

QUARTERLY STATEMENT

OF THE

MML Bay State Life Insurance Company

TO THE

Insurance Department

OF THE

STATE OF

**FOR THE QUARTER ENDED
MARCH 31, 2017**

LIFE AND ACCIDENT AND HEALTH

2017

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

ASSETS

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
1. Bonds	311,862,134		311,862,134	310,216,806
2. Stocks:				
2.1 Preferred stocks				
2.2 Common stocks				
3. Mortgage loans on real estate:				
3.1 First liens	3,755,985		3,755,985	4,007,088
3.2 Other than first liens.....				
4. Real estate:				
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 (\$(5,169,219)), cash equivalents (\$71,592,781) and short-term investments (\$)	66,423,562		66,423,562	62,691,625
6. Contract loans (including \$ premium notes)	95,923,349		95,923,349	95,147,773
7. Derivatives				
8. Other invested assets				
9. Receivables for securities				
10. Securities lending reinvested collateral assets				
11. Aggregate write-ins for invested assets				
12. Subtotals, cash and invested assets (Lines 1 to 11)	477,965,030		477,965,030	472,063,292
13. Title plants less \$ charged off (for Title insurers only)				
14. Investment income due and accrued	4,929,929	72,897	4,857,032	4,359,157
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	859	778	81	673
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	(2,697,972)		(2,697,972)	(2,080,053)
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	4,044,884		4,044,884	2,911,681
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	22,666,113		22,666,113	18,471,759
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon				
18.2 Net deferred tax asset	19,207,505	11,990,712	7,216,793	6,184,602
19. Guaranty funds receivable or on deposit	196,672		196,672	198,623
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	127,955		127,955	125,904
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)	526,440,975	12,064,387	514,376,588	502,235,638
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	4,380,825,642		4,380,825,642	4,312,051,379
28. Total (Lines 26 and 27)	4,907,266,617	12,064,387	4,895,202,230	4,814,287,017
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page				
1199. Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)				
2501.				
2502.				
2503.				
2598. Summary of remaining write-ins for Line 25 from overflow page				
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)				

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$139,437,457 less \$ included in Line 6.3 (including \$122,772,612 Modco Reserve)	139,437,457	138,538,127
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)		
3. Liability for deposit-type contracts (including \$ Modco Reserve)	11,464,140	11,548,399
4. Contract claims:		
4.1 Life	1,663,266	3,824,460
4.2 Accident and health		
5. Policyholders' dividends \$ and coupons \$ due and unpaid		
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	3,359	2,438
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	17,987,917	14,578,631
9.3 Other amounts payable on reinsurance, including \$ assumed and \$ 8,511,699 ceded	8,511,699	(3,421,656)
9.4 Interest Maintenance Reserve	234,612	289,594
10. Commissions to agents due or accrued-life and annuity contracts \$ 16,024 , accident and health \$ and deposit-type contract funds \$	16,024	267,320
11. Commissions and expense allowances payable on reinsurance assumed		
12. General expenses due or accrued	(2)	11,640
13. Transfers to Separate Accounts due or accrued (net) (including \$ (580,781) accrued for expense allowances recognized in reserves, net of reinsured allowances)	11,441,011	15,996,642
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	254,771	199,460
15.1 Current federal and foreign income taxes, including \$ (7,254,029) on realized capital gains (losses)	18,985,568	18,697,891
15.2 Net deferred tax liability		
16. Unearned investment income		
17. Amounts withheld or retained by company as agent or trustee	30,270	16,675
18. Amounts held for agents' account, including \$ agents' credit balances		
19. Remittances and items not allocated	686,692	5,895,429
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	4,896,880	4,997,495
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	5,458,456	2,310,794
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	231,180	187,860
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	221,303,300	213,941,199
27. From Separate Accounts Statement	4,380,825,642	4,312,051,379
28. Total liabilities (Lines 26 and 27)	4,602,128,942	4,525,992,578
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	143,736,914	143,736,914
34. Aggregate write-ins for special surplus funds		
35. Unassigned funds (surplus)	146,836,174	142,057,325
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)	290,573,088	285,794,239
38. Totals of Lines 29, 30 and 37	293,073,288	288,294,439
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	4,895,202,230	4,814,287,017
DETAILS OF WRITE-INS		
2501. Miscellaneous liabilities	171,731	140,262
2502. Funds awaiting escheat	59,449	47,598
2503.		
2598. Summary of remaining write-ins for Line 25 from overflow page		
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	231,180	187,860
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page		
3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)		
3401.		
3402.		
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SUMMARY OF OPERATIONS

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Premiums and annuity considerations for life and accident and health contracts	(1,017,328)	6,585,200	(105,853,696)
2. Considerations for supplementary contracts with life contingencies			65,136
3. Net investment income	4,098,152	3,325,545	14,288,275
4. Amortization of Interest Maintenance Reserve (IMR)	30,614	47,876	188,040
5. Separate Accounts net gain from operations excluding unrealized gains or losses			
6. Commissions and expense allowances on reinsurance ceded	2,613,554	1,425,644	61,254,601
7. Reserve adjustments on reinsurance ceded	(19,253,567)	(4,590,552)	112,685,751
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	13,170,216	18,793,389	71,495,125
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	253,965	(208,707)	(761,293)
9. Totals (Lines 1 to 8.3)	(104,394)	25,378,395	153,361,939
10. Death benefits	7,382,546	14,547,314	40,748,262
11. Matured endowments (excluding guaranteed annual pure endowments)			
12. Annuity benefits	338,951	664,790	3,111,803
13. Disability benefits and benefits under accident and health contracts	67,034	113,982	364,151
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	842,797	11,818,480	49,389,269
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	158,879	591,710	1,096,059
18. Payments on supplementary contracts with life contingencies			
19. Increase in aggregate reserves for life and accident and health contracts	899,331	(537,934)	1,920,099
20. Totals (Lines 10 to 19)	9,689,538	27,198,342	96,629,643
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	851,850	772,173	2,935,769
22. Commissions and expense allowances on reinsurance assumed			
23. General insurance expenses	3,053,774	1,844,170	7,955,012
24. Insurance taxes, licenses and fees, excluding federal income taxes	330,784	323,920	990,162
25. Increase in loading on deferred and uncollected premiums	(389)	(1,012)	(792)
26. Net transfers to or (from) Separate Accounts net of reinsurance	(17,936,641)	(10,860,017)	(35,570,149)
27. Aggregate write-ins for deductions	(596,482)	(379,884)	34,553,217
28. Totals (Lines 20 to 27)	(4,607,566)	18,897,692	107,492,862
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	4,503,172	6,480,703	45,869,077
30. Dividends to policyholders			
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	4,503,172	6,480,703	45,869,077
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	308,166	1,192,641	25,634,294
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)	4,195,006	5,288,062	20,234,783
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ (7,368) (excluding taxes of \$ (13,121) transferred to the IMR)	(23,875)	226	20,356
35. Net income (Line 33 plus Line 34)	4,171,131	5,288,288	20,255,139
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	288,294,439	231,301,005	231,301,005
37. Net income (Line 35)	4,171,131	5,288,288	20,255,139
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ 6,739	12,515	(3,009)	(19,222)
39. Change in net unrealized foreign exchange capital gain (loss)			
40. Change in net deferred income tax	(703,660)	(621,575)	12,313,003
41. Change in nonadmitted assets	1,671,152	1,158,535	(9,887,929)
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	100,615	49,142	(331,185)
45. Change in treasury stock			
46. Surplus (contributed to) withdrawn from Separate Accounts during period			
47. Other changes in surplus in Separate Accounts Statement			
48. Change in surplus notes			
49. Cumulative effect of changes in accounting principles			
50. Capital changes:			
50.1 Paid in			
50.2 Transferred from surplus (Stock Dividend)			
50.3 Transferred to surplus			
51. Surplus adjustment:			
51.1 Paid in			
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	(472,904)		34,663,629
54. Net change in capital and surplus for the year (Lines 37 through 53)	4,778,849	5,871,381	56,993,434
55. Capital and surplus, as of statement date (Lines 36 + 54)	293,073,288	237,172,386	288,294,439
DETAILS OF WRITE-INS			
08.301. Other miscellaneous income	378,581	97,303	983,035
08.302. Sub-advisory fees	(124,616)	(306,010)	(1,744,328)
08.303.			
08.398. Summary of remaining write-ins for Line 8.3 from overflow page			
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	253,965	(208,707)	(761,293)
2701. Reinsurance ceded adjustment	(601,704)		34,663,629
2702. Miscellaneous charges to operations	5,222	(379,884)	(110,412)
2703.			
2798. Summary of remaining write-ins for Line 27 from overflow page			
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	(596,482)	(379,884)	34,553,217
5301. Reinsurance ceded adjustment	(601,704)		34,663,629
5302. Other changes to surplus	128,800		
5303.			
5398. Summary of remaining write-ins for Line 53 from overflow page			
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	(472,904)		34,663,629

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

CASH FLOW

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
Cash from Operations			
1. Premiums collected net of reinsurance	1,073,834	4,507,863	(102,483,538)
2. Net investment income	3,797,247	3,082,827	13,981,424
3. Miscellaneous income	10,210,222	21,323,750	243,146,856
4. Total (Lines 1 to 3)	15,081,303	28,914,440	154,644,742
5. Benefit and loss related payments	16,018,430	26,281,071	95,172,234
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(6,881,011)	(7,652,790)	(35,033,623)
7. Commissions, expenses paid and aggregate write-ins for deductions	1,204,588	3,449,502	11,832,105
8. Dividends paid to policyholders			
9. Federal and foreign income taxes paid (recovered) net of \$ tax on capital gains (losses)		(728,334)	3,948,825
10. Total (Lines 5 through 9)	10,342,007	21,349,449	75,919,541
11. Net cash from operations (Line 4 minus Line 10)	4,739,296	7,564,991	78,725,201
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	4,352,236	8,246,765	47,823,746
12.2 Stocks			
12.3 Mortgage loans	250,833	449,604	1,832,747
12.4 Real estate			
12.5 Other invested assets			
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	1	(1,296)	(156)
12.7 Miscellaneous proceeds		(870,925)	124,096
12.8 Total investment proceeds (Lines 12.1 to 12.7)	4,603,070	7,824,148	49,780,433
13. Cost of investments acquired (long-term only):			
13.1 Bonds	5,988,132	28,832,335	135,100,254
13.2 Stocks			
13.3 Mortgage loans	148	1,069	2,992
13.4 Real estate			
13.5 Other invested assets			
13.6 Miscellaneous applications		(1,433,291)	
13.7 Total investments acquired (Lines 13.1 to 13.6)	5,988,280	27,400,113	135,103,246
14. Net increase (or decrease) in contract loans and premium notes	775,577	(486,201)	(458,743)
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(2,160,787)	(19,089,764)	(84,864,070)
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	(168,722)	669,123	1,386,252
16.5 Dividends to stockholders			
16.6 Other cash provided (applied)	1,322,150	515,936	6,154,814
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	1,153,428	1,185,059	7,541,066
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)	3,731,937	(10,339,714)	1,402,197
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	62,691,625	61,289,428	61,289,428
19.2 End of period (Line 18 plus Line 19.1)	66,423,562	50,949,714	62,691,625
Note: Supplemental disclosures of cash flow information for non-cash transactions:			
20.0001. Bond conversions and refinancing	2,245,948	500,000	942,855
20.0002. Interest capitalization for long-term debt			312

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Industrial life			
2. Ordinary life insurance	9,166,502	9,400,164	37,389,376
3. Ordinary individual annuities	4,065	2,865	21,760
4. Credit life (group and individual)			
5. Group life insurance	(3,371,831)	19,198	(3,372,447)
6. Group annuities			
7. A & H - group			
8. A & H - credit (group and individual)			
9. A & H - other			
10. Aggregate of all other lines of business			
11. Subtotal	5,798,736	9,422,227	34,038,689
12. Deposit-type contracts			
13. Total	5,798,736	9,422,227	34,038,689
DETAILS OF WRITE-INS			
1001.			
1002.			
1003.			
1098. Summary of remaining write-ins for Line 10 from overflow page			
1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

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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 (the 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	2017	2016
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 3)	XXX	XXX	XXX	\$ 4,171,131	\$ 20,255,139
(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>\$ 4,171,131</u>	<u>\$ 20,255,139</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 293,073,288	\$ 288,294,439
(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>\$ 293,073,288</u>	<u>\$ 288,294,439</u>

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

c. Accounting policy:

(1-5) No change

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

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

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

(7-14) No change

d. Going concern - No change

Note 2 – Accounting Changes and Corrections of Errors

a. For the three months ended March 31, 2017 and 2016, the Company did not record any corrections of prior year errors.

Certain prior year amounts within these financial statements have been reclassified to conform to the current year presentation.

b. Adoption of new accounting standards

In April and August 2016, the NAIC adopted and made effective modifications to SSAP No. 1, *Accounting Policies, Risks & Uncertainties, and Other Disclosures*. The modifications clarify that the disclosure presentation for permitted and prescribed practices should include practices that result in different statutory accounting reporting (such as gross or net) presentations that differ from the Accounting Practices and Procedures (AP&P) Manual. The modifications also clarified that disclosure of restricted assets should be included in the annual financial statements, and, pursuant to the AP&P manual preamble, in the interim financial statements if significant changes have occurred since the annual statement. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted and made effective modifications to SSAP No. 97, *Investments in Subsidiary, Controlled and Affiliated Entities*. The modifications clarify which entities are subject to the subsidiary, controlled and affiliated (SCA) disclosure and add a new appendix detailing the filing guidance that was previously included within the Purposes and Procedures Manual of the NAIC Investment Analysis Office for SCA entities. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 2, *Cash, Drafts and Short-Term Investments*, SSAP No. 26, *Bonds, Excluding Loan-backed and Structured Securities*, and SSAP No. 30, *Unaffiliated Common Stock*, which were effective September 30, 2016. These modifications clarify the accounting for short-term investments and the classification of Money Market Mutual Funds registered under the Investment Company Act of 1940 (the Act) and regulated under rule 2a-7 of the Act as short-term investments under SSAP No. 2. While retaining the short-term classification, Money Market Mutual Funds may be accounted for under SSAP No. 26 or SSAP No. 30. These modifications did not have a significant impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 1, *Accounting Policies, Risks & Uncertainties, and Other Disclosures*, which are effective December 31, 2016. These modifications require the reporting entity to disclose the amount and nature of any assets reflected within the reporting entity's financial statements that were received as collateral and the recognized liability to return these collateral assets. The Company has adopted these modifications.

NOTES TO FINANCIAL STATEMENTS

In August 2016, the NAIC adopted and made effective modifications to SSAP No. 51, *Life Contracts*. These modifications clarify that annual assumption changes from reserving methods used in principles-based reserving (PBR) would not qualify as a change in valuation basis. Changes in valuation basis are recorded directly to surplus instead of through income. This modification was made to accommodate PBR which becomes effective January 1, 2017. This modification did not have an impact on the Company's financial statements.

Note 3 – Business Combinations and Goodwill - No change

Note 4 – Discontinued Operations - No change

Note 5 – Investments

- a. Mortgage loans - No change
- b. Debt restructuring - No change
- c. Reverse mortgages - No change

NOTES TO FINANCIAL STATEMENTS

d. Loan-backed and structured securities:

- (1) Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.
- (2) The following contains loan-backed and structured securities that recognized OTTI classified on the following bases for recognizing OTTI:

(1) Amortized Cost Basis Before OTTI	(2) OTTI Recognized in Loss		(3) Fair Value 1-(2a+2b)
	(2a) Interest	(2b) Non-interest	

OTTI recognized in the first quarter

a. Intent to sell	\$	-	\$	-	\$	-
b. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis		94,424	-	41,274	53,150	
c. Total first quarter	<u>\$</u>	<u>94,424</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>41,274</u>

OTTI recognized in the second quarter

d. Intent to sell	\$	-	\$	-	\$	-
e. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis		-	-	-	-	
f. Total second quarter	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>

OTTI recognized in the third quarter

g. Intent to sell	\$	-	\$	-	\$	-
h. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis		-	-	-	-	
i. Total third quarter	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>

OTTI recognized in the fourth quarter

j. Intent to sell	\$	-	\$	-	\$	-
k. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis		-	-	-	-	
l. Total fourth quarter	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>	<u>\$</u>	<u>-</u>

m. Annual aggregate total

<u>\$</u>	<u>-</u>	<u>\$</u>	<u>41,274</u>
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All impairments were taken due to the present value of cash flows expected to be collected being less than the amortized cost basis.

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

CUSIP	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
22541QJR4	\$ 7,034.17	\$ 33.78	\$ (7,000.39)	\$ 33.78	\$ 4,334.02	March 31, 2017
86358RA23	87,389.56	53,115.66	(34,273.90)	53,115.66	84,944.86	March 31, 2017
Totals	\$ 94,423.73	\$ 53,149.44	\$ (41,274.29)	\$ 53,149.44	\$ 89,278.88	

- (4) As of March 31, 2017, the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:

a. The aggregate amount of unrealized losses:	
1. Less than 12 months	\$ (1,545,573)
2. 12 months or longer	\$ (325,409)
b. The aggregate related fair value of securities with unrealized losses:	
1. Less than 12 months	\$ 57,186,517
2. 12 months or longer	\$ 6,051,896

- (5) No change

e. Repurchase agreements:

- (1-2) No change

- (3) The Company does not have any securities lending transactions administered by an affiliated agent.

- (4-6) No change

f. The Company does not have any investments in real estate.

NOTES TO FINANCIAL STATEMENTS

- g. Low income housing tax credit properties - No change
- h. Restricted assets - No change
- i. Working capital finance investments: The Company did not invest in working capital finance investments.
- j. 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.
- k. Structured notes - No change
- l. 5* Securities - No change

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

Note 7 – Investment Income – No change

Note 8 – Derivative Instruments - No change

Note 9 – Income Taxes – No change

Note 10 – Information Concerning Parent, Subsidiaries and Affiliates

- a-l. No change

Note 11 – Debt

- a. No change
- 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. Defined Benefit Plan
 - (1-3) No change
 - (4) The company did not have any defined benefit pension plans for which the reporting entity is directly liable.
 - (5-21) No change
- b-j. No change

Note 13 – Capital and Surplus, Shareholders' Dividend Restrictions and Quasi-Reorganizations - No change

Note 14 – Liabilities, Contingencies and Assessments

- a. Contingent commitments – No change
- b. Assessments - No change
- c. Gain contingencies - No change
- d. Claims related to extra contractual obligations - No change
- e. All other contingencies:

The Company is involved in litigation arising in the normal course of business, which seeks compensatory damages, punitive damages and equitable remedies. Although the Company is not aware of any actions or allegations that reasonably should give rise to a material adverse impact to the Company's financial position or liquidity, the outcome of litigation cannot be foreseen with certainty. It is the opinion of management that the ultimate resolution of these matters will not materially impact the Company's financial position or liquidity. However, the outcome of a particular proceeding may be material to the Company's results of operations for a particular period depending upon, among other factors, the size of the loss and the level of the Company's results of operations for the period.
- f. Regulatory matters:

The Company is subject to governmental and administrative proceedings and regulatory inquiries, examinations and investigations in the ordinary course of its business. In connection with regulatory inquiries, examinations and investigations, the Company has been contacted by various regulatory agencies including, among others, the Securities and Exchange Commission, the U.S. Department of Labor and various state insurance departments and state attorneys general. The Company has cooperated fully with these regulatory agencies with regard to their inquiries, examinations and investigations and has responded to information requests and comments.

Market volatility in the financial services industry over the last several years has contributed to increased scrutiny of the entire financial services industry. Therefore, the Company believes that it is reasonable to expect that proceedings, regulatory inquiries, examinations and investigations into the insurance and financial services industries will continue for the foreseeable future. Additionally, new industry-wide legislation, rules and regulations could significantly affect the insurance and financial services industries as a whole. It is the opinion of management that the ultimate resolution of these regulatory inquiries, examinations, investigations, legislative and regulatory changes of which we are aware will not materially impact the Company's financial position or liquidity. However, the outcome of a particular matter may be material to the Company's operating results for a particular period depending upon, among other factors, the financial impact of the matter and the level of the Company's results of operations for the period.

Note 15 – Leases - No change

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

NOTES TO FINANCIAL STATEMENTS

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

- a. Transfers of receivables reported as sales - No change
- b. Transfer and Servicing of Financial Assets:
 - (1) No change
 - (2) The Company did not have any servicing assets or liabilities in 2017 or 2016.
 - (3) No change
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2017 or 2016.
 - (5-7) No change
- c. Wash sales:
 - (1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio.
 - (2) The Company did not sell any securities with the NAIC Designation 3 or below through the first quarter ended March 31, 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 - No change

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

Note 20 – Fair Value Measurements

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

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

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

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

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

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

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

The fair value of 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.

NOTES TO FINANCIAL STATEMENTS

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

	March 31, 2017			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Bonds:				
Parent, subsidiaries and affiliates	\$ -	\$ 518,682	\$ -	\$ 518,682
Separate account assets ⁽¹⁾	959,431,007	2,307,358,966	-	3,266,789,973
Total financial assets carried at fair value	<u>\$ 959,431,007</u>	<u>\$ 2,307,877,648</u>	<u>\$ -</u>	<u>\$ 3,267,308,655</u>

⁽¹⁾\$1,114,035,669 of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

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

	December 31, 2016			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Bonds:				
Parent, subsidiaries and affiliates	\$ -	\$ 524,103	\$ -	\$ 524,103
Separate account assets ⁽¹⁾	922,485,384	2,302,419,763	-	3,224,905,147
Total financial assets carried at fair value	<u>\$ 922,485,384</u>	<u>\$ 2,302,943,866</u>	<u>\$ -</u>	<u>\$ 3,225,429,250</u>

⁽¹⁾\$1,087,146,232 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, 2016, 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 rating, 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 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.

NOTES TO FINANCIAL STATEMENTS

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

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

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

5. Derivative assets and liabilities fair value disclosures on a gross basis are included in paragraph 1 above. Since there are no derivative assets or liabilities classified in Level 3, the reconciliation disclosures required under paragraphs 2 through 4 are not applicable.
- b. The Company provides additional fair value information in Note 21 – Other Items.
- c. The following presents a summary of the carrying values and fair values of the Company's financial instruments:

March 31, 2017						
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Not Practicable (Carrying Value)
Financial assets:						
Bonds:						
U. S. government and agencies	\$ 39,247,628	\$ 39,353,228	-	\$ 39,247,628	-	-
Special revenue	70,923	63,444	-	70,923	-	-
Industrial and miscellaneous	268,668,217	266,046,373	-	265,030,160	3,638,057	-
Parent, subsidiaries and affiliates	6,464,086	6,399,089	-	6,464,086	-	-
Mortgage loans - residential	3,658,314	3,755,985	-	-	3,658,314	-
Cash, cash equivalents and short-term investments	66,423,562	66,423,562	(5,169,219)	71,592,781	-	-
Separate account assets	4,392,147,609	4,380,825,642	959,431,007	3,417,244,967	15,471,635	-
Financial liabilities:						
Individual annuity contracts	2,256,694	3,028,216	-	-	2,256,694	-
Supplementary contracts	11,463,342	11,349,844	-	-	11,463,342	-

December 31, 2016						
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Not Practicable (Carrying Value)
Financial assets:						
Bonds:						
U. S. government and agencies	\$ 39,216,346	\$ 39,357,823	-	\$ 39,216,346	-	-
Special revenue	72,640	66,143	-	72,640	-	-
Industrial and miscellaneous	266,229,273	264,388,709	-	252,459,408	13,769,865	-
Parent, subsidiaries and affiliates	6,442,873	6,404,131	-	6,442,873	-	-
Mortgage loans - residential	3,921,346	4,007,088	-	-	3,921,346	-
Cash, cash equivalents and short-term investments	61,289,428	61,289,428	1,211,195	60,078,233	-	-
Separate account assets	4,320,299,668	4,312,051,379	923,105,179	3,381,127,144	16,067,345	-
Financial liabilities:						
Individual annuity contracts	2,225,733	3,061,780	-	-	2,225,733	-
Supplementary contracts	11,538,373	11,424,132	-	-	11,538,373	-

- d. For the period ended March 31, 2017, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

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

Business risks

The Company operates in a business environment subject to various risks and uncertainties. The principal risks include insurance and underwriting risks, investment and interest rate risks and credit risk. The combined impact of these risks could have a material, adverse effect on the Company's financial statements or result in operating losses in future periods. The Company employs the use of reinsurance, portfolio diversification, asset/liability management processes and other risk management techniques to mitigate the impact of these risks. This condensed risks and uncertainties disclosure should be read in conjunction with the disclosure in the Company's 2015 Annual Statement.

NOTES TO FINANCIAL STATEMENTS

Insurance and underwriting risks

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, morbidity, longevity, persistency, interest rates and other factors. If actual policy experience emerges that is significantly and adversely different from assumptions used in product pricing, the effect could be material to the profitability of the Company. The Company reinsures certain life 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.

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. Business interruption insurance recoveries - No change
- e. State transferrable tax credits - No change
- f. Subprime mortgage related risk exposure:
 - (1) No change
 - (2) No change
 - (3) The actual cost reduced by paydowns, carrying value, fair value and related gross realized losses from OTTI of the Company's investments with significant Alt-A and subprime exposure were as follows:

	March 31, 2017			Three Months Ended March 31, 2017
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 1,183,210	\$ 1,208,451	\$ 1,482,655	\$ 7,000
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in subsidiary and controlled affiliates	-	-	-	-
f. Other assets	-	-	-	-
g. Total	<u>\$ 1,183,210</u>	<u>\$ 1,208,451</u>	<u>\$ 1,482,655</u>	<u>\$ 7,000</u>

NOTES TO FINANCIAL STATEMENTS

	March 31, 2017			Three Months Ended March 31, 2017
	Actual	Carrying	Fair	OTTI
	Cost	Value	Value	
Subprime:				
a. Residential mortgage-backed securities	\$ 1,422,023	\$ 1,774,837	\$ 2,180,252	\$ -
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in subsidiary and controlled affiliates	-	-	-	-
f. Other assets	-	-	-	-
g. Total	<u>\$ 1,422,023</u>	<u>\$ 1,774,837</u>	<u>\$ 2,180,252</u>	<u>\$ -</u>

	December 31, 2016			Year Ended December 31, 2016
	Actual	Carrying	Fair	OTTI
	Cost	Value	Value	
Alt-A:				
a. Residential mortgage-backed securities	\$ 2,025,204	\$ 1,322,448	\$ 1,746,541	\$ 19
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in subsidiary and controlled affiliates	-	-	-	-
f. Other assets	-	-	-	-
g. Total	<u>\$ 2,025,204</u>	<u>\$ 1,322,448</u>	<u>\$ 1,746,541</u>	<u>\$ 19</u>

	December 31, 2016			Year Ended December 31, 2016
	Actual	Carrying	Fair	OTTI
	Cost	Value	Value	
Subprime:				
a. Residential mortgage-backed securities	\$ 3,193,121	\$ 1,803,842	\$ 2,235,591	\$ 6,452
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in subsidiary and controlled affiliates	-	-	-	-
f. Other assets	-	-	-	-
g. Total	<u>\$ 3,193,121</u>	<u>\$ 1,803,842</u>	<u>\$ 2,235,591</u>	<u>\$ 6,452</u>

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

g. Retained asset accounts - No change

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through May 10, 2017, 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 - No change

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

a – d. No change.

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

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2017 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which were considered corrections of prior year errors.

Note 26 – Intercompany Pooling Arrangements - No change

Note 27 – Structured Settlements - No change

Note 28 – Health Care Receivables - No change

Note 29 – Participating Policies - No change

Note 30 – Premium Deficiency Reserves - No change

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

NOTES TO FINANCIAL STATEMENTS

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

Note 33 – Premium and Annuity Considerations Deferred and Uncollected - No change

Note 34 – Separate Accounts - No change

Note 35 – Loss/Claim Adjustment Expenses - No change

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

- 1.1 Did the reporting entity experience any material transactions requiring the filing of Disclosure of Material Transactions with the State of Domicile, as required by the Model Act? Yes [] No [X]
- 1.2 If yes, has the report been filed with the domiciliary state? Yes [] No []
- 2.1 Has any change been made during the year of this statement in the charter, by-laws, articles of incorporation, or deed of settlement of the reporting entity? Yes [] No [X]
- 2.2 If yes, date of change:
- 3.1 Is the reporting entity a member of an Insurance Holding Company System consisting of two or more affiliated persons, one or more of which is an insurer? Yes [X] No []
If yes, complete Schedule Y, Parts 1 and 1A.
- 3.2 Have there been any substantial changes in the organizational chart since the prior quarter end? Yes [] No [X]
- 3.3 If the response to 3.2 is yes, provide a brief description of those changes.
- 4.1 Has the reporting entity been a party to a merger or consolidation during the period covered by this statement? Yes [] No [X]
- 4.2 If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation.

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

- 5. If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved? Yes [] No [X] N/A []
If yes, attach an explanation.
- 6.1 State as of what date the latest financial examination of the reporting entity was made or is being made. 12/31/2014
- 6.2 State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released. 12/31/2014
- 6.3 State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date). 05/31/2016
- 6.4 By what department or departments?
State of Connecticut Insurance Department.
- 6.5 Have all financial statement adjustments within the latest financial examination report been accounted for in a subsequent financial statement filed with Departments? Yes [] No [] N/A [X]
- 6.6 Have all of the recommendations within the latest financial examination report been complied with? Yes [X] No [] N/A []
- 7.1 Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period? Yes [] No [X]
- 7.2 If yes, give full information:
- 8.1 Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board? Yes [] No [X]
- 8.2 If response to 8.1 is yes, please identify the name of the bank holding company.
- 8.3 Is the company affiliated with one or more banks, thrifts or securities firms? Yes [X] No []
- 8.4 If response to 8.3 is yes, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC) and the Securities Exchange Commission (SEC)] and identify the affiliate's primary federal regulator.

1 Affiliate Name	2 Location (City, State)	3 FRB	4 OCC	5 FDIC	6 SEC
Baring International Investment Limited	London, UK				YES.
Barings Securities, LLC	Boston, MA				YES.
MML Distributors, LLC	Enfield, CT				YES.
MML Investment Advisers, LLC	Enfield, CT				YES.
MML Investors Services, LLC	Springfield, MA				YES.
MML Strategic Distributors, LLC	Springfield, MA				YES.
MMLISI Financial Alliances, LLC	Springfield, MA				YES.
OppenheimerFunds Distributor, Inc.	New York, NY				YES.
The MassMutual Trust Company, FSB	Enfield, CT		YES		

GENERAL INTERROGATORIES

- 9.1 Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards? Yes No
 (a) Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
 (b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity;
 (c) Compliance with applicable governmental laws, rules and regulations;
 (d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and
 (e) Accountability for adherence to the code.
- 9.11 If the response to 9.1 is No, please explain:
- 9.2 Has the code of ethics for senior managers been amended? Yes No
- 9.21 If the response to 9.2 is Yes, provide information related to amendment(s).
- 9.3 Have any provisions of the code of ethics been waived for any of the specified officers? Yes No
- 9.31 If the response to 9.3 is Yes, provide the nature of any waiver(s).

FINANCIAL

- 10.1 Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement? Yes No
- 10.2 If yes, indicate any amounts receivable from parent included in the Page 2 amount: \$0

INVESTMENT

- 11.1 Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.) Yes No
- 11.2 If yes, give full and complete information relating thereto:
12. Amount of real estate and mortgages held in other invested assets in Schedule BA: \$
13. Amount of real estate and mortgages held in short-term investments: \$
- 14.1 Does the reporting entity have any investments in parent, subsidiaries and affiliates? Yes No
- 14.2 If yes, please complete the following:
- | | 1
Prior Year-End
Book/Adjusted
Carrying Value | 2
Current Quarter
Book/Adjusted
Carrying Value |
|---|--|---|
| 14.21 Bonds | \$ 6,404,131 | \$ 5,880,407 |
| 14.22 Preferred Stock | \$ | \$ |
| 14.23 Common Stock | \$ | \$ |
| 14.24 Short-Term Investments | \$ | \$ |
| 14.25 Mortgage Loans on Real Estate | \$ | \$ |
| 14.26 All Other | \$ | \$ |
| 14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | \$ 6,404,131 | \$ 5,880,407 |
| 14.28 Total Investment in Parent included in Lines 14.21 to 14.26 above | \$ | \$ |
- 15.1 Has the reporting entity entered into any hedging transactions reported on Schedule DB? Yes No
- 15.2 If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes No
 If no, attach a description with this statement.

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company
GENERAL INTERROGATORIES

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

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

1 Name of Custodian(s)	2 Custodian Address
Citibank, N.A.	333 West 34th Street, New York, NY 10001

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

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

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

- 17.4 If yes, give full information relating thereto:

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

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

1 Name of Firm or Individual	2 Affiliation
Barings LLC	A.....

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

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

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

1 Central Registration Depository Number	2 Name of Firm or Individual	3 Legal Entity Identifier (LEI)	4 Registered With	5 Investment Management Agreement (IMA) Filed
106006	Barings LLC	5493005EMQYELJUS5W59	SEC	DS.....

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

- 18.2 If no, list exceptions:

GENERAL INTERROGATORIES

PART 2 - LIFE & HEALTH

1.	Report the statement value of mortgage loans at the end of this reporting period for the following categories:	1 Amount
1.1	Long-Term Mortgages In Good Standing	
1.11	Farm Mortgages	\$
1.12	Residential Mortgages	\$ 3,755,985
1.13	Commercial Mortgages	\$
1.14	Total Mortgages in Good Standing	\$ 3,755,985
1.2	Long-Term Mortgages In Good Standing with Restructured Terms	
1.21	Total Mortgages in Good Standing with Restructured Terms	\$
1.3	Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months	
1.31	Farm Mortgages	\$
1.32	Residential Mortgages	\$
1.33	Commercial Mortgages	\$
1.34	Total Mortgages with Interest Overdue more than Three Months	\$
1.4	Long-Term Mortgage Loans in Process of Foreclosure	
1.41	Farm Mortgages	\$
1.42	Residential Mortgages	\$
1.43	Commercial Mortgages	\$
1.44	Total Mortgages in Process of Foreclosure	\$
1.5	Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)	\$ 3,755,985
1.6	Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter	
1.61	Farm Mortgages	\$
1.62	Residential Mortgages	\$
1.63	Commercial Mortgages	\$
1.64	Total Mortgages Foreclosed and Transferred to Real Estate	\$
2.	Operating Percentages:	
2.1	A&H loss percent	%
2.2	A&H cost containment percent	%
2.3	A&H expense percent excluding cost containment expenses	%
3.1	Do you act as a custodian for health savings accounts?	Yes [] No [X]
3.2	If yes, please provide the amount of custodial funds held as of the reporting date	\$
3.3	Do you act as an administrator for health savings accounts?	Yes [] No [X]
3.4	If yes, please provide the balance of the funds administered as of the reporting date	\$

SCHEDULE S - CEDED REINSURANCE

Showing All New Reinsurance Treaties - Current Year to Date

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Reinsurer	5 Jurisdiction	6 Type of Reinsurer Contract	7 Type of Reinsurer	8 Certified Reinsurer Rating (1 through 6)	9 Effective Date of Certified Reinsurer Rating
NONE								

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company
SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

1	Direct Business Only						
	2	3	4	5	6	7	
Life Contracts							Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees
States, Etc.	Active Status	Life Insurance Premiums	Annuity Considerations				
1. Alabama	AL	L	73,632			73,632	
2. Alaska	AK	L	4,140			4,140	
3. Arizona	AZ	L	207,048			207,048	
4. Arkansas	AR	L	14,450			14,450	
5. California	CA	L	1,067,468			1,067,468	
6. Colorado	CO	L	203,434			203,434	
7. Connecticut	CT	L	176,936			176,936	
8. Delaware	DE	L	22,629			22,629	
9. District of Columbia	DC	L	211,718			211,718	
10. Florida	FL	L	514,533			514,533	
11. Georgia	GA	L	169,010			169,010	
12. Hawaii	HI	L	60,256			60,256	
13. Idaho	ID	L	17,660			17,660	
14. Illinois	IL	L	322,793			322,793	
15. Indiana	IN	L	175,108			175,108	
16. Iowa	IA	L	164,848	450		165,298	
17. Kansas	KS	L	78,619			78,619	
18. Kentucky	KY	L	64,919			64,919	
19. Louisiana	LA	L	80,768			80,768	
20. Maine	ME	L	41,159			41,159	
21. Maryland	MD	L	244,380	315		244,695	
22. Massachusetts	MA	L	239,323			239,323	
23. Michigan	MI	L	320,050	2,550		322,600	
24. Minnesota	MN	L	90,494			90,494	
25. Mississippi	MS	L	57,675			57,675	
26. Missouri	MO	L	135,536			135,536	
27. Montana	MT	L	97,195			97,195	
28. Nebraska	NE	L	84,191	450		84,641	
29. Nevada	NV	L	93,110			93,110	
30. New Hampshire	NH	L	46,282			46,282	
31. New Jersey	NJ	L	390,640			390,640	
32. New Mexico	NM	L	22,330			22,330	
33. New York	NY	N	48,590			48,590	
34. North Carolina	NC	L	291,723			291,723	
35. North Dakota	ND	L	1,196			1,196	
36. Ohio	OH	L	318,056			318,056	
37. Oklahoma	OK	L	305,409			305,409	
38. Oregon	OR	L	86,034			86,034	
39. Pennsylvania	PA	L	500,528			500,528	
40. Rhode Island	RI	L	30,177			30,177	
41. South Carolina	SC	L	156,027			156,027	
42. South Dakota	SD	L	11,743			11,743	
43. Tennessee	TN	L	160,366			160,366	
44. Texas	TX	L	873,512			873,512	
45. Utah	UT	L	77,827			77,827	
46. Vermont	VT	L	29,891	300		30,191	
47. Virginia	VA	L	391,687			391,687	
48. Washington	WA	L	186,695			186,695	
49. West Virginia	WV	L	49,291			49,291	
50. Wisconsin	WI	L	92,292			92,292	
51. Wyoming	WY	L	5,258			5,258	
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 Aliens	OT	XXX	14,895			14,895	
59. Subtotal	(a)	50	9,123,531	4,065		9,127,596	
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	81,833				81,833	
94. Aggregate or other amounts not allocable by State	XXX						
95. Totals (Direct Business)	XXX	9,205,364	4,065			9,209,429	
96. Plus Reinsurance Assumed	XXX						
97. Totals (All Business)	XXX	9,205,364	4,065			9,209,429	
98. Less Reinsurance Ceded	XXX	8,135,595				8,135,595	
99. Totals (All Business) less Reinsurance Ceded	XXX	1,069,769	4,065			1,073,834	
DETAILS OF WRITE-INS							
58001. ZZZ Other Alien	XXX	14,895				14,895	
58002.	XXX						
58003.	XXX						
58998. Summary of remaining write-ins for Line 58 from overflow page	XXX						
58999. Totals (Lines 58001 through 58003 plus 58998)(Line 58 above)	XXX	14,895				14,895	
9401.	XXX						
9402.	XXX						
9403.	XXX						
9498. Summary of remaining write-ins for Line 94 from overflow page	XXX						
9499. Totals (Lines 9401 through 9403 plus 9498)(Line 94 above)	XXX						

(L) Licensed or Chartered - Licensed Insurance Carrier or Domiciled RRG; (R) Registered - Non-domiciled RRGs; (Q) Qualified - Qualified or Accredited Reinsurer; (E) Eligible - Reporting Entities eligible or approved to write Surplus Lines in the state; (N) None of the above - Not allowed to write business in the state.

(a) Insert the number of L responses except for Canada and Other Alien.

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
WP-SC, LLC*	26-4441097		Delaware
MSP-SC, LLC	04-1590850		Delaware
Country Club Office Plaza LLC*	27-1435692		Delaware
Invicta Advisors LLC	56-2574604		Delaware
Jefferies Finance LLC*	27-0105644		Delaware
Apex Credit Partners LLC	None		Delaware
JFIN Fund V 2017 LLC	None		Delaware
JFIN Fund III LLC	None		Delaware
JFIN Asset Management 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 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

*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 CLO 2015 Ltd.*	None		Cayman Islands
JFIN CLO 2015-II Ltd.*	None		Cayman Islands
JFIN Revolver CLO Ltd.	None		Cayman Islands
JFIN Revolver CLO 2014 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2015 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2015-II Ltd.	None		Cayman Islands
JFIN CLO 2016 Ltd.*	None		Cayman Islands
JFIN CLO 2017 Ltd *	None		Cayman Islands
MassMutual Retirement Services, 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
MMC Equipment Finance LLC	04-1590850		Delaware
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
MSC Holding Company, LLC	45-4376777		Delaware
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
First Mercantile Trust Company	62-0951563		Tennessee
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures LLC	47-1296410		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
Society of Grownups, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I 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>
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings (UK) Limited	98-0432153		United Kingdom
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 Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Babson European Direct Lending 1 GP LLP	None		United Kingdom
Barings Advisers (Japan) KK	None		Japan
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
Barings Real Estate Advisers Japan KK	None		Japan
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate Advisers GmbH	98-1194368		Germany
MassMutual Baring Holding LLC	04-1590850		Delaware
Baring North America LLC	98-0241935		Massachusetts
MassMutual Holdings (Bermuda) Limited	None		Bermuda
Baring Asset Management Limited	98-0241935		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 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 Asset Management (Japan) Limited	98-0236449		Japan
Baring Asset Management (Australia) Pty Limited	98-0457456		Australia
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sàrl	None		Switzerland
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC

*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>
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 Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Barings Investment Advisers (Hong Kong) Limited	None		Hong Kong, Special Administrative Region of China
Alchemy Copyrights, LLC*	47-2642354		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
Solar Acquisition Holding, LLC	None		Delaware
Sweet Tree Holdings I, LLC	46-3123110		Delaware
Tamiami Citrus, LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
U.S. Buyer Broadcasting, LLC	47-1855920		Delaware
U.S. WIG Holdings, LP	46-1500495		Delaware
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
VGS Acquisition Holding, LLC	None		Delaware
WC Aircraft Holdings US II, LLC	46-3378584		Delaware
Wood Creek Aircraft Holding I, LP	None		Cayman Islands
Babson Capital Floating Rate Income Fund Management, LLC	04-1590850		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings TERO Management LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
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
SDCOS Management LLC	04-1590850		Delaware
Somerset Special Opportunities Management LLC	04-1590850		Delaware

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
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
Coastal Merger Corp.	None		Delaware
HarbourView Asset Management Corporation	22-2697140		New York
OFI Global Trust Company	13-3459790		New York
OFI International, Ltd.	None		United Kingdom
Trinity Investment Management Corporation	25-1951632		Pennsylvania
OFI SteelPath, Inc.	84-1128397		Delaware
Shareholder Services, Inc.	84-1066811		Colorado
VTL Associates, LLC	None		Pennsylvania
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
MassMutual Asia Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Asia Investors Ltd.	None		Hong Kong, Special Administrative Region of China
MassMutual Guardian Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Insurance Consultants Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Services Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Trustees Limited	None		Hong Kong, Special Administrative Region of China
Protective Capital (International) Limited	98-0610331		Hong Kong, Special Administrative Region of China
MassMutual Life Insurance Company	None		Japan
MassMutual Internacional (Chile) SpA	98-1033127		Chile
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		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	04-1590850		Delaware

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		Delaware
Alexandria Towers Investors LLC	16-1720387		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Almack Mezzanine Fund III LP*	None		United Kingdom
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Barings Emerging Markets Local Debt Fund	None		Ireland
Barings Global Special Situations Credit Fund 1	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. 2007-I	None		Cayman Islands
Babson CLO Ltd. 2012-I	None		Cayman Islands
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2013-II	98-1128827		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2014-II	None		Cayman Islands
Babson CLO Ltd. 2014-III	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
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
Babson Capital Global Credit Fund (Lux) SCSp, SIACV-SIF	None		Luxembourg
Baring Focused EAFE Equity Fund	11-3789446		Delaware
Baring Global Dynamic Asset Allocation Fund	30-0607379		Delaware
Barings Global Energy Infrastructure Fund I LP*	98-1332384		Cayman Islands
Barings NA Private Loan Fund*	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
Benton Street Partners I, L.P.*	98-0536233		Cayman Islands
Benton Street Partners II, L.P.*	98-0536199		Cayman Islands
Braemar Energy Ventures I, L.P. *	None		Delaware
Cambridge Hotel, LLC	06-1614196		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>
Cheyenne Mountain Resort LLC	04-1590850		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Cornerstone Core Mortgage Venture I LP	27-1701622		Delaware
Cornerstone Enhanced Mortgage Fund I LP	45-3751572		Delaware
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Duchess VI CLO B.V.	None		United Kingdom
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I, L.P.*	80-0691253		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
Kazwell Realty Partners LLC	20-3887968		Delaware
Marco Hotel LLC	46-4255307		Delaware
MM Debt Participations LLC*	81-3000420		Delaware
MML O'Hare Hotel LLC	26-3799762		Delaware
Oakley Grove Development LLC	20-3887968		Delaware
Old Pasco Properties LLC	20-3887968		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
Seattle 1415 Hotel Owner LLC	46-5491311		Delaware
Sedona TFMP Land LLC	04-1590850		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Myrtle Monrovia MM LLC	04-1590850		Delaware
South Pasco Properties LLC	20-3887968		Delaware
Tower Square Capital Partners, L.P.*	04-3722906		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
Baring Affiliates & Funds:			
Barings Emerging Markets Debt Blended Total Return Fund	None		Ireland

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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 Emerging Markets Debt Short Duration Fund	None		Ireland
Barings Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Floating Rate Income Fund, L.P.	27-3330830		Delaware
Barings Global Investment Grade Corporate Plus 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 Emerging Markets Local Currency Debt Fund	47-3774453		Massachusetts
Barings Global High Yield Fund	47-3790192		Massachusetts
Baring Greater China Equity Fund	None		Hong Kong
Barings Total Return Bond Fund	47-3734770		Massachusetts
Barings U.S. High Yield Fund	47-3801860		Massachusetts
Gateway Mezzanine Partners I Trust	None		Australia
Great Lakes II LLC*	71-1018134		Delaware
Great Lakes LLC*	56-2505390		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Somerset Special Opportunities Master Fund LP	None		Cayman Islands
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
12-18 West 55th Street Predevelopment, LLC*	20-2548283		Delaware
50 Liberty LLC*	36-4823011		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
Budapester Strasse LLC	81-4382111		Delaware
CHC/RFP VI Core LLC	04-1590850		Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II 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 330 Third LLC*	46-5001122		Delaware
CREA FMF Nashville LLC	46-4367364		Delaware
CREA/LYON West Gateway, LLC*	26-2399532		Delaware
CREA Madison Member LLC	81-0890084		Delaware
CREA/PPC Venture LLC*	20-0348173		Delaware
Fallon Cornerstone One MPD LLC*	26-1611591		Delaware
Fan Pier Development LLC*	20-3347091		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>
Farrington London Holdings LLC*	46-3880526		Delaware
Infinity SCD Ltd.	None		United Kingdom
Johnston Groves LLC	20-4819358		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
MM Chatham Office LLC*	81-2871333		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Sawgrass Village Shopping Center LLC*	27-2977720		Delaware
Ten Fan Pier Boulevard LLC*	None		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
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterford Development Associates	20-2970495		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
WeHo Domain LLC*	46-3122029		Delaware
Willowood Lakeside Master LLC	81-1552222		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
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

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual 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:			
Oppenheimer Developing Markets Fund	93-6305075		Delaware
Oppenheimer Developing Markets Equity UCITS	None		Ireland
Oppenheimer Emerging Markets Innovators UCITS	None		Ireland
Oppenheimer ESG Revenue ETF	81-3492794		Delaware
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 Multi-Asset Income Fund	47-1714929		Delaware
Oppenheimer Global Value Equity UCITS	None		Ireland
Oppenhemier International Growth & Income Fund	81-3136071		Delaware
Oppenheimer Macquarie Global Infrastructure Fund	81-1080638		Delaware

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388	0000225602		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		0000924777		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							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	95.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.000	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			26-4441097				WP-SC, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	81.400	MMLIC		
.0000			26-4441097				WP-SC, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	18.600	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			56-2574604				Invicta Advisors LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		
.0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund V 2017 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							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		
.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		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000							JFIN CLO 2015 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	44.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	56.000	MMLIC		
.0000							JFIN CLO 2015-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	33.000	MMLIC		
.0000							JFIN CLO 2015-II Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	53.000	MMLIC		
.0000							JFIN Revolver CLO Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	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 2015-II Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2016 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017 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			04-3356880		0000943903		MML Distributors LLC	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-3356880		0000943903		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							MML Strategic Distributors, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1563535	2881445	0001103653		The MassMutual Trust Company, FSB	.CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-1590850				MMC Equipment Finance LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	.DE	NIA	MMC Equipment Finance LLC	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		0000067160		MML Private Equity Fund Investor LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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			45-4376777				MSC Holding Company, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-3341767				MassMutual Holding MSC, Inc.	.MA	NIA	MSC Holding Company, LLC	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			06-1597528				MassMutual Assignment Company	.NC	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	.DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			62-0951563	1160004	0001259664		First Mercantile Trust Company	.TN	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	.DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850		0001399869		MassMutual Capital Partners LLC	.DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures 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				Society of Growups, LLC	.MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850		0000701059		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		0001456663		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		000009015		Barings LLC	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.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		0000930012		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			98-0432153				Barings (UK) Limited	.GBR	NIA	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.a. r.l.	.LUX	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine GP III Limited	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Holding Partnership GP Limited	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund Limited	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund II Limited	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000			98-1012393				Barings Global Advisors Limited	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Babson European Direct Lending 1 GP LLP	.GBR	NIA	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Barings Advisers (Japan) KK	.JPN	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Holdings LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital LLC	.NI	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Corporation	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895	0001011148		Barings Real Estate Advisers Inc.	.CA	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate Advisers Japan KK	.JPN	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate UK Holdings Limited	.DE	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							BREAE AIFM LLP	.GBR	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000			98-0654401				Barings Real Estate Advisers (Continental Europe) Limited	.GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654388				Barings Real Estate Advisers Europe LLP	.GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000							Barings Real Estate Advisers Europe Finance LLP	.GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654412				Barings Real Estate Advisers GmbH	.DEU	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-1194368				MassMutual Baring Holding LLC	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Baring Holding LLC	.IA	NIA	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0241935	2363071	0000932463		MassMutual Holdings (Bermuda) Limited	.BMU	NIA	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate UK Holdings Limited	.GBR	NIA	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
.0000			98-0457328		0001568131		Baring International Investment Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Baring International Investment Management Holdings	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457587				Baring Asset Management UK Holdings Limited	.GBR	NIA	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000							Baring Asset Management UK Holdings Limited	.DEU	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management GmbH	.DEU	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0465031				Baring Asset Management (Asia) Holdings Limited	.HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0524271				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) Limited	.HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457463				Baring Asset Management (Asia) Limited	.KOR	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Korea Limited	.JPN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0236449				Baring Asset Management (Japan) Limited	.AUS	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management (Australia) Pty Limited	.IRL	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457456				Baring International Fund Managers (Ireland) Limited				Ownership	100.000	MMLIC		
.0000			98-0524272				Baring International Fund Managers (Ireland) Limited				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	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000							Baring Asset Management Switzerland Sarl	.CHE	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457707				Baring SICE (Taiwan) Limited	.TWN	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			98-0457456				Barings Australia Holding Company Pty Ltd	.AUS	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Australia Pty Ltd	.AUS	NIA	Baring Australia Holding Company Pty Ltd.	Ownership	100.000	MMLIC		
.0000							Barings Investment Advisors (Hong Kong) Limited	.HKG	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	15.100	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.100	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	NIA	Barings LLC	Influence		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			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	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC.	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.800	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	66.300	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			46-3123110				Sweet Tree Holdings 1, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	16.100	MMLIC		
.0000			46-3123110				Sweet Tree Holdings 1, LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Tamiami Citrus, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		
.0000							Teaktree Acquisition, LLC	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Teaktree Acquisition, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	12.700	MMLIC		
.0000							U.S. Buyer Broadcasting, LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			46-1500495				U.S. Buyer Broadcasting, LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			46-1500495				U.S. WIG Holdings, LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	11.700	MMLIC		
.0000			46-1500495				U.S. WIG Holdings, LP	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	32.600	MMLIC		
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Solar Acquisition Holding, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	39.200	MMLIC		
.0000							Solar Acquisition Holding, LLC	.DE	NIA	Barings LLC	Management		MMLIC		
.0000							VGS Acquisition Holding, LLC	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	42.600	MMLIC		
.0000							VGS Acquisition Holding, LLC	.DE	NIA	Barings LLC	Management		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	18.000	MMLIC		
.0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Wood Creek Capital Management LLC	Management		MMLIC		
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.100	MMLIC		
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Wood Creek Capital Management LLC	Management		MMLIC		
.0000			04-1590850		0001501011		Babson Capital Floating Rate Income Fund 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							Barings CLO Investment Partners GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings TERO Management 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			04-1590850				SDCOS Management 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		
.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							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	97.000	MMLIC		
.0000			13-2527171	2679183	0000820031		OppenheimerFunds, Inc.	CO	NIA	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		
.0000			13-2953455		0000276541		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	0001179479		OFI Global Institutional, Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							Coastal Merger Corp.	DE	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			22-2697140				HarbourView Asset Management Corporation	NY	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	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			25-1951632		0000099782		Trinity Investment Management Corporation	PA	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			84-1128397		0000857468		OFI SteelPath, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-1066811		0000276398		Shareholder Services, Inc.	CO	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							VTL Associates, LLC	PA	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							Index Management Solutions, LLC	PA	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-0765063		0001041674		OFI Global Asset Management, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			91-2036414		0001179480		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		0000764139		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	BMJ	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			04-3313782				MassMutual International LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000							MassMutual Asia Limited	HKG	IA	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Asia Investors Ltd.	HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Guardian Limited	HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000							MassMutual Insurance Consultants Limited	.HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Services Limited	.HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Trustees Limited	.HKG	NIA	MassMutual Asia Limited	Ownership	80.000	MMLIC		
.0000			98-0610331				Protective Capital (International) Limited	.HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000			98-1033127				MassMutual Internacional (Chile) SpA	.CHL	NIA	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Life Insurance Company	.JPN	IA	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000			04-2443240				MML Management Corporation	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-3548444				MassMutual International Holding MSC, Inc.	.IA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor II, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor III, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-8730751				Cornerstone Global REIT Corporation	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				100 w. 3rd Street LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				300 South Tryon Hotel LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				300 South Tryon LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				54 West Capital LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			16-1720387				Alexandria Towers Investors 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	38.900	MMLIC		
.0000							Almack Mezzanine Fund I LP	.GBR	NIA	C.M. Life Insurance Company	Ownership	4.300	MMLIC		
.0000							Almack Mezzanine Fund I LP	.GBR	NIA	Barings (U.K.) Limited	Management		MMLIC		
.0000							Almack Mezzanine Fund II Unleveraged LP	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	73.300	MMLIC		
.0000							Almack Mezzanine Fund II Unleveraged LP	.GBR	NIA	Barings (U.K.) Limited	Management		MMLIC		
.0000							Almack Mezzanine Fund III LP	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.400	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							Barings Emerging Markets Corporate Bond Fund	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.700	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	.IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Local Debt Fund	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	47.300	MMLIC		
.0000							Barings Emerging Markets Local Debt Fund	.IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Special Situations Credit Fund 1	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.700	MMLIC		
.0000							Barings Global Special Situations Credit Fund 1	.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	23.900	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	C.M. Life Insurance Company	Ownership	1.500	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	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000			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	78.700	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	3.900	MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings US High Yield Bond Fund	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.600	MMLIC		
.0000							Barings US High Yield Bond Fund	JRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson CLO Ltd. 2007-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2012-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2012-II	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2013-I	CYM	NIA	Barings LLC	Influence		MMLIC		4
.0000			98-1128827				Babson CLO Ltd. 2013-II	CYM	NIA	Barings LLC	Influence		MMLIC		5
.0000							Babson CLO Ltd. 2014-I	CYM	NIA	Barings LLC	Influence		MMLIC		2
.0000							Babson CLO Ltd. 2014-II	CYM	NIA	Barings LLC	Influence		MMLIC		6
.0000							Babson CLO Ltd. 2014-III	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2015-I	CYM	NIA	Barings LLC	Influence		MMLIC		7
.0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MMLIC		8
.0000							Babson CLO Ltd. 2016-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson CLO Ltd. 2016-I	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2014-II BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Euro CLO 2016-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
.0000							Babson Global Credit Fund (Lux) SCSp, SIACV-SIF	LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.200	MMLIC		
.0000							Babson Global Credit Fund (Lux) SCSp, SIACV-SIF	LUX	NIA	Barings LLC	Management		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	90.000	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	C.M. Life Insurance Company	Ownership	10.000	MMLIC		
.0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	Barings LLC	Management		MMLIC		
.0000			11-3789446				Baring Focused EAFE Equity Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.400	MMLIC		
.0000			11-3789446				Baring Focused EAFE Equity Fund	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			30-0607379		0001497049		Baring Global Dynamic Asset Allocation Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	18.700	MMLIC		
.0000			30-0607379		0001497049		Baring Global Dynamic Asset Allocation Fund	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.200	MMLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	CYM	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	82.000	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	41.100	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited	Management		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	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	64.400	MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Company	Management				
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership/Influence	99.100	MMLIC		
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Barings LLC	Management				
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	C.M. Life Insurance Company	Ownership	0.100	MMLIC		
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.400	MMLIC		
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.600	MMLIC		3
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership	10.400	MMLIC		
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	Barings LLC	Management				
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	92.500	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	Barings LLC	Management				
.0000			06-1614196				Cambridge Hotel, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Cheyenne Mountain Resort LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	81.700	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	C.M. Life Insurance Company	Ownership	5.200	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	Barings Real Estate Advisers LLC	Management				
.0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	50.000	MMLIC		
.0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			45-3751572		0001534877		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.600	MMLIC		
.0000			45-3751572		0001534877		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.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				
.0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	50.000	MMLIC		
.0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			20-5578089				Barings Core Property Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	10.300	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.100	MMLIC		
.0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	25.400	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				
.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC		
.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000				3981641			Duchess VI CLO B.V.	GBR	NIA	Barings LLC	Influence				
.0000				4007502			Duchess VII CLO B.V.	GBR	NIA	Barings LLC	Influence				
.0000			20-3887968				E-Wise Land Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	62.500	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	7.700	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Barings LLC	Management				

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.900	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership	5.200	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000			37-1708623		0001565779		Great Lakes III, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	35.700	MMLIC		
.0000			37-1708623		0001565779		Great Lakes III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			20-3887968				Kazwell Realty Partners LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-4255307				Marco Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000			26-3799762				MML O'Hare Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	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			75-2901061				Reston Arboretum LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0713071				Riva Portland LLC	DE	NIA	Massachusetts Mutual Life Insurance 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			46-5491311				Seattle 1415 Hotel Owner LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Sedona TFMP Land LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	46.600	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	2.300	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				South Myrtle Monrovia MM LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				South Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.100	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	4.500	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Barings LLC	Management		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			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	15.000	MMLIC		
.0000			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	6.000	MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	17.000	MMLIC		
.0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	96.400	MMLIC		
.0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P.	DE	NIA	Barings LLC	Management		MMLIC		

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.0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	0.000	MMLIC		
.0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	41.100	MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	0.600	MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Barings LLC	Management		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			27-3330830		0001521404		Babson Capital Floating Rate Income Fund, L.P.	DE	NIA	MassMutual Holding LLC	Ownership	0.000	MMLIC		
.0000							Babson Capital Loan Strategies Master Fund LP	CYM	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Investment Grade Corporate Plus Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000			47-3758432				Barings Emerging Markets Debt Blended Total Return Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-374453				Barings Emerging Markets Local Currency Debt Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3790192				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3734770				Barings Greater China Equity Fund	HKG	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			47-3801860				Barings Total Return Bond Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000							Barings U.S. High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000							Gateway Mezzanine Partners I Trust	AUS	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			56-2505390				Great Lakes LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.400	MMLIC		
.0000			56-2505390				Great Lakes LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.500	MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Barings LLC	Influence		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			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	89.200	MMLIC		
.0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.800	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	46.100	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.600	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	32.300	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.200	MMLIC		
.0000			81-4382111				Budapester Strasse LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				CHC/RFP VI Core LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.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			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	100.000	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			35-2531693				Cornerstone Permanent Mortgage Fund III	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	Company	Ownership	0.900	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.100	MMLIC		
.0000			46-4367364				CREA FMF Nashville LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-2399532				CREA/LYON West Gateway, LLC	DE	NIA	Company	Ownership	54.000	MMLIC		
.0000			26-2399532				CREA/LYON West Gateway, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.000	MMLIC		
.0000			81-0890084				CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	93.400	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.600	MMLIC		
.0000			26-1611591	3956836			Fallon Cornerstone One MPD LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	67.100	MMLIC		
.0000			26-1611591	3956836			Fallon Cornerstone One MPD LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.600	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	58.500	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.800	MMLIC		
.0000			46-3880526				Farrington London Holdings LLC	DE	NIA	Company	Ownership	94.500	MMLIC		
.0000			46-3880526				Farrington London Holdings LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.500	MMLIC		
.0000							Infinity SCD Ltd	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.200	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			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	83.400	MMLIC		
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.600	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Company	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							Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	91.000	MMLIC		
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	C.M. Life Insurance Company	Ownership	9.000	MMLIC		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000			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			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			20-2970495				Waterford Development Associates	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	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			81-1552222				Willowood Lakeside Master LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		
.0000			20-5481477				Ygnatio Valley Funding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			45-3168892			00	MassMutual Barings Dynamic Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			51-0529328		0000927972	00	MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			26-3229251		0000927972	00	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.500	MMLIC		
.0000			04-3277550		0000927972	00	MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.800	MMLIC		
.0000			14-1980900		0000916053	00	MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	29.700	MMLIC		
.0000			01-0821120		0000916053	00	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.000	MMLIC		
.0000			04-3512593		0000916053	00	MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3513019		0000916053	00	MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.200	MMLIC		
.0000			42-1710935		0000916053	00	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	74.600	MMLIC		
.0000			02-0769954		0000916053	00	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		
.0000			04-3584140		0000916053	00	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.600	MMLIC		
.0000			46-4257056		0000067160		MML Series International Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	8.400	MMLIC		
.0000			47-3517233		0001317146		MML Series II Asset Momentum Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.500	MMLIC		
.0000			47-3529636		0001317146		MML Series II Dynamic Bond Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	3.200	MMLIC		
.0000			47-3544629		0001317146		MML Series II Equity Rotation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.100	MMLIC		

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000			47-3559064		0001317146		MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.500	MMLIC		
.0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	25.600	MMLIC		
.0000			47-5326235		0000916053		MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.700	MMLIC		
.0000			45-1618155		0000916053		MassMutual RetireSMART Conservative Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618222		0000916053		MassMutual RetireSMART Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	5.700	MMLIC		
.0000			45-1618262		0000916053		MassMutual RetireSMART Moderate Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618046		0000916053		MassMutual RetireSMART Moderate Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			93-6305075				Oppenheimer Developing Markets Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.900	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership	31.600	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			81-3492794				Oppenheimer ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							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			47-3676235				Oppenheimer Global Multi-Asset Growth Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			47-1714929				Oppenheimer Global Multi-Asset Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Global Value Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3136071				Oppenheimer International Growth & Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-1080638				Oppenheimer Macquarie Global Infrastructure Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns .98% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 3.6% and includes only Great Lakes III, L.P.
3	Partnership investors own 99% and include Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own 8.7% and includes only Babson Capital Loan Strategies Fund, L.P.
5	Debt investors own 4.3% and includes only Great Lakes III, L.P.
6	Debt investors own 5.8% and includes only Great Lakes III, L.P.
7	Debt investors own 2.0% and includes only Great Lakes III, L.P.
8	Debt investors own 4.3% and includes only Great Lakes III, L.P.

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SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

The following supplemental reports are required to be filed as part of your statement filing. However, in the event that your company does not transact the type of business for which the special report must be filed, your response of NO to the specific interrogatory will be accepted in lieu of filing a "NONE" report and a bar code will be printed below. If the supplement is required of your company but is not being filed for whatever reason enter SEE EXPLANATION and provide an explanation following the interrogatory questions.

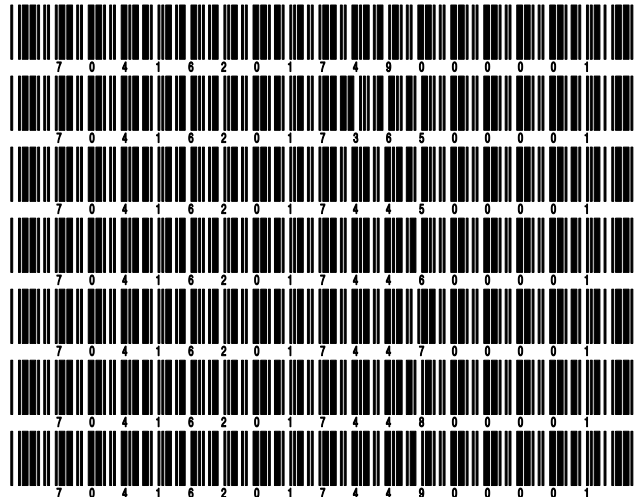
	Response
1. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3. Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
4. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
5. Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC?	NO
6. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
7. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC?	NO

Explanation:

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

Bar Code:

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



OVERFLOW PAGE FOR WRITE-INS

NONE

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE A - VERIFICATION

Real Estate

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year		
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition		
3. Current year change in encumbrances		
4. Total gain (loss) on disposals		
5. Deduct amounts received on disposals		
6. Total foreign exchange change in book/adjusted carrying value		
7. Deduct current year's other than temporary impairment recognized		
8. Deduct current year's depreciation		
9. Book/adjusted carrying value at 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

Mortgage Loans

	1 Year to Date	2 Prior Year Ended December 31
1. Book value/recorded investment excluding accrued interest, December 31 of prior year	4,007,088	5,847,458
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition	148	2,992
3. Capitalized deferred interest and other		
4. Accrual of discount	561	1,411
5. Unrealized valuation increase (decrease)		
6. Total gain (loss) on disposals		
7. Deduct amounts received on disposals	250,202	1,832,747
8. Deduct amortization of premium and mortgage interest points and commitment fees	1,610	12,026
9. Total foreign exchange change in book value/recorded investment excluding accrued interest		
10. Deduct current year's other than temporary impairment recognized		
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	3,755,985	4,007,088
12. Total valuation allowance		
13. Subtotal (Line 11 plus Line 12)	3,755,985	4,007,088
14. Deduct total nonadmitted amounts		
15. Statement value at end of current period (Line 13 minus Line 14)	3,755,985	4,007,088

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year		
2. Cost of acquired:		
2.1 Actual cost at time of acquisition		
2.2 Additional investment made after acquisition		
3. Capitalized deferred interest and other		
4. Accrual of discount		
5. Unrealized valuation increase (decrease)		
6. Total gain (loss) on disposals		
7. Deduct amounts received on disposals		
8. Deduct amortization of premium and depreciation		
9. Total foreign exchange change in book/adjusted carrying value		
10. Deduct current year's other than temporary impairment recognized		
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)		
12. Deduct total nonadmitted amounts		
13. Statement value at end of current period (Line 11 minus Line 12)		

NONE

SCHEDULE D - VERIFICATION

Bonds and Stocks

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value of bonds and stocks, December 31 of prior year	310,216,806	222,828,946
2. Cost of bonds and stocks acquired	8,215,632	136,043,421
3. Accrual of discount	361,931	498,623
4. Unrealized valuation increase (decrease)	18,901	(29,573)
5. Total gain (loss) on disposals	(37,491)	128,413
6. Deduct consideration for bonds and stocks disposed of	6,739,573	48,766,601
7. Deduct amortization of premium	132,798	477,316
8. Total foreign exchange change in book/adjusted carrying value		
9. Deduct current year's other than temporary impairment recognized	41,274	9,107
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	311,862,134	310,216,806
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	311,862,134	310,216,806

STATEMENT AS OF MARCH 31, 2017 OF THE MML Bay State Life Insurance Company

SCHEDULE D - PART 1B

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

NAIC Designation	1 Book/Adjusted Carrying Value Beginning of Current Quarter	2 Acquisitions During Current Quarter	3 Dispositions During Current Quarter	4 Non-Trading Activity During Current Quarter	5 Book/Adjusted Carrying Value End of First Quarter	6 Book/Adjusted Carrying Value End of Second Quarter	7 Book/Adjusted Carrying Value End of Third Quarter	8 Book/Adjusted Carrying Value December 31 Prior Year
BONDS								
1. NAIC 1 (a)	248,205,661	268,849,781	289,846,982	(3,258,430)	223,950,030			248,205,661
2. NAIC 2 (a)	120,960,709	380,103,166	349,749,834	4,212,243	155,526,284			120,960,709
3. NAIC 3 (a)	3,438,712		815,351	(599,515)	2,023,846			3,438,712
4. NAIC 4 (a)	1,296,948		622,040	(3,006)	671,902			1,296,948
5. NAIC 5 (a)	782,227		12,347	(5,914)	763,966			782,227
6. NAIC 6 (a)	526,941			(8,260)	518,681			526,941
7. Total Bonds	375,211,198	648,952,947	641,046,554	337,118	383,454,709			375,211,198
PREFERRED STOCK								
8. NAIC 1								
9. NAIC 2								
10. NAIC 3								
11. NAIC 4								
12. NAIC 5								
13. NAIC 6								
14. Total Preferred Stock								
15. Total Bonds and Preferred Stock	375,211,198	648,952,947	641,046,554	337,118	383,454,709			375,211,198

(a) Book/Adjusted Carrying Value column for the end of the current reporting period includes the following amount of short-term and cash equivalent bonds by NAIC designation:

NAIC 1 \$; NAIC 2 \$71,592,781 ; NAIC 3 \$ NAIC 4 \$; NAIC 5 \$; NAIC 6 \$

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SCHEDULE DA - PART 1

Short-Term Investments

	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
9199999 Totals					

NONE

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year		4,995,929
2. Cost of short-term investments acquired		8,472,961
3. Accrual of discount		29,971
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals		308
6. Deduct consideration received on disposals		13,499,169
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)		
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)		

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

SCHEDULE E - VERIFICATION

(Cash Equivalents)

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	64,994,390	55,082,304
2. Cost of cash equivalents acquired	640,737,315	1,147,813,746
3. Accrual of discount	168,052	323,001
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	1	(464)
6. Deduct consideration received on disposals	634,306,977	1,138,224,197
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)	71,592,781	64,994,390
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	71,592,781	64,994,390