANS	1,930,067		1,930,067		
0700004. TERM COST RESERVE	21,728		21,728		
0799997. Totals (Gross)	2,813,604		2,813,604		
0799998. Reinsurance ceded					
0799999. Miscellaneous Reserves: Totals (Net)	2,813,604		2,813,604		
9999999. Totals (Net) - Page 3, Line 1	143,984,461		142,411,146		1,573,315

EXHIBIT 5 - INTERROGATORIES

- 1.1 Has the reporting entity ever issued both participating and non-participating contracts?..... Yes [] No [X]
- 1.2 If not, state which kind is issued.
 Non-participating
- 2.1 Does the reporting entity at present issue both participating and non-participating contracts?..... Yes [] No [X]
- 2.2 If not, state which kind is issued.
 Non-participating
- 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 [] No [X]
 7.1 If yes, state the total dollar amount of assets covered by these contracts or agreements \$
 7.2 Specify the basis (fair value, amortized cost, etc.) for determining the amount:

 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 [] No [X]
 9.1 If yes, state the total dollar amount of any account value associated with these contracts, agreements or riders: \$
 9.2 State the amount of reserves established for this business: \$
 9.3 Identify where the reserves are reported in the blank:

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

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

Exhibit 6 - Aggregate Reserves for Accident and Health Contracts

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	12,986,104		107,812	12,878,292		
2. Deposits received during the year	3,059,105			3,059,105		
3. Investment earnings credited to the account	409,790			409,790		
4. Other net change in reserves			(24,329)	24,329		
5. Fees and other charges assessed						
6. Surrender charges						
7. Net surrender or withdrawal payments	1,378,802			1,378,802		
8. Other net transfers to or (from) Separate Accounts						
9. Balance at the end of current year before reinsurance (Lines 1+2+3+4-5-6-7-8)	15,076,197		83,483	14,992,714		
10. Reinsurance balance at the beginning of the year						
11. Net change in reinsurance assumed						
12. Net change in reinsurance ceded						
13. Reinsurance balance at the end of the year (Lines 10+11-12)						
14. Net balance at the end of current year after reinsurance (Lines 9 + 13)	15,076,197		83,483	14,992,714		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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											
1.2 Reinsurance assumed											
1.3 Reinsurance ceded											
1.4 Net											
2. In course of settlement:											
2.1 Resisted											
2.11 Direct											
2.12 Reinsurance assumed											
2.13 Reinsurance ceded											
2.14 Net			(b)	(b)		(b)	(b)				
2.2 Other											
2.21 Direct	10,525,763		4,184,193				6,341,570				
2.22 Reinsurance assumed											
2.23 Reinsurance ceded	6,684,552		4,096,719				2,587,833				
2.24 Net	3,841,211		(b) 87,474	(b)		(b)	(b) 3,753,737		(b)	(b)	(b)
3. Incurred but unreported:											
3.1 Direct	1,128,426		1,128,426								
3.2 Reinsurance assumed											
3.3 Reinsurance ceded	396,900		396,900								
3.4 Net	731,526		(b) 731,526	(b)		(b)	(b)		(b)	(b)	(b)
4. TOTALS											
4.1 Direct	11,654,189		5,312,619				6,341,570				
4.2 Reinsurance assumed											
4.3 Reinsurance ceded	7,081,452		4,493,619				2,587,833				
4.4 Net	4,572,737	(a)	(a) 819,000				(a) 3,753,737				

(a) Including matured endowments (but not guaranteed annual pure endowments) unpaid amounting to \$ in Column 2, \$ 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 \$283,715
 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 2018 OF THE MML Bay State 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	84,451,123		32,933,234	1,792,311			49,725,578				
1.2 Reinsurance assumed											
1.3 Reinsurance ceded	44,592,447		30,121,905				14,470,542				
1.4 Net	(d) 39,858,676		2,811,329	1,792,311			35,255,036				
2. Liability December 31, current year from Part 1:											
2.1 Direct	11,654,189		5,312,619				6,341,570				
2.2 Reinsurance assumed											
2.3 Reinsurance ceded	7,081,452		4,493,619				2,587,833				
2.4 Net	4,572,737		819,000				3,753,737				
3. Amounts recoverable from reinsurers December 31, current year	4,130,048		2,470,062				1,659,987				
4. Liability December 31, prior year:											
4.1 Direct	17,802,844		5,401,733				12,401,110				
4.2 Reinsurance assumed											
4.3 Reinsurance ceded	14,322,712		4,516,613				9,806,099				
4.4 Net	3,480,132		885,121				2,595,011				
5. Amounts recoverable from reinsurers December 31, prior year	4,374,621		1,506,960				2,867,661				
6. Incurred Benefits											
6.1 Direct	78,302,468		32,844,119	1,792,311			43,666,038				
6.2 Reinsurance assumed											
6.3 Reinsurance ceded	37,106,615		31,062,013				6,044,602				
6.4 Net	41,195,854		1,782,107	1,792,311			37,621,436				

(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 \$ in Line 1.1, \$ in Line 1.4.
 \$ in Line 6.1, and \$ 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 \$333,652 premiums waived under total and permanent disability benefits.

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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			
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			
7. Derivatives (Schedule DB)			
8. Other invested assets (Schedule BA)			
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)			
13. Title plants (for Title insurers only)			
14. Investment income due and accrued	102,032	38,394	(63,638)
15. Premiums and considerations:			
15.1 Uncollected premiums and agents' balances in the course of collection	684	1,226	542
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			
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	2,859,786	8,671,871	5,812,085
19. Guaranty funds receivable or on deposit			
20. Electronic data processing equipment and software			
21. Furniture and equipment, including health care delivery assets			
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			
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	2,962,502	8,711,491	5,748,989
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts			
28. Total (Lines 26 and 27)	2,962,502	8,711,491	5,748,989
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.			
2502.			
2503.			
2598. Summary of remaining write-ins for Line 25 from overflow page			
2599. Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)			

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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 MML Bay State 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 State of Connecticut Insurance Department.

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

	SSAP #	F/S Page	F/S Line	2018	2017
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 2)	XXX	XXX	XXX	\$ 18,275,580	\$ 14,821,712
(2) State prescribed practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A	-	-
(3) State permitted practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	<u>\$ 18,275,580</u>	<u>\$ 14,821,712</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 309,931,856	\$ 295,306,367
(6) State prescribed practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A	-	-
(7) State permitted practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	<u>\$ 309,931,856</u>	<u>\$ 295,306,367</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 liabilities for policyholders' reserves, the determination of admissible deferred tax assets (DTAs), 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. 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.

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 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) As of December 31, 2018 and 2017, the Company did not hold any common stocks.
- (4) As of December 31, 2018 and 2017, the Company did not hold any preferred stocks.
- (5) Mortgage loans are valued at the unpaid principal balance of the loan, net of unamortized premium, discount, mortgage origination fees and valuation allowances. Mortgage loans comprised primarily seasoned pools of homogeneous residential mortgage loans substantially backed by Federal Housing Administration (FHA) and Veterans Administration (VA) guarantees.
- (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.

NOTES TO FINANCIAL STATEMENTS

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) The Company did not own any subsidiaries and did not hold any investments in controlled or affiliated companies.
- (8) The Company did not have any investments in joint ventures, partnerships or limited liability companies (LLCs).
- (9) The Company did not have any derivative financial instruments.
- (10) The Company does not utilize anticipated investment income as a factor in the premium deficiency calculation in accordance with Statutory Accounting Principles (SSAP) No. 54 "Individual and Group Accident and Health Contracts."
- (11) The Company does not have disability or long-term care contracts therefore it does not have any unpaid claim or claim expense reserves related to these products.
- (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

- 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, 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
Deferred income tax	\$ -	\$ (6,624,718)	\$ (6,624,718)
Federal income taxes receivable	-	687,034	687,034
Total	\$ -	\$ (5,937,684)	

Of the \$5,937,684 decrease to surplus for prior years' errors, \$6,624,718 was recorded as a change in deferred taxes and \$687,034 was recorded as a change in current tax receivable in the Summary of Operations.

For the year ended December 31, 2017, 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
General expenses due and accrued	\$ (7,956)	\$ (7,956)	\$ 7,956
Total	\$ (7,956)	\$ (7,956)	

- b. Adoption of new accounting standards

In June 2016, the NAIC adopted substantive revisions 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. The modifications are not expected to have a material effect on the Company's total life reserves and surplus in the financial statements.

In April 2017, the NAIC adopted modifications to SSAP No. 69, Statement of Cash Flows, to adopt Accounting Standards Update (ASU) No. 2016-15, Classification of Certain Cash Receipts and Cash Payments, in its entirety, effective January 1, 2018 on a retrospective basis. These modifications address the classification and disclosure of certain items within the statements of cash flows. Upon adoption, proceeds from the settlement of the Company's corporate owned life insurance policies were classified as investing activities instead of operating activities. Additionally, the Company elected to apply the nature of distribution approach to subsidiary, controlled or affiliated equity method investments and the cumulative earnings approach to all other equity method investments in determining whether distributions received from equity method investees are returns on investment, recorded as operating activities, or returns of investment, recorded as investing activities. Although the adoption of these modifications required reclassification between investing and operating cash flows, they did not have a material impact on the Company's financial statements.

In November 2017, the NAIC adopted modifications to SSAP No. 100R, Fair Value, allowing NAV per share as a practical expedient to fair value, either when specifically named in a SSAP or when the investee qualifies as an investment company, which were effective January 1, 2018. These modifications adopted, with modification, applicable U.S. GAAP, allowing greater consistency with Financial Accounting Standards Board's allowable use of NAV. These modifications also included the U.S. GAAP requirement to report instruments measured at NAV as a practical expedient outside of the fair value hierarchy disclosure as a separate item, along with a description of the terms and conditions of redemption features, amounts of unfunded commitments, restrictions to sell, and various other items. As a result of these modifications, the NAIC issued SSAP No. 100R, Fair Value. The adoption of these modifications did not have an impact on the Company's financial statements.

In February 2018, the NAIC adopted modifications to SSAP No. 9, Subsequent Events, and SSAP No. 101, Income Taxes, to temporarily allow any revised tax calculations resulting from the Tax Cuts and Job Act (the Act) that occurred after statutory filing, to be classified as changes in estimate, thus avoiding classification as Type 1 subsequent events. Under SSAP No. 9, reporting entities are generally required to amend their filed statutory financial statements in their domestic state to ensure that the statutory financial statements and the audited financial statements are consistent if a Type 1 event is identified after the statutory financial statements are filed, but before the audited financial statements are issued. The adoption of this modification did not materially impact the Company's financial statements.

In November 2018, the NAIC adopted modifications to SSAP No. 15, Debt and Holding Company Obligations, and SSAP No. 25, Affiliates and Other Related Parties, to clarify that (1) forgiveness of a reporting entity obligation should be recognized as contributed capital; (2) forgiveness of an amount owed to the reporting entity should be recognized as a dividend; and (3) waivers or modifications to 'amounts charged' in transactions involving services provided between related parties should be reassessed to determine that the fair and reasonable standards requirement continues to be met. These modifications also clarify that if the transaction is with a parent or other stockholder and the charge for services has been fully waived the guidance in SSAP No. 72, Surplus and Quasi-Reorganization, for recognition as contributed capital (forgiveness of a reporting entity obligation) or as a dividend (forgiveness of amount owed to the reporting entity) should be applied. The Company has adopted these modifications.

Note 3 – Business Combinations and Goodwill

- a. The Company did not have any business combinations accounted for using the statutory purchase method.
- b. There were no business combinations taking the form of a statutory merger.

NOTES TO FINANCIAL STATEMENTS

- c. The Company did not enter into any assumption reinsurance agreements.
- d. 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.

Note 5 – Investments

a. Mortgage loans:

- (1) During 2018 and 2017, the Company did not purchase residential mortgage loans.
- (2) During 2018 and 2017, the Company did not own any commercial mortgage loans or mezzanine real estate loans.
- (3) As of December 31, 2018 and 2017, 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			Total
	Farm	Insured	All Other	Insured	All Other	Mezzanine	
a. 2018							
1. Recorded investment (all)							
(a) Current	\$ - \$	2,588,322 \$	155,761 \$	- \$	- \$	- \$	2,744,083
(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	\$ - \$	- \$	- \$	- \$	- \$	- \$	-
b. 2017							
1. Recorded investment (all)							
(a) Current	\$ - \$	3,023,708 \$	164,138 \$	- \$	- \$	- \$	3,187,846
(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	\$ - \$	- \$	- \$	- \$	- \$	- \$	-

- (5) As of December 31, 2018 and 2017, the Company did not have any impaired mortgage loans with or without allowance for credit losses and subject to a participant or co-lender mortgage loan agreement for which the Company is restricted from unilaterally foreclosing on the mortgage loan.
- (6) As of December 31, 2018 and 2017, the Company did not have any impaired mortgage loans.
- (7) As of and for the year ended December 31, 2018 and 2017, the Company did not have any mortgage loans with allowance for credit losses nor any changes in the allowance for credit losses.
- (8) As of December 31, 2018, the Company did not have any mortgage loans derecognized as a result of foreclosure.

NOTES TO FINANCIAL STATEMENTS

- (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, 2018 and 2017, the Company did not have any restructured debt.
- c. Reverse mortgages:
As of December 31, 2018 and 2017, 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 Company did not recognize other-than-temporary impairments on loan-backed and structured securities.
 - (3) The Company did not recognize impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis.
 - (4) As of December 31, 2018, 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	\$ (288,783)
2. 12 months or longer	\$ (2,828,952)
 - b. The aggregate related fair value of securities with unrealized losses:

1. Less than 12 months	\$ 30,500,278
2. 12 months or longer	\$ 66,393,259
 - (5) No additional information.
- e. Dollar repurchase agreements and/or securities lending transactions:
(1) The Company did not have any dollar repurchase agreements and/or securities lending transactions as of December 31, 2018.
- f. Repurchase agreements transactions accounted for as secured borrowing:
(1) The Company did not have any repurchase agreements as of December 31, 2018.
- g. Reverse repurchase agreements transactions accounted for as secured borrowing:
(1) The Company did not have any reverse repurchase agreements transactions accounted for as secured borrowing as of December 31, 2018.
- h. Repurchase agreements transactions accounted for as a sale:
(1) The Company did not have any repurchase agreements transactions accounted for as a sale as of December 31, 2018.
- i. Reverse repurchase agreements transactions accounted for as a sale:
(1) The Company did not have any reverse repurchase agreements transactions accounted for as a sale as of December 31, 2018.
- j. Real estate:
(1) The Company did not have any investments in real estate for the years ended December 31, 2018 and 2017.
- k. Low income housing tax credit properties:
(1) The Company did not have any these properties for the years ended December 31, 2018 or 2017.

NOTES TO FINANCIAL STATEMENTS

I. Restricted assets:

(1) Restricted assets (including pledged):

Restricted Asset Category	Gross (Admitted & Nonadmitted) Restricted						
	Current Year					6	7
	1	2	3	4	5	Total from Prior Year	Increase/ (Decrease) (5 minus 6)
	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)		
a. Subject to contractual obligation for which liability is not shown	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
b. Collateral held under security lending agreements	-	-	-	-	-	-	-
c. Subject to repurchase agreements	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-
i. FHLB capital stock	-	-	-	-	-	-	-
j. On deposit with states	4,460,010	-	-	-	4,460,010	4,466,341	(6,331)
k. On deposit with other regulatory bodies	-	-	-	-	-	-	-
l. Pledged collateral to FHLB (including assets backing funding agreements)	-	-	-	-	-	-	-
m. Pledged as collateral not captured in other categories	-	-	-	-	-	-	-
n. Other restricted assets	-	-	-	-	-	-	-
o. Total restricted assets	\$ 4,460,010	\$ -	\$ -	\$ -	\$ 4,460,010	\$ 4,466,341	\$ (6,331)

(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	-	-	-	-
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	-	-	-	-
i. FHLB capital stock	-	-	-	-
j. On deposit with states	-	4,460,010	0.090	0.090
k. On deposit with other regulatory bodies	-	-	-	-
l. Pledged collateral to FHLB (including assets backing funding agreements)	-	-	-	-
m. Pledged as collateral not captured in other categories	-	-	-	-
n. Other restricted assets	-	-	-	-
o. Total Restricted Assets	\$ -	\$ 4,460,010	0.090 %	0.090 %

(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)					
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	
Total (c)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

(a) Subset of column 1

(b) Subset of column 3

(c) Total Line for Column 1 through 7 should equal 5H (1) in Columns 1 through 7 respectively and Total Line for Columns 8 through 10 should equal 5H (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					6	7	8	Percentage	
	Current Year								Total from Prior Year	Increase/ (Decrease) (5 minus 6)	Total Current Year Admitted Restricted	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 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

- 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 does not currently hold derivatives, repurchase agreements, reverse repurchase agreements or securities lending assets and liabilities.
- o. Structured notes:
A structured note is a direct debt issuance by a corporation, municipality, or government entity, ranking pari-passu with the issuer's other debt issuance of equal seniority where either: (a) the coupon and/or principal payments are linked, in whole or in part, to prices or payment streams from index or indices, or assets deriving their value from other than the issuer's credit quality, or (b) the coupon and/or principal payments are leveraged by a formula that is different from either a fixed coupon, or a non-leveraged floating rate coupon linked to an interest rate index, including but not limited to the London Interbank Offered Rate (LIBOR) or the prime rate. As structured notes are issuer obligations without a trust, they are within the scope of SSAP No. 26, "Bonds, Excluding Loan-backed and Structured Securities". Structured notes are different than the asset backed structured securities, which are accounted for under SSAP No. 43R, "Revised - Loan-Backed and Structured Securities", as they lack either a trust or assets backing them. The disclosure below allows regulators to assess the volume of activity in structured notes and to determine whether additional accounting or reporting revisions, such as valuation and risk-based capital, are needed. To satisfy this request, the Company is required to separately identify structured notes, on a CUSIP basis and provide information by CUSIP for actual cost, fair value, book/adjusted carrying value, and whether the structured note is a mortgage-referenced security. The following sets forth the actual cost, fair value and carrying value of structured notes as of December 31, 2018:

CUSIP Identification	Actual Cost	Fair Value	Book / Adjusted Carrying Value	Mortgage-Referenced Security (YES/NO)
391164AF7	\$ 526,870	\$ 495,294	\$ 511,284	NO
Total	\$ 526,870	\$ 495,294	\$ 511,284	XXX

- p. 5* Securities - No change
- q. Short Sales - The Company does not engage in short sale transactions.
- r. Prepayment Penalty and Acceleration Fees:

	Year Ended December 31, 2018	
	General Account	Separate Account
1. Number of CUSIPS	9	16
2. Aggregate Amount of Investment Income	\$ 204,902	\$ 108,924

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, 2018. There were no individual investment in joint ventures, partnerships or LLCs exceeding 10% of admitted assets for the year ended December 31, 2017.
- b. The Company did not have any investment in joint ventures, partnerships and LLCs, therefore, no impairment write-downs were recognized for the years ended December 31, 2018 or 2017.

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 \$102,032 for the year ended December 31, 2018 and \$ 38,394 for the year ended December 31, 2017.

Note 8 – Derivative Instruments

The company did not have any derivative instruments for the years ended December 31, 2018 or 2017.

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, 2018		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ 5,081,403	\$ 20,398	\$ 5,101,801
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	5,081,403	20,398	5,101,801
(d) DTAs nonadmitted	2,859,787	-	2,859,787
(e) Subtotal net admitted DTA	2,221,616	20,398	2,242,014
(f) Total gross DTLs	525,095	1,696,521	2,221,616
(g) Net admitted DTA(L)	<u>\$ 1,696,521</u>	<u>\$ (1,676,123)</u>	<u>\$ 20,398</u>

	December 31, 2017		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ 12,120,980	\$ 16,075	\$ 12,137,055
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	12,120,980	16,075	12,137,055
(d) DTAs nonadmitted	8,671,871	-	8,671,871
(e) Subtotal net admitted DTA	3,449,109	16,075	3,465,184
(f) Total gross DTLs	657,608	1,162,801	1,820,409
(g) Net admitted DTA(L)	<u>\$ 2,791,501</u>	<u>\$ (1,146,726)</u>	<u>\$ 1,644,775</u>

	Change		
	Ordinary	Capital	Total
(a) Gross DTAs	\$ (7,039,577)	\$ 4,323	\$ (7,035,254)
(b) Statutory valuation allowance adjustment	-	-	-
(c) Adjusted gross DTAs	(7,039,577)	4,323	(7,035,254)
(d) DTAs nonadmitted	(5,812,084)	-	(5,812,084)
(e) Subtotal net admitted DTA	(1,227,493)	4,323	(1,223,170)
(f) Total gross DTLs	(132,513)	533,720	401,207
(g) Net admitted DTA(L)	<u>\$ (1,094,980)</u>	<u>\$ (529,397)</u>	<u>\$ (1,624,377)</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, 2018		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 20,398	\$ 20,398
(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. Adjusted gross DTAs expected to be realized following the balance sheet date	-	-	-
2. Adjusted gross DTAs allowed per limitation threshold	45,920,674	-	45,920,674
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	2,221,616	-	2,221,616
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ 2,221,616</u>	<u>\$ 20,398</u>	<u>\$ 2,242,014</u>

	December 31, 2017		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 7,228	\$ 7,228
(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)	1,637,547	-	1,637,547
1. Adjusted gross DTAs expected to be realized following the balance sheet date	1,637,547	-	1,637,547
2. Adjusted gross DTAs allowed per limitation threshold	42,648,658	-	42,648,658
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	1,811,562	8,847	1,820,409
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ 3,449,109</u>	<u>\$ 16,075</u>	<u>\$ 3,465,184</u>

	Change		
	Ordinary	Capital	Total
(a) Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 13,170	\$ 13,170
(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)	(1,637,547)	-	(1,637,547)
1. Adjusted gross DTAs expected to be realized following the balance sheet date	(1,637,547)	-	(1,637,547)
2. Adjusted gross DTAs allowed per limitation threshold	3,272,016	-	3,272,016
(c) Adjusted gross DTAs (excluding the amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs	410,054	(8,847)	401,207
(d) DTAs admitted as the result of application of SSAP no. 101			
Total (2(a) + 2(b) + 2(c))	<u>\$ (1,227,493)</u>	<u>\$ 4,323</u>	<u>\$ (1,223,170)</u>

NOTES TO FINANCIAL STATEMENTS

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

	Years Ended December 31,	
	2018	2017
(a) Ratio percentage used to determine recovery period and threshold limitation amount	12,234%	11,571%
(b) Amount of adjusted capital and surplus used to determine recovery period and threshold limitation in 2(b)2 above.	\$ 306,137,830	\$ 284,324,390

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, 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)	\$ 5,081,403	\$ 20,398
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)	\$ 1,696,521	\$ (1,676,123)
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	100%	-%

	December 31, 2017	
	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)	\$ 12,120,980	\$ 16,075
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(g)	\$ 2,791,501	\$ (1,146,726)
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	22%	-%

	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)	\$ (7,039,577)	\$ 4,323
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)	\$ (1,094,980)	\$ (529,397)
4. Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies	78%	-%
(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 expense on earnings is as follows:

	Years Ended December 31,		
	2018	2017	Change
(a) Federal	\$ 2,857,783	\$ (2,569,559)	\$ 5,427,342
(b) Foreign	-	-	-
(c) Subtotal	<u>2,857,783</u>	<u>(2,569,559)</u>	<u>5,427,342</u>
(d) Federal income tax on net capital gains	(105,815)	(1,017)	(104,798)
(e) Utilization of capital loss carry-forwards	-	-	-
(f) Other	-	-	-
(g) Federal and foreign income taxes incurred	<u>\$ 2,751,968</u>	<u>\$ (2,570,576)</u>	<u>\$ 5,322,544</u>

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

	December 31,		
	2018	2017	Change
2. Deferred Tax Assets:			
(a) Ordinary			
(1) Discounting of unpaid losses	\$ -	\$ -	\$ -
(2) Unearned premium reserve	-	-	-
(3) Policyholder reserves	1,166,048	1,256,309	(90,261)
(4) Investments	-	-	-
(5) Deferred acquisition costs	3,689,861	4,026,287	(336,426)
(6) Policyholder dividends accrual	-	-	-
(7) Fixed assets	-	-	-
(8) Compensation and benefits accrual	-	-	-
(9) Pension accrual	-	-	-
(10) Receivables - nonadmitted	-	-	-
(11) Net operating loss carry-forward	-	-	-
(12) Tax credit carry-forward	-	-	-
(13) Other	225,494	6,838,384	(6,612,890)
(14) Subtotal	<u>5,081,403</u>	<u>12,120,980</u>	<u>(7,039,577)</u>
(b) Statutory valuation allowance adjustment	-	-	-
(c) Nonadmitted	<u>2,859,787</u>	<u>8,671,871</u>	<u>(5,812,084)</u>
(d) Admitted ordinary DTAs (2a14 - 2b - 2c)	<u>2,221,616</u>	<u>3,449,109</u>	<u>(1,227,493)</u>
(e) Capital			
(1) Investments	20,398	16,075	4,323
(2) Net capital loss carry-forward	-	-	-
(3) Real estate	-	-	-
(4) Other	-	-	-
(5) Subtotal	<u>20,398</u>	<u>16,075</u>	<u>4,323</u>
(f) Statutory valuation allowance adjustment	-	-	-
(g) Nonadmitted	-	-	-
(h) Admitted capital DTAs (2e5 - 2f - 2g)	<u>20,398</u>	<u>16,075</u>	<u>4,323</u>
(i) Admitted DTAs (2d + 2h)	<u>2,242,014</u>	<u>3,465,184</u>	<u>(1,223,170)</u>

NOTES TO FINANCIAL STATEMENTS

3. Deferred Tax Liabilities:

(a) Ordinary

(1) Investments	-	-	-
(2) Fixed Assets	-	-	-
(3) Deferred and uncollected premium	243,072	245,260	(2,188)
(4) Policyholder reserves	277,463	410,550	(133,087)
(5) Other	4,560	1,798	2,762
(6) Subtotal	<u>525,095</u>	<u>657,608</u>	<u>(132,513)</u>

(b) Capital

(1) Investments	1,696,521	1,162,801	533,720
(2) Real estate	-	-	-
(3) Other	-	-	-
(4) Subtotal	<u>1,696,521</u>	<u>1,162,801</u>	<u>533,720</u>

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

	<u>2,221,616</u>	<u>1,820,409</u>	<u>401,207</u>
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4. Net DTA(L) (2i - 3c)	<u>\$ 20,398</u>	<u>\$ 1,644,775</u>	<u>\$ (1,624,377)</u>
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The change in net deferred income taxes is comprised of the following:

	Years Ended December 31,	
	2018	2017
(1) Net DTA(L)	\$ (7,436,461)	\$ (9,601,259)
Less: Items not recorded in the change in net deferred income taxes:	-	-
(2) Tax-effect of unrealized gains/(losses)	(4,323)	(5,724)
(3) Tax-effect of change in accounting method for pensions	-	-
(4) Change in net deferred income taxes	<u>\$ (7,440,784)</u>	<u>\$ (9,606,983)</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,	
	2018	2017
(1) Provision computed at statutory rate	\$ 4,375,974	\$ 4,270,855
(2) Nonadmitted assets	(13,250)	(13,084)
(3) Foreign governmental income taxes	-	-
(4) Expense items	475,149	27
(5) Investment items	(1,159,821)	(4,232,745)
(6) Tax credits	-	-
(7) Change in reserve valuation basis	-	-
(8) Corporate rate reduction	-	6,867,047
(9) Other	<u>6,514,700</u>	<u>144,307</u>
Total statutory income tax expense (benefit)	<u>\$ 10,192,752</u>	<u>\$ 7,036,407</u>
(10) Federal and foreign income tax benefit	\$ 2,751,968	\$ (2,570,576)
(11) Change in net deferred income taxes	<u>7,440,784</u>	<u>9,606,983</u>
Total statutory income tax expense (benefit)	<u>\$ 10,192,752</u>	<u>\$ 7,036,407</u>

- E. (1) As of December 31, 2018, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has no total tax credit carryforwards included in deferred taxes.
- (2) The Company paid federal income taxes of \$2,802,185 in 2018 and \$18,995,860 in 2017.
- (3) As of December 31, 2018 and 2017, the Company had no protective deposits recognized as admitted assets.
- F. (1) The Company is included in a consolidated United States (U.S.) federal income tax return with its parent, Massachusetts Mutual Life Insurance Company (MassMutual), a mutual life insurance company domiciled in the Commonwealth of Massachusetts, and MassMutual's eligible U.S. subsidiaries. The Company also files income tax returns in various states and foreign jurisdictions.
- (2) The Company, MassMutual, and MassMutual's 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 capital net losses, which it may incur. Further, the Agreement provides

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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.
- (2) On December 22, 2017, the president signed into law H.R. I/Public Law 115-97 commonly known as the Tax Cuts and Jobs Act (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 reduces the corporate tax rate to 21 percent, eliminates the corporate alternative tax, increases the capitalization rates for determining deferred acquisition costs and extends the amortization period, modifies the life company proration rules, reduces the dividends received deduction applicable to corporate shareholders, and modifies the net operating loss deduction applicable to corporate taxpayers. The Act also changed the method for computing deductions for life insurance reserves in 2017.
- (3) As a result of the reduction of the corporate tax rate to 21 percent, the Company remeasured its net admitted deferred taxes as of the enactment date and recognized a decrease in surplus of \$1,096,517 in 2017. Of the \$1,096,517 net decrease, \$6,867,047 was reflected in the change in other deferred income taxes, \$10,717 was reflected in the change in net unrealized capital gains (losses), offset by increases of \$5,781,247 reflected in change in non-admitted assets.
- (4) Effective January 1, 2018, the Act increases the capitalization rates for determining specified policy acquisition expenses. The provision increases the capitalization rate for annuity contracts from 1.75 percent to 2.09 percent, the rate for group life insurance contracts from 2.05 percent to 2.45 percent, and the rate for all other specified contracts from 7.7 percent to 9.2 percent. This provision extends the amortization period for capitalized deferred acquisition costs (DAC) to 180 months from 120 months. A transition rule allows capitalized DAC as of December 31, 2017 to continue to be amortized over 10-years.
- (5) Effective January 1, 2018, the Act modifies the life company proration rules by defining the company's share as 70 percent and the policyholders' share as 30 percent for purposes of the dividends received deduction and tax-exempt interest income.
- (6) Effective January 1, 2018, the Act reduces the dividends received deduction applicable to corporate shareholders for the 70 percent deductions to 50 percent, and for the 80 percent deduction to 65 percent. The 100 percent dividends received deduction remains in effect for dividends from affiliated group members.
- (7) The Act modifies the deduction for NOLs and imposes the general corporate regime on life insurers. Under prior law, NOLs generally had a carry back period of two years (three years in the case of a life insurance company) and a carryforward period of 20 years (15 years in the case of a life insurance company). The Act eliminates the carry back period and makes the carryforward period indefinite. The amount of the NOL deduction allowed is limited to 80 percent of taxable income computed without regard to the NOL deduction. This provision applies to NOLs arising in taxable years beginning after December 31, 2017.
- (8) 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. The revised reserve computation is effective for taxable years beginning after December 31, 2017. A transition rule requires life insurers to 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. For the year ended December 31, 2017, the Company recorded an estimated provision for this change by recognizing a net \$410,550 decrease in its DTA associated with the increase in tax reserves, offset by a corresponding increase to a new DTA which represents future tax deductions that will be amortized over the eight year transition period. The Company adjusted this provisional amount for year ended December 31, 2018 by recognizing an increase in its DTA of \$26,595, offset by a corresponding decrease in the new DTA. This new DTA of \$383,955 will be amortized over eight years. In addition, the Company recognized a tax benefit of \$47,994 included in the tax expense reported on the Summary of Operations to reflect the first year's amortization of the eight-year transition rule.
- (9) 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.
- (10) With respect to the admitted DTAs calculation, effective January 1, 2018, the Act eliminates the ability to carryback net operating losses, therefore the amount of adjusted gross DTA admitted based on recoverable federal taxes is limited only to capital DTAs.

Note 10 – Information Concerning Parent, Subsidiaries and Affiliates

- a. The Company is a wholly owned subsidiary of C.M. Life Insurance Company (C.M. Life), a stock life insurance company domiciled in the state of Connecticut.
- b. The Company did not have any material non-insurance related party transactions during the years ended December 31, 2018 or 2017.
- c. See Schedule Y for SCA activity.
- d. The Company reported \$142,525 as amounts due from parent, subsidiaries and affiliates as of December 31, 2018 and \$146,234 as of December 31, 2017. The Company reported \$2,931,676 as amounts due to parent, subsidiaries and affiliates as of December 31, 2018 and \$618,012 as of December 31, 2017. Terms require settlement of these amounts within 30 to 90 days.
- e. The Company has a modified coinsurance (Modco) quota-share reinsurance agreement with MassMutual where the Company cedes 100% of the premium on certain bank-owned life insurance policies. In return, MassMutual pays the Company a stipulated expense allowance, death and surrender benefits. The Company retains the assets and related reserves for payment of future benefits on the ceded policies. The Modco adjustment is the mechanism by which MassMutual funds the reserve on the reinsured portion of the risk. It is needed to adjust for the financial effect of the Company holding the reserves on the ceded coverage rather than MassMutual.

The Company also has a stop-loss agreement with MassMutual under which the Company cedes claims which, in aggregate, exceed 1.24% of the covered volume for any year, with maximum coverage of \$25,000,000 above the aggregate limit. The aggregate limit was \$27,218,464 in 2018 and \$26,911,594 in 2017 and it was not exceeded in either year.

The Company has a quota-share reinsurance agreement with MassMutual in which MassMutual assumes specific plans of insurance on a yearly renewable term basis.

The net amounts outstanding and due from MassMutual for the various reinsurance agreements were \$16,067,764 as of December 31, 2018 and \$23,289,192 as of December 31, 2017. These outstanding balances are due and payable with terms ranging from monthly to annually, depending on the agreement in effect.

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The following summarizes reinsurance transactions between the Company and MassMutual:

	Years Ended December 31,	
	2018	2017
Premium expense ceded, related to:		
Stop-loss agreements	\$ (175,483)	\$ (173,782)
Quota-share reimbursement agreements	(5,292,033)	(6,319,966)
Modified coinsurance adjustments ceded, included in fee and other income	(11,932,442)	(14,383,351)
Expense allowances on reinsurance ceded, included in fees and other expense, related to:		
Modified coinsurance agreements	5,992,189	5,875,935
Policyholders' benefits ceded, related to:		
Modified coinsurance agreements	6,044,602	14,092,259
Quota-share reimbursement agreements	4,705,992	2,913,206
Experience refunds (paid) received, related to:		
Stop-loss agreements	43,872	43,446
Modified coinsurance agreements	2,829,920	(1,110,401)

- f. Pursuant to a management agreement, MassMutual, for a fee, furnishes to the Company, as required, operating facilities, human resources, computer software development and managerial services. Investment and administrative services are also provided to the Company pursuant to a management services agreement with MassMutual. While management believes that these fees are calculated on a reasonable basis, these fees may not necessarily be indicative of the costs that would have been incurred on a stand-alone basis.

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

	Years Ended December 31,	
	2018	2017
Fee income:		
Recordkeeping and other services	\$ 813,873	\$ 719,530
Investment advisory income	1,603,488	1,655,871
Fee expense:		
Management and service contracts and cost-sharing arrangements	11,303,040	8,645,579

The Company participates in variable annuity exchange programs with MassMutual, where certain variable annuity contract holders can make a nontaxable exchange of their contracts for enhanced MassMutual variable annuity contracts. The Company did not record any surrender benefits in 2018 or 2017 related to these exchange programs.

- g. All outstanding shares of the Company were owned by its parent.
- h. The Company does not have an investment in its parent.
- i. As of December 31, 2018, the Company did not have an investment in SCAs exceeding 10% of admitted assets.
- j. In 2018, the Company did not have impairment write-downs on its investments in affiliated bonds.
- In 2017, the Company recognized \$6,452 in impairment write-downs on its investments in affiliated bonds.
- The Company does not have an impairment write-down of any SCA entities during the statement periods.
- 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 does not hold an investment in a downstream noninsurance holding company.
- m. The Company does not have investments in foreign or noninsurance SCAs.
- n. The Company does not have any insurance SCAs for which the audited statutory equity reflects a departure from NAIC statutory accounting practices.

Note 11 – Debt

- a. The Company did not have any capital notes or liability for borrowed money as of December 31, 2018 or 2017.
- 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.
- b. The Company is not a member of the Federal Home Loan Bank (FHLB) therefore it has no FHLB funding agreements.

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

- a. The Company did not have any defined benefit pension plans for which the reporting entity is directly liable.

NOTES TO FINANCIAL STATEMENTS

- b. The Company did not have any pension plans for which the reporting entity is directly liable.
- c. The Company did not have any pension plans for which the reporting entity is directly liable.
- d. The Company did not have any pension plans for which the reporting entity is directly liable.
- e. The Company did not have any defined contribution plans.
- f. The Company did not have multi-employer plans.
- g. Consolidated/Holding Company Plans:
MassMutual charges allocated expenses to the Company based on relative weighted commissions for agents and time studies of its employees. The Company recorded an expense of \$1,010,837 for the year ended December 31, 2018 and \$860,151 for the year ended December 31, 2017 for these plans.
- h. The Company does not accrue for postemployment benefits and compensated absences since it does not have any employees.

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

- (1) The Company had 50,000 shares of common stock authorized, 12,501 shares issued and outstanding as of December 31, 2018. The par value of the common stock is \$200 per share.
- (2) The Company did not have any preferred stock outstanding.
- (3) Without the prior approval of the Insurance Commissioner of the State of Connecticut (the Commissioner), total dividends paid to the Company's shareholder in a twelve month period are limited to the greater of (i) 10% of the Company's surplus as of December 31 of the preceding year or (ii) the net gain from operations for the twelve month period ending on December 31 of the preceding year; each case is determined using statutory accounting policies. In addition, the prior approval of the Commissioner is required if any dividend or distribution exceeds the Company's earned surplus. Under these regulations, \$30,993,185 of shareholder's equity is available for distribution to the shareholder in 2019 without prior regulatory approval.
- (4) The Company did not pay a dividend to C.M. Life in 2018.
- (5) Within the limits of (3) above, there are no restrictions placed on the portion of Company profits that may be paid as ordinary dividends to the stockholder.
- (6) There are no restrictions on unassigned surplus funds.
- (7) The Company did not make any advances to surplus.
- (8) The Company did not have any stock held for special purposes.
- (9) The Company does not have any special surplus funds.
- (10) The portion of unassigned funds (surplus) represented by net unrealized gains and losses (cumulative, net of deferred tax) was (\$76,736) as of December 31, 2018. The Company did not have unassigned funds (surplus) represented by net unrealized gains and losses (\$60,472) as of December 31, 2017.
- (11) The Company did not have any surplus debentures or similar obligations.
- (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:
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. As of December 31, 2018 or 2017, the Company had no commitments.
- 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, 2018 through the filing date.
- d. The Company did not have any claims related to extra contractual obligations in 2018.
- e. 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.

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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

The Company did not have any lease obligations.

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

There were no contracts for the years ended December 31, 2018 or 2017.

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

- a. During 2018 and 2017, 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, 2018 or 2017.
 - (2) The Company did not have any servicing assets or liabilities in 2018 or 2017.
 - (3) The Company did not have any servicing assets or liabilities in 2018 or 2017.
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2018 or 2017.
 - (5) The Company did not have any transfers of financial assets accounted for as secured borrowing in 2018 or 2017.
 - (6) The Company did not have any transfers of receivables with recourse in 2018 or 2017.
 - (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, 2018 or 2017, 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 did not have any premium written through managing general agents or third party administrators.

Note 20 – Fair Value Measurements

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

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

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

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

When available, the Company generally uses unadjusted quoted market prices from independent sources to determine the fair value of investments, and classifies such items within Level 1 of the fair value hierarchy. If quoted prices are not available, prices are derived from observable market data for similar assets in an active market or obtained directly from brokers for identical assets traded in inactive markets. Investments that are priced using these inputs are classified within Level 2 of the fair value hierarchy. When some of the necessary observable inputs are unavailable, fair value is based upon internally developed models. These models use inputs not directly observable or correlated with observable market data. Typical inputs, which are integrated in the Company's internal discounted cash flow models and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings and benchmark yields such as the LIBOR, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

The Company has established and maintains policies and guidelines that govern its valuation methodologies and their consistent application. These policies and guidelines address the use of inputs, price source hierarchies and provide controls around the valuation processes. These controls include appropriate review and analysis of prices against market activity or indicators for reasonableness, 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.

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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 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 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 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, 2018				
		Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Financial assets:						
Bonds:						
Parent, subsidiaries and affiliates	\$	-	\$ 431,866	\$ -	\$ -	\$ 431,866
Separate account assets ⁽¹⁾		912,506,896	2,321,309,243	-	-	3,233,816,139
<hr/>						
Total financial assets carried at fair value	\$	912,506,896	\$ 2,321,741,109	\$ -	\$ -	\$ 3,234,248,005

⁽¹⁾\$1,121,779,807 of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the period ended December 31, 2018, there were no significant transfers between Level 1 and Level 2 and the Company does not have any financial instruments that were carried at NAV as a practical expedient.

		December 31, 2017				
		Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Financial assets:						
Bonds:						
Parent, subsidiaries and affiliates	\$	-	\$ 452,453	\$ -	\$ -	\$ 452,453
Separate account assets ⁽¹⁾		1,043,779,636	2,311,676,298	-	-	3,355,455,934
<hr/>						
Total financial assets carried at fair value	\$	1,043,779,636	\$ 2,312,128,751	\$ -	\$ -	\$ 3,355,908,387

⁽¹⁾\$1,109,220,223 of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the year ended December 31, 2017, there were no significant transfers between Level 1 and Level 2.

- (2) The Company does not have any Level 3 financial instruments that are carried at fair value.
- (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 issues 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

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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.

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

		December 31, 2018					Net	Not		
		Aggregate	Admitted	Level 1	Level 2	Level 3	Asset	Practicable		
		Fair Value	Assets				Value	(Carrying		
									(NAV)	Value)
Financial assets:										
Bonds:										
U. S. government and agencies	\$	38,906,142	\$ 39,528,591	\$ -	\$ 38,906,142	\$ -	\$ -	\$ -	-	-
Special revenue		51,935	47,542	-	51,935	-	-	-	-	-
Industrial and miscellaneous		306,532,105	310,643,200	-	305,412,775	1,119,330	-	-	-	-
Parent, subsidiaries and affiliates		6,287,919	6,271,740	-	6,287,919	-	-	-	-	-
Mortgage loans - residential		2,605,889	2,744,083	-	-	2,605,889	-	-	-	-
Cash, cash equivalents and short-term investments		24,369,505	24,369,505	(673,159)	25,042,664	-	-	-	-	-
Separate account assets		4,343,738,927	4,355,595,947	912,506,896	3,418,972,086	12,259,944	-	-	-	-
Financial liabilities:										
Individual annuity contracts		2,448,924	3,128,429	-	-	2,448,924	-	-	-	-
Supplementary contracts		15,126,022	14,976,259	-	-	15,126,022	-	-	-	-

		December 31, 2017					Net	Not		
		Aggregate	Admitted	Level 1	Level 2	Level 3	Asset	Practicable		
		Fair Value	Assets				Value	(Carrying		
									(NAV)	Value)
Financial assets:										
Bonds:										
U. S. government and agencies	\$	39,143,523	\$ 39,541,458	\$ -	\$ 39,143,523	\$ -	\$ -	\$ -	-	-
Special revenue		61,823	55,923	-	61,823	-	-	-	-	-
Industrial and miscellaneous		269,796,515	265,755,184	-	268,378,485	1,418,030	-	-	-	-
Parent, subsidiaries and affiliates		7,184,666	7,099,665	-	7,184,666	-	-	-	-	-
Mortgage loans - residential		3,087,102	3,187,846	-	-	3,087,102	-	-	-	-
Cash, cash equivalents and short-term investments		55,147,328	55,147,328	(3,042,971)	58,190,299	-	-	-	-	-
Separate account assets		4,476,743,352	4,464,676,157	1,043,779,636	3,418,899,196	14,064,520	-	-	-	-
Financial liabilities:										
Individual annuity contracts		2,266,510	2,940,410	-	-	2,266,510	-	-	-	-
Supplementary contracts		13,007,075	12,878,292	-	-	13,007,075	-	-	-	-

- d. As of December 31, 2018 and December 31, 2017, 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 \$4,460,010 as of December 31, 2018 and \$4,466,341 as of December 31, 2017.

NOTES TO FINANCIAL STATEMENTS

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 and credit risk.

Insurance and underwriting risks

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, 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. The Company 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 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.

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 capital 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. Market factors, including interest rates, credit spread quality, equity prices, 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.

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.

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.

Political Uncertainties

Political events, such as the ongoing volatility with respect to the European Union, may trigger or exacerbate the risk factors described above. Whether those underlying risk factors are driven by politics or not, the Company's dynamic approach to managing risks enables us to utilize the mitigating actions described above to attempt to reduce the potential impact of each underlying risk factor on the Company.

- d. The Company did not receive any business interruption recoveries in 2018.
- e. The Company did not have unused transferable or non-transferable state tax credits as of December 31, 2018.
- f. Subprime mortgage related risk exposure:
As of December 31, 2018 and 2017, the Company did not have any direct exposure through investments in subprime mortgage loans.

NOTES TO FINANCIAL STATEMENTS

(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.

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, 2018 and 2017, the Company did not have any direct subprime exposure through purchases of unsecuritized whole-loan pools.

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

(3) Direct exposure through other investments.

Alt-A:	December 31, 2018			Year Ended December 31, 2018	
	Actual	Carrying	Fair		
	Cost	Value	Value	OTTI	
a. Residential mortgage-backed securities	\$ 752,906	\$ 846,365	\$ 990,672	\$	-
b. Commercial mortgage-backed securities	-	-	-	-	-
c. Collateralized debt obligations	-	-	-	-	-
d. Structured securities	-	-	-	-	-
e. Equity investments in SCA	-	-	-	-	-
f. Other assets	-	-	-	-	-
g. Total	<u>\$ 752,906</u>	<u>\$ 846,365</u>	<u>\$ 990,672</u>	<u>\$</u>	<u>-</u>

Alt-A:	December 31, 2017			Year Ended December 31, 2017	
	Actual	Carrying	Fair		
	Cost	Value	Value	OTTI	
a. Residential mortgage-backed securities	\$ 1,042,852	\$ 1,105,302	\$ 1,282,584	\$	7,000
b. Commercial mortgage-backed securities	-	-	-	-	-
c. Collateralized debt obligations	-	-	-	-	-
d. Structured securities	-	-	-	-	-
e. Equity investments in SCA	-	-	-	-	-
f. Other assets	-	-	-	-	-
g. Total	<u>\$ 1,042,852</u>	<u>\$ 1,105,302</u>	<u>\$ 1,282,584</u>	<u>\$</u>	<u>7,000</u>

(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 0.95% to 1.70%. 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.

NOTES TO FINANCIAL STATEMENTS

	Retained Asset Accounts In Force December 31,			
	2018		2017	
	Number	Balance	Number	Balance
<u>Account aging categories:</u>				
a. Up to and including 12 months	6	\$ 1,064,279	4	\$ 285,909
b. 13 to 24 months	2	146,553	2	138,190
c. 25 to 36 months	2	114,658	4	201,882
d. 37 to 48 months	3	115,331	6	265,654
e. 49 to 60 months	5	163,463	1	8,788
f. Over 60 months	3	217,590	2	230,702
g. Total	<u>21</u>	<u>\$ 1,821,874</u>	<u>19</u>	<u>\$ 1,131,125</u>

	Individual		Group	
	Number	Balance	Number	Balance
a. Retained asset accounts as of January 1, 2018	19	\$ 1,131,124	-	\$ -
b. Retained asset accounts issued	10	1,668,590	-	-
c. Investment earnings credited to retained accounts	N/A	18,682	N/A	-
d. Fees and other charges assessed to retained asset accounts	N/A	(12)	N/A	-
e. Retained asset accounts transferred to state unclaimed property funds	(2)	(38)	-	-
f. Retained asset accounts closed/withdrawn	(6)	(996,471)	-	-
g. Retained asset accounts as of December 31, 2018	<u>21</u>	<u>\$ 1,821,875</u>	<u>-</u>	<u>\$ -</u>

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 22, 2019, the date the financial statements were available to be issued. No events have occurred subsequent to the date of the statement of financial position and before the date of evaluation that would require disclosure.

Note 23 – Reinsurance

a. Ceded Reinsurance Report:

Section 1 - General Interrogatories:

(1) The Company and its officers and directors do not own any portion of a nonaffiliated reinsurer.

(2) The Company did not reinsure any policies with a company chartered in a country other than the U.S., excluding U.S. branches of these companies, which was 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, 2018, the resulting reduction in surplus due to loss of reinsurance reserve credits net of unearned premium would be \$11,247,764, 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, 2018, 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>-</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>-</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 2018 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

The Company did not issue participating policies.

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 did not have any insurance in force as of December 31, 2018, for which the gross premium was less than the net premium according to the standard valuation set by the Department.
- (4) Tabular interest was determined for Variable life general account reserves using a formula that applies a weighted average credited rate to the mean account value.
- (5) Liabilities for investment-type contracts such as supplementary contracts not involving life contingencies 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.

NOTES TO FINANCIAL STATEMENTS

(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

	December 31, 2018				% of Total
	General Account	Separate Account w/ Guarantees	Separate Account Nonguaranteed	Total	
a. Subject to discretionary withdrawal:					
(1) With market value adjustment	\$ 2,354,735	\$ -	\$ -	2,354,735	4 %
(2) At book value less current surrender charge of 5% or more	-	-	-	-	-
(3) At fair value	-	-	32,933,698	32,933,698	65
(4) Total with market value adjustment or at fair value	2,354,735	-	32,933,698	35,288,433	69 %
(5) At book value without adjustment	14,976,259	-	-	14,976,259	30
b. Not subject to discretionary withdrawal provision	869,124	-	-	869,124	1
c. Total (gross)	18,200,118	-	32,933,698	51,133,816	100 %
d. Reinsurance ceded	-	-	-	-	-
e. Total (net)* (gross less reinsurance ceded)	\$ 18,200,118	\$ -	\$ 32,933,698	\$ 51,133,816	

*Reconciliation of total annuity actuarial reserves and deposit-type fund liabilities.

f. Life and Accident and Health Annual Statement:	
(1) Exhibit 5, annuities section, total (net)	\$ 3,123,921
(2) Exhibit 5, supplementary contracts with life contingencies section, total (net)	-
(3) Exhibit 7, deposit-type contracts Column 1, Line 14	15,076,197
(4) Subtotal	18,200,118
Separate Accounts Annual Statement:	
(5) Exhibit 3, annuities section, total (net)	32,933,698
(6) Exhibit 3, supplementary contracts section, total (net)	-
(7) Policyholders dividend and coupon accumulations	-
(8) Policyholder premiums	-
(9) Guaranteed interest contracts	-
(10) Other contract deposit funds	-
(11) Subtotal	32,933,698
(12) Combined total	\$ 51,133,816
g. The Company is not a member of the FHLB therefore it has no FHLB funding agreements.	

Note 33 – Premium and Annuity Considerations Deferred and Uncollected

a. Deferred and uncollected life insurance premiums and annuity considerations as of December 31, 2018, were as follows:

Type	Gross	Net of Loading
(1) Industrial	\$ -	\$ -
(2) Ordinary new business	-	-
(3) Ordinary renewal	(2,549,048)	(2,558,801)
(4) Credit life	-	-
(5) Group life	(171,075)	(171,075)
(6) Group annuity	-	-
(7) Totals	\$ (2,720,123)	\$ (2,729,876)

Note 34 – 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. 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 state statute Connecticut Laws Title 38a, Chapter 700b, Sections 38a-433 & 459.

NOTES TO FINANCIAL STATEMENTS

- (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.

As of December 31, 2018 and 2017, the Company's NAIC Separate Account Annual Statement included Separate Accounts with legally insulated products of \$ 4,355,595,947 and \$4,451,883,060, respectively. 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, 2018 are attributed to the following:

Product/Transaction:	Separate Account Assets	
	Legally Insulated	Not Legally Insulated
Stable Value Bank-Owned Life Insurance	\$ 2,283,186,076	\$ -
Bank-Owned Life Insurance - Guaranteed	1,114,917,835	6,861,972
Individual Variable Universal Life	661,840,288	-
Corporate-Owned Life Insurance	255,830,966	-
Individual Variable Annuity	32,958,810	-
Total	\$ 4,348,733,975	\$ 6,861,972

- (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:

2018	\$	-
2017		-
2016		-
2015		-
2014		-

For the year ended December 31, 2018, the general account of the Company had paid \$322,625 toward separate account guarantees. The total separate account guarantees paid by the general account for the preceding years ending December 31, 2017, 2016, 2015, and 2014 was \$278,674, \$517,611, \$386,032 and \$163,645, respectively.

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

Condition That Requires GAAP General Account Reporting

Product Identifier:

Stable Value Bank-Owned Life Insurance	GAAP general account classification/Investment performance
Bank-Owned Life Insurance - Guaranteed	GAAP general account 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 nonindexed 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.

NOTES TO FINANCIAL STATEMENTS

Information regarding the separate accounts of the Company as of and for the year ended December 31, 2018 is as follows:

	Index	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, 2018	\$ -	\$ -	\$ -	30,815,940	\$ 30,815,940
Reserves at December 31, 2018:					
(2) For accounts with assets at:					
a. Fair value	\$ -	\$ -	\$ -	3,213,438,417	\$ 3,213,438,417
b. Amortized cost	-	1,129,340,963	-	-	1,129,340,963
c. Total Reserves*	\$ -	\$ 1,129,340,963	\$ -	\$ 3,213,438,417	\$ 4,342,779,380
(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	-	-	-	3,213,438,417	3,213,438,417
4. At book value, without market value adjustment and with current surrender charge of less than 5%	-	1,129,340,963	-	-	1,129,340,963
5. Subtotal	\$ -	\$ 1,129,340,963	\$ -	\$ 3,213,438,417	\$ 4,342,779,380
b. Not subject to discretionary withdrawal	-	-	-	-	-
c. Total	\$ -	\$ 1,129,340,963	\$ -	\$ 3,213,438,417	\$ 4,342,779,380
(4) Reserves for Assets Default Risk in Lieu of AVR	\$ -	\$ -	\$ -	\$ -	-

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

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

	December 31, 2018
(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)	\$ 30,815,940
(b) Transfers from separate accounts (Page 4, Line 10)	(89,724,415)
(c) Net transfers to (from) separate accounts (a) - (b)	(58,908,475)
(2) Reconciling adjustments:	
(a) Net deposits on deposit-type liabilities	-
(3) Transfers as reported in the Summary of Operations of the Life, Accident & Health Annual Statement	\$ (58,908,475)
(1c) + (2) = (Page 4, Line 26)	

Note 35 – Loss/Claim Adjustment Expenses

The Company did not have any loss/claim adjustment expenses.

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? Connecticut
- 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). 05/31/2016
- 3.4 By what department or departments?
State of Connecticut Insurance Department
- 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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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
HarbourView Asset Management Corporation	New York, NY				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
OC Private Capital, LLC	New York, NY				YES
OFI Advisors, Inc.	New York, NY				YES
OFI Global Asset Management, Inc.	New York, NY				YES
OFI Global Institutional, Inc.	New York, NY				YES
OFI Private Investments, Inc.	New York, NY				YES
OFI SteelPath, Inc.	Dallas, TX				YES
OppenheimerFunds Distributor, Inc.	New York, NY				YES
OppenheimerFunds Inc.	New York, NY				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 25
- 12.13 Total book/adjusted carrying value \$ 18,577,777
- 12.2 If, yes provide explanation:
The company has investments in debt securities in 25 parcels which own or hold real estate indirectly. The statement value at December 31, 2018 of debt is \$18,577,777.
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 [] No [X]
- 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

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:\$0

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]

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
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\$
 - 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\$
 - 25.27 FHLB Capital Stock\$
 - 25.28 On deposit with states\$ 4,460,010
 - 25.29 On deposit with other regulatory bodies\$
 - 25.30 Pledged as collateral - excluding collateral pledged to an FHLB\$
 - 25.31 Pledged as collateral to FHLB - including assets backing funding agreements\$
 - 25.32 Other\$

25.3 For category (25.26) provide the following:

1 Nature of Restriction	2 Description	3 Amount

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

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

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 [] No [X]

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

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

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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

GENERAL INTERROGATORIES

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
Barings LLC	A.....

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 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 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
106006	Barings LLC	5493005EMQYELJUS5W59	SEC	DS.....

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 [] No [X]

29.2 If yes, complete the following schedule:

1 CUSIP #	2 Name of Mutual Fund	3 Book/Adjusted Carrying Value
29.2999 - Total		

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
.....

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	381,533,737	376,820,765	(4,712,972)
30.2 Preferred stocks			
30.3 Totals	381,533,737	376,820,765	(4,712,972)

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 [X] No []

32.2 If no, list exceptions:
.....

GENERAL INTERROGATORIES

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]

OTHER

35.1 Amount of payments to trade associations, service organizations and statistical or rating bureaus, if any?\$18,471

35.2 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)	5,280
US Chamber of Commerce	4,620

36.1 Amount of payments for legal expenses, if any?\$17,547

36.2 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
Sutherland Asbill & Brennan LLP	4,400

37.1 Amount of payments for expenditures in connection with matters before legislative bodies, officers or departments of government, if any?\$8,195

37.2 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 2018 OF THE MML Bay State Life Insurance Company

GENERAL INTERROGATORIES

PART 2 - LIFE INTERROGATORIES

1.1 Does the reporting entity have any direct Medicare Supplement Insurance in force? Yes [] No [X]

1.2 If yes, indicate premium earned on U.S. business only \$

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. \$

1.6 Individual policies:

Most current three years:

1.61 Total premium earned \$

1.62 Total incurred claims \$

1.63 Number of covered lives

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	870,930	1,590,674
2.2 Premium Denominator	0.000	0.000
2.3 Premium Ratio (2.1/2.2)		
2.4 Reserve Numerator		
2.5 Reserve Denominator	145,743,594	141,130,194
2.6 Reserve Ratio (2.4/2.5)	0.000	0.000

3.1 Does this reporting entity have Separate Accounts? Yes [X] No []

3.2 If yes, has a Separate Accounts Statement been filed with this Department? Yes [X] 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? \$ 422,329

3.4 State the authority under which Separate Accounts are maintained:
Connecticut General Statutes, Section 33a-433 and 33a-459.

3.5 Was any of the reporting entity's Separate Accounts business reinsured as of December 31? Yes [X] No []

3.6 Has the reporting entity assumed by reinsurance any Separate Accounts business as of December 31? Yes [] No [X]

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)"? \$

4.1 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 []

4.2 Net reimbursement of such expenses between reporting entities:

4.21 Paid \$ 8,348,748

4.22 Received \$

5.1 Does the reporting entity write any guaranteed interest contracts? Yes [] No [X]

5.2 If yes, what amount pertaining to these lines is included in:

5.21 Page 3, Line 1 \$

5.22 Page 4, Line 1 \$

6. FOR STOCK REPORTING ENTITIES ONLY:

6.1 Total amount paid in by stockholders as surplus funds since organization of the reporting entity: \$ 143,736,914

7. Total dividends paid stockholders since organization of the reporting entity:

7.11 Cash \$ 287,566,415

7.12 Stock \$ 180,000

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

GENERAL INTERROGATORIES

8.1 Does the company 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.

8.2 If yes, has the reporting entity completed the Workers' Compensation Carve-Out Supplement to the Annual Statement? Yes [] No []

8.3 If 8.1 is yes, the amounts of earned premiums and claims incurred in this statement are:

	1 Reinsurance Assumed	2 Reinsurance Ceded	3 Net Retained
8.31 Earned premium
8.32 Paid claims
8.33 Claim liability and reserve (beginning of year)
8.34 Claim liability and reserve (end of year)
8.35 Incurred claims

8.4 If reinsurance assumed included amounts with attachment points below \$1,000,000, the distribution of the amounts reported in Lines 8.31 and 8.34 for Column (1) are:

	Attachment Point	1 Earned Premium	2 Claim Liability and Reserve
8.41	<\$25,000	.....	.....
8.42	\$25,000 - 99,999	.....	.....
8.43	\$100,000 - 249,999	.....	.....
8.44	\$250,000 - 999,999	.....	.....
8.45	\$1,000,000 or more	.....	.....

8.5 What portion of earned premium reported in 8.31, Column 1 was assumed from pools?\$

9. 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:

9.1 Amount of loss reserves established by these annuities during the current year:\$

9.2 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	

10.1 Do you act as a custodian for health savings accounts? Yes [] No [X]

10.2 If yes, please provide the amount of custodial funds held as of the reporting date.\$

10.3 Do you act as an administrator for health savings accounts? Yes [] No [X]

10.4 If yes, please provide the balance of funds administered as of the reporting date.\$

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
GENERAL INTERROGATORIES

11.1 Are any of the captive affiliates reported on Schedule S, Part 3, authorized reinsurers? Yes [] No [] N/A []
 11.2 If the answer to 11.1 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

12. Provide the following for individual ordinary life insurance* policies (U.S. business only) for the current year (prior to reinsurance assumed or ceded):

12.1 Direct Premium Written\$32,968,738
 12.2 Total Incurred Claims\$32,522,580
 12.3 Number of Covered Lives24,973

*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 gurarantee)
Universal Life (with or without secondary gurarantee)
Variable Universal Life (with or without secondary gurarantee)

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

13.1 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 []

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 2018	2 2017	3 2016	4 2015	5 2014
Life Insurance in Force (Exhibit of Life Insurance)					
1. Ordinary - whole life and endowment (Line 34, Col. 4)	4,667,416	4,977,101	5,292,746	5,683,960	6,050,202
2. Ordinary - term (Line 21, Col. 4, less Line 34, Col. 4)	3,364	3,922	4,109	4,183	4,429
3. Credit life (Line 21, Col. 6)					
4. Group, excluding FEGLI/SGLI (Line 21, Col. 9 less Lines 43 & 44, Col. 4)	6,863,701	6,944,793	6,939,534	6,952,141	7,197,793
5. Industrial (Line 21, Col. 2)					
6. FEGLI/SGLI (Lines 43 & 44, Col. 4)					
7. Total (Line 21, Col. 10)	11,534,481	11,925,817	12,236,389	12,640,284	13,252,424
7.1 Total in force for which VM-20 deterministic/stochastic reserves are calculated			XXX	XXX	XXX
New Business Issued (Exhibit of Life Insurance)					
8. Ordinary - whole life and endowment (Line 34, Col. 2)	1,115	6,863	2,237	2,939	3,239
9. Ordinary - term (Line 2, Col. 4, less Line 34, Col. 2)					
10. Credit life (Line 2, Col. 6)					
11. Group (Line 2, Col. 9)					
12. Industrial (Line 2, Col. 2)					
13. Total (Line 2, Col. 10)	1,115	6,863	2,237	2,939	3,239
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)	1,475,281	939,725	(102,342,667)	22,332,572	24,768,332
15.2 Ordinary-individual annuities (Line 20.4, Col. 4)	16,855	193,111	21,760	15,900	72,897
16. Credit life (group and individual) (Line 20.4, Col. 5)					
17.1 Group life insurance (Line 20.4, Col. 6)	(621,206)	457,838	(3,532,789)	2,120,238	(729,431)
17.2 Group annuities (Line 20.4, Col. 7)					
18.1 A & H-group (Line 20.4, Col. 8)					
18.2 A & H-credit (group and individual) (Line 20.4, Col. 9)					
18.3 A & H-other (Line 20.4, Col. 10)					
19. Aggregate of all other lines of business (Line 20.4, Col. 11)					
20. Total	870,930	1,590,674	(105,853,696)	24,468,709	24,111,798
Balance Sheet (Pages 2 & 3)					
21. Total admitted assets excluding Separate Accounts business (Page 2, Line 26, Col. 3)	504,094,528	495,872,034	502,235,638	421,257,703	396,121,986
22. Total liabilities excluding Separate Accounts business (Page 3, Line 26)	194,162,672	200,565,666	213,941,199	189,956,698	184,428,288
23. Aggregate life reserves (Page 3, Line 1)	143,984,461	140,786,199	138,538,127	136,618,028	131,672,365
23.1 Excess VM-20 deterministic/stochastic reserve over NPR related to Line 7.1			XXX	XXX	XXX
24. Aggregate A & H reserves (Page 3, Line 2)					
25. Deposit-type contract funds (Page 3, Line 3)	15,076,197	12,986,104	11,548,399	9,891,826	6,325,705
26. Asset valuation reserve (Page 3, Line 24.01)	5,711,963	5,070,022	4,997,495	4,666,310	4,323,715
27. Capital (Page 3, Lines 29 and 30)	2,500,200	2,500,200	2,500,200	2,500,200	2,500,200
28. Surplus (Page 3, Line 37)	307,431,656	292,806,167	285,794,239	228,800,805	209,193,498
Cash Flow (Page 5)					
29. Net Cash from Operations (Line 11)	17,834,358	(8,498,367)	78,725,201	28,144,313	16,463,961
Risk-Based Capital Analysis					
30. Total adjusted capital	315,643,819	300,376,389	293,291,934	235,967,315	216,017,413
31. Authorized control level risk - based capital	2,674,748	2,681,761	2,482,639	2,652,876	2,641,360
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)	74.3	67.2	65.7	57.8	40.8
33. Stocks (Lines 2.1 and 2.2)					
34. Mortgage loans on real estate(Lines 3.1 and 3.2)	0.6	0.7	0.8	1.5	1.2
35. Real estate (Lines 4.1, 4.2 and 4.3)					
36. Cash, cash equivalents and short-term investments (Line 5)	5.1	11.9	13.3	15.9	31.4
37. Contract loans (Line 6)	20.0	20.3	20.2	24.8	26.6
38. Derivatives (Page 2, Line 7)					
39. Other invested assets (Line 8)	0.0				
40. Receivables for securities (Line 9)					
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 2018	2 2017	3 2016	4 2015	5 2014
Investments in Parent, Subsidiaries and Affiliates					
44. Affiliated bonds (Schedule D Summary, Line 12, Col. 1)	6,271,740	7,099,665	6,404,131	1,642,655	2,287,569
45. Affiliated preferred stocks (Schedule D Summary, Line 18, Col. 1)					
46. Affiliated common stocks (Schedule D Summary Line 24, Col. 1),					
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					
50. Total of above Lines 44 to 49	6,271,740	7,099,665	6,404,131	1,642,655	2,287,569
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)	2,962,502	8,711,491	13,735,539	3,847,610	4,449,066
53. Total admitted assets (Page 2, Line 28, Col. 3)	4,859,690,475	4,960,548,191	4,814,287,017	4,700,075,825	4,670,965,245
Investment Data					
54. Net investment income (Exhibit of Net Investment Income)	17,075,474	17,590,030	14,288,275	12,852,135	11,616,274
55. Realized capital gains (losses) (Page 4, Line 34, Column 1)	49,710	18,418	20,356	(35,042)	160,945
56. Unrealized capital gains (losses) (Page 4, Line 38, Column 1)	(16,263)	(41,250)	(19,222)		
57. Total of above Lines 54, 55 and 56	17,108,921	17,567,198	14,289,409	12,817,093	11,777,219
Benefits and Reserve Increases (Page 6)					
58. Total contract benefits - life (Lines 10, 11, 12, 13, 14 and 15 Col. 1, minus Lines 10, 11, 12, 13, 14 and 15 Cols. 9, 10 and 11)	46,611,466	44,508,798	93,613,485	96,724,416	95,253,292
59. Total contract benefits - A & H (Lines 13 & 14, Cols. 9, 10 & 11)					
60. Increase in life reserves - other than group and annuities (Line 19, Cols. 2 and 3)	3,052,169	2,086,763	1,778,200	4,291,458	1,799,063
61. Increase in A & H reserves (Line 19, Cols. 9, 10 & 11)					
62. Dividends to policyholders (Line 30, Col. 1)					
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	234.7	90.2	47.6	23.9	34.3
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	5.3	6.0	6.5	5.8	6.5
65. A & H loss percent (Schedule H, Part 1, Lines 5 and 6, Col. 2)					
66. A & H cost containment percent (Schedule H, Pt. 1, Line 4, Col. 2)					
67. A & H expense percent excluding cost containment expenses (Schedule H, Pt. 1, Line 10, Col. 2)					
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)					
71. Prior years' claim liability and reserve-health other than group (Schedule H, Part 3, Line 3.2 Col. 1 less Col. 2)					
Net Gains From Operations After Federal Income Taxes by Lines of Business (Page 6, Line 33)					
72. Industrial life (Col. 2)					
73. Ordinary - life (Col. 3)	6,511,876	11,165,646	15,256,560	15,406,256	12,675,712
74. Ordinary - individual annuities (Col. 4)	(44,312)	23,009	649,597	(71,572)	49,014
75. Ordinary-supplementary contracts (Col. 5)	(238,455)	(128,868)	(101,148)	185,035	134,238
76. Credit life (Col. 6)					
77. Group life (Col. 7)	11,996,757	3,743,507	4,429,774	5,172,836	2,781,754
78. Group annuities (Col. 8)					
79. A & H-group (Col. 9)					
80. A & H-credit (Col. 10)					
81. A & H-other (Col. 11)					
82. Aggregate of all other lines of business (Col. 12)					
83. Total (Col. 1)	18,225,866	14,803,294	20,234,783	20,692,555	15,640,719

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 2018 OF THE MML Bay State Life Insurance Company

DIRECT BUSINESS IN THE STATE OF Grand Total

DURING THE YEAR 2018

NAIC Group Code 0435

LIFE INSURANCE

NAIC Company Code 70416

DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1	2	3	4	5
	Ordinary	Credit Life (Group and Individual)	Group	Industrial	Total
1. Life insurance	32,635,085		41,283		32,676,368
2. Annuity considerations	16,855				16,855
3. Deposit-type contract funds		XXX		XXX	
4. Other considerations					
5. Totals (Sum of Lines 1 to 4)	32,651,940		41,283		32,693,223
DIRECT DIVIDENDS TO POLICYHOLDERS					
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	32,599,582		49,725,578		82,325,160
10. Matured endowments					
11. Annuity benefits	1,792,310				1,792,310
12. Surrender values and withdrawals for life contracts	49,559,974		20,870		49,580,844
13. Aggregate write-ins for miscellaneous direct claims and benefits paid					
14. All other benefits, except accident and health	333,651				333,651
15. Totals	84,285,517		49,746,448		134,031,965
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.	Amount	No. of Ind.Pols. & Gr. Certifs.	Amount	No. of Certifs.	Amount	No.	Amount	No.	Amount
16. Unpaid December 31, prior year	24	4,271,958			10	12,401,110			34	16,673,068
17. Incurred during current year	309	32,845,407			55	43,666,038			364	76,511,445
Settled during current year:										
18.1 By payment in full	304	32,933,233			58	49,725,578			362	82,658,812
18.2 By payment on compromised claims										
18.3 Totals paid	304	32,933,233			58	49,725,578			362	82,658,812
18.4 Reduction by compromise										
18.5 Amount rejected										
18.6 Total settlements	304	32,933,233			58	49,725,578			362	82,658,812
19. Unpaid Dec. 31, current year (16+17-18.6)	29	4,184,132			7	6,341,570			36	10,525,702
POLICY EXHIBIT						No. of Policies				
20. In force December 31, prior year	26,524	4,981,023,650	(a)		15	6,944,793,406			26,539	11,925,817,056
21. Issued during year		1,115,437								1,115,437
22. Other changes to in force (Net)	(1,505)	(311,359,439)				(81,092,111)			(1,505)	(392,451,550)
23. In force December 31 of current year	25,019	4,670,779,648	(a)		15	6,863,701,295			25,034	11,534,480,943

(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	Dividends Paid 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 (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)					

NONE

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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	Number of		9	
	Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance	Number of Individual Policies and Group Certificates	Amount of Insurance	Policies	Certificates	Amount of Insurance	
1. In force end of prior year			26,524	4,981,024			15	8,560	6,944,793	11,925,817
2. Issued during year				1,115						1,115
3. Reinsurance assumed										
4. Revived during year			3	615						615
5. Increased during year (net)			2							
6. Subtotals, Lines 2 to 5			5	1,730						1,730
7. Additions by dividends during year	XXX		XXX		XXX		XXX	XXX		
8. Aggregate write-ins for increases										
9. Totals (Lines 1 and 6 to 8)			26,529	4,982,754			15	8,560	6,944,793	11,927,548
Deductions during year:										
10. Death			165	31,584			XXX	55	43,679	75,263
11. Maturity							XXX			
12. Disability							XXX			
13. Expiry			4	362						362
14. Surrender			987	184,269						184,269
15. Lapse			347	73,709						73,709
16. Conversion							XXX	XXX	XXX	
17. Decreased (net)			7	22,050					37,413	59,463
18. Reinsurance										
19. Aggregate write-ins for decreases										
20. Totals (Lines 10 to 19)			1,510	311,974				55	81,092	393,067
21. In force end of year (Line 9 minus Line 20)			25,019	4,670,780			15	8,505	6,863,701	11,534,481
22. Reinsurance ceded end of year	XXX		XXX	4,551,546	XXX		XXX	XXX	2,249,422	6,800,968
23. Line 21 minus Line 22	XXX		XXX	119,234	XXX	(a)	XXX	XXX	4,614,280	4,733,513
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)										

(a) Group \$; Individual \$

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	
25. Other paid-up insurance			5	9,517
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				
29. Other term insurance - decreasing	XXX		XXX	
30. Other term insurance	XXX		XXX	476
31. Totals (Lines 27 to 30)				476
Reconciliation to Lines 2 and 21:				
32. Term additions	XXX		XXX	
33. Totals, extended term insurance	XXX	XXX	58	2,888
34. Totals, whole life and endowment		1,115	24,961	4,667,416
35. Totals (Lines 31 to 34)		1,115	25,019	4,670,780

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	1,115		4,670,780	
38. Credit Life (Group and Individual)				
39. Group			6,863,701	
40. Totals (Lines 36 to 39)	1,115		11,534,481	

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	
42. Number in force end of year if the number under ceding company 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	44,512
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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.	
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			11,447	1,894,192				
49. Disability Income								
50. Extended Benefits			XXX	XXX				
51. Other								
52. Total		(a)	11,447	(a) 1,894,192		(a)		(a)

(a) See the Annual Audited Financial Reports section of the annual statement instructions

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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		105		
2. Issued during year		23		
3. Reinsurance assumed				
4. Increased during year (net)				
5. Total (Lines 1 to 4)		128		
Deductions during year:				
6. Decreased (net)		19		
7. Reinsurance ceded				
8. Totals (Lines 6 and 7)		19		
9. In force end of year		109		
10. Amount on deposit		(a) 15,605,645		(a)
11. Income now payable		29		
12. Amount of income payable	(a)	(a) 297,025	(a)	(a)

ANNUITIES

	Ordinary		Group	
	1 Immediate	2 Deferred	3 Contracts	4 Certificates
1. In force end of prior year		777		
2. Issued during year				
3. Reinsurance assumed				
4. Increased during year (net)				
5. Totals (Lines 1 to 4)		777		
Deductions during year:				
6. Decreased (net)		89		
7. Reinsurance ceded				
8. Totals (Lines 6 and 7)		89		
9. In force end of year		688		
Income now payable:				
10. Amount of income payable	(a)	XXX	XXX	(a)
Deferred fully paid:				
11. Account balance	XXX	(a)	XXX	(a)
Deferred not fully paid:				
12. Account balance	XXX	(a) 35,154,031	XXX	(a)

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						
2. Issued during year						
3. Reinsurance assumed						
4. Increased during year (net)		XXX		XXX		XXX
5. Totals (Lines 1 to 4)		XXX		XXX		XXX
Deductions during year:						
6. Conversions		XXX		XXX	XXX	XXX
7. Decreased (net)		XX		XX		XX
8. Reinsurance ceded		XX		XX		XX
9. Totals (Lines 6 to 8)		XXX		XXX		XXX
10. In force end of year	(a)		(a)			(a)

DEPOSIT FUNDS AND DIVIDEND ACCUMULATIONS

	1	2
	Deposit Funds Contracts	Dividend Accumulations Contracts
1. In force end of prior year		
2. Issued during year		
3. Reinsurance assumed		
4. Increased during year (net)		
5. Totals (Lines 1 to 4)		
Deductions During Year:		
6. Decreased (net)		
7. Reinsurance ceded		
8. Totals (Lines 6 and 7)		
9. In force end of year		
10. Amount of account balance	(a)	(a)

(a) See the Annual Audited Financial Reports section of the annual statement instructions.

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
FORM FOR CALCULATING THE INTEREST MAINTENANCE RESERVE

INTEREST MAINTENANCE RESERVE

	1 Amount
1. Reserve as of December 31, Prior Year	111,930
2. Current year's realized pre-tax capital gains/(losses) of \$ (239,967) transferred into the reserve net of taxes of \$ (50,393)	(189,573)
3. Adjustment for current year's liability gains/(losses) released from the reserve	
4. Balance before reduction for amount transferred to Summary of Operations (Line 1 + Line 2 + Line 3)	(77,643)
5. Current year's amortization released to Summary of Operations (Amortization, Line 1, Column 4)	32,756
6. Reserve as of December 31, current year (Line 4 minus Line 5)	(110,399)

AMORTIZATION

	1	2	3	4
Year of Amortization	Reserve as of December 31, Prior Year	Current Year's Realized Capital Gains/(Losses) Transferred into the Reserve Net of Taxes	Adjustment for Current Year's Liability Gains/(Losses) Released From the Reserve	Balance Before Reduction for Current Year's Amortization (Cols. 1 + 2 + 3)
1. 2018	77,562	(44,806)		32,756
2. 2019	40,404	(60,264)		(19,860)
3. 2020	15,331	(25,964)		(10,633)
4. 2021	4,036	(21,823)		(17,787)
5. 2022	1,785	(17,667)		(15,882)
6. 2023	2,299	(13,405)		(11,106)
7. 2024	1,623	(9,790)		(8,167)
8. 2025	(592)	(7,269)		(7,861)
9. 2026	(2,664)	(4,603)		(7,267)
10. 2027	(3,895)	(1,782)		(5,677)
11. 2028	(4,709)	1,197		(3,512)
12. 2029	(5,309)	2,624		(2,685)
13. 2030	(5,209)	2,459		(2,750)
14. 2031	(4,154)	2,325		(1,829)
15. 2032	(2,942)	2,151		(791)
16. 2033	(1,658)	2,044		386
17. 2034	(265)	1,759		1,494
18. 2035	345	1,402		1,747
19. 2036	175	1,016		1,191
20. 2037	57	604		661
21. 2038	(21)	220		199
22. 2039	(144)			(144)
23. 2040	(108)			(108)
24. 2041	(1)			(1)
25. 2042	(11)			(11)
26. 2043	(6)			(6)
27. 2044				
28. 2045				
29. 2046				
30. 2047				
31. 2048 and Later				
32. Total (Lines 1 to 31)	111,930	(189,573)		(77,643)

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	5,051,778	18,245	5,070,023				5,070,023
2. Realized capital gains/(losses) net of taxes - General Account	(17,033)		(17,033)				(17,033)
3. Realized capital gains/(losses) net of taxes - Separate Accounts	(23,153)		(23,153)				(23,153)
4. Unrealized capital gains/(losses) net of deferred taxes - General Account	(16,914)		(16,914)				(16,914)
5. Unrealized capital gains/(losses) net of deferred taxes - Separate Accounts							
6. Capital gains credited/(losses charged) to contract benefits, payments or reserves							
7. Basic contribution	1,087,859	4,863	1,092,722		425	425	1,093,147
8. Accumulated balances (Lines 1 through 5 - 6 + 7)	6,082,536	23,108	6,105,644		425	425	6,106,069
9. Maximum reserve	5,883,987	16,158	5,900,145		1,672	1,672	5,901,817
10. Reserve objective	4,124,667	9,788	4,134,455		1,082	1,082	4,135,537
11. 20% of (Line 10 - Line 8)	(391,574)	(2,664)	(394,238)		131	131	(394,106)
12. Balance before transfers (Lines 8 + 11)	5,690,962	20,444	5,711,406		556	556	5,711,963
13. Transfers	4,286	(4,286)					
14. Voluntary contribution							
15. Adjustment down to maximum/up to zero							
16. Reserve as of December 31, current year (Lines 12 + 13 + 14 + 15)	5,695,248	16,158	5,711,406		556	556	5,711,963

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	39,528,591	XXX	XXX	39,528,591	0.0000		0.0000		0.0000	
2.	1	Highest Quality	206,878,939	XXX	XXX	206,878,939	0.0004	82,752	0.0023	475,822	0.0030	620,637
3.	2	High Quality	105,101,649	XXX	XXX	105,101,649	0.0019	199,693	0.0058	609,590	0.0090	945,915
4.	3	Medium Quality	1,859,293	XXX	XXX	1,859,293	0.0093	17,291	0.0230	42,764	0.0340	63,216
5.	4	Low Quality	2,508,988	XXX	XXX	2,508,988	0.0213	53,441	0.0530	132,976	0.0750	188,174
6.	5	Lower Quality	180,148	XXX	XXX	180,148	0.0432	7,782	0.1100	19,816	0.1700	30,625
7.	6	In or Near Default	433,465	XXX	XXX	433,465	0.0000		0.2000	86,693	0.2000	86,693
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)	356,491,073	XXX	XXX	356,491,073	XXX	360,960	XXX	1,367,661	XXX	1,935,260
PREFERRED STOCK												
10.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
11.	2	High Quality		XXX	XXX		0.0019		0.0058		0.0090	
12.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
13.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
14.	5	Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
15.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
16.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
17.		Total Preferred Stocks (Sum of Lines 10 through 16)		XXX	XXX		XXX		XXX		XXX	
SHORT - TERM BONDS												
18.		Exempt Obligations		XXX	XXX		0.0000		0.0000		0.0000	
19.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
20.	2	High Quality	6,954,698	XXX	XXX	6,954,698	0.0019	13,214	0.0058	40,337	0.0090	62,592
21.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
22.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
23.	5	Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
24.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
25.		Total Short - Term Bonds (Sum of Lines 18 through 24)	6,954,698	XXX	XXX	6,954,698	XXX	13,214	XXX	40,337	XXX	62,592
DERIVATIVE INSTRUMENTS												
26.		Exchange Traded		XXX	XXX		0.0004		0.0023		0.0030	
27.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
28.	2	High Quality		XXX	XXX		0.0019		0.0058		0.0090	
29.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
30.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
31.	5	Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
32.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
33.		Total Derivative Instruments		XXX	XXX		XXX		XXX		XXX	
34.		Total (Lines 9 + 17 + 25 + 33)	363,445,771	XXX	XXX	363,445,771	XXX	374,174	XXX	1,407,998	XXX	1,997,852

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		0.0010		0.0050		0.0065	
36.		Farm Mortgages - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
37.		Farm Mortgages - CM3 - Medium Quality			XXX		0.0060		0.0175		0.0225	
38.		Farm Mortgages - CM4 - Low Medium Quality			XXX		0.0105		0.0300		0.0375	
39.		Farm Mortgages - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
40.		Residential Mortgages - Insured or Guaranteed	2,588,322		XXX	2,588,322	0.0003	776	0.0006	1,553	0.0010	2,588
41.		Residential Mortgages - All Other	155,761		XXX	155,761	0.0013	202	0.0030	467	0.0040	623
42.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003		0.0006		0.0010	
43.		Commercial Mortgages - All Other - CM1 - Highest Quality			XXX		0.0010		0.0050		0.0065	
44.		Commercial Mortgages - All Other - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
45.		Commercial Mortgages - All Other - CM3 - Medium Quality			XXX		0.0060		0.0175		0.0225	
46.		Commercial Mortgages - All Other - CM4 - Low Medium Quality			XXX		0.0105		0.0300		0.0375	
47.		Commercial Mortgages - All Other - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
Overdue, Not in Process:												
48.		Farm Mortgages			XXX		0.0420		0.0760		0.1200	
49.		Residential Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
50.		Residential Mortgages - All Other			XXX		0.0025		0.0058		0.0090	
51.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
52.		Commercial Mortgages - All Other			XXX		0.0420		0.0760		0.1200	
In Process of Foreclosure:												
53.		Farm Mortgages			XXX		0.0000		0.1700		0.1700	
54.		Residential Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
55.		Residential Mortgages - All Other			XXX		0.0000		0.0130		0.0130	
56.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
57.		Commercial Mortgages - All Other			XXX		0.0000		0.1700		0.1700	
58.		Total Schedule B Mortgages (Sum of Lines 35 through 57)	2,744,083		XXX	2,744,083	XXX	979	XXX	2,020	XXX	3,211
59.		Schedule DA Mortgages			XXX		0.0030		0.0100		0.0130	
60.		Total Mortgage Loans on Real Estate (Lines 58 + 59)	2,744,083		XXX	2,744,083	XXX	979	XXX	2,020	XXX	3,211

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		XXX	XXX		0.0000		0.1300 (a)		0.1300 (a)	
2.		Unaffiliated - Private		XXX	XXX		0.0000		0.1600		0.1600	
3.		Federal Home Loan Bank		XXX	XXX		0.0000		0.0050		0.0080	
4.		Affiliated - Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
Affiliated - Investment Subsidiary:												
5.		Fixed Income - Exempt Obligations					XXX		XXX		XXX	
6.		Fixed Income - Highest Quality					XXX		XXX		XXX	
7.		Fixed Income - High Quality					XXX		XXX		XXX	
8.		Fixed Income - Medium Quality					XXX		XXX		XXX	
9.		Fixed Income - Low Quality					XXX		XXX		XXX	
10.		Fixed Income - Lower Quality					XXX		XXX		XXX	
11.		Fixed Income - In/Near Default					XXX		XXX		XXX	
12.		Unaffiliated Common Stock - Public					0.0000		0.1300 (a)		0.1300 (a)	
13.		Unaffiliated Common Stock - Private					0.0000		0.1600		0.1600	
14.		Real Estate					(b)		(b)		(b)	
15.		Affiliated - Certain Other (See SVO Purposes and Procedures Manual)		XXX	XXX		0.0000		0.1300		0.1300	
16.		Affiliated - All Other		XXX	XXX		0.0000		0.1600		0.1600	
17.		Total Common Stock (Sum of Lines 1 through 16)					XXX		XXX		XXX	
REAL ESTATE												
18.		Home Office Property (General Account only)					0.0000		0.0750		0.0750	
19.		Investment Properties					0.0000		0.0750		0.0750	
20.		Properties Acquired in Satisfaction of Debt					0.0000		0.1100		0.1100	
21.		Total Real Estate (Sum of Lines 18 through 20)					XXX		XXX		XXX	
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		0.0004		0.0023		0.0030	
24.	2	High Quality		XXX	XXX		0.0019		0.0058		0.0090	
25.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
26.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
27.	5	Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
28.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
29.		Total with Bond Characteristics (Sum of Lines 22 through 28)		XXX	XXX		XXX		XXX		XXX	

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		XXX	XXX		0.0004		0.0023		0.0030	
31.	2	High Quality		XXX	XXX		0.0019		0.0058		0.0090	
32.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
33.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
34.	5	Lower Quality	9,834	XXX	XXX	9,834	0.0432	425	0.1100	1,082	0.1700	1,672
35.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
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)	9,834	XXX	XXX	9,834	XXX	425	XXX	1,082	XXX	1,672
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF MORTGAGE LOANS												
In Good Standing Affiliated:												
38.		Mortgages - CM1 - Highest Quality			XXX		0.0010		0.0050		0.0065	
39.		Mortgages - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
40.		Mortgages - CM3 - Medium Quality			XXX		0.0060		0.0175		0.0225	
41.		Mortgages - CM4 - Low Medium Quality			XXX		0.0105		0.0300		0.0375	
42.		Mortgages - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
43.		Residential Mortgages - Insured or Guaranteed			XXX		0.0003		0.0006		0.0010	
44.		Residential Mortgages - All Other		XXX	XXX		0.0013		0.0030		0.0040	
45.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003		0.0006		0.0010	
Overdue, Not in Process Affiliated:												
46.		Farm Mortgages			XXX		0.0420		0.0760		0.1200	
47.		Residential Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
48.		Residential Mortgages - All Other			XXX		0.0025		0.0058		0.0090	
49.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
50.		Commercial Mortgages - All Other			XXX		0.0420		0.0760		0.1200	
In Process of Foreclosure Affiliated:												
51.		Farm Mortgages			XXX		0.0000		0.1700		0.1700	
52.		Residential Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
53.		Residential Mortgages - All Other			XXX		0.0000		0.0130		0.0130	
54.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
55.		Commercial Mortgages - All Other			XXX		0.0000		0.1700		0.1700	
56.		Total Affiliated (Sum of Lines 38 through 55)			XXX		XXX		XXX		XXX	
57.		Unaffiliated - In Good Standing With Covenants			XXX		(c)		(c)		(c)	
58.		Unaffiliated - In Good Standing Defeased With Government Securities			XXX		0.0010		0.0050		0.0065	
59.		Unaffiliated - In Good Standing Primarily Senior			XXX		0.0035		0.0010		0.0130	
60.		Unaffiliated - In Good Standing All Other			XXX		0.0060		0.0175		0.0225	
61.		Unaffiliated - Overdue, Not in Process			XXX		0.0420		0.0760		0.1200	
62.		Unaffiliated - In Process of Foreclosure			XXX		0.0000		0.1700		0.1700	
63.		Total Unaffiliated (Sum of Lines 57 through 62)			XXX		XXX		XXX		XXX	
64.		Total with Mortgage Loan Characteristics (Lines 56 + 63)			XXX		XXX		XXX		XXX	

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		0.1300 (a)		0.1300 (a)	
66.		Unaffiliated Private		XXX	XXX		0.0000		0.1600		0.1600	
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		0.1300		0.1300	
69.		Affiliated Other - All Other		XXX	XXX		0.0000		0.1600		0.1600	
70.		Total with Common Stock Characteristics (Sum of Lines 65 through 69)		XXX	XXX		XXX		XXX		XXX	
INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF REAL ESTATE												
71.		Home Office Property (General Account only)					0.0000		0.0750		0.0750	
72.		Investment Properties					0.0000		0.0750		0.0750	
73.		Properties Acquired in Satisfaction of Debt					0.0000		0.1100		0.1100	
74.		Total with Real Estate Characteristics (Sum of Lines 71 through 73)					XXX		XXX		XXX	
LOW INCOME HOUSING TAX CREDIT INVESTMENTS												
75.		Guaranteed Federal Low Income Housing Tax Credit					0.0003		0.0006		0.0010	
76.		Non-guaranteed Federal Low Income Housing Tax Credit					0.0063		0.0120		0.0190	
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)					XXX		XXX		XXX	
ALL OTHER INVESTMENTS												
81.		NAIC 1 Working Capital Finance Investments		XXX			0.0000		0.0037		0.0037	
82.		NAIC 2 Working Capital Finance Investments		XXX			0.0000		0.0120		0.0120	
83.		Other Invested Assets - Schedule BA		XXX			0.0000		0.1300		0.1300	
84.		Other Short-Term Invested Assets - Schedule DA		XXX			0.0000		0.1300		0.1300	
85.		Total All Other (Sum of Lines 81, 82, 83 and 84)		XXX			XXX		XXX		XXX	
86.		Total Other Invested Assets - Schedules BA & DA (Sum of Lines 29, 37, 64, 70, 74, 80 and 85)	9,834			9,834	XXX	425	XXX	1,082	XXX	1,672

(a) Times the company's weighted average portfolio beta (Minimum .10, Maximum .20).
 (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.

Asset Valuation Reserve Replications (Synthetic) Assets

NONE

Schedule F - Claims

NONE

Schedule H - Part 1 - Analysis of Underwriting Operations

NONE

Schedule H - Part 2 - Reserves and Liabilities

NONE

Schedule H - Part 3 - Test of Prior Year's Claim Reserves and Liabilities

NONE

Schedule H - Part 4 - Reinsurance

NONE

Schedule H - Part 5 - Health Claims

NONE

Schedule S - Part 1 - Section 1

NONE

Schedule S - Part 1 - Section 2

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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
65935	04-1590850	09/07/1983	Massachusetts Mutual Life Insurance Company	MA		250,141
65935	04-1590850	01/01/2000	Massachusetts Mutual Life Insurance Company	MA	1,659,987	2,587,833
0299999. Life and Annuity - U.S. Affiliates - Other					1,659,987	2,837,974
0399999. Total Life and Annuity - U.S. Affiliates					1,659,987	2,837,974
0699999. Total Life and Annuity - Non-U.S. Affiliates						
0799999. Total Life and Annuity - Affiliates					1,659,987	2,837,974
86258	13-2572994	02/08/1999	General Re Life Corp. (C081)	CT	23,667	324,129
65676	35-0472300	02/08/1999	Lincoln National Life Ins. Co. (LN81)	IN	185,571	476,027
66346	58-0828824	02/08/1999	Munich American Reassurance Co (MU81)	GA	623,453	771,831
66346	58-0828824	01/01/1999	Munich American Reassurance Co (MU82)	GA	98,997	108,591
93572	43-1235868	01/01/1999	RGA Reinsurance Co. (A282)	MO	61,952	127,344
93572	43-1235868	02/08/1999	RGA Reinsurance Co. (GA81)	MO	110,627	476,027
82627	06-0839705	12/31/2016	Swiss Re Life & Health America Inc. (SR16)	MO	1,365,795	1,959,529
0899999. Life and Annuity - U.S. Non-Affiliates					2,470,062	4,243,478
1099999. Total Life and Annuity - Non-Affiliates					2,470,062	4,243,478
1199999. Total Life and Annuity					4,130,049	7,081,452
1499999. Total Accident and Health - U.S. Affiliates						
1799999. Total Accident and Health - Non-U.S. Affiliates						
1899999. Total Accident and Health - Affiliates						
2199999. Total Accident and Health - Non-Affiliates						
2299999. Total Accident and Health						
2399999. Total U.S. (Sum of 0399999, 0899999, 1499999 and 1999999)					4,130,049	7,081,452
2499999. Total Non-U.S. (Sum of 0699999, 0999999, 1799999 and 2099999)						
9999999 Totals - Life, Annuity and Accident and Health					4,130,049	7,081,452

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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			
65935	04-1590850	09/07/1983	Massachusetts Mutual Life Insurance Co.	MA	YRT/I	OL	381,449,451	4,598,578	5,728,758	5,292,033					
65935	04-1590850	01/01/1997	Massachusetts Mutual Life Insurance Co.	MA	OTH/I	OL				131,611					
0299999. General Account - Authorized U.S. Affiliates - Other							381,449,451	4,598,578	5,728,758	5,423,644					
0399999. Total General Account - Authorized U.S. Affiliates							381,449,451	4,598,578	5,728,758	5,423,644					
0699999. Total General Account - Authorized Non-U.S. Affiliates															
0799999. Total General Account - Authorized Affiliates							381,449,451	4,598,578	5,728,758	5,423,644					
80659	38-0397420	03/01/1996	Canada Life Assurance Co. (CR57)	MI	YRT/G	OL	723,604	2,677	2,480	2,085					
86258	13-2572994	02/08/1999	General Re Life Corp. (C081)	CT	YRT/I	OL	242,072,920	1,987,208	1,957,729	1,245,703					
65676	35-0472300	01/05/1983	Lincoln National Life Ins. Co. (LN16)	IN	YRT/G	OL	3,088,061	11,426	10,584	9,677					
65676	35-0472300	02/08/1999	Lincoln National Life Ins. Co. (LN81)	IN	YRT/I	OL	367,454,982	3,016,614	2,971,914	1,866,472					
66346	58-0828824	05/01/1994	Munich American Reassurance (CA48)	GA	YRT/G	OL	207,245	767	710	545					
66346	58-0828824	02/08/1999	Munich American Reassurance (MU81)	GA	YRT/I	OL	611,699,965	5,021,607	4,947,163	2,883,954					
66346	58-0828824	01/01/1999	Munich American Reassurance (MU82)	GA	YRT/I	OL	184,547,325	1,709,995	1,746,218	1,035,690					
93572	43-1235868	05/01/1994	RGA Reinsurance Co. (AZ51)	MO	YRT/G	OL	807,426	2,987	2,767	2,081					
93572	43-1235868	01/01/1999	RGA Reinsurance Co. (AZ82)	MO	YRT/I	OL	221,758,094	2,054,425	2,097,979	1,587,746					
93572	43-1235868	02/08/1999	RGA Reinsurance Co. (GA81)	MO	YRT/I	OL	367,454,982	3,016,614	2,971,914	1,836,963					
68713	84-0499703	03/01/1996	Security Life of Denver Ins. Co. (SD46)	CO	YRT/G	OL			6,424	2,171					
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16V)	MO	MCO/I	OL	2,175,108,326			15,732,278	29,559,150	31,546,275	126,346,998		
82627	06-0839705	03/01/1996	Swiss Re Life & Health America (SR59)	MO	YRT/G	OL	4,032,852	14,921	13,822	14,269					
0899999. General Account - Authorized U.S. Non-Affiliates							4,178,955,782	16,839,241	16,729,704	26,219,634	29,559,150	31,546,275	126,346,998		
1099999. Total General Account - Authorized Non-Affiliates							4,178,955,782	16,839,241	16,729,704	26,219,634	29,559,150	31,546,275	126,346,998		
1199999. Total General Account Authorized							4,560,405,233	21,437,819	22,458,462	31,643,278	29,559,150	31,546,275	126,346,998		
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							4,560,405,233	21,437,819	22,458,462	31,643,278	29,559,150	31,546,275	126,346,998		
65935	04-1590850	01/01/2000	Massachusetts Mutual Life Insurance Co.	MA	MCO/G	OL	2,240,562,579			(2,829,920)			1,120,900,750		
3699999. Separate Accounts - Authorized U.S. Affiliates - Other							2,240,562,579			(2,829,920)				1,120,900,750	
3799999. Total Separate Accounts - Authorized U.S. Affiliates							2,240,562,579			(2,829,920)				1,120,900,750	
4099999. Total Separate Accounts - Authorized Non-U.S. Affiliates															
4199999. Total Separate Accounts - Authorized Affiliates							2,240,562,579			(2,829,920)				1,120,900,750	
82627	06-0839705	12/31/2016	Swiss Re Life & Health America (SR16V)	MO	MCO/I	OL							651,248,993		
4299999. Separate Accounts - Authorized U.S. Non-Affiliates														651,248,993	
4499999. Total Separate Accounts - Authorized Non-Affiliates														651,248,993	
4599999. Total Separate Accounts Authorized							2,240,562,579			(2,829,920)				1,772,149,743	
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							2,240,562,579			(2,829,920)				1,772,149,743	

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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		
6999999	Total U.S. (Sum of 0399999, 0899999, 1499999, 1999999, 2599999, 3099999, 3799999, 4299999, 4899999, 5399999, 5999999 and 6499999)						6,800,967,812	21,437,819	22,458,462	28,813,358	29,559,150	31,546,275	1,898,496,741	
7099999	Total Non-U.S. (Sum of 0699999, 0999999, 1799999, 2099999, 2899999, 3199999, 4099999, 4399999, 5199999, 5499999, 6299999 and 6599999)													
9999999	- Totals						6,800,967,812	21,437,819	22,458,462	28,813,358	29,559,150	31,546,275	1,898,496,741	

Schedule S - Part 3 - Section 2

NONE

Schedule S - Part 4

NONE

Schedule S - Part 4 - Bank Footnote

NONE

Schedule S - Part 5

NONE

Schedule S - Part 5 - Bank Footnote

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE S - PART 6

Five Year Exhibit of Reinsurance Ceded Business
(\$000 Omitted)

	1 2018	2 2017	3 2016	4 2015	5 2014
A. OPERATIONS ITEMS					
1. Premiums and annuity considerations for life and accident and health contracts	28,813	35,634	139,892	18,413	18,350
2. Commissions and reinsurance expense allowances	10,345	9,250	61,255	5,632	5,523
3. Contract claims	37,107	42,255	25,185	26,267	26,420
4. Surrender benefits and withdrawals for life contracts	44,165	43,051			
5. Dividends to policyholders					
6. Reserve adjustments on reinsurance ceded	(71,779)	(70,296)	112,686	(15,069)	(12,815)
7. Increase in aggregate reserve for life and accident and health contracts	(1,021)	(625)	(384)	41	(543)
B. BALANCE SHEET ITEMS					
8. Premiums and annuity considerations for life and accident and health contracts deferred and uncollected	(437)	2,549	611	652	194
9. Aggregate reserves for life and accident and health contracts	21,438	22,458	23,083	23,467	23,426
10. Liability for deposit-type contracts					
11. Contract claims unpaid	7,081	14,323	8,780	5,642	4,901
12. Amounts recoverable on reinsurance	4,130	4,375	2,912	5,325	7,225
13. Experience rating refunds due or unpaid	3,248	420	1,564	1,572	2,028
14. Policyholders' dividends (not included in Line 10)					
15. Commissions and reinsurance expense allowances due	8,312	14,776	16,908	19,537	21,245
16. Unauthorized reinsurance offset					
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)					
21. Other (O)					
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)					

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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)	479,619,597		479,619,597
2. Reinsurance (Line 16)	17,936,305	(17,936,305)	
3. Premiums and considerations (Line 15)	(2,729,876)	(437,429)	(3,167,305)
4. Net credit for ceded reinsurance	XXX	44,225,862	44,225,862
5. All other admitted assets (balance)	9,268,502		9,268,502
6. Total assets excluding Separate Accounts (Line 26)	504,094,528	25,852,128	529,946,656
7. Separate Account assets (Line 27)	4,355,595,947		4,355,595,947
8. Total assets (Line 28)	4,859,690,475	25,852,128	4,885,542,603
LIABILITIES, CAPITAL AND SURPLUS (Page 3)			
9. Contract reserves (Lines 1 and 2)	143,984,461	21,437,820	165,422,281
10. Liability for deposit-type contracts (Line 3)	15,076,197		15,076,197
11. Claim reserves (Line 4)	4,572,737	7,081,452	11,654,189
12. Policyholder dividends/reserves (Lines 5 through 7)			
13. Premium & annuity considerations received in advance (Line 8)	2,248		2,248
14. Other contract liabilities (Line 9)	18,809,760	(2,700,187)	16,109,573
15. Reinsurance in unauthorized companies (Line 24.02 minus inset amount)			
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)	11,717,269	33,043	11,750,312
20. Total liabilities excluding Separate Accounts (Line 26)	194,162,672	25,852,128	220,014,800
21. Separate Account liabilities (Line 27)	4,355,595,947		4,355,595,947
22. Total liabilities (Line 28)	4,549,758,619	25,852,128	4,575,610,747
23. Capital & surplus (Line 38)	309,931,856	XXX	309,931,856
24. Total liabilities, capital & surplus (Line 39)	4,859,690,475	25,852,128	4,885,542,603
NET CREDIT FOR CEDED REINSURANCE			
25. Contract reserves	21,437,820		
26. Claim reserves	7,081,452		
27. Policyholder dividends/reserves			
28. Premium & annuity considerations received in advance			
29. Liability for deposit-type contracts			
30. Other contract liabilities	(2,700,187)		
31. Reinsurance ceded assets	17,936,305		
32. Other ceded reinsurance recoverables			
33. Total ceded reinsurance recoverables	43,755,390		
34. Premiums and considerations	(437,429)		
35. Reinsurance in unauthorized companies			
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	(33,043)		
40. Total ceded reinsurance payable/offsets	(470,471)		
41. Total net credit for ceded reinsurance	44,225,862		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	188,935			188,935	
2. Alaska	AK	L	16,902			16,902	
3. Arizona	AZ	L	779,490			779,490	
4. Arkansas	AR	L	72,191			72,191	
5. California	CA	L	4,046,954			4,046,954	
6. Colorado	CO	L	666,831			666,831	
7. Connecticut	CT	L	595,794			595,794	
8. Delaware	DE	L	93,556			93,556	
9. District of Columbia	DC	L	306,574			306,574	
10. Florida	FL	L	1,908,927			1,908,927	
11. Georgia	GA	L	551,834			551,834	
12. Hawaii	HI	L	203,228			203,228	
13. Idaho	ID	L	61,102			61,102	
14. Illinois	IL	L	1,152,523			1,152,523	
15. Indiana	IN	L	467,457			467,457	
16. Iowa	IA	L	533,567	1,800		535,367	
17. Kansas	KS	L	278,394			278,394	
18. Kentucky	KY	L	265,582			265,582	
19. Louisiana	LA	L	405,397			405,397	
20. Maine	ME	L	166,361			166,361	
21. Maryland	MD	L	1,015,497	105		1,015,602	
22. Massachusetts	MA	L	911,365			911,365	
23. Michigan	MI	L	1,587,439	11,950		1,599,389	
24. Minnesota	MN	L	417,456			417,456	
25. Mississippi	MS	L	241,403			241,403	
26. Missouri	MO	L	480,145			480,145	
27. Montana	MT	L	205,345			205,345	
28. Nebraska	NE	L	361,784	1,800		363,584	
29. Nevada	NV	L	277,018			277,018	
30. New Hampshire	NH	L	163,150			163,150	
31. New Jersey	NJ	L	1,403,590			1,403,590	
32. New Mexico	NM	L	93,797			93,797	
33. New York	NY	N	137,302			137,302	
34. North Carolina	NC	L	1,111,706			1,111,706	
35. North Dakota	ND	L	6,200			6,200	
36. Ohio	OH	L	1,174,026			1,174,026	
37. Oklahoma	OK	L	808,357			808,357	
38. Oregon	OR	L	337,921			337,921	
39. Pennsylvania	PA	L	1,946,842			1,946,842	
40. Rhode Island	RI	L	125,940			125,940	
41. South Carolina	SC	L	717,368			717,368	
42. South Dakota	SD	L	29,024			29,024	
43. Tennessee	TN	L	580,525			580,525	
44. Texas	TX	L	2,617,298			2,617,298	
45. Utah	UT	L	350,182			350,182	
46. Vermont	VT	L	71,309	1,200		72,509	
47. Virginia	VA	L	1,444,379			1,444,379	
48. Washington	WA	L	710,225			710,225	
49. West Virginia	WV	L	157,307			157,307	
50. Wisconsin	WI	L	336,389			336,389	
51. Wyoming	WY	L	20,271			20,271	
52. American Samoa	AS	N					
53. Guam	GU	N					
54. Puerto Rico	PR	N					
55. U.S. Virgin Islands	VI	N					
56. Northern Mariana Islands	MP	N					
57. Canada	CAN	N					
58. Aggregate Other Alien	OT	XXX	74,209			74,209	
59. Subtotal	XXX		32,676,368	16,855		32,693,223	
90. Reporting entity contributions for employee benefits plans	XXX						
91. Dividends or refunds applied to purchase paid-up additions and annuities	XXX						
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	333,652				333,652	
94. Aggregate or other amounts not allocable by State	XXX						
95. Totals (Direct Business)	XXX	33,010,020	16,855			33,026,875	
96. Plus reinsurance assumed	XXX						
97. Totals (All Business)	XXX	33,010,020	16,855			33,026,875	
98. Less reinsurance ceded	XXX	31,799,939				31,799,939	
99. Totals (All Business) less Reinsurance Ceded	XXX	1,210,081	16,855	(c)		1,226,936	
58001. DETAILS OF WRITE-INS							
58002. ZZZ Other Alien	XXX	74,209				74,209	
58003. Summary of remaining write-ins for Line 58 from overflow page	XXX						
58998. Totals (Lines 58001 through 58003 plus 58998)(Line 58 above)	XXX	74,209				74,209	
9401. Summary of remaining write-ins for Line 94 from overflow page	XXX						
9402. Summary of remaining write-ins for Line 94 from overflow page	XXX						
9403. Summary of remaining write-ins for Line 94 from overflow page	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						

(a) Active Status Counts:

L - Licensed or Chartered - Licensed insurance carrier or domiciled RRG50 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.....7

(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 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE T - PART 2
INTERSTATE COMPACT - EXHIBIT OF PREMIUMS WRITTEN

Allocated by States and Territories

		Direct Business Only					6 Totals
		1 Life (Group and Individual)	2 Annuities (Group and Individual)	3 Disability Income (Group and Individual)	4 Long-Term Care (Group and Individual)	5 Deposit-Type Contracts	
States, Etc.							
1. Alabama	AL	188,935					188,935
2. Alaska	AK	16,902					16,902
3. Arizona	AZ	779,490					779,490
4. Arkansas	AR	72,191					72,191
5. California	CA	4,046,954					4,046,954
6. Colorado	CO	666,831					666,831
7. Connecticut	CT	595,794					595,794
8. Delaware	DE	93,556					93,556
9. District of Columbia	DC	306,574					306,574
10. Florida	FL	1,908,927					1,908,927
11. Georgia	GA	551,834					551,834
12. Hawaii	HI	203,228					203,228
13. Idaho	ID	61,102					61,102
14. Illinois	IL	1,152,523					1,152,523
15. Indiana	IN	467,457					467,457
16. Iowa	IA	533,567	1,800				535,367
17. Kansas	KS	278,394					278,394
18. Kentucky	KY	265,582					265,582
19. Louisiana	LA	405,397					405,397
20. Maine	ME	166,361					166,361
21. Maryland	MD	1,015,497	105				1,015,602
22. Massachusetts	MA	911,365					911,365
23. Michigan	MI	1,587,439	11,950				1,599,389
24. Minnesota	MN	417,456					417,456
25. Mississippi	MS	241,403					241,403
26. Missouri	MO	480,145					480,145
27. Montana	MT	205,345					205,345
28. Nebraska	NE	361,784	1,800				363,584
29. Nevada	NV	277,018					277,018
30. New Hampshire	NH	163,150					163,150
31. New Jersey	NJ	1,403,590					1,403,590
32. New Mexico	NM	93,797					93,797
33. New York	NY	137,302					137,302
34. North Carolina	NC	1,111,706					1,111,706
35. North Dakota	ND	6,200					6,200
36. Ohio	OH	1,174,026					1,174,026
37. Oklahoma	OK	808,357					808,357
38. Oregon	OR	337,921					337,921
39. Pennsylvania	PA	1,946,842					1,946,842
40. Rhode Island	RI	125,940					125,940
41. South Carolina	SC	717,368					717,368
42. South Dakota	SD	29,024					29,024
43. Tennessee	TN	580,525					580,525
44. Texas	TX	2,617,298					2,617,298
45. Utah	UT	350,182					350,182
46. Vermont	VT	71,309	1,200				72,509
47. Virginia	VA	1,444,379					1,444,379
48. Washington	WA	710,225					710,225
49. West Virginia	WV	157,307					157,307
50. Wisconsin	WI	336,389					336,389
51. Wyoming	WY	20,271					20,271
52. American Samoa	AS						
53. Guam	GU						
54. Puerto Rico	PR						
55. U.S. Virgin Islands	VI						
56. Northern Mariana Islands	MP						
57. Canada	CAN						
58. Aggregate Other Alien	OT	74,209					74,209
59. Total		32,676,368	16,855				32,693,223

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, LLC	06-1041383		Delaware
CML Mezzanine Investor L, LLC	06-1041383		Delaware
CML Mezzanine Investor III, LLC	06-1041383		Delaware
CML Special Situations Investor LLC	None		Delaware
MML Mezzanine Investor L, LLC	04-1590850		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack 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
Country Club Office Plaza LLC*	27-1435692		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
Jefferies Finance LLC	27-0105644		Delaware
JFIN GP Adviser LLC	None		Delaware
JFIN Revolver Fund, L.P.	None		Delaware
JFIN Fund III LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
JFAM Loan Fund, 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
JFIN High Yield Investments LLC	None		Delaware
JFIN High Yield Investments LLC	None		Delaware

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

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
JFIN LC Fund LLC	None		Delaware
JFIN Revolver CLO Holdings LLC	None		Delaware
JFIN CLO 2007 Ltd.	None		Cayman Islands
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 2014 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
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 2018-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 Mezzanine Investor, LLC	04-1590850		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 2009-A	27-1379258		Delaware
MMAF Equipment Finance LLC 2011-A	45-2589019		Delaware
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
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures Holding LLC	None		Delaware
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 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
Baring 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
Baring Asset Management (Australia) Pty Limited	98-0457456		Australia
Barings Investment Advisors (Hong Kong) Limited	None		Hong Kong, Special Administrative Region of China
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings 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

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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 Real Estate Advisers 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
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
MassMutual Baring Holding LLC	04-1590850		Delaware
MassMutual Holdings (Bermuda) Limited	None		Bermuda
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Aland Royalty Holdings LP	None		Delaware
Engs Holdings Inc.	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

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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>
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
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
Baring North America LLC	98-0241935		Massachusetts
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
BREBF I GP LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
CCM Fund I REIT Manager LLC	None		Delaware
CCM Venture I GP LLC	None		Delaware
CCM Venture I REIT Manager LLC	None		Delaware
CEMF I GP LLC	None		Delaware
CHY Venture 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
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 LLC	90-0666326		Delaware
Mezzco Australia II LLC	None		Delaware
RECSA-NY GP LLC	None		Delaware

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Somerset Special Opportunities Management LLC	04-1590850		Delaware
Oppenheimer Acquisition Corp.	84-1149206		Delaware
OppenheimerFunds, Inc.	13-2527171		Colorado
OppenheimerFunds Distributor, Inc.	13-2953455		New York
Oppenheimer Real Asset Management, Inc.	84-1106295		Delaware
OFI Global Institutional, Inc	13-4160541		New York
HarbourView Asset Management Corporation	22-2697140		New York
OC Private Capital, LLC	None		Delaware
OFI Global Trust Company	13-3459790		New York
OFI International, Ltd.	None		United Kingdom
SNW Asset Management Corporation	None		Delaware
Seattle Northwest Asset Management LLC	None		Washington
Trinity Investment Management Corporation	25-1951632		Pennsylvania
OFI SteelPath, Inc.	84-1128397		Delaware
Shareholder Services, Inc.	84-1066811		Colorado
OFI Advisors, LLC	None		Delaware
Index Management Solutions, LLC	None		Pennsylvania
OFI Global Asset Management, Inc.	84-0765063		Delaware
OFI Private Investments Inc.	91-2036414		New York
Tremont Group Holdings, LLC	62-1210532		New York
Tremont Partners, LLC	06-1121864		Connecticut
Tremont GP, LLC	20-8215352		Delaware
Settlement Agent, LLC	90-0874510		Delaware
Tremont (Bermuda) Limited	None		Bermuda
MassMutual International LLC	04-3313782		Delaware
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
Cornerstone Global REIT Corporation	20-8730751		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		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

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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 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
Barings CLO 2018-III	None		Cayman Islands
Barings CLO 2018-IV	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 Equity Income Fund	None		Hong Kong
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 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
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware

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

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	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
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
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I LP	80-0691253		Delaware
Gillem GA Industrial LLC	04-1590850		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Kazwell Realty Partners LLC	20-3887968		Delaware
KKR-MM Vector LP	82-1512591		Delaware
Marco Hotel LLC	46-425307		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
MM Debt Participations LLC	81-3000420		Delaware
Oakley Grove Development LLC	20-3887968		Delaware
Old Pasco Properties LLC	20-3887968		Delaware
RB Apartments LLC	82-4411267		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Riva Portland LLC	30-0713071		Delaware
Rockall CLO B.V.	None		United Kingdom
Rockville Town Center LLC	54-2055778		Virginia
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Pasco Properties LLC	20-3887968		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
West 46 th Street Hotel LLC	05-1590850		Delaware
Barings Affiliates & Funds:			
Barings Emerging Markets Debt Blended Total Return Fund	None		Ireland
Barings Emerging Markets Debt Short Duration Fund	None		Ireland
Barings Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings Emerging Markets Debt Blended Total Return Fund	47-3758432		Massachusetts
Barings Global High Yield Fund	47-3790192		Massachusetts
Baring Greater China Equity Fund	None		Hong Kong

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	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings Total Return Bond Fund	47-3734770		Massachusetts
Barings U.S. High Yield Fund	47-3801860		Massachusetts
Great Lakes II LLC*	71-1018134		Delaware
Somerset Special Opportunities Master Fund LP	None		Cayman Islands
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
Cornbrook PRS Holdings LLC	82-3307907		Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II LLC	95-4207717		California
Cornerstone California Mortgage Fund III LLC	95-4207717		California
Cornerstone Fort Pierce Development LLC*	56-2630592		Delaware
Cornerstone Permanent Mortgage Fund	45-2632610		Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735		Massachusetts
CREA 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
Farringdon London Holdings LLC*	46-3880526		Delaware
Johnston Groves LLC	20-4819358		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 LLC	04-1590850		Delaware
PACO France Logistics 2 LLC	04-1590850		Delaware
PACO France Logistics 3 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
UK LIW Manager LLC	45-4606547		Delaware
UK LIW Member LLC	45-4606547		Delaware
Unna, Dortmund Holding LLC	82-3250684		Delaware
Via Ceresio Milan LLC	82-3281588		Delaware

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	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
WeHo Domain LLC*	46-3122029		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
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

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	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual RetireSMART Conservative Fund	45-1618155		Massachusetts
MassMutual RetireSMART Growth Fund	45-1618222		Massachusetts
MassMutual RetireSMART Moderate Fund	45-1618262		Massachusetts
MassMutual RetireSMART Moderate Growth Fund	45-1618046		Massachusetts
Oppenheimer Funds:			
OFI Pictet Global Environmental Solution Fund	81-5311583		Delaware
Oppenheimer Developing Markets Fund	93-6305075		Delaware
Oppenheimer Developing Markets Equity UCITS	None		Ireland
Oppenheimer Emerging Markets Innovators UCITS	None		Ireland
Oppenheimer Emerging Markets Local Debt UCITS	3440740DH		Ireland
Oppenheimer Emerging Markets Revenue ETF	46-2984739		Delaware
Oppenheimer Emerging Markets Ultra Dividend Revenue ETF	82-2237734		Delaware
Oppenheimer ESG Revenue ETF	81-3492794		Delaware
Oppenheimer Global ILS Fund LP	83-1689208		New York
Oppenheimer Global ESG Revenue ETF	81-3480754		Delaware
Oppenheimer Global Equity UCITS	None		Ireland
Oppenheimer Global Multi-Asset Growth Fund	47-3676235		Delaware
Oppenheimer Global Real Estate Fund	46-1604428		Delaware
Oppenheimer Global Revenue ETF	81-5010075		Delaware
Oppenheimer Global Value Equity UCITS	None		Ireland
Oppenheimer Global Unconstrained Bond Fund	82-2693880		Delaware
Oppenheimer International Revenue ETF	81-4969331		Delaware
Oppenheimer International Ultra Dividend Revenue ETF	82-2271542		Delaware
Oppenheimer Preferred Securities & Income Fund	82-3462739		Delaware
Oppenheimer Russell 2000 Dynamic Multifactor ETF	82-2794856		Delaware
Oppenheimer Russell 1000 Momentum Factor ETF	82-2716323		Delaware
Oppenheimer Russell 1000 Value Factor ETF	82-2759921		Delaware
Oppenheimer Russell 1000 Low Volatility Factor ETF	82-2701797		Delaware
Oppenheimer Russell 1000 Size Factor ETF	82-2740997		Delaware
Oppenheimer Russell 1000 Quality Factor ETF	82-2732571		Delaware
Oppenheimer Russell 1000 Yield Factor ETF	82-2768498		Delaware
Oppenheimer SteelPath MLP & Energy Infrastructure Fund	82-2222426		Delaware

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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388			Massachusetts Mutual Life Insurance Company (MMLIC)	MA	UIP	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	CM Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	LDP	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	RE	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor L, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor III, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Special Situations Investor LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor L, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MML Special Situations Investor LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Wood Creek Capital Management LLC	Management		MMLIC		
.0000			20-5305426				Lyme Adirondack Forest Company, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timber Sales, Inc.	NY	NIA	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands I, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands II, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Berkshire Way LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MSP-SC, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-1435692				Country Club Office Plaza LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	88.100	MMLIC		
.0000			27-1435692				Country Club Office Plaza LLC	DE	NIA	C.M. Life Insurance Company	Ownership	11.900	MMLIC		
.0000							EM Opportunities LLC	DE	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			04-1590850				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							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver Fund, L.P.	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							JFAM Loan Fund, 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		
.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		

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

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.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 2007 Ltd.	CYM	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 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	70.000	MMLIC		
.0000							JFIN CLO 2014 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	30.000	MMLIC		
.0000							JFIN CLO 2014-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN MM CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	44.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	56.000	MMLIC		
.0000							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							Apex Credit CLO 2016 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Retirement Services, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Copper Hill Road LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	NIA	MassMutual Holding LLC	Ownership	1.000	MMLIC		
.0000							MML Investment Advisers, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			26-0073611				MassMutual Asset Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.600	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
.0000			27-1379258				MMAF Equipment Finance LLC 2009-A	DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			45-2589019				MMAF Equipment Finance LLC 2011-A	DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Placement Investment Company I, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			04-1590850				MM Private Equity Intercontinental LLC	DE	NIA	MML Private Equity Fund Investor LLC	Ownership	100.000	MMLIC		
.0000			45-2738137				Pioneers Gate LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			06-1597528				MassMutual Assignment Company	NC	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			46-2252944				Haven Life Insurance Agency, LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Capital Partners LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							Crane Venture Partners LLP	GBR	NIA	MassMutual Holding LLC	Ownership	33.000	MMLIC		
.0000							MassMutual Ventures Management LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures SEA Management Private Limited	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures UK LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures US I LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures US II LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1466022				LifeScore Labs, LLC	MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Investors Services, LLC	MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Insurance Agency, LLC	MA	NIA	MML Investors Services, LLC	Ownership	100.000	MMLIC		
.0000			41-2011634				MMLISI Financial Alliances, LLC	DE	NIA	MML Investors Services, LLC	Ownership	100.000	MMLIC		
.0000			45-4000072				MM Asset Management Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			51-0504477				Barings LLC	DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000							Baring Asset Management (Asia) Holdings Limited	HKG	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Baring International Fund Managers (Bermuda) Limited	BMU	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457465				Baring Asset Management (Asia) Holdings Limited	HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Korea Limited	KOR	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Management (Shanghai) Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		
.0000							Barings Overseas Investment Fund Management (Shanghai) Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		
.0000			98-0457707				Baring SICE (Taiwan) Limited	TWN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Barings Japan Limited	JPN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management (Australia) Pty Limited	AUS	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457456				Barings Investment Advisors (Hong Kong) Limited	HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Barings Australia Holding Company Pty Ltd	AUS	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457456				Barings Australia Pty Ltd	AUS	NIA	Baring Australia Holding Company Pty Ltd	Ownership	100.000	MMLIC		
.0000			80-0875475				Barings Finance LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BCF Europe Funding Limited	IRL	NIA	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000							BCF Senior Funding I LLC	DE	NIA	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000							BCF Senior Funding I Designated Activity Company	IRL	NIA	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000			04-3238351				Barings Securities LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0437588				Barings Guernsey Limited	GGY	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Europe Limited	GBR	NIA	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings Real Estate UK Holdings Limited	DE	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							BREA E AIFM LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000							Barings Real Estate Advisers (Continental Europe) Limited	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654401				Barings Real Estate Advisers Europe LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654388												

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			98-0654412				Barings Real Estate Advisers Europe Finance LLP	.GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-1194368				Barings Real Estate Advisers GmbH	.DEU	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR	NIA	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
.0000			98-1012393				Barings Global Advisors Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings European Direct Lending 1 GP LLP	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457587				Baring International Investment Management Holdings	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	.GBR	NIA	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0465031				Baring Asset Management GmbH	.DEU	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0524272				Baring International Fund Managers (Ireland) Limited	.IRL	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Switzerland Sarl	.CHE	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0497550				Baring France SAS	.FRA	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457574				Baring Pension Trustees Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.à. r.l	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Fund (LUX) GP S.à. r.l	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine GP III Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Holding Partnership GP Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund II Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR	NIA	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Holdings LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital LLC	.MI	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Corporation	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Baring Holding LLC	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Holdings (Bermuda) Limited	.BMU	NIA	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	26.700	MMLIC		
.0000			83-0560183				Aland Royalty Holdings LP	.DE	NIA	Barings LLC	Management		MMLIC		
.0000							Engs Holdings Inc.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	21.700	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	21.100	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			46-5460309				Red Lake Ventures, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.500	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.700	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Tamiami Citurus, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000			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	28.900	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	100.000	MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	33.300	MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Aland Royalty GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI Funds SLP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Alternative Investments SLP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Asset-Based Income Fund (US) GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Barings Global Investment Funds (U.S.) Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Babson Global Loan Feeder Management, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0241935				Barings North America LLC	MA	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings ABIF SLP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CLO Investment Partners GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Core Property Fund GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Direct Lending GP Ltd.	CYM	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multi Asset Income Fund	HKG	NIA	Barings LLC	Ownership	0.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Real Assets Fund GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings/LAZ Parking Fund GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0536233				Benton Street Advisors, Inc.	CYM	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BREBF I GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BRECS VII GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CCM Fund I REIT Manager LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CCM Venture I GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CCM Venture I REIT Manager LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CEMF I GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CHY Venture GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CREF X GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							CREF VIII GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Great Lakes III GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Lake Jackson LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			04-1590850				Loan Strategies Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Mezzco LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			02-0767001				Mezzco II LLC	DE	NIA	Barings LLC	Ownership	98.400	MMLIC		
.0000			41-2280126				Mezzco III LLC	DE	NIA	Barings LLC	Ownership	99.300	MMLIC		
.0000			80-0920285				Mezzco IV LLC	DE	NIA	Barings LLC	Ownership	99.300	MMLIC		
.0000			90-0666326				Mezzco Australia LLC	DE	NIA	Barings LLC	Ownership	72.000	MMLIC		
.0000							Mezzco Australia II LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							RECSA-NY GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Somerset Special Opportunities Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850					DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-1149206	2897101			Oppenheimer Acquisition Corp.	DE	NIA	MassMutual Asset Management Holding LLC	Ownership	96.600	MMLIC		
.0000			13-2527171	2679183			OppenheimerFunds, Inc.	CO	NIA	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		
.0000			13-2953455				OppenheimerFunds Distributor, Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-1106295				Oppenheimer Real Asset Management, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			13-4160541	3458125			OFI Global Institutional, Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			22-2697140				HarbourView Asset Management Corporation	NY	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000							OC Private Capital, LLC	DE	NIA	OFI Institutional Asset Management, Inc.	Ownership	51.000	MMLIC		
.0000			13-3459790	2914875			OFI Global Trust Company	NY	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000							OFI International, Ltd.	GBR	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000							SNW Asset Management Corporation	DE	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			60-2233720				Seattle Northwest Asset Management LLC	WA	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			25-1951632				Trinity Investment Management Corporation	PA	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			84-1128397				OFI SteelPath, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-1066811				Shareholder Services, Inc.	CO	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							OFI Advisors, LLC	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							Index Management Solutions, LLC	PA	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-0765063				OFI Global Asset Management, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			91-2036414				OFI Private Investments Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			62-1210532				Tremont Group Holdings, LLC	NY	NIA	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		
.0000			06-1121864				Tremont Partners, LLC	CT	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			20-8215352				Tremont GP, LLC	DE	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			90-0874510				Settlement Agent, LLC	DE	NIA	Tremont GP	Ownership	100.000	MMLIC		
.0000							Tremont (Bermuda) Limited	BMU	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			04-3313782				MassMutual International LLC	DE	NIA	Company	Ownership	100.000	MMLIC	Y	
.0000							Yunfeng Financial Group Limited	HKG	NIA	MassMutual International LLC	Ownership	24.800	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			04-2443240				MML Management Corporation	MA	NIA	Company	Ownership	100.000	MMLIC	Y	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			04-1590850				MML Mezzanine Investor II, LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			04-1590850				MML Mezzanine Investor III, LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			27-3576835				MassMutual External Benefits Group LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			20-8730751				Cornerstone Global REIT Corporation	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			04-1590850				100 w. 3rd Street LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			82-2432216				300 South Tryon Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company					
.0000			04-1590850				300 South Tryon LLC	DE	NIA	Company	Ownership	100.000	MMLIC		

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.0000			20-3887968				54 West Capital LLC	DE	NIA	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							Almack Mezzanine Fund II Unleveraged LP	GBR	NIA	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		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	Barings (U.K.) Limited	Management		MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	24.200	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	C.M. Life Insurance Company	Ownership/Influence	2.400	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	91.400	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	23.700	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	DE	NIA	Barings LLC	Management		MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	77.100	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	3.700	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.200	MMLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Ownership	17.300	MMLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson CLO Ltd. 2013-I	CYM	NIA	Barings LLC	Influence		MMLIC		3
.0000							Babson CLO Ltd. 2014-I	CYM	NIA	Barings LLC	Influence		MMLIC		2
.0000							Babson CLO Ltd. 2015-I	CYM	NIA	Barings LLC	Influence		MMLIC		5
.0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MMLIC		6
.0000							Babson CLO Ltd. 2016-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2016-II	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO Ltd. 2017-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2018-III	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2018-IV	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-II BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2016-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro Equity Income Fund	HKG	NIA	Barings Asset Management Limited	Ownership/Influence	0.000	MMLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.300	MMLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	53.800	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	C.M. Life Insurance Company	Ownership	6.000	MMLIC		

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.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Barings LLC	Management		MMLIC		
.0000			82-5330194				Barings Global Em. Markets Equity Fund	.NC	NIA	Barings LLC	Management		MMLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	95.700	MMLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Baring 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	11.500	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	57.700	MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	.DE	NIA	C.M. Life Insurance Company	Ownership	10.200	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	30.300	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			38-4010344				Barings North American Private Loan Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	48.300	MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	.DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	38.600	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	.DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	11.000	MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	.DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000							Braemar Energy Ventures I, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	88.000	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	16.800	MMLIC		
.0000							Barings European Core Property Fund SCSp	.LUX	NIA	C.M. Life Insurance Company	Ownership	1.100	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			20-8730751				Cornerstone Global Real Estate LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	92.300	MMLIC		
.0000			20-8730751				Cornerstone Global Real Estate LP	.DE	NIA	C.M. Life Insurance Company	Ownership	7.600	MMLIC		
.0000			20-8730751				Cornerstone Global Real Estate LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			36-4770946				Cornerstone High Yield Venture LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	49.700	MMLIC		
.0000			36-4770946				Cornerstone High Yield Venture LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	13.000	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	24.900	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			46-5437441				Barings/LAZ Parking Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.800	MMLIC		

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.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000				4007502			Duchess VII CLO B.V.	GBR	NIA	Barings LLC	Influence		MMLIC		
.0000			20-3887968				E-Wise Land Venture LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000			80-0691253				Gateway Mezzanine Partners I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	71.600	MMLIC		
.0000			37-1708623				Great Lakes III, L.P.	DE	NIA	Company	Ownership/Influence	38.800	MMLIC		
.0000			37-1708623				Great Lakes III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				Gillem GA Industrial LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			38-4041011				JPMCC Commercial Mortgage Securities Trust 2017-JP7	NY	NIA	Barings LLC	Management		MMLIC		
.0000			38-4032059				JPMDB Commercial Mortgage Securities Trust 2017-C5	NY	NIA	Barings LLC	Management		MMLIC		
.0000			20-3887968				Kazwell Realty Partners LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000			82-1512591				KKR-MM Vector LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	52.300	MMLIC		
.0000			46-4255307				Marco Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000			45-3623262				HB Naples Golf Owner LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Company	Ownership/Influence	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000			20-3887968				Oakley Grove Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				Old Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-4411267				RB Apartments LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000			75-2901061				Reston Arboretum LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0713071				Riva Portland LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000							Rockall CLO B.V.	GBR	NIA	Barings LLC	Influence		MMLIC		
.0000			54-2055778				Rockville Town Center LLC	VA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	Company	Ownership/Influence	58.500	MMLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	2.900	MMLIC		
.0000			20-3887968				South Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			35-2553915				Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0336246				Tower Square Capital Partners II, L.P.	DE	NIA	Company	Ownership/Influence	22.400	MMLIC		
.0000			30-0336246				Tower Square Capital Partners II, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	3.900	MMLIC		
.0000			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	85.000	MMLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	15.500	MMLIC		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	95.000	MMLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			80-0920367				Tower Square Capital Partners IV-A, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	21.300	MMLIC		
.0000			04-1590850				West 46th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Emerging Markets Debt Blended Total Return Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Debt Short Duration Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Sovereign Debt Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson Capital Loan Strategies Master Fund LP	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Debt Blended Total Return Fund	CYM	NIA	Barings LLC	Management		MMLIC		
.0000			47-3758432				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3790192				Barings Greater China Equity 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			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							Somerset Special Opportunities Master Fund LP	CYM	NIA	Barings LLC	Management		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	49.900	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.900	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	84.400	MMLIC		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.600	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.100	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Barings LLC	Management		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.600	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Barings LLC	Management		MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-0890084				CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			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	4.800	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	59.300	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			46-3880526				Farringdon London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.500	MMLIC		
.0000			46-3880526				Farringdon London Holdings LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.500	MMLIC		
.0000			20-4819358				Johnston Groves LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	57.200	MMLIC		
.0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Island Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	49.000	MMLIC		
.0000			83-0881588				NoHo West Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			04-1590850				PACO France Logistics LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				PACO France Logistics 2 LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				PACO France Logistics 3 LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-3393166				Portland 400 Sixth Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000							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	95.000	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.200	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			45-4606547				UK LIW Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.000	MMLIC		
.0000			45-4606547				UK LIW Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			82-3250684				Unna, Dortmund Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-3281588				Via Ceresio Milan LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	92.000	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			46-3122029				WeHo Domain LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	77.400	MMLIC		
.0000			46-3122029				WeHo Domain LLC	DE	NIA	C.M. Life Insurance Company	Ownership	12.600	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	OQ	MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.100	MMLIC		
.0000			26-3229251		0000927972	OQ	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	2.300	MMLIC		
.0000			04-3277550		0000927972	OQ	MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			14-1980900		0000916053	OQ	MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			01-0821120		0000916053	OQ	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.600	MMLIC		
.0000			04-3512593		0000916053	OQ	MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3513019		0000916053	OQ	MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			42-1710935		0000916053	OQ	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	17.200	MMLIC		
.0000			02-0769954		0000916053	OQ	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3584140		0000916053	OQ	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	10.500	MMLIC		
.0000			82-3347422		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2005 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	10.700	MMLIC		
.0000			82-3355639		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2010 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3382389		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3396442		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2020 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3417420		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2025 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3430358		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2030 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3439837		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2035 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3451779		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2040 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3472295		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2045 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3481715		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2050 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			82-3502011		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		

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.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	95.000	MMLIC		
.0000			47-3559064				MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.300	MMLIC		
.0000			27-1933828		0000916053	QO	MassMutual RetireSMART 2015 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-1933389		0000916053	QO	MassMutual RetireSMART 2035 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	72.100	MMLIC		
.0000			27-1932769		0000916053	QO	MassMutual RetireSMART 2045 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	65.300	MMLIC		
.0000			46-3289207		0000916053	QO	MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.400	MMLIC		
.0000			47-5326235		0000916053	QO	MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	79.600	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			45-1618262		0000916053	QO	MassMutual RetireSMART Moderate Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618046		0000916053	QO	MassMutual RetireSMART Moderate Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			81-5311583				OFI Pictet Global Environmental Solution Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			93-6305075				Oppenheimer Developing Markets Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership	77.800	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Emerging Markets Innovators UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Emerging Markets Local Debt UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			34-407400H				Oppenheimer Emerging Markets Revenue ETF	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			46-2984739				Oppenheimer Emerging Markets Ultra Dividend Revenue ETF	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2237734				Oppenheimer ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3492794				Oppenheimer Global Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3480754				Oppenheimer Global ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			83-1689208				Oppenheimer Global ILS Fund LP	NY	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			46-1604428		0001562689	QO	Oppenheimer Global Real Estate Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3676235				Oppenheimer Global Multi-Asset Growth Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-5010075				Oppenheimer Global Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			82-2693880				Oppenheimer Global Value Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-4969331				Oppenheimer Global Unconstrained Bond Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer International Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2271542				Oppenheimer International Ultra Dividend Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-3462739				Oppenheimer Preferred Securities & Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2794856				Oppenheimer Russell 2000 Dynamic Multifactor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2716323				Oppenheimer Russell 1000 Momentum Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2759921				Oppenheimer Russell 1000 Value Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2701797				Oppenheimer Russell 1000 Low Volatility Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2740997				Oppenheimer Russell 1000 Size Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2732571				Oppenheimer Russell 1000 Quality Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2768498				Oppenheimer Russell 1000 Yield Factor ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			82-2222426				Oppenheimer SteelPath MLP & Energy Infrastructure Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 6.09% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 6.7% 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 5.9% and includes only Great Lakes III, L.P.
5	Debt investors own 7.5% and includes only Great Lakes III, L.P.

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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)
65935	04-1590850	Massachusetts Mutual Life Insurance Company (MMLIC)	916,308,240	1,081,021,918	(236,795,000)						1,760,535,158	(32,735,718)
93432	06-1041383	C.M. Life Insurance Company	554,219	13,675,125							14,229,344	28,237,757
70416	43-0581430	MML Bay State Life Insurance Company										4,497,961
	80-0875475	Barings Finance LLC			236,795,000						236,795,000	
		EM Opportunities LLC		175,677,879							175,677,879	
	83-0881588	NoHo West Venture LLC		74,192,704							74,192,704	
	35-2531693	Cornerstone Permanent Mortgage Fund III		70,265,210							70,265,210	
		Ten Fan Pier Boulevard LLC		56,469,242							56,469,242	
	61-1750537	Cornerstone Permanent Mortgage Fund II		46,977,496							46,977,496	
		Spain Avalon Holding LLC		45,079,597							45,079,597	
	82-3867745	Barings Global Special Situations Credit 3										
				43,214,990							43,214,990	
	36-4868350	Barings Asset-Based Income Fund (US) LP		41,005,241							41,005,241	
	82-3867745	Barings Global Real Assets Fund LP		39,301,391							39,301,391	
		PACO France Logistics 2 LLC		32,718,579							32,718,579	
		MM Mortgage Lending LLC		31,483,096							31,483,096	
	95-4207717	Cornerstone California Mortgage Fund I LLC										
				28,711,429							28,711,429	
	82-2783393	Danville Riverwalk Venture, LLC		26,550,613							26,550,613	
	95-4207717	Cornerstone California Mortgage Fund III LLC										
				19,746,124							19,746,124	
	81-2244465	Chassis Acquisition Holding LLC		18,000,000							18,000,000	
	81-0841854	Barings CLO Investment Partners LP		16,112,065							16,112,065	
	82-3307907	Cornbrook PRS Holdings LLC		15,373,125							15,373,125	
	95-4207717	Cornerstone California Mortgage Fund II LLC										
				14,704,737							14,704,737	
		EIP Holdings I LLC		14,482,759							14,482,759	
		Aland Royalty Holdings LP		13,702,220							13,702,220	
	04-1590850	MM Island Member LLC		13,220,127							13,220,127	
	81-5360103	Landmark Manchester Holdings LLC		11,169,441							11,169,441	
	98-1332384	Barings Real Estate Credit Strategies VII LP										
				11,031,144							11,031,144	
	38-4010344	Barings North American Private Loan Fund LP										
				9,916,974							9,916,974	
	82-1563809	CCB Montford Park LLC		9,558,524							9,558,524	
	04-1590850	MML Private Equity Fund Investor LLC		9,505,142							9,505,142	
		PACO France Logistics LLC		9,293,105							9,293,105	
	04-1590850	MM Copper Hill Road LLC		8,644,391							8,644,391	
	61-1793735	Cornerstone Permanent Mortgage Fund IV		6,438,185							6,438,185	
	47-1993493	Waterloo London Holdings LLC		3,202,256							3,202,256	
	46-5432619	Cornerstone Real Estate Fund X LP		2,329,524							2,329,524	
	82-3281588	Via Ceresio Milan LLC		1,412,300							1,412,300	
	81-5273574	Three PW Office Holding LLC		1,268,424							1,268,424	

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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)
	82-2285211	Calgary Railway Holding LLC		917,028							917,028	
	04-1590850	Berkshire Way LLC		500,000							500,000	
		Tamiami Citrus, LLC		470,820							470,820	
		Braemar Energy Ventures I, L.P.		284,722							284,722	
	56-2630592	Cornerstone Fort Pierce Development LLC		250,921							250,921	
	46-3123110	Sweet Tree Holdings 1, LLC		114,983							114,983	
		PACO France Logistics 3 LLC		420							420	
	04-3584140	MassMutual Select Small Company Value Fund	(1)								(1)	
	51-0529328	MassMutual Premier Main Street Fund	(936)								(936)	
	47-3055009	Milestone Acquisition Holding, LLC		(1,602)							(1,602)	
	14-1980900	MassMutual Select Diversified International Fund	(1,763)								(1,763)	
		Barings US Loan Fund Series		(2,073)							(2,073)	
	42-1710935	MassMutual Select Mid-Cap Value Fund	(3,962)								(3,962)	
	04-3277550	MassMutual Premier Value Fund	(4,138)								(4,138)	
	04-3513019	MassMutual Select Large Cap Value Fund	(6,035)								(6,035)	
		Alchemy Copyrights LLC		(7,683)							(7,683)	
	47-3559064	MML Series II Special Situations Fund	(37,933)								(37,933)	
	46-3289207	MassMutual RetireSMART 2055 Fund	(66,021)								(66,021)	
		Baring Investment Series LLC		(111,299)							(111,299)	
	06-1041383	CML Mezzanine Investor L, LLC		(164,959)							(164,959)	
	45-4606547	UK LIW Manager LLC		(167,863)							(167,863)	
	20-2970495	US Pharmaceutical Holdings II, LLC		(254,281)							(254,281)	
		Barings European Core Property Fund SCSp		(308,045)							(308,045)	
	81-3000420	MM Debt Participations LLC		(325,000)							(325,000)	
		Barings Affordable Housing Mortgage Fund I LLC		(355,980)							(355,980)	
	46-5491311	Seattle 1415 Hotel Owner LLC		(367,108)							(367,108)	
		OPPENHEIMERFUNDS ICAV	(404,612)								(404,612)	
	81-4258759	CRA Aircraft Holding LLC		(480,000)							(480,000)	
	06-1041383	CML Mezzanine Investor, LLC		(547,449)							(547,449)	
	80-0691253	Gateway Mezzanine Partners I, L.P.		(641,178)							(641,178)	
	71-1018134	Great Lakes II LLC		(849,114)							(849,114)	
	20-4819358	Johnston Groves LLC		(954,687)							(954,687)	
	04-1590850	Cambridge Hotel LLC		(1,274,263)							(1,274,263)	
	27-0547156	Cornerstone Real Estate Fund VIII LP		(1,334,200)							(1,334,200)	
	46-2344300	Intermodal Holdings II LLC		(1,415,700)							(1,415,700)	
	20-2970495	Waterford Development Associates		(1,428,898)							(1,428,898)	
	04-1590850	MML Mezzanine Investor L, LLC		(1,484,635)							(1,484,635)	
	06-1041383	CML Mezzanine Investor III, LLC		(1,495,397)							(1,495,397)	
	35-2484550	Twenty Two Liberty LLC		(1,950,000)							(1,950,000)	
	81-4382111	Budapester Strasse LLC		(1,960,595)							(1,960,595)	
	30-0336246	Tower Square Capital Partners II, L.P.		(2,009,574)							(2,009,574)	

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SCHEDULE Y

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)
	16-1720387	Alexandria Towers Investors LLC		(2,396,120)							(2,396,120)	
	45-3751572	Cornerstone Enhanced Mortgage Fund I LP		(2,446,842)							(2,446,842)	
	06-1563535	The MassMutual Trust Company, FSB	(2,500,000)								(2,500,000)	
	45-5401109	Washington Gateway Apartments Venture LLC										
				(2,519,912)							(2,519,912)	
		CML Special Situations Investor LLC		(2,607,906)							(2,607,906)	
	47-3517233	MML Series II Asset Momentum Fund	(2,967,885)								(2,967,885)	
	46-3122029	WeHo Domain LLC		(2,974,321)							(2,974,321)	
	27-2977720	Sawgrass Village Shopping Center LLC		(3,324,993)							(3,324,993)	
	04-1590850	Wood Creek Venture Fund LLC		(3,328,920)							(3,328,920)	
	47-3544629	MML Series II Equity Rotation Fund	(3,360,067)								(3,360,067)	
	81-1552222	Willowood Lakeside Master LLC		(4,210,080)							(4,210,080)	
	46-5437441	Barings/LAZ Parking Fund LP		(4,747,473)							(4,747,473)	
	04-1590850	MML Mezzanine Investor, LLC		(4,927,037)							(4,927,037)	
	46-3880526	Farringdon London Holdings LLC		(4,941,880)							(4,941,880)	
	45-2632610	Cornerstone Permanent Mortgage Fund		(5,333,156)							(5,333,156)	
	98-1332384	Barings Global Energy Infrastructure Fund I LP		(5,706,215)							(5,706,215)	
	82-1512591	KKR MM Project Vector LP		(5,881,034)							(5,881,034)	
	26-4441097	WP-SC, LLC		(6,948,079)							(6,948,079)	
		OPPENHEIMER GLOBAL REAL ESTATE FD	(7,509,106)								(7,509,106)	
	32-0160190	Tower Square Capital Partners II-A, L.P.		(7,645,202)							(7,645,202)	
	04-1590850	MML Mezzanine Investor II, LLC		(8,788,710)							(8,788,710)	
	26-1611591	Fallon Cornerstone One MPD LLC		(10,126,558)							(10,126,558)	
	37-1708623	Great Lakes III, L.P.		(13,058,261)							(13,058,261)	
	04-1590850	MML Mezzanine Investor III, LLC		(13,458,577)							(13,458,577)	
	90-0991195	Gateway Mezzanine Partners II LP		(16,367,279)							(16,367,279)	
	45-4606547	UK LIW Member LLC		(16,487,566)							(16,487,566)	
	20-0348173	CREA/PPC Venture LLC		(23,437,699)							(23,437,699)	
	36-4770946	Cornerstone High Yield Venture LP		(23,537,615)							(23,537,615)	
		Barings Real Estate European Value Add I SCSp		(25,069,876)							(25,069,876)	
		Baring Investment Series LLC		(25,418,967)							(25,418,967)	
		Barings Global Private Loan Fund		(26,096,288)							(26,096,288)	
	20-3347091	Fan Pier Development LLC		(29,353,835)							(29,353,835)	
	41-2280129	Tower Square Capital Partners IIIA, L.P.		(39,412,688)							(39,412,688)	
	27-0105644	Jefferies Finance LLC		(40,000,000)							(40,000,000)	
		MML Special Situations Investor LLC		(40,857,186)							(40,857,186)	
	82-3393166	Portland 400 Sixth Manager LLC		(41,559,148)							(41,559,148)	
	81-4065378	Remington L & W Holdings LLC		(46,461,590)							(46,461,590)	
	47-5322979	Timberland Forest Holding LLC		(55,556,468)							(55,556,468)	
	82-3250684	Unna, Dortmund Holding LLC		(63,551,310)							(63,551,310)	
		MML Investment Advisers, LLC		(71,684,844)							(71,684,844)	
	36-4823011	50 Liberty LLC		(94,880,035)							(94,880,035)	

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PART 2 - SUMMARY OF INSURER'S TRANSACTIONS WITH ANY AFFILIATES

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	04-1590850	Insurance Road LLC		(177,754,582)							(177,754,582)	
	04-2854319	MassMutual Holding LLC	(900,000,000)	343,488,638							(556,511,362)	
	04-3313782	MassMutual International LLC		(1,368,732,774)							(1,368,732,774)	
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?	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?	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?	NO
13. Will the Medicare Supplement Insurance Experience Exhibit be filed with the state of domicile and the NAIC by March 1?	NO
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?	NO
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?	NO
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

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? NO
- 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? NO
- 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? NO
- 34. Will the Worker's Compensation Carve-Out Supplement be filed by March 1? NO
- 35. Will Supplemental Schedule O be filed with the state of domicile and the NAIC by March 1? NO
- 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? NO
- 43. Will the Interest-Sensitive Life Insurance Products Report Forms be filed with the state of domicile and the NAIC by April 1? YES
- 44. Will the Credit Insurance Experience Exhibit be filed with the state of domicile and the NAIC by April 1? NO
- 45. Will the Accident and Health Policy Experience Exhibit be filed by April 1? NO
- 46. Will the Analysis of Annuity Operations by Lines of Business be filed with the state of domicile and the NAIC by April 1? YES
- 47. Will the Analysis of Increase in Annuity Reserves During the Year be filed with the state of domicile and the NAIC by April 1? YES
- 48. 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
- 49. 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
- 50. Will the confidential Actuarial Memorandum required by Actuarial Guideline XXXVIII 8D be filed with the state of domicile by April 30? NO
- 51. Will the Supplemental Term and Universal Life Insurance Reinsurance Exhibit be filed with the state of domicile and the NAIC by April 1? NO
- 52. Will the Variable Annuities Supplement be filed with the state of domicile and the NAIC by April 1? YES

AUGUST FILING

- 53. Will Management's Report of Internal Control Over Financial Reporting be filed with the state of domicile by August 1? SEE EXPLANATION

Explanations:

- 12. Not Required
- 13. This line of business is not written by the company.
- 14. Not Required
- 15. Not Required
- 17. Not Required
- 18. Not Required
- 19. Not Required
- 20. Not Required
- 21. Not Required
- 22. Not Required
- 23. Not Required
- 24. Not Required
- 27. This line of business is not written by the company.
- 28. This line of business is not written by the company.
- 29. Not Required
- 30. Not Required
- 33. Not Required
- 34. This line of business is not written by the company.
- 35. 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
- 42. This line of business is not written by the company.
- 44. This line of business is not written by the company.
- 45. This line of business is not written by the company.
- 48. This line of business is not written by the company.
- 49. This line of business is not written by the company.
- 50. Not Required
- 51. Not Required
- 53. Does not meet the threshold of \$500 million premium test.

Bar Codes:

- 12. SIS Stockholder Information Supplement [Document Identifier 420]



- 13. Medicare Supplement Insurance Experience Exhibit [Document Identifier 360]



- 14. Trusteed Surplus Statement [Document Identifier 490]



- 15. Participating Opinion for Exhibit 5 [Document Identifier 371]



























- 17. Actuarial Opinion on X-Factors [Document Identifier 442]



- 18. Actuarial Opinion on Separate Accounts Funding Guaranteed Minimum Benefit [Document Identifier 443]



SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

19. Actuarial Opinion on Synthetic Guaranteed Investment Contracts [Document Identifier 444]	 7 0 4 1 6 2 0 1 8 4 4 4 0 0 0 0 0
20. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]	 7 0 4 1 6 2 0 1 8 4 4 4 5 0 0 0 0 0
21. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]	 7 0 4 1 6 2 0 1 8 4 4 4 6 0 0 0 0 0
22. Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]	 7 0 4 1 6 2 0 1 8 4 4 4 7 0 0 0 0 0
23. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]	 7 0 4 1 6 2 0 1 8 4 4 4 8 0 0 0 0 0
24. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]	 7 0 4 1 6 2 0 1 8 4 4 4 9 0 0 0 0 0
27. Actuarial Certifications Related to Annuity Nonforfeiture Ongoing Compliance for Equity Indexed Annuities [Document Identifier 452]	 7 0 4 1 6 2 0 1 8 4 4 5 2 0 0 0 0 0
28. Modified Guaranteed Annuity Model Regulation [Document Identifier 453]	 7 0 4 1 6 2 0 1 8 4 4 5 3 0 0 0 0 0
29. Actuarial Certifications Related to Hedging required by Actuarial Guideline XLIII [Document Identifier 436]	 7 0 4 1 6 2 0 1 8 4 4 3 6 0 0 0 0 0
30. Financial Officer Certification Related to Clearly Defined Hedging Strategy required by Actuarial Guideline XLIII [Document Identifier 437]	 7 0 4 1 6 2 0 1 8 4 4 3 7 0 0 0 0 0
33. 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 [Document Identifier 454]	 7 0 4 1 6 2 0 1 8 4 4 5 4 0 0 0 0 0
34. Workers' Compensation Carve-Out Supplement [Document Identifier 495]	 7 0 4 1 6 2 0 1 8 4 4 9 5 0 0 0 0 0
35. Supplemental Schedule O [Document Identifier 465]	 7 0 4 1 6 2 0 1 8 4 4 6 5 0 0 0 0 0
36. Medicare Part D Coverage Supplement [Document Identifier 365]	 7 0 4 1 6 2 0 1 8 4 3 6 5 0 0 0 0 0
37. Relief from the five-year rotation requirement for lead audit partner [Document Identifier 224]	 7 0 4 1 6 2 0 1 8 4 2 2 4 0 0 0 0 0
38. Relief from the one-year cooling off period for independent CPA [Document Identifier 225]	 7 0 4 1 6 2 0 1 8 4 2 2 5 0 0 0 0 0
39. Relief from the Requirements for Audit Committees [Document Identifier 226]	 7 0 4 1 6 2 0 1 8 4 2 2 6 0 0 0 0 0
42. Long-Term Care Experience Reporting Forms [Document Identifier 306]	 7 0 4 1 6 2 0 1 8 4 3 0 6 0 0 0 0 0
44. Credit Insurance Experience Exhibit [Document Identifier 230]	 7 0 4 1 6 2 0 1 8 4 2 3 0 0 0 0 0 0
45. Accident and Health Policy Experience Exhibit [Document Identifier 210]	 7 0 4 1 6 2 0 1 8 4 2 1 0 0 0 0 0 0
48. Supplemental Health Care Exhibit (Parts 1, 2 and 3) [Document Identifier 216]	 7 0 4 1 6 2 0 1 8 4 2 1 6 0 0 0 0 0
49. Supplemental Health Care Exhibit's Expense Allocation Report [Document Identifier 217]	 7 0 4 1 6 2 0 1 8 4 2 1 7 0 0 0 0 0
50. Actuarial Memorandum Required by Actuarial Guideline XXXVIII 8D [Document Identifier 435]	 7 0 4 1 6 2 0 1 8 4 3 5 0 0 0 0 0
51. Supplemental Term and Universal Life Insurance Reinsurance Exhibit [Document Identifier 345]	 7 0 4 1 6 2 0 1 8 4 3 4 5 0 0 0 0 0

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NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SUMMARY INVESTMENT SCHEDULE

Investment Categories	Gross Investment Holdings		Admitted Assets as Reported in the Annual Statement			
	1 Amount	2 Percentage	3 Amount	4 Securities Lending Reinvested Collateral Amount	5 Total (Col. 3 + 4) Amount	6 Percentage
1. Bonds:						
1.1 U.S. treasury securities	39,523,594	8.241	39,523,594		39,523,594	8.241
1.2 U.S. government agency obligations (excluding mortgage-backed securities):						
1.21 Issued by U.S. government agencies		0.000				0.000
1.22 Issued by U.S. government sponsored agencies		0.000				0.000
1.3 Non-U.S. government (including Canada, excluding mortgaged-backed securities)		0.000				0.000
1.4 Securities issued by states, territories, and possessions and political subdivisions in the U.S. :						
1.41 States, territories and possessions general obligations		0.000				0.000
1.42 Political subdivisions of states, territories and possessions and political subdivisions general obligations		0.000				0.000
1.43 Revenue and assessment obligations		0.000				0.000
1.44 Industrial development and similar obligations		0.000				0.000
1.5 Mortgage-backed securities (includes residential and commercial MBS):						
1.51 Pass-through securities:						
1.511 Issued or guaranteed by GNMA	4,997	0.001	4,997		4,997	0.001
1.512 Issued or guaranteed by FNMA and FHLMC		0.000				0.000
1.513 All other	11,310,835	2.358	11,310,835		11,310,835	2.358
1.52 CMOs and REMICs:						
1.521 Issued or guaranteed by GNMA, FNMA, FHLMC or VA	47,543	0.010	47,543		47,543	0.010
1.522 Issued by non-U.S. Government issuers and collateralized by mortgage-backed securities issued or guaranteed by agencies shown in Line 1.521		0.000				0.000
1.523 All other	85,210,674	17.766	85,210,674		85,210,674	17.766
2. Other debt and other fixed income securities (excluding short-term):						
2.1 Unaffiliated domestic securities (includes credit tenant loans and hybrid securities)	175,916,566	36.678	175,916,566		175,916,566	36.678
2.2 Unaffiliated non-U.S. securities (including Canada)	38,271,586	7.980	38,271,586		38,271,586	7.980
2.3 Affiliated securities	6,205,278	1.294	6,205,278		6,205,278	1.294
3. Equity interests:						
3.1 Investments in mutual funds		0.000				0.000
3.2 Preferred stocks:						
3.21 Affiliated		0.000				0.000
3.22 Unaffiliated		0.000				0.000
3.3 Publicly traded equity securities (excluding preferred stocks):						
3.31 Affiliated		0.000				0.000
3.32 Unaffiliated		0.000				0.000
3.4 Other equity securities:						
3.41 Affiliated		0.000				0.000
3.42 Unaffiliated		0.000				0.000
3.5 Other equity interests including tangible personal property under lease:						
3.51 Affiliated		0.000				0.000
3.52 Unaffiliated		0.000				0.000
4. Mortgage loans:						
4.1 Construction and land development		0.000				0.000
4.2 Agricultural		0.000				0.000
4.3 Single family residential properties	2,744,083	0.572	2,744,083		2,744,083	0.572
4.4 Multifamily residential properties		0.000				0.000
4.5 Commercial loans		0.000				0.000
4.6 Mezzanine real estate loans		0.000				0.000
5. Real estate investments:						
5.1 Property occupied by company		0.000				0.000
5.2 Property held for production of income (including \$0 of property acquired in satisfaction of debt)		0.000				0.000
5.3 Property held for sale (including \$0 property acquired in satisfaction of debt)		0.000				0.000
6. Contract loans	96,005,102	20.017	96,005,102		96,005,102	20.017
7. Derivatives		0.000				0.000
8. Receivables for securities		0.000				0.000
9. Securities Lending (Line 10, Asset Page reinvested collateral)		0.000		XXX	XXX	XXX
10. Cash, cash equivalents and short-term investments	24,369,505	5.081	24,369,505		24,369,505	5.081
11. Other invested assets	9,834	0.002	9,834		9,834	0.002
12. Total invested assets	479,619,597	100.000	479,619,597		479,619,597	100.000

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE A - VERIFICATION BETWEEN YEARS

Real Estate

1.	Book/adjusted carrying value, December 31 of prior year	
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 6)	
2.2	Additional investment made after acquisition (Part 2, Column 9)	
3.	Current year change in encumbrances:	
3.1	Totals, Part 1, Column 13	
3.2	Totals, Part 3, Column 11	
4.	Total gain (loss) on disposals, Part 3, Column 18	
5.	Deduct amounts received on disposals, Part 3, Column 15	
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	
8.	Deduct current year's depreciation:	
8.1	Totals, Part 1, Column 11	
8.2	Totals, Part 3, Column 9	
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	
10.	Deduct total nonadmitted amounts	
11.	Statement value at end of current period (Line 9 minus Line 10)	

NONE

SCHEDULE B - VERIFICATION BETWEEN YEARS

Mortgage Loans

1.	Book value/recorded investment excluding accrued interest, December 31 of prior year	3,187,846
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 7)	
2.2	Additional investment made after acquisition (Part 2, Column 8)	1,329
3.	Capitalized deferred interest and other:	
3.1	Totals, Part 1, Column 12	
3.2	Totals, Part 3, Column 11	
4.	Accrual of discount	583
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	
7.	Deduct amounts received on disposals, Part 3, Column 15	440,677
8.	Deduct amortization of premium and mortgage interest points and commitment fees	4,998
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest:	
9.1	Totals, Part 1, Column 13	
9.2	Totals, Part 3, Column 13	
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)	2,744,083
12.	Total valuation allowance	
13.	Subtotal (Line 11 plus 12)	2,744,083
14.	Deduct total nonadmitted amounts	
15.	Statement value of mortgages owned at end of current period (Line 13 minus Line 14)	2,744,083

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE BA - VERIFICATION BETWEEN YEARS

Other Long-Term Invested Assets

1.	Book/adjusted carrying value, December 31 of prior year	
2.	Cost of acquired:	
	2.1 Actual cost at time of acquisition (Part 2, Column 8)	9,834
	2.2 Additional investment made after acquisition (Part 2, Column 9)	9,834
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	
	5.2 Totals, Part 3, Column 9	
6.	Total gain (loss) on disposals, Part 3, Column 19	
7.	Deduct amounts received on disposals, Part 3, Column 16	
8.	Deduct amortization of premium and depreciation	
9.	Total foreign exchange change in book/adjusted carrying value:	
	9.1 Totals, Part 1, Column 17	
	9.2 Totals, Part 3, Column 14	
10.	Deduct current year's other than temporary impairment recognized:	
	10.1 Totals, Part 1, Column 15	
	10.2 Totals, Part 3, Column 11	
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	9,834
12.	Deduct total nonadmitted amounts	
13.	Statement value at end of current period (Line 11 minus Line 12)	9,834

SCHEDULE D - VERIFICATION BETWEEN YEARS

Bonds and Stocks

1.	Book/adjusted carrying value, December 31 of prior year	312,452,230
2.	Cost of bonds and stocks acquired, Part 3, Column 7	82,609,316
3.	Accrual of discount	725,547
4.	Unrealized valuation increase (decrease):	
	4.1. Part 1, Column 12	(20,586)
	4.2. Part 2, Section 1, Column 15	
	4.3. Part 2, Section 2, Column 13	
	4.4. Part 4, Column 11	(20,586)
5.	Total gain (loss) on disposals, Part 4, Column 19	(240,855)
6.	Deduction consideration for bonds and stocks disposed of, Part 4, Column 7	38,690,792
7.	Deduct amortization of premium	531,656
8.	Total foreign exchange change in book/adjusted carrying value:	
	8.1. Part 1, Column 15	
	8.2. Part 2, Section 1, Column 19	
	8.3. Part 2, Section 2, Column 16	
	8.4. Part 4, Column 15	
9.	Deduct current year's other than temporary impairment recognized:	
	9.1. Part 1, Column 14	17,033
	9.2. Part 2, Section 1, Column 17	
	9.3. Part 2, Section 2, Column 14	
	9.4. Part 4, Column 13	17,033
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Notes 5R, Line 5R(2)	204,902
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	356,491,073
12.	Deduct total nonadmitted amounts	
13.	Statement value at end of current period (Line 11 minus Line 12)	356,491,073

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	39,528,591	38,906,142	39,562,647	39,505,087
	2. Canada				
	3. Other Countries				
	4. Totals	39,528,591	38,906,142	39,562,647	39,505,087
U.S. States, Territories and Possessions (Direct and guaranteed)	5. Totals				
U.S. Political Subdivisions of States, Territories and Possessions (Direct and guaranteed)	6. Totals				
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	47,543	51,935	49,339	46,675
Industrial and Miscellaneous, SVO Identified Funds, Bank Loans and Hybrid Securities (unaffiliated)	8. United States	272,371,614	268,791,037	272,550,726	274,036,261
	9. Canada	6,596,859	6,573,338	6,573,493	6,625,769
	10. Other Countries	31,674,726	31,167,729	31,513,143	31,794,267
	11. Totals	310,643,199	306,532,104	310,637,362	312,456,297
Parent, Subsidiaries and Affiliates	12. Totals	6,271,740	6,287,920	6,364,842	6,440,291
	13. Total Bonds	356,491,073	351,778,101	356,614,190	358,448,350
PREFERRED STOCKS					
Industrial and Miscellaneous (unaffiliated)	14. United States				
	15. Canada				
	16. Other Countries				
	17. Totals				
Parent, Subsidiaries and Affiliates	18. Totals				
	19. Total Preferred Stocks				
COMMON STOCKS					
Industrial and Miscellaneous (unaffiliated)	20. United States				
	21. Canada				
	22. Other Countries				
	23. Totals				
Parent, Subsidiaries and Affiliates	24. Totals				
	25. Total Common Stocks				
	26. Total Stocks				
	27. Total Bonds and Stocks	356,491,073	351,778,101	356,614,190	

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	1,858	39,526,437	296			XXX	39,528,591	10.4	39,541,459	10.7	39,528,591	
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	1,858	39,526,437	296			XXX	39,528,591	10.4	39,541,459	10.7	39,528,591	
2. All Other Governments												
2.1 NAIC 1						XXX						
2.2 NAIC 2						XXX						
2.3 NAIC 3						XXX						
2.4 NAIC 4						XXX						
2.5 NAIC 5						XXX						
2.6 NAIC 6						XXX						
2.7 Totals						XXX						
3. U.S. States, Territories and Possessions etc., Guaranteed												
3.1 NAIC 1						XXX						
3.2 NAIC 2						XXX						
3.3 NAIC 3						XXX						
3.4 NAIC 4						XXX						
3.5 NAIC 5						XXX						
3.6 NAIC 6						XXX						
3.7 Totals						XXX						
4. U.S. Political Subdivisions of States, Territories and Possessions, Guaranteed												
4.1 NAIC 1						XXX						
4.2 NAIC 2						XXX						
4.3 NAIC 3						XXX						
4.4 NAIC 4						XXX						
4.5 NAIC 5						XXX						
4.6 NAIC 6						XXX						
4.7 Totals						XXX						
5. U.S. Special Revenue & Special Assessment Obligations, etc., Non-Guaranteed												
5.1 NAIC 1	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	
5.2 NAIC 2						XXX						
5.3 NAIC 3						XXX						
5.4 NAIC 4						XXX						
5.5 NAIC 5						XXX						
5.6 NAIC 6						XXX						
5.7 Totals	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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	3,321,011	41,543,149	150,309,117	4,071,105	2,520,552	XXX	201,764,934	52.9	183,262,312	49.4	150,832,932	50,932,002
6.2 NAIC 2	32,487,341	23,680,446	70,466,149	1,285,224	1,451,741	XXX	129,370,901	33.9	135,679,622	36.6	86,069,043	43,301,858
6.3 NAIC 3	64,434	1,134,969	659,890			XXX	1,859,293	0.5	1,742,542	0.5	842,987	1,016,306
6.4 NAIC 4	430,803	76,541	2,001,644			XXX	2,508,988	0.7	2,699,406	0.7	2,508,988	
6.5 NAIC 5	61,447	72,248	43,872	2,581		XXX	180,148	0.0	211,599	0.1		180,148
6.6 NAIC 6			1,440	159		XXX	1,599	0.0			1,599	
6.7 Totals	36,365,036	66,507,353	223,482,112	5,359,069	3,972,293	XXX	335,685,863	88.0	323,595,481	87.3	240,255,549	95,430,314
7. Hybrid Securities												
7.1 NAIC 1						XXX						
7.2 NAIC 2						XXX			350,000	0.1		
7.3 NAIC 3						XXX						
7.4 NAIC 4						XXX						
7.5 NAIC 5						XXX						
7.6 NAIC 6						XXX						
7.7 Totals						XXX			350,000	0.1		
8. Parent, Subsidiaries and Affiliates												
8.1 NAIC 1	6,586	1,368,060	3,684,003	7,814		XXX	5,066,463	1.3	5,876,588	1.6	34,887	5,031,576
8.2 NAIC 2			773,412			XXX	773,412	0.2	770,624	0.2		773,412
8.3 NAIC 3						XXX						
8.4 NAIC 4						XXX						
8.5 NAIC 5						XXX						
8.6 NAIC 6					431,866	XXX	431,866	0.1	452,453	0.1		431,866
8.7 Totals	6,586	1,368,060	4,457,415	7,814	431,866	XXX	6,271,741	1.6	7,099,665	1.9	34,887	6,236,854
9. SVO Identified Funds												
9.1 NAIC 1	XXX	XXX	XXX	XXX	XXX							
9.2 NAIC 2	XXX	XXX	XXX	XXX	XXX							
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. Bank Loans												
10.1 NAIC 1						XXX			XXX	XXX		
10.2 NAIC 2						XXX			XXX	XXX		
10.3 NAIC 3						XXX			XXX	XXX		
10.4 NAIC 4						XXX			XXX	XXX		
10.5 NAIC 5						XXX			XXX	XXX		
10.6 NAIC 6						XXX			XXX	XXX		
10.7 Totals						XXX			XXX	XXX		

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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) 3,339,405	82,462,552	154,004,991	4,080,030	2,520,552		246,407,530	64.6	XXX	XXX	190,443,952	55,963,578
11.2 NAIC 2	(d) 32,487,341	23,680,446	71,239,561	1,285,224	1,451,741		130,144,313	34.1	XXX	XXX	86,069,043	44,075,270
11.3 NAIC 3	(d) 64,434	1,134,969	659,890				1,859,293	0.5	XXX	XXX	842,987	1,016,306
11.4 NAIC 4	(d) 430,803	76,541	2,001,644				2,508,988	0.7	XXX	XXX	2,508,988	
11.5 NAIC 5	(d) 61,447	72,248	43,872	2,581			180,148	0.0	XXX	XXX		180,148
11.6 NAIC 6	(d) 1,440		1,440	159	431,866		433,465	0.1	XXX	XXX	1,599	431,866
11.7 Totals	36,383,430	107,426,756	227,951,398	5,367,994	4,404,159		(b) 381,533,737	100.0	XXX	XXX	279,866,569	101,667,168
11.8 Line 11.7 as a % of Col. 7	9.5	28.2	59.7	1.4	1.2		100.0	XXX	XXX	XXX	73.4	26.6
12. Total Bonds Prior Year												
12.1 NAIC 1	5,904,907	86,183,790	130,372,977	4,689,455	1,585,154		XXX	XXX	228,736,283	61.7	150,180,248	78,556,035
12.2 NAIC 2	56,709,651	28,889,348	47,635,293	2,112,984	1,452,970		XXX	XXX	136,800,246	36.9	70,232,664	66,567,582
12.3 NAIC 3	107,559	1,088,254	500,563	46,166			XXX	XXX	1,742,542	0.5	332,916	1,409,626
12.4 NAIC 4	435,997	76,987	2,001,831	184,591			XXX	XXX	2,699,406	0.7	2,514,815	184,591
12.5 NAIC 5	75,978	83,823	49,834	1,964			XXX	XXX	211,599	0.1		211,599
12.6 NAIC 6					452,453		XXX	XXX	452,453	0.1		452,453
12.7 Totals	63,234,092	116,322,202	180,560,498	7,035,160	3,490,577		XXX	XXX	(b) 370,642,529	100.0	223,260,643	147,381,886
12.8 Line 12.7 as a % of Col. 9	17.1	31.4	48.7	1.9	0.9		XXX	XXX	100.0	XXX	60.2	39.8
13. Total Publicly Traded Bonds												
13.1 NAIC 1	796,805	51,384,915	134,880,966	2,365,586	1,015,680		190,443,952	49.9	150,180,248	40.5	190,443,952	XXX
13.2 NAIC 2	7,071,428	21,043,523	55,399,368	1,102,983	1,451,741		86,069,043	22.6	70,232,664	18.9	86,069,043	XXX
13.3 NAIC 3		842,987					842,987	0.2	332,916	0.1	842,987	XXX
13.4 NAIC 4	430,803	76,541	2,001,644				2,508,988	0.7	2,514,815	0.7	2,508,988	XXX
13.5 NAIC 5												XXX
13.6 NAIC 6			1,440	159			1,599	0.0			1,599	XXX
13.7 Totals	8,299,036	73,347,966	192,283,418	3,468,728	2,467,421		279,866,569	73.4	223,260,643	60.2	279,866,569	XXX
13.8 Line 13.7 as a % of Col. 7	3.0	26.2	68.7	1.2	0.9		100.0	XXX	XXX	XXX	100.0	XXX
13.9 Line 13.7 as a % of Line 11.7, Col. 7, Section 11	2.2	19.2	50.4	0.9	0.6		73.4	XXX	XXX	XXX	73.4	XXX
14. Total Privately Placed Bonds												
14.1 NAIC 1	2,542,600	31,077,637	19,124,025	1,714,444	1,504,872		55,963,578	14.7	78,556,035	21.2	XXX	55,963,578
14.2 NAIC 2	25,415,913	2,636,923	15,840,193	182,241			44,075,270	11.6	66,567,582	18.0	XXX	44,075,270
14.3 NAIC 3	64,434	291,982	659,890				1,016,306	0.3	1,409,626	0.4	XXX	1,016,306
14.4 NAIC 4									184,591	0.0	XXX	
14.5 NAIC 5	61,447	72,248	43,872	2,581			180,148	0.0	211,599	0.1	XXX	180,148
14.6 NAIC 6					431,866		431,866	0.1	452,453	0.1	XXX	431,866
14.7 Totals	28,084,394	34,078,790	35,667,980	1,899,266	1,936,738		101,667,168	26.6	147,381,886	39.8	XXX	101,667,168
14.8 Line 14.7 as a % of Col. 7	27.6	33.5	35.1	1.9	1.9		100.0	XXX	XXX	XXX	XXX	100.0
14.9 Line 14.7 as a % of Line 11.7, Col. 7, Section 11	7.4	8.9	9.3	0.5	0.5		26.6	XXX	XXX	XXX	XXX	26.6

(a) Includes \$ 100,973,701 freely tradable under SEC Rule 144 or qualified for resale under SEC Rule 144A.

(b) Includes \$ 34,878 current year of bonds with Z designations, \$ prior year of bonds with Z designations and \$ 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. "Z*" means the SVO could not evaluate the obligation because valuation procedures for the security class are under regulatory review.

(c) Includes \$ current year of bonds with 5GI designations, \$ prior year of bonds with 5* or 5GI designations and \$ 431,866 current year, \$ 452,453 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 \$; NAIC 2 \$ 25,042,664 ; NAIC 3 \$; NAIC 4 \$; NAIC 5 \$; NAIC 6 \$

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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 11.7	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												
1.1 Issuer Obligations		39,523,594				XXX	39,523,594	10.4	39,535,499	10.7	39,523,594	
1.2 Residential Mortgage-Backed Securities	1,858	2,843	296			XXX	4,997	0.0	5,960	0.0	4,997	
1.3 Commercial Mortgage-Backed Securities						XXX						
1.4 Other Loan-Backed and Structured Securities						XXX						
1.5 Totals	1,858	39,526,437	296			XXX	39,528,591	10.4	39,541,459	10.7	39,528,591	
2. All Other Governments												
2.1 Issuer Obligations						XXX						
2.2 Residential Mortgage-Backed Securities						XXX						
2.3 Commercial Mortgage-Backed Securities						XXX						
2.4 Other Loan-Backed and Structured Securities						XXX						
2.5 Totals						XXX						
3. U.S. States, Territories and Possessions, Guaranteed												
3.1 Issuer Obligations						XXX						
3.2 Residential Mortgage-Backed Securities						XXX						
3.3 Commercial Mortgage-Backed Securities						XXX						
3.4 Other Loan-Backed and Structured Securities						XXX						
3.5 Totals						XXX						
4. U.S. Political Subdivisions of States, Territories and Possessions, Guaranteed												
4.1 Issuer Obligations						XXX						
4.2 Residential Mortgage-Backed Securities						XXX						
4.3 Commercial Mortgage-Backed Securities						XXX						
4.4 Other Loan-Backed and Structured Securities						XXX						
4.5 Totals						XXX						
5. U.S. Special Revenue & Special Assessment Obligations etc., Non-Guaranteed												
5.1 Issuer Obligations						XXX						
5.2 Residential Mortgage-Backed Securities	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	
5.3 Commercial Mortgage-Backed Securities						XXX						
5.4 Other Loan-Backed and Structured Securities						XXX						
5.5 Totals	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	
6. Industrial and Miscellaneous												
6.1 Issuer Obligations	33,538,669	32,358,468	131,833,164	2,022,765	2,444,277	XXX	202,197,343	53.0	168,751,977	45.5	151,780,255	50,417,088
6.2 Residential Mortgage-Backed Securities	506,188	949,543	390,100	324,691	14	XXX	2,170,536	0.6	2,683,164	0.7	1,740,905	429,631
6.3 Commercial Mortgage-Backed Securities	54,060	15,898,700	78,331,757			XXX	94,284,517	24.7	94,522,662	25.5	79,350,180	14,934,337
6.4 Other Loan-Backed and Structured Securities	2,266,119	17,300,642	12,927,092	3,011,612	1,528,002	XXX	37,033,467	9.7	57,637,678	15.6	7,384,209	29,649,258
6.5 Totals	36,365,036	66,507,353	223,482,113	5,359,068	3,972,293	XXX	335,685,863	88.0	323,595,481	87.3	240,255,549	95,430,314
7. Hybrid Securities												
7.1 Issuer Obligations						XXX			350,000	0.1		
7.2 Residential Mortgage-Backed Securities						XXX						
7.3 Commercial Mortgage-Backed Securities						XXX						
7.4 Other Loan-Backed and Structured Securities						XXX						
7.5 Totals						XXX			350,000	0.1		
8. Parent, Subsidiaries and Affiliates												
8.1 Issuer Obligations						XXX						
8.2 Residential Mortgage-Backed Securities	6,586	42,872	9,190	7,814		XXX	66,462	0.0	85,955	0.0	34,887	31,575
8.3 Commercial Mortgage-Backed Securities						XXX			790,633	0.2		
8.4 Other Loan-Backed and Structured Securities		1,325,187	4,448,225		431,866	XXX	6,205,278	1.6	6,223,077	1.7		6,205,278
8.5 Totals	6,586	1,368,059	4,457,415	7,814	431,866	XXX	6,271,740	1.6	7,099,665	1.9	34,887	6,236,853

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State 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 11.7	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												
9.1 Exchange Traded Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX							
9.2 Bond Mutual Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX							
9.3 Totals	XXX	XXX	XXX	XXX	XXX							
10. Bank Loans												
10.1 Bank Loans - Issued						XXX			XXX	XXX		
10.2 Bank Loans - Acquired						XXX			XXX	XXX		
10.3 Totals						XXX			XXX	XXX		
11. Total Bonds Current Year												
11.1 Issuer Obligations	33,538,669	71,882,062	131,833,164	2,022,765	2,444,277	XXX	241,720,937	63.4	XXX	XXX	191,303,849	50,417,088
11.2 Residential Mortgage-Backed Securities	524,582	1,020,164	411,161	333,616	14	XXX	2,289,537	0.6	XXX	XXX	1,828,331	461,206
11.3 Commercial Mortgage-Backed Securities	54,060	15,898,700	78,331,757			XXX	94,284,517	24.7	XXX	XXX	79,350,180	14,934,337
11.4 Other Loan-Backed and Structured Securities	2,266,119	18,625,829	17,375,317	3,011,612	1,959,868	XXX	43,238,745	11.3	XXX	XXX	7,384,209	35,854,536
11.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX				XXX	XXX		
11.6 Bank Loans						XXX			XXX	XXX		
11.7 Totals	36,383,430	107,426,755	227,951,399	5,367,993	4,404,159		381,533,736	100.0	XXX	XXX	279,866,569	101,667,167
11.8 Line 11.7 as a % of Col. 7	9.5	28.2	59.7	1.4	1.2		100.0	XXX	XXX	XXX	73.4	26.6
12. Total Bonds Prior Year												
12.1 Issuer Obligations	60,396,017	75,575,937	68,596,916	2,615,636	1,452,970	XXX	XXX	XXX	208,637,476	56.3	136,067,541	72,569,935
12.2 Residential Mortgage-Backed Securities	909,941	1,140,499	433,610	346,741	212	XXX	XXX	XXX	2,831,003	0.8	2,265,062	565,941
12.3 Commercial Mortgage-Backed Securities	115,024	13,674,663	81,523,608			XXX	XXX	XXX	95,313,295	25.7	79,483,023	15,830,272
12.4 Other Loan-Backed and Structured Securities	1,813,110	25,931,103	30,006,364	4,072,783	2,037,395	XXX	XXX	XXX	63,860,755	17.2	5,445,017	58,415,738
12.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX				XXX	XXX		
12.6 Bank Loans	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
12.7 Totals	63,234,092	116,322,202	180,560,498	7,035,160	3,490,577		XXX	XXX	370,642,529	100.0	223,260,643	147,381,886
12.8 Line 12.7 as a % of Col. 9	17.1	31.4	48.7	1.9	0.9		XXX	XXX	100.0	XXX	60.2	39.8
13. Total Publicly Traded Bonds												
13.1 Issuer Obligations	7,421,062	68,186,998	111,228,747	2,022,765	2,444,277	XXX	191,303,849	50.1	136,067,541	36.7	191,303,849	XXX
13.2 Residential Mortgage-Backed Securities	481,231	826,329	336,598	184,159	14	XXX	1,828,331	0.5	2,265,062	0.6	1,828,331	XXX
13.3 Commercial Mortgage-Backed Securities		2,448,331	76,901,849			XXX	79,350,180	20.8	79,483,023	21.4	79,350,180	XXX
13.4 Other Loan-Backed and Structured Securities	396,742	1,886,308	3,816,225	1,261,803	23,130	XXX	7,384,208	1.9	5,445,017	1.5	7,384,208	XXX
13.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX							XXX
13.6 Bank Loans						XXX			XXX	XXX		XXX
13.7 Totals	8,299,035	73,347,966	192,283,419	3,468,727	2,467,421		279,866,568	73.4	223,260,643	60.2	279,866,568	XXX
13.8 Line 13.7 as a % of Col. 7	3.0	26.2	68.7	1.2	0.9		100.0	XXX	XXX	XXX	100.0	XXX
13.9 Line 13.7 as a % of Line 11.7, Col. 7, Section 11	2.2	19.2	50.4	0.9	0.6		73.4	XXX	XXX	XXX	73.4	XXX
14. Total Privately Placed Bonds												
14.1 Issuer Obligations	26,117,607	3,695,064	20,604,417			XXX	50,417,088	13.2	72,569,935	19.6	XXX	50,417,088
14.2 Residential Mortgage-Backed Securities	43,351	193,835	74,563	149,457		XXX	461,206	0.1	565,941	0.2	XXX	461,206
14.3 Commercial Mortgage-Backed Securities	54,060	13,450,369	1,429,908			XXX	14,934,337	3.9	15,830,272	4.3	XXX	14,934,337
14.4 Other Loan-Backed and Structured Securities	1,869,377	16,739,521	13,559,092	1,749,809	1,936,738	XXX	35,854,537	9.4	58,415,738	15.8	XXX	35,854,537
14.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX							XXX
14.6 Bank Loans						XXX			XXX	XXX		XXX
14.7 Totals	28,084,395	34,078,789	35,667,980	1,899,266	1,936,738		101,667,168	26.6	147,381,886	39.8	XXX	101,667,168
14.8 Line 14.7 as a % of Col. 7	27.6	33.5	35.1	1.9	1.9		100.0	XXX	XXX	XXX	XXX	100.0
14.9 Line 14.7 as a % of Line 11.7, Col. 7, Section 11	7.4	8.9	9.3	0.5	0.5		26.6	XXX	XXX	XXX	XXX	26.6

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

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	999,957	999,957			
2. Cost of short-term investments acquired	16,977,694	16,977,694			
3. Accrual of discount	77,047	77,047			
4. Unrealized valuation increase (decrease)					
5. Total gain (loss) on disposals					
6. Deduct consideration received on disposals	11,100,000	11,100,000			
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)	6,954,698	6,954,698			
11. Deduct total nonadmitted amounts					
12. Statement value at end of current period (Line 10 minus Line 11)	6,954,698	6,954,698			

(a) Indicate the category of such assets, for example, joint ventures, transportation equipment:

Schedule DB - Part A - Verification - Options, Caps, Floors, Collars, Swaps and Forwards

NONE

Schedule DB - Part B - Verification - Futures Contracts

NONE

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open

NONE

Schedule DB-Part C-Section 2-Reconciliation of Replication (Synthetic Asset) Transactions Open

NONE

Schedule DB - Verification - Book/Adjusted Carrying Value, Fair Value and Potential Exposure of
Derivatives

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company
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	57,190,342	57,190,342		
2. Cost of cash equivalents acquired	1,456,893,952	1,456,893,952		
3. Accrual of discount	773,330	773,330		
4. Unrealized valuation increase (decrease)				
5. Total gain (loss) on disposals	888	888		
6. Deduct consideration received on disposals	1,496,770,547	1,496,770,547		
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)	18,087,966	18,087,966		
11. Deduct total nonadmitted amounts				
12. Statement value at end of current period (Line 10 minus Line 11)	18,087,966	18,087,966		

(a) Indicate the category of such investments, for example, joint ventures, transportation equipment:

Schedule A - Part 1 - Real Estate Owned

NONE

Schedule A - Part 2 - Real Estate Acquired and Additions Made

NONE

Schedule A - Part 3 - Real Estate Disposed

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

1 Loan Number	2 Code	3 Location		5 Loan Type	6 Date Acquired	7 Rate of Interest	8 Book Value/Recorded Investment Excluding Accrued Interest	Change in Book Value/Recorded Investment					14 Value of Land and Buildings	15 Date of Last Appraisal or Valuation
		3 City	4 State					9 Unrealized Valuation Increase (Decrease)	10 Current Year's (Amortization)/ Accretion	11 Current Year's Other-Than-Temporary Impairment Recognized	12 Capitalized Deferred Interest and Other	13 Total Foreign Exchange Change in Book Value		
00077AF65		Various	OH		03/28/2006		162,464		(527)				155,780	03/28/2006
00077AH19		Various	OH		09/26/2006		85,802		(555)				82,418	09/26/2006
059610EF8		Various	PR		08/12/2004		203,030		255				193,759	08/12/2004
059610N09		Various	PR		04/12/2006		258,347		(297)				251,280	04/12/2006
073245B05		Various	IL		07/27/2007		236,883		1,646				225,560	07/27/2007
222375G07		Various	TX		06/29/2007		251,266		149				228,111	06/29/2007
258125G02		Various	PR		11/16/2004		129,687		(3,735)				108,980	11/16/2004
709301DE2		Various	FL		09/29/2015		119,333		(1,082)				116,219	09/29/2015
749549DE8		Various	PR		06/15/2004		164,993		(50)				156,876	06/15/2004
902975B04		Various	LA		09/28/2006		187,021		243				177,226	09/28/2006
949750EF6		Various	TX		08/15/2006		177,322		435				170,531	08/15/2006
949750FG3		Various	TX		09/07/2006		116,108		(141)				112,282	09/07/2006
949750GH0		Various	TX		11/07/2006		225,869		(475)				215,977	11/07/2006
949750N07		Various	TX		06/26/2007		270,197		(714)				258,153	06/26/2007
0299999. Mortgages in good standing - Residential mortgages-insured or guaranteed							2,588,322		(4,848)				2,453,152	XXX
749549EF4		Various	PR		06/30/2004		155,761		433				152,736	06/30/2004
0399999. Mortgages in good standing - Residential mortgages-all other							155,761		433				152,736	XXX
0899999. Total Mortgages in good standing							2,744,083		(4,415)				2,605,888	XXX
1699999. Total - Restructured Mortgages														XXX
2499999. Total - Mortgages with overdue interest over 90 days														XXX
3299999. Total - Mortgages in the process of foreclosure														XXX
3399999 - Totals							2,744,083		(4,415)				2,605,888	XXX

General Interrogatory:

1. Mortgages in good standing \$ unpaid taxes \$ interest due and unpaid.
2. Restructured mortgages \$ unpaid taxes \$ interest due and unpaid.
3. Mortgages with overdue interest over 90 days not in process of foreclosure \$ unpaid taxes \$ interest due and unpaid.
4. Mortgages in process of foreclosure \$ unpaid taxes \$ interest due and unpaid.

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE B - PART 2

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

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Rate of Interest	7 Actual Cost at Time of Acquisition	8 Additional Investment Made After Acquisition	9 Value of Land and Buildings
	2 City	3 State						
059610NC9	Various	PR		05/15/2018	5.819		1,172	251,280
073245BC5	Various	IL		10/25/2018	5.485		155	225,560
949750GH0	Various	TX		09/18/2018	5.390		2	215,977
0299999. Mortgages in good standing - Residential mortgages-insured or guaranteed							1,329	692,817
0899999. Total Mortgages in good standing							1,329	692,817
1699999. Total - Restructured Mortgages								
2499999. Total - Mortgages with overdue interest over 90 days								
3299999. Total - Mortgages in the process of foreclosure								
3399999 - Totals							1,329	692,817

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE B - PART 3

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

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Disposal Date	7 Book Value/ Recorded Investment Excluding Accrued Interest Prior Year	Change in Book Value/Recorded Investment					14 Book Value/ Recorded Investment Excluding Accrued Interest on Disposal	15 Consid- eration	16 Foreign Exchange Gain (Loss) on Disposal	17 Realized Gain (Loss) on Disposal	18 Total Gain (Loss) on Disposal
	2 City	3 State					8 Unrealized Valuation Increase (Decrease)	9 Current Year's (Amortization) /Accretion	10 Current Year's Other- Than- Temporary Impairment Recognized	11 Capitalized Deferred Interest and Other	12 Total Change in Book Value (8+9-10+11)						13 Total Foreign Exchange Change in Book Value
Residential												440,677	440,677			
0299999. Mortgages with partial repayments												440,677	440,677			
0599999 - Totals												440,677	440,677			

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE BA - PART 1

Showing Other Long-Term Invested Assets OWNED December 31 of Current Year

1	2	3	Location		6	7	8	9	10	11	12	Change in Book/Adjusted Carrying Value					18	19	20		
			4	5								13	14	15	16	17					
CUSIP Identification	Name or Description	Code	City	State	Name of Vendor or General Partner	NAIC Designation and Administrative Symbol/Market Indicator	Date Originally Acquired	Type and Strategy	Actual Cost	Fair Value	Book/Adjusted Carrying Value Less Encumbrances	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Foreign Exchange Change in Book/Adjusted Carrying Value	Investment Income	Commitment for Additional Investment	Percentage of Ownership		
023138-AA-8	8020 Ambac Assurance Corp		New York	NY	Guardian Life Ins Co Amer	5	12/31/2018		9,834	9,834	9,834										
2399999. Surplus Debentures, etc - Unaffiliated									9,834	9,834	9,834								XXX		
4499999. Total - Unaffiliated									9,834	9,834	9,834									XXX	
4599999. Total - Affiliated																				XXX	
4699999 - Totals									9,834	9,834	9,834										XXX

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE December 31 of Current Year

1 CUSIP Identification	2 Name or Description	Location		5 Name of Vendor or General Partner	6 Date Originally Acquired	7 Type and Strategy	8 Actual Cost at Time of Acquisition	9 Additional Investment Made After Acquisition	10 Amount of Encumbrances	11 Percentage of Ownership
		3 City	4 State							
023138-AA-8	8020 Ambac Assurance Corp	New York	.NY.	Guardian Life Ins Co Amer	12/31/2018		9,834			
2399999. Surplus Debentures, etc - Unaffiliated							9,834			XXX
4499999. Total - Unaffiliated							9,834			XXX
4599999. Total - Affiliated										XXX
4699999 - Totals							9,834			XXX

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE BA - PART 3

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

1 CUSIP Identification	2 Name or Description	Location		5 Name of Purchaser or Nature of Disposal	6 Date Originally Acquired	7 Disposal Date	8 Book/ Adjusted Carrying Value Less Accum- ulated Depreci- ation or Amortiza- tion	Change in Book/Adjusted Carrying Value				15 Book/ Adjusted Carrying Value Less Encum- brances on Disposal	16 Consid- eration	17 Foreign Exchange Gain (Loss) on Disposal	18 Realized Gain (Loss) on Disposal	19 Total Gain (Loss) on Disposal	20 Invest- ment Income
		3 City	4 State					9 Increase (De- crease)	10 (Amorti- zation)/ Accretion	11 Current Year's Other- Than- Temporary Impair- ment Recogn- ized	12 Capital- ized Deferred Interest and Other							13 Total Change in Book/ Adjusted Carrying Value (9+10- 11+12)	14 Total Foreign Exchange Change in Book/ Adjusted Carrying Value
NONE																	
4699999 - Totals																	

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

Table with columns: 1 CUSIP Identification, 2 Description, 3 Code, 4 Foreign Code, 5 Bond Char, 6 NAIC Designation and Administrative Symbol, 7 Actual Cost, 8 Rate Used to Obtain Fair Value, 9 Fair Value, 10 Par Value, 11 Book/Adjusted Carrying Value, 12 Change in Book/Adjusted Carrying Value (Unrealized Valuation Increase/Decrease), 13 Current Year's (Amortization) Accretion, 14 Current Year's Other-Than-Temporary Impairment Recognized, 15 Total Foreign Exchange Change in Book/Adjusted Carrying Value, 16 Rate of, 17 Effective Rate of, 18 When Paid, 19 Admitted Amount Due and Accrued, 20 Amount Received During Year, 21 Dates Acquired, 22 Stated Contractual Maturity Date.

E10.4

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

Table with 22 columns: 1. CUSIP Identification, 2. Description, 3-5. Codes (3: Code, 4: F o r e i g n, 5: Bond Char), 6. NAIC Designation and Administrative Symbol, 7. Actual Cost, 8. Rate Used to Obtain Fair Value, 9. Fair Value, 10. Par Value, 11. Book/Adjusted Carrying Value, 12. Unrealized Valuation Increase/(Decrease), 13. Current Year's (Amortization) Accretion, 14. Current Year's Other Than-Temporary Impairment Recognized, 15. Total Foreign Exchange Change in Book/Adjusted Carrying Value, 16. Rate of, 17. Effective Rate of, 18. When Paid, 19. Admitted Amount Due and Accrued, 20. Amount Received During Year, 21. Dates Acquired, 22. Stated Contractual Maturity Date.

E10.7

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 1

Showing All Long-Term BONDS Owned December 31 of Current Year

1	2	Codes			6	7	Fair Value		10	11	Change in Book/Adjusted Carrying Value				Interest					Dates		
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22	
CUSIP Identification	Description	C o d e	F o r e i g n	Bond Char	NAIC Designation and Administrative Symbol	Actual Cost	Rate Used to Obtain Fair Value	Fair Value	Par Value	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amortization) Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Rate of	Effective Rate of	When Paid	Admitted Amount Due and Accrued	Amount Received During Year	Acquired	Stated Contractual Maturity Date	
6599999	Subtotal -Bank Loans							XXX							XXX	XXX	XXX				XXX	XXX
7799999	Total - Issuer Obligations					217,547,699	XXX	213,925,142	218,194,828	216,678,279		(82,811)			XXX	XXX	XXX	2,046,518	5,917,201		XXX	XXX
7899999	Total - Residential Mortgage-Backed Securities					1,824,133	XXX	2,616,096	3,272,940	2,289,538		117,437	17,033		XXX	XXX	XXX	(6,888)	103,941		XXX	XXX
7999999	Total - Commercial Mortgage-Backed Securities					94,595,445	XXX	92,067,728	93,249,751	94,284,511		(123,206)			XXX	XXX	XXX	516,108	3,650,580		XXX	XXX
8099999	Total - Other Loan-Backed and Structured Securities					42,646,913	XXX	43,169,135	43,730,831	43,238,745	(20,586)	151,712			XXX	XXX	XXX	419,186	1,582,971		XXX	XXX
8199999	Total - SVO Identified Funds						XXX								XXX	XXX	XXX				XXX	XXX
8299999	Total - Bank Loans						XXX								XXX	XXX	XXX				XXX	XXX
8399999	Total Bonds					356,614,190	XXX	351,778,101	358,448,350	356,491,073	(20,586)	63,132	17,033		XXX	XXX	XXX	2,974,924	11,254,693		XXX	XXX

Schedule D - Part 2 - Section 1 - Preferred Stocks Owned

N O N E

Schedule D - Part 2 - Section 2 - Common Stocks Owned

N O N E

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1	2	3	4	5	6	7	8	9
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends
00108W-AG-5	AEP Texas Inc-SENIOR UNSECURED		06/13/2018	BARCLAYS CAPITAL INC		497,050	500,000	1,536
00440E-AV-9	ACE INA HOLDINGS-SR UNSECURED		06/26/2018	WELLS FARGO		1,065,625	1,100,000	5,630
008252-AM-0	Affiliated Managers Grou-SENIOR UNSECURE		06/25/2018	KEY CAPITAL MARKETS		815,024	800,000	12,467
008252-AN-8	Affiliated Managers Grou-SR UNSECURED		07/16/2018	KEY CAPITAL MARKETS		1,068,320	1,100,000	17,860
010392-FS-2	Alabama Power Co-SENIOR UNSECURED		06/21/2018	MORGAN		992,470	1,000,000	
026874-DK-0	American International G-SENIOR UNSECURE		06/26/2018	VARIOUS		1,090,500	1,100,000	9,007
03040W-AL-9	AMERICAN WATER CAPITAL C-SR UNSECURED		06/06/2018	MORGAN		985,690	1,000,000	9,161
035224-AD-2	Anheuser-Busch Cos LLC /-SENIOR UNSECURE		11/13/2018	EXCHANGE OFFER		798,161	800,000	8,273
05369A-AA-9	Aviation Capital Group L-SENIOR UNSECURE		05/30/2018	CITIGROUP GLOBAL MAR		653,065	700,000	2,042
06406R-AF-4	Bank of New York Mellon -SENIOR UNSECURE		07/09/2018	VARIOUS		1,462,185	1,500,000	18,190
097023-BX-2	Boeing Co/The-SENIOR UNSECURED		07/11/2018	CREDIT SUISSE SECURI		1,072,797	1,100,000	13,903
10510K-AC-1	BRAMBLES USA INC-SR UNSECURED		05/31/2018	CITIGROUP GLOBAL MAR		902,763	900,000	4,228
120568-AX-8	BUNGE LTD FINANCE CORP-SENIOR UNSECURED		06/06/2018	DEUTSCHE BANK SECURI		455,420	500,000	5,101
12636Y-AA-0	CPH America Finance Inc-SENIOR UNSECURED		05/31/2018	JP MORGAN SECURITIES		475,330	500,000	1,181
171340-AN-2	CHURCH & DWIGHT CO INC-SENIOR UNSECURED		06/25/2018	VARIOUS		2,039,499	2,200,000	28,105
17252M-AN-0	Cintas Corp No 2-SENIOR UNSECURED		07/17/2018	BANK OF AMERICA CORP		494,515	500,000	5,550
186108-QK-0	Cleveland Electric Illum-SENIOR UNSECURE		07/19/2018	DEUTSCHE BANK SECURI		1,335,999	1,400,000	14,564
207597-EJ-0	Connecticut Light & Powe-SECURED		06/06/2018	FIRST TENNESSEE		1,347,724	1,400,000	10,329
22160K-AM-7	Costco Wholesale Corp-SENIOR UNSECURED		06/28/2018	CREDIT SUISSE SECURI		1,055,461	1,100,000	4,033
254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED		07/12/2018	VARIOUS		386,354	400,000	6,742
25470D-BD-0	Discovery Communications-SENIOR UNSECURE		04/05/2018	EXCHANGE OFFER		529,220	500,000	6,397
26884T-AR-3	EPAC USA Finance LLC-SENIOR UNSECURED		06/13/2018	BARCLAYS CAPITAL INC		1,033,021	1,100,000	1,412
28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURE		06/11/2018	VARIOUS		2,099,594	2,100,000	
313747-AU-1	Federal Realty Investmen-SENIOR UNSECURE		06/28/2018	BANK OF AMERICA CORP		1,011,160	1,000,000	18,324
369550-AZ-1	General Dynamics Corp-SENIOR UNSECURED		05/31/2018	JP MORGAN SECURITIES		1,385,565	1,500,000	2,078
369550-BG-2	General Dynamics Corp-SENIOR UNSECURED		06/01/2018	BANK OF AMERICA CORP		1,394,834	1,400,000	3,267
378272-AG-1	Glencore Funding LLC-SENIOR UNSECURED		06/20/2018	HSBC SECURITIES INC		187,912	200,000	1,184
413875-AW-5	Harris Corp-SENIOR UNSECURED		05/30/2018	WELLS FARGO		202,608	200,000	
42981C-AA-6	HIGH STREET FUNDING TRUS-SENIOR UNSECURE		06/25/2018	VARIOUS		2,158,486	2,200,000	25,625
44107H-AC-6	NY Society for Relief of-SECURED		06/05/2018	GOLDMAN		1,388,240	1,400,000	9,301
452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED		07/17/2018	CANTOR		2,052,798	2,200,000	10,283
457187-AB-8	INGREDION INC-SENIOR UNSECURED		07/17/2018	LIQUIDNET INC		562,932	600,000	5,760
45866F-AF-1	Intercontinental Exchang-SENIOR UNSECURE		06/25/2018	VARIOUS		2,062,819	2,200,000	19,323
49446R-AS-8	Kimco Realty Corp-SENIOR UNSECURED		06/21/2018	WELLS FARGO		190,552	200,000	1,773
50540R-AG-5	Laboratory Corp of Ameri-SR UNSECURED		06/05/2018	FIRST TENNESSEE		195,510	200,000	2,520
521070-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED		07/12/2018	NETSCOUT SECURITIES		194,658	200,000	2,813
521070-AH-8	LAZARD GROUP LLC-SENIOR UNSECURED		07/12/2018	BRILEY		1,320,620	1,400,000	18,427
532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED		07/11/2018	WELLS FARGO		1,365,024	1,200,000	21,633
534187-BH-1	Lincoln National Corp-SENIOR UNSECURED		06/11/2018	BRILEY		1,058,112	1,100,000	1,393
565122-AB-4	Maple Escrow Subsidiary -SENIOR UNSECURE		06/20/2018	CREDIT SUISSE SECURI		702,121	700,000	2,413
579780-AN-7	MCCORMICK & CO INC/MD-SENIOR UNSECURED		06/13/2018	VARIOUS		1,319,596	1,400,000	15,404
60871R-AG-5	MOLSON COORS BREWING CO-SENIOR UNSECURED		06/12/2018	VARIOUS		1,273,342	1,400,000	17,208
631005-BH-7	Narragansett Electric Co-SENIOR UNSECURE		07/24/2018	MORGAN		1,100,000	1,100,000	
64952W-CX-9	New York Life Global Fun-SECURED		07/10/2018	U B S SECURITIES		2,172,787	2,300,000	383
65106F-AG-7	NEWCASTLE MORTGAGE SECUR-SERIES 2007-1 C		12/26/2018	PAYUP		22,329	1,875	
666807-AG-5	Northrop Grumman Systems-SENIOR UNSECURE		07/18/2018	BRILEY		622,275	500,000	15,203
666807-BN-1	Northrop Grumman Corp-SENIOR UNSECURED		07/12/2018	CREDIT SUISSE SECURI		662,515	700,000	63
670346-AP-0	Nucor Corp-SENIOR UNSECURED		06/01/2018	BARCLAYS CAPITAL INC		998,660	1,000,000	4,279
69353R-FG-8	PNC Bank NA-SENIOR UNSECURED		05/30/2018	GOLDMAN		1,044,615	1,100,000	3,410
703481-AB-7	Patterson-UTI Energy Inc-SENIOR UNSECURE		09/10/2018	EXCHANGE OFFER		1,803,217	1,800,000	7,703
709599-AW-4	Penske Truck Leasing Co -SENIOR UNSECURE		06/07/2018	U. S. BANCORP		186,762	200,000	491
709599-AZ-7	Penske Truck Leasing Co -SENIOR UNSECURE		06/07/2018	U. S. BANCORP		197,714	200,000	2,041
718546-AR-5	Phillips 66-SENIOR UNSECURED		07/10/2018	CITIGROUP GLOBAL MAR		1,083,027	1,100,000	15,611
724479-AN-0	Pitney Bowes Inc-SENIOR UNSECURED		07/10/2018	MORGAN		425,500	500,000	5,604
74340X-BH-3	Prologis LP-SENIOR UNSECURED		06/19/2018	WELLS FARGO		501,970	500,000	54
78409V-AM-6	S&P Global Inc-SENIOR UNSECURED		06/12/2018	BANK OF AMERICA CORP		277,434	300,000	3,491
784860-AD-3	SVB FINANCIAL GROUP-SR UNSECURED		07/10/2018	NETSCOUT SECURITIES		389,494	400,000	6,319
79466L-AF-1	salesforce.com Inc-SENIOR UNSECURED		06/05/2018	VARIOUS		1,987,030	2,000,000	11,306
808513-AX-3	Charles Schwab Corp/The-SENIOR UNSECURED		05/31/2018	RBC CAPITAL MARKETS		1,014,010	1,000,000	1,283
857477-AN-3	State Street Corp-SR UNSECURED		07/09/2018	MORGAN		1,382,234	1,400,000	3,208
875484-AH-0	Tanger Properties LP-SENIOR UNSECURED		07/18/2018	MORGAN		96,411	100,000	510
875484-AJ-6	TANGER PROPERTIES LP-SENIOR UNSECURED		06/19/2018	WELLS FARGO		991,199	1,100,000	10,503
883556-BR-2	Thermo Fisher Scientific-SENIOR UNSECURE		06/26/2018	CREDIT SUISSE SECURI		369,940	400,000	3,245
883556-BX-9	Thermo Fisher Scientific-SENIOR UNSECURE		06/04/2018	GOLDMAN		656,432	700,000	6,907
89236T-EM-3	Toyota Motor Credit Corp-SENIOR UNSECURE		06/07/2018	HSBC SECURITIES INC		2,844,555	3,000,000	37,744

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ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 3

Showing All Long-Term Bonds and Stocks ACQUIRED During Current Year

1 CUSIP Identification	2 Description	3 Foreign	4 Date Acquired	5 Name of Vendor	6 Number of Shares of Stock	7 Actual Cost	8 Par Value	9 Paid for Accrued Interest and Dividends	
90932N-AA-1	UNITED AIRLINES 2018-1 C-UNTD AIR 18-1 B		05/09/2018	CREDIT SUISSE SECURI		1,000,000	1,000,000		
91159H-HM-5	US Bancorp-SUBORDINATED		05/30/2018	U. S. BANCORP		1,423,845	1,500,000	4,392	
91159H-HR-4	US Bancorp-SENIOR UNSECURED		05/30/2018	GOLDMAN		1,345,092	1,400,000	4,165	
95000U-2A-0	Wells Fargo & Co-SENIOR UNSECURED		05/31/2018	CREDIT SUISSE SECURI		287,460	300,000	358	
98389B-AV-2	Xcel Energy Inc-SENIOR UNSECURED		06/20/2018	JP MORGAN SECURITIES		198,622	200,000		
98978V-AL-7	Zoetis Inc-SENIOR UNSECURED		07/10/2018	CREDIT SUISSE SECURI		651,196	700,000	7,000	
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED	A.	05/31/2018	DEUTSCHE BANK SECURI		479,095	500,000	7,421	
67077M-AA-6	Nutrien Ltd-SENIOR UNSECURED	A.	04/12/2018	EXCHANGE OFFER		430,879	450,000		
780082-AD-5	Royal Bank of Canada-SUBORDINATED	A.	06/29/2018	BRILEY		1,017,900	1,000,000	20,150	
00774M-AE-5	AerCap Ireland Capital D-SENIOR UNSECURE	D.	02/15/2018	VARIOUS		1,146,373	1,200,000	3,488	
00928Q-AQ-4	AIRCASLE LTD-SENIOR UNSECURED	D.	06/29/2018	VARIOUS		1,058,750	1,100,000	7,815	
02315Q-AA-6	Ambac LSNI LLC-FIRST LIEN	D.	02/12/2018	DLB			34,878		
25243Y-AZ-2	Diageo Capital PLC-SENIOR UNSECURED	D.	06/20/2018	U B S SECURITIES		1,011,100	1,000,000	3,660	
50247W-AB-3	LYB International Financ-SENIOR UNSECURE	D.	05/31/2018	U B S SECURITIES		1,045,869	1,100,000	9,839	
606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURE	D.	07/17/2018	MITSUBISHI UFJ SEC I		1,091,728	1,100,000	17,428	
801060-AD-6	Sanofi-SENIOR UNSECURED	D.	06/12/2018	MORGAN		1,389,780	1,400,000		
92857W-BK-5	Vodafone Group PLC-SENIOR UNSECURED	D.	06/05/2018	VARIOUS		1,989,110	2,000,000	1,580	
984851-AF-2	Yara International ASA-SENIOR UNSECURED	D.	05/24/2018	CITIGROUP GLOBAL MAR		99,748	100,000		
3899999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)							79,171,211	81,441,753	591,094
465968-AP-0	JPMCC COMMERCIAL MORTGAG-SERIES 2017-JP7		01/01/2018	JP MORGAN SECURITIES		(784,455)	(1,000,000)	(3,797)	
5599999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates							(784,455)	(1,000,000)	(3,797)
8399997. Total - Bonds - Part 3							78,386,756	80,441,753	587,297
8399998. Total - Bonds - Part 5							4,222,560	4,300,000	32,054
8399999. Total - Bonds							82,609,316	84,741,753	619,351
8999997. Total - Preferred Stocks - Part 3								XXX	
8999998. Total - Preferred Stocks - Part 5								XXX	
8999999. Total - Preferred Stocks								XXX	
9799997. Total - Common Stocks - Part 3								XXX	
9799998. Total - Common Stocks - Part 5								XXX	
9799999. Total - Common Stocks								XXX	
9899999. Total - Preferred and Common Stocks								XXX	
9999999 - Totals							82,609,316	XXX	619,351

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 4

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

1	2	3	4	5	6	7	8	9	10	Change In Book/Adjusted Carrying Value					16	17	18	19	20	21
										11	12	13	14	15						
CUSIP Identification	Description	Foreign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consideration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ Decrease	Current Year's (Amortization)/ Accretion	Current Year's Other-Than-Temporary Impairment Recognized	Total Change in Book/ Adjusted Carrying Value (11+12-13)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Contractual Maturity Date
92915P-AB-1	VOYA CLO LTD-INGIM 2014-1A A2AR	D	04/18/2018	PAYDOWN		1,100,000	1,100,000	1,100,000	1,100,000						1,100,000				18,863	04/18/2026
94949L-AA-8	WELLFLEET CLO LTD-WELF 2016-2A A1	D	11/08/2018	PAYDOWN		1,400,000	1,400,000	1,400,000	1,400,000						1,400,000				51,429	10/20/2028
94949L-AC-4	WELLFLEET CLO 2016-2 LTD-WELF 2016-2A A2	D	11/08/2018	PAYDOWN		1,100,000	1,100,000	1,096,700	1,114,247		(14,247)		(14,247)		1,100,000				46,577	10/20/2028
98372P-AG-3	XLIT LTD-SR UNSECURED	D	12/27/2018	CALL 118.355339		473,421	400,000	468,728	456,178		(7,171)		(7,171)		522,428		(49,007)	(49,007)	101,896	11/15/2024
3899999	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)					34,094,775	34,114,143	34,348,165	34,014,112		129,099		129,099		34,318,750		(223,967)	(223,967)	1,414,037	XXX
38143V-AA-7	GOLDMAN SACHS CAPITAL 1-SUBORDINATED NOT		11/27/2018	BRILEY		384,787	350,000	350,000	350,000						350,000		34,787	34,787	28,623	02/15/2034
4899999	Subtotal - Bonds - Hybrid Securities					384,787	350,000	350,000	350,000						350,000		34,787	34,787	28,623	XXX
465968-AP-0	JPMCC COMMERCIAL MORTGAG-SERIES 2017-JP7		01/01/2018	JP MORGAN SECURITIES							(6,178)		(6,178)					(1,383)	09/01/2050	
79549A-RD-3	SALOMON BROTHERS MORTGAG-SERIES 2002-HYB		05/01/2018	PAYDOWN		591	591	592	564		27		27		591				7	09/01/2032
79549A-RE-1	SALOMON BROTHERS MORTGAG-SERIES 2002-HYB		12/01/2018	PAYDOWN		65	65	66	72		(6)		(6)		65				1	09/01/2032
79549A-SM-2	SALOMON BROTHERS MORTGAG-SERIES 2003-UP1		11/01/2018	PAYDOWN		19,855	19,855	17,738	17,562		2,293		2,293		19,855				320	04/01/2032
79549A-XZ-7	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2		12/01/2018	PAYDOWN		4,962	4,962	3,800	3,875		1,087		1,087		4,962				162	06/01/2033
79549A-YA-1	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2		12/01/2018	PAYDOWN		3,781	3,781	2,674	1,105		2,677		2,677		3,781				123	06/01/2033
5599999	Subtotal - Bonds - Parent, Subsidiaries and Affiliates					29,254	29,254	24,870	23,178		(100)		(100)		29,254				(770)	XXX
8399997	Total - Bonds - Part 4					34,518,010	34,502,591	34,732,685	34,396,622		128,862		128,862		34,707,198		(189,180)	(189,180)	1,442,232	XXX
8399998	Total - Bonds - Part 5					4,172,782	4,300,000	4,222,560			1,897		1,897		4,224,457		(51,675)	(51,675)	107,203	XXX
8399999	Total - Bonds					38,690,792	38,802,591	38,955,245	34,396,622		130,759		130,759		38,931,655		(240,855)	(240,855)	1,549,435	XXX
8999997	Total - Preferred Stocks - Part 4						XXX													XXX
8999998	Total - Preferred Stocks - Part 5						XXX													XXX
8999999	Total - Preferred Stocks						XXX													XXX
9799997	Total - Common Stocks - Part 4						XXX													XXX
9799998	Total - Common Stocks - Part 5						XXX													XXX
9799999	Total - Common Stocks						XXX													XXX
9899999	Total - Preferred and Common Stocks						XXX													XXX
9999999	Totals					38,690,792	XXX	38,955,245	34,396,622		130,759		130,759		38,931,655		(240,855)	(240,855)	1,549,435	XXX

E14.2

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 5

Showing All Long-Term Bonds and Stocks ACQUIRED During Year and Fully DISPOSED OF During Current Year

1 CUSIP Identifi- cation	2 Description	3 For- eign	4 Date Acquired	5 Name of Vendor	6 Disposal Date	7 Name of Purchaser	8 Par Value (Bonds) or Number of Shares (Stock)	9 Actual Cost	10 Consid- eration	11 Book/ Adjusted Carrying Value at Disposal	Change in Book/Adjusted Carrying Value					17 Foreign Exchange Gain (Loss) on Disposal	18 Realized Gain (Loss) on Disposal	19 Total Gain (Loss) on Disposal	20 Interest and Dividends Received During Year	21 Paid for Accrued Interest and Dividends		
											12 Unrealized Valuation Increase/ (Decrease)	13 Current Year's (Amort- ization)/ Accretion	14 Current Year's Other- Than- Temporary Impairment Recognized	15 Total Change in Book/ Adjusted Carrying Valu (12 + 13 - 14)	16 Total Foreign Exchange Change in Book/ Adjusted Carrying Value							
31428X-BP-0	FedEx Corp-SENIOR UNSECURED		07/09/2018	VARIOUS	10/12/2018	CITIGROUP GLOBAL MAR	1,500,000	1,430,242	1,419,765	1,431,954				1,712		1,712		(12,189)	(12,189)	36,267	21,741	
693506-BP-1	PPG Industries Inc-SENIOR UNSECURED		06/04/2018	RAYMOND JAMES	10/26/2018	CITIGROUP GLOBAL MAR	1,000,000	988,880	949,800	989,286				406		406		(39,486)	(39,486)	25,313	10,313	
703481-AA-9	Patterson-UTL Energy Inc-SENIOR UNSECURE		01/11/2018	VARIOUS	09/10/2018	EXCHANGE OFFER	1,800,000	1,803,438	1,803,217	1,803,217				(221)		(221)				45,623		
3899999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)							4,300,000	4,222,560	4,172,782	4,224,457				1,897		1,897		(51,675)	(51,675)	107,203	32,054	
8399998. Total - Bonds							4,300,000	4,222,560	4,172,782	4,224,457				1,897		1,897		(51,675)	(51,675)	107,203	32,054	
8999998. Total - Preferred Stocks																						
9799998. Total - Common Stocks																						
9899999. Total - Preferred and Common Stocks																						
9999999 - Totals								4,222,560	4,172,782	4,224,457				1,897		1,897		(51,675)	(51,675)	107,203	32,054	

Schedule D-Part 6-Section 1-Valuation of Shares of Subsidiary, Controlled or Affiliated Companies

N O N E

Schedule D - Part 6 - Section 2

N O N E

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE DA - PART 1

Showing All SHORT-TERM INVESTMENTS Owned December 31 of Current Year

1	Codes		4	5	6	7	Change in Book/Adjusted Carrying Value				12	13	Interest					20	
	2	3					8	9	10	11			14	15	16	17	18		19
Description	Code	For- eign	Date Acquired	Name of Vendor	Maturity Date	Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other- Than- Temporary Impairment Recognized	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Par Value	Actual Cost	Amount Due and Accrued Dec. 31 of Current Year on Bond Not in Default	Non- Admitted Due and Accrued	Rate of	Effective Rate of	When Paid	Amount Received During Year	Paid for Accrued Interest
0599999. Total - U.S. Government Bonds															XXX	XXX	XXX		
1099999. Total - All Other Government Bonds															XXX	XXX	XXX		
1799999. Total - U.S. States, Territories and Possessions Bonds															XXX	XXX	XXX		
2499999. Total - U.S. Political Subdivisions Bonds															XXX	XXX	XXX		
3199999. Total - U.S. Special Revenues Bonds															XXX	XXX	XXX		
BELL CANADA INC. COMMERCIAL PAPER	@		12/12/2018	CITIGROUP GLOBAL MAR	03/14/2019	4,969,351		8,026		5,000,000	4,961,325			0.000	3.084	N/A			
SUNCOR ENERGY INC. COMMERCIAL PAPER	@		12/06/2018	CITIGROUP GLOBAL MAR	03/28/2019	1,985,348		4,388		2,000,000	1,980,960			0.000	3.089	N/A			
3299999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations						6,954,699		12,414		7,000,000	6,942,285			XXX	XXX	XXX			
3899999. Total - Industrial and Miscellaneous (Unaffiliated) Bonds						6,954,699		12,414		7,000,000	6,942,285			XXX	XXX	XXX			
4899999. Total - Hybrid Securities															XXX	XXX	XXX		
5599999. Total - Parent, Subsidiaries and Affiliates Bonds															XXX	XXX	XXX		
6099999. Subtotal - SVO Identified Funds															XXX	XXX	XXX		
6599999. Subtotal - Bank Loans															XXX	XXX	XXX		
7799999. Total - Issuer Obligations						6,954,699		12,414		7,000,000	6,942,285			XXX	XXX	XXX			
7899999. Total - Residential Mortgage-Backed Securities															XXX	XXX	XXX		
7999999. Total - Commercial Mortgage-Backed Securities															XXX	XXX	XXX		
8099999. Total - Other Loan-Backed and Structured Securities															XXX	XXX	XXX		
8199999. Total - SVO Identified Funds															XXX	XXX	XXX		
8299999. Total - Bank Loans															XXX	XXX	XXX		
8399999. Total Bonds						6,954,699		12,414		7,000,000	6,942,285			XXX	XXX	XXX			
8699999. Total - Parent, Subsidiaries and Affiliates										XXX					XXX	XXX	XXX		
9199999 - Totals						6,954,699		12,414		XXX	6,942,285			XXX	XXX	XXX			

Schedule DB - Part A - Section 1 - Options, Caps, Floors, Collars, Swaps and Forwards Open

NONE

Schedule DB - Part A - Section 2 - Options, Caps, Floors, Collars, Swaps and Forwards Terminated

NONE

Schedule DB - Part B - Section 1 - Futures Contracts Open

NONE

Schedule DB - Part B - Section 1B - Brokers with whom cash deposits have been made

NONE

Schedule DB - Part B - Section 2 - Futures Contracts Terminated

NONE

Schedule DB - Part D - Section 1 - Counterparty Exposure for Derivative Instruments Open

NONE

Schedule DB - Part D-Section 2 - Collateral for Derivative Instruments Open - Pledged By

NONE

Schedule DB - Part D-Section 2 - Collateral for Derivative Instruments Open - Pledged To

NONE

Schedule DL - Part 1 - Reinvested Collateral Assets Owned

NONE

Schedule DL - Part 2 - Reinvested Collateral Assets Owned

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE E - PART 1 - CASH

1 Depository	2 Code	3 Rate of Interest	4 Amount of Interest Received During Year	5 Amount of Interest Accrued December 31 of Current Year	6 Balance	7 *
Bank of America, NA Hartford, CT					(1,273,064)	XXX
Citibank, NA New York, NY					65,118	XXX
JPMorgan Chase Bank, N.A. New York, NY					534,787	XXX
0199998 Deposits in ... depositories which do not exceed the allowable limit in any one depository (See instructions) - open depositories	XXX	XXX				XXX
0199999. Totals - Open Depositories	XXX	XXX			(673,159)	XXX
0299998 Deposits in ... depositories which do not exceed the allowable limit in any one depository (See instructions) - suspended depositories	XXX	XXX				XXX
0299999. Totals - Suspended Depositories	XXX	XXX				XXX
0399999. Total Cash on Deposit	XXX	XXX			(673,159)	XXX
0499999. Cash in Company's Office	XXX	XXX	XXX	XXX		XXX
0599999 Total - Cash	XXX	XXX			(673,159)	XXX

TOTALS OF DEPOSITORY BALANCES ON THE LAST DAY OF EACH MONTH DURING THE CURRENT YEAR

1. January.....	(855,952)	4. April.....	(1,208,227)	7. July.....	(2,560,480)	10. October.....	(957,032)
2. February.....	(2,134,648)	5. May.....	494,618	8. August.....	(1,677,774)	11. November.....	(466,246)
3. March.....	4,160,567	6. June.....	1,852,136	9. September.....	(1,358,605)	12. December.....	(673,159)

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned December 31 of Current Year

1 CUSIP	2 Description	3 Code	4 Date Acquired	5 Rate of Interest	6 Maturity Date	7 Book/Adjusted Carrying Value	8 Amount of Interest Due and Accrued	9 Amount Received During Year
0599999. Total - U.S. Government Bonds								
1099999. Total - All Other Government Bonds								
1799999. Total - U.S. States, Territories and Possessions Bonds								
2499999. Total - U.S. Political Subdivisions Bonds								
3199999. Total - U.S. Special Revenues Bonds								
	COX ENTERPRISES INC. COMMERCIAL PAPER		12/31/2018	0.000	01/02/2019	4,299,677		322
	ERAC USA FINANCE LLC COMMERCIAL PAPER		12/27/2018	0.000	01/10/2019	5,196,228		2,093
	SPECTRA ENERGY PARTNERS LP COMMERCIAL PA		12/17/2018	0.000	01/15/2019	3,995,281		5,044
	MAGNA INTERNATIONAL INC. COMMERCIAL PAPE		12/28/2018	0.000	01/10/2019	4,596,779		1,430
3299999.	Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations					18,087,965		8,889
3899999.	Total - Industrial and Miscellaneous (Unaffiliated) Bonds					18,087,965		8,889
4899999.	Total - Hybrid Securities							
5599999.	Total - Parent, Subsidiaries and Affiliates Bonds							
6099999.	Subtotal - SVO Identified Funds							
6599999.	Subtotal - Bank Loans							
7799999.	Total - Issuer Obligations					18,087,965		8,889
7899999.	Total - Residential Mortgage-Backed Securities							
7999999.	Total - Commercial Mortgage-Backed Securities							
8099999.	Total - Other Loan-Backed and Structured Securities							
8199999.	Total - SVO Identified Funds							
8299999.	Total - Bank Loans							
8399999.	Total Bonds					18,087,965		8,889
8899999.	Total Cash Equivalents					18,087,965		8,889

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company

SCHEDULE E - PART 3 - SPECIAL DEPOSITS

States, Etc.	1 Type of Deposit	2 Purpose of Deposit	Deposits For the Benefit of All Policyholders		All Other Special Deposits	
			3 Book/Adjusted Carrying Value	4 Fair Value	5 Book/Adjusted Carrying Value	6 Fair Value
1. Alabama	AL					
2. Alaska	AK					
3. Arizona	AZ					
4. Arkansas	AR	B LIFE INSURANCE	105,407	102,408		
5. California	CA					
6. Colorado	CO					
7. Connecticut	CT	B LIFE INSURANCE	1,505,817	1,462,969		
8. Delaware	DE					
9. District of Columbia	DC					
10. Florida	FL					
11. Georgia	GA	B LIFE INSURANCE	105,407	102,408		
12. Hawaii	HI					
13. Idaho	ID					
14. Illinois	IL					
15. Indiana	IN					
16. Iowa	IA					
17. Kansas	KS					
18. Kentucky	KY					
19. Louisiana	LA					
20. Maine	ME					
21. Maryland	MD					
22. Massachusetts	MA	B LIFE INSURANCE	100,388	97,531		
23. Michigan	MI					
24. Minnesota	MN					
25. Mississippi	MS					
26. Missouri	MO	B LIFE INSURANCE	1,505,817	1,462,969		
27. Montana	MT					
28. Nebraska	NE					
29. Nevada	NV					
30. New Hampshire	NH	B LIFE INSURANCE	105,407	102,408		
31. New Jersey	NJ					
32. New Mexico	NM	B LIFE INSURANCE	209,645	204,816	209,756	204,816
33. New York	NY					
34. North Carolina	NC	B LIFE INSURANCE	401,551	390,125		
35. North Dakota	ND					
36. Ohio	OH					
37. Oklahoma	OK					
38. Oregon	OR					
39. Pennsylvania	PA					
40. Rhode Island	RI					
41. South Carolina	SC	B LIFE INSURANCE	150,582	146,297		
42. South Dakota	SD					
43. Tennessee	TN					
44. Texas	TX					
45. Utah	UT					
46. Vermont	VT					
47. Virginia	VA	B LIFE INSURANCE	60,233	58,519		
48. Washington	WA					
49. West Virginia	WV					
50. Wisconsin	WI					
51. Wyoming	WY					
52. American Samoa	AS					
53. Guam	GU					
54. Puerto Rico	PR					
55. U.S. Virgin Islands	VI					
56. Northern Mariana Islands	MP					
57. Canada	CAN					
58. Aggregate Alien and Other	OT	XXX	XXX			
59. Subtotal	XXX	XXX	4,250,254	4,130,450	209,756	204,816
DETAILS OF WRITE-INS						
5801.						
5802.						
5803.						
5898. Summary of remaining write-ins for Line 58 from overflow page	XXX	XXX				
5899. Totals (Lines 5801 thru 5803 plus 5898)(Line 58 above)	XXX	XXX				

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