

**QUARTERLY STATEMENT**

**OF THE**

**MML Bay State Life Insurance Company**

**TO THE**

**Insurance Department**

**OF THE**

**STATE OF**

**FOR THE QUARTER ENDED  
SEPTEMBER 30, 2016**

**LIFE AND ACCIDENT AND HEALTH**

**2016**



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

# QUARTERLY STATEMENT

AS OF SEPTEMBER 30, 2016

OF THE CONDITION AND AFFAIRS OF THE

## MML Bay State Life Insurance Company

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

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

Country of Domicile United States of America

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

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

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

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

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

Internet Website Address www.massmutual.com

Statutory Statement Contact Tammy A. Peatman, 413-744-6327  
(Name) (Area Code) (Telephone Number)  
tpeatman@massmutual.com, 413-226-4086  
(E-mail Address) (FAX Number)

### OFFICERS

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

### OTHER

Elizabeth Ward Chicares #, Chief Financial Officer Mark Douglas Roellig, Executive Vice President and General Counsel Michael Robert Fanning, Executive Vice President  
Melvin Timothy Corbett, Executive Vice President

### DIRECTORS OR TRUSTEES

Roger William Crandall - Chairman Michael Robert Fanning Elizabeth Ward Chicares #  
Mark Douglas Roellig

State of Massachusetts SS:  
County of Hampden

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

Roger William Crandall Pia Denise Flanagan Todd Garrett Picken  
President and Chief Executive Officer Secretary Treasurer

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_  
a. Is this an original filing? ..... Yes [ X ] No [ ]  
b. If no,  
1. State the amendment number.....  
2. Date filed .....  
3. Number of pages attached.....

STATEMENT AS OF SEPTEMBER 30, 2016 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 .....	286,029,094		286,029,094	222,828,946
2. Stocks:				
2.1 Preferred stocks .....				
2.2 Common stocks .....				
3. Mortgage loans on real estate:				
3.1 First liens .....	4,372,315		4,372,315	5,847,458
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 (\$ .....(995,486) ), cash equivalents (\$ .....31,576,873 ) and short-term investments (\$ .....5,994,772 ) .....	36,576,159		36,576,159	61,289,428
6. Contract loans (including \$ ..... premium notes) .....	94,924,115		94,924,115	95,606,516
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) .....	421,901,683		421,901,683	385,572,348
13. Title plants less \$ ..... charged off (for Title insurers only) .....				
14. Investment income due and accrued .....	4,589,780		4,589,780	4,042,982
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection .....	292	298	(6)	1,850
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ ..... earned but unbilled premiums) .....	(1,733,232)		(1,733,232)	(2,124,980)
15.3 Accrued retrospective premiums (\$ ..... ) and contracts subject to redetermination (\$ ..... ) .....				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers .....	736,542		736,542	5,325,462
16.2 Funds held by or deposited with reinsured companies .....				
16.3 Other amounts receivable under reinsurance contracts .....	27,393,263		27,393,263	21,108,963
17. Amounts receivable relating to uninsured plans .....				
18.1 Current federal and foreign income tax recoverable and interest thereon .....	2,508,111		2,508,111	3,088,375
18.2 Net deferred tax asset .....	6,596,396	2,846,957	3,749,439	3,746,941
19. Guaranty funds receivable or on deposit .....	201,991		201,991	214,116
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 .....	129,092		129,092	281,646
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) .....	462,323,918	2,847,255	459,476,663	421,257,703
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts .....	4,333,575,782		4,333,575,782	4,278,818,122
28. Total (Lines 26 and 27)	4,795,899,700	2,847,255	4,793,052,445	4,700,075,825
<b>DETAILS OF WRITE-INS</b>				
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 SEPTEMBER 30, 2016 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 \$ .....136,904,000 less \$ ..... included in Line 6.3 (including \$ ..... Modco Reserve) .....	136,904,000	136,618,028
2. Aggregate reserve for accident and health contracts (including \$ ..... Modco Reserve) .....		
3. Liability for deposit-type contracts (including \$ ..... Modco Reserve).....	10,891,800	9,891,826
4. Contract claims:		
4.1 Life .....	6,713,640	6,741,511
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 .....	4,710	2,383
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 .....	18,393,938	11,172,256
9.3 Other amounts payable on reinsurance, including \$ ..... assumed and \$ .....4,386,135 ceded .....	4,386,135	798,473
9.4 Interest Maintenance Reserve .....	332,190	365,578
10. Commissions to agents due or accrued-life and annuity contracts \$ .....18,213 , accident and health \$ ..... and deposit-type contract funds \$ .....	18,213	66,652
11. Commissions and expense allowances payable on reinsurance assumed .....		
12. General expenses due or accrued .....	344	399,844
13. Transfers to Separate Accounts due or accrued (net) (including \$ .....(600,197) accrued for expense allowances recognized in reserves, net of reinsured allowances) .....	16,785,582	16,533,168
14. Taxes, licenses and fees due or accrued, excluding federal income taxes .....	164,463	234,258
15.1 Current federal and foreign income taxes, including \$ ..... on realized capital gains (losses) .....		
15.2 Net deferred tax liability .....		
16. Unearned investment income .....		
17. Amounts withheld or retained by company as agent or trustee .....	13,908	16,902
18. Amounts held for agents' account, including \$ ..... agents' credit balances .....		
19. Remittances and items not allocated .....	283,455	(275,038)
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 .....	4,933,855	4,666,310
24.02 Reinsurance in unauthorized and certified (\$ ..... ) companies .....		
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$ ..... ) reinsurers .....		
24.04 Payable to parent, subsidiaries and affiliates .....	2,104,795	2,208,982
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 .....	11,294,288	
24.10 Payable for securities lending .....		
24.11 Capital notes \$ ..... and interest thereon \$ .....		
25. Aggregate write-ins for liabilities .....	232,503	515,565
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) .....	213,457,819	189,956,698
27. From Separate Accounts Statement .....	4,333,575,782	4,278,818,122
28. Total liabilities (Lines 26 and 27) .....	4,547,033,601	4,468,774,820
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) .....	99,781,730	85,063,891
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) .....	243,518,644	228,800,805
38. Totals of Lines 29, 30 and 37 .....	246,018,844	231,301,005
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) .....	4,793,052,445	4,700,075,825
<b>DETAILS OF WRITE-INS</b>		
2501. Miscellaneous liabilities .....	185,266	297,428
2502. Funds awaiting escheat .....	47,237	218,137
2503. ....		
2598. Summary of remaining write-ins for Line 25 from overflow page .....		
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) .....	232,503	515,565
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 SEPTEMBER 30, 2016 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	14,705,005	19,945,417	24,468,709
2. Considerations for supplementary contracts with life contingencies	65,136		
3. Net investment income	10,501,043	9,226,257	12,852,135
4. Amortization of Interest Maintenance Reserve (IMR)	143,055	134,526	197,060
5. Separate Accounts net gain from operations excluding unrealized gains or losses			
6. Commissions and expense allowances on reinsurance ceded	4,294,205	4,216,821	5,631,952
7. Reserve adjustments on reinsurance ceded	(11,495,550)	(16,158,033)	(15,069,413)
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	55,328,506	57,058,766	70,035,625
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	(866,595)	(1,020,499)	(932,285)
9. Totals (Lines 1 to 8.3)	72,674,805	73,403,255	97,183,783
10. Death benefits	32,987,286	35,667,092	46,519,558
11. Matured endowments (excluding guaranteed annual pure endowments)			
12. Annuity benefits	2,932,197	648,830	918,837
13. Disability benefits and benefits under accident and health contracts	257,420	399,072	479,467
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	36,379,998	36,834,603	48,806,554
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	979,920	460,518	702,273
18. Payments on supplementary contracts with life contingencies			
19. Increase in aggregate reserves for life and accident and health contracts	285,972	4,580,586	4,945,662
20. Totals (Lines 10 to 19)	73,822,793	78,590,701	102,372,351
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	2,285,364	2,579,173	3,399,662
22. Commissions and expense allowances on reinsurance assumed			
23. General insurance expenses	5,740,409	5,958,320	8,068,586
24. Insurance taxes, licenses and fees, excluding federal income taxes	776,428	876,781	1,118,136
25. Increase in loading on deferred and uncollected premiums	(3,096)	(3,313)	(556)
26. Net transfers to or (from) Separate Accounts net of reinsurance	(27,908,129)	(36,741,154)	(45,187,681)
27. Aggregate write-ins for deductions	(157,747)	25,993	62,351
28. Totals (Lines 20 to 27)	54,556,022	51,286,501	69,832,849
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	18,118,783	22,116,754	27,350,934
30. Dividends to policyholders			
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	18,118,783	22,116,754	27,350,934
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	3,164,330	5,619,328	6,658,379
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)	14,954,453	16,497,426	20,692,555
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ 25,936 (excluding taxes of \$ 59,052 transferred to the IMR)	35,928	(11,879)	(35,042)
35. Net income (Line 33 plus Line 34)	14,990,381	16,485,547	20,657,513
<b>CAPITAL AND SURPLUS ACCOUNT</b>			
36. Capital and surplus, December 31, prior year	231,301,005	211,693,698	211,693,698
37. Net income (Line 35)	14,990,381	16,485,547	20,657,513
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (2,519)	(4,677)		
39. Change in net unrealized foreign exchange capital gain (loss)			
40. Change in net deferred income tax	(1,000,675)	(977,340)	(1,309,067)
41. Change in nonadmitted assets	1,000,355	557,862	601,456
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	(267,545)	(305,940)	(342,595)
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			
54. Net change in capital and surplus for the year (Lines 37 through 53)	14,717,839	15,760,129	19,607,307
55. Capital and surplus, as of statement date (Lines 36 + 54)	246,018,844	227,453,827	231,301,005
<b>DETAILS OF WRITE-INS</b>			
08.301. Sub advisory fees	(1,324,543)	(1,224,338)	(1,540,537)
08.302. Other miscellaneous income	457,948	203,839	608,252
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)	(866,595)	(1,020,499)	(932,285)
2701. Miscellaneous charges to operations	(157,747)	25,993	62,351
2702.			
2703.			
2798. Summary of remaining write-ins for Line 27 from overflow page			
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	(157,747)	25,993	62,351
5301.			
5302.			
5303.			
5398. Summary of remaining write-ins for Line 53 from overflow page			
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)			

## STATEMENT AS OF SEPTEMBER 30, 2016 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
<b>Cash from Operations</b>			
1. Premiums collected net of reinsurance .....	15,066,988	17,338,735	22,222,478
2. Net investment income .....	9,960,290	8,325,248	12,057,377
3. Miscellaneous income .....	51,427,704	51,184,714	58,356,708
4. Total (Lines 1 to 3) .....	76,454,982	76,848,697	92,636,563
5. Benefit and loss related payments .....	68,964,027	72,653,829	92,108,978
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts .....	(28,160,543)	(35,247,078)	(45,157,205)
7. Commissions, expenses paid and aggregate write-ins for deductions .....	9,206,371	12,101,768	13,204,996
8. Dividends paid to policyholders .....			
9. Federal and foreign income taxes paid (recovered) net of \$ .....978,489 tax on capital gains (losses) .....	2,669,054	1,432,157	4,335,481
10. Total (Lines 5 through 9) .....	52,678,909	50,940,676	64,492,250
11. Net cash from operations (Line 4 minus Line 10) .....	23,776,073	25,908,021	28,144,313
<b>Cash from Investments</b>			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds .....	27,547,437	13,386,506	26,695,569
12.2 Stocks .....			
12.3 Mortgage loans .....	1,468,731	378,496	711,572
12.4 Real estate .....			
12.5 Other invested assets .....			
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments .....	(936)	89	155
12.7 Miscellaneous proceeds .....	114,063	505,204	499,607
12.8 Total investment proceeds (Lines 12.1 to 12.7) .....	29,129,295	14,270,295	27,906,903
13. Cost of investments acquired (long-term only):			
13.1 Bonds .....	90,612,231	95,271,243	104,592,416
13.2 Stocks .....			
13.3 Mortgage loans .....	1,564	2,383,218	2,394,997
13.4 Real estate .....			
13.5 Other invested assets .....			
13.6 Miscellaneous applications .....	(11,294,288)	(2,888,691)	
13.7 Total investments acquired (Lines 13.1 to 13.6) .....	79,319,507	94,765,770	106,987,413
14. Net increase (or decrease) in contract loans and premium notes .....	(682,401)	1,129,326	1,586,260
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14) .....	(49,507,811)	(81,624,801)	(80,666,770)
<b>Cash from Financing and Miscellaneous Sources</b>			
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 .....	805,491	2,927,819	3,385,215
16.5 Dividends to stockholders .....			
16.6 Other cash provided (applied) .....	212,978	238,555	(309,725)
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6) .....	1,018,469	3,166,374	3,075,490
<b>RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS</b>			
18. Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17) .....	(24,713,269)	(52,550,406)	(49,446,967)
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year .....	61,289,428	110,736,395	110,736,395
19.2 End of period (Line 18 plus Line 19.1) .....	36,576,159	58,185,989	61,289,428

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

20.0001. Bond conversions and refinancing .....	500,000	473,646	1,717,983
20.0002. Interest capitalization for long-term debt .....		2,091	2,091

## 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 .....	28,038,205	30,164,280	40,121,999
3. Ordinary individual annuities .....	18,095	13,185	15,900
4. Credit life (group and individual) .....			
5. Group life insurance .....	(7,187,754)	(879,786)	2,743,977
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 .....	20,868,546	29,297,679	42,881,876
12. Deposit-type contracts .....			
13. Total	20,868,546	29,297,679	42,881,876
DETAILS OF WRITE-INS			
1001. ....			
1002. ....			
1003. ....			
1098. Summary of remaining write-ins for Line 10 from overflow page .....			
1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

## NOTES TO FINANCIAL STATEMENTS

### TABLE OF CONTENTS

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



## 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:

	State of Domicile	2016	2015
<b>NET INCOME</b>			
(1) State basis (Page 4, Line 35, Columns 1 & 3)	CT	\$ 14,990,381	\$ 20,657,513
(2) State prescribed practices that increase (decrease) NAIC SAP	-	-	-
(3) State permitted practices that increase (decrease) NAIC SAP	-	-	-
(4) NAIC SAP (1-2-3=4)	CT	<u>\$ 14,990,381</u>	<u>\$ 20,657,513</u>
<b>SURPLUS</b>			
(5) State basis (Page 3, Line 38, Columns 1 & 2)	CT	\$ 246,018,844	\$ 231,301,005
(6) State prescribed practices that increase (decrease) NAIC SAP	-	-	-
(7) State permitted practices that increase (decrease) NAIC SAP	-	-	-
(8) NAIC SAP (5-6-7=8)	CT	<u>\$ 246,018,844</u>	<u>\$ 231,301,005</u>

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

c. Accounting policy:

(1-5) No change

(6) For fixed income securities that do not have a fixed schedule of payments, such as asset-backed securities, mortgage-backed securities, including residential mortgage-backed securities and commercial mortgage-backed securities, and structured securities, including collateralized debt obligations, amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies for each type of security.

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 nine months ended September 30, 2016 and 2015, 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 March 2015, the NAIC adopted the requirements of Accounting Standards Update (ASU) No. 2014-15, *Presentation of Financial Statements – Going Concern (Topic 205): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, which led to non-substantive revisions to Statement of Statutory Accounting Principle (SSAP) No. 1, *Accounting Policies, Risks & Uncertainties, and Other Disclosures*; SSAP No. 48, *Joint Ventures, Partnerships and Limited Liability Companies*; SSAP No. 68, *Business Combinations and Goodwill*; and SSAP No. 97, *Investments in Subsidiary, Controlled and Affiliated (SCA) Entities*, which is effective on December 31, 2016. The ASU requires management of an entity to evaluate whether or not there is substantial doubt about the entity's ability to continue as a going concern and, if so, disclose that fact. The adoption of this guidance did not have an impact on the Company's financial statements.

In April and August 2016, the NAIC adopted and made effective modifications to SSAP No. 1, *Accounting Policies, Risks and Other Disclosures*. The modifications clarify the disclosure presentation for permitted and prescribed practices, as well as clarify that the disclosure shall 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. This clarification did not have an impact on the Company as the Company currently does not have any permitted or prescribed practices.

In April 2016, the NAIC adopted and made effective modifications to SSAP No. 1, *Accounting Policies, Risks and Other Disclosures*. The modifications clarify 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. This modification did not have an impact on the Company's financial statements.

In August 2016, the NAIC adopted and made effective modifications to SSAP No. 51, *Life Contracts*, to 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 in surplus instead of income. This modification was made to accommodate PBR which becomes effective January 1, 2017. The adoption of the modification did not have an impact on the Company's financial statements.

## NOTES TO 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

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		-		-		-
c. Total first quarter	\$	-	\$	-	\$	-

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		76,837		-		6,452
f. Total second quarter	\$	76,837	\$	-	\$	6,452

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		118,384		-		845
i. Total third quarter	\$	118,384	\$	-	\$	845

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	\$	-	\$	-	\$	-

m. Annual aggregate total

\$ -      \$ 7,297

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
79549ASM2	\$ 76,836.92	\$ 70,384.74	\$ (6,452.18)	\$ 70,384.74	\$ 72,517.43	June 30, 2016
86358RA23	\$ 118,384.46	\$ 117,539.46	\$ (845.00)	\$ 117,539.46	\$ 112,771.17	September 30, 2016
Totals	\$ 195,221.38	\$ 187,924.20	\$ (7,297.18)	\$ 187,924.20	\$ 185,288.60	

(4) As of September 30, 2016, the gross unrealized losses and fair values for investments in structured and loan-backed securities which an OTTI has not been recognized in earnings follow:

a. The aggregate amount of unrealized losses:	
1. Less than 12 months	\$ (277,858)
2. 12 months or longer	\$ (71,627)
b. The aggregate related fair value of securities with unrealized losses:	
1. Less than 12 months	\$ 24,194,579
2. 12 months or longer	\$ 2,316,990

(5) No change

## NOTES TO FINANCIAL STATEMENTS

- 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.
- 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:  
A structured note is a direct debt issuance by a corporation, municipality, or government entity, ranking pari-passu with the issuer's other debt issuance of equal seniority where either: (a) the coupon and/or principal payments are linked, in whole or in part, to prices or payment streams from index or indices, or assets deriving their value from other than the issuer's credit quality, or (b) the coupon and/or principal payments are leveraged by a formula that is different from either a fixed coupon, or a non-leveraged floating rate coupon linked to an interest rate index, including but not limited to the London Interbank Offered Rate (LIBOR) or the prime rate. As structured notes are issuer obligations without a trust, they are within the scope of SSAP No. 26, "Bonds, Excluding Loan-backed and Structured Securities" (SSAP No. 26). Structured notes are different than the asset backed structured securities, which are accounted for under SSAP No. 43R, "Revised - Loan-Backed and Structured Securities" (SSAP No. 43R), as they lack either a trust or assets backing them. The disclosure below allows regulators to assess the volume of activity in structured notes and to determine whether additional accounting or reporting revisions, such as valuation and risk-based capital, are needed. To satisfy this request, the Company is required to separately identify structured notes, on a CUSIP basis and provide information by CUSIP for actual cost, fair value, book/adjusted carrying value, and whether the structured note is a mortgage-referenced security. The following sets forth the actual cost, fair value and carrying value of structured notes as of September 30, 2016:

CUSIP Identification	Actual Cost	Fair Value	Book / Adjusted Carrying Value	Mortgage-Referenced Security (YES/NO)
391164AF7	\$ 526,870	\$ 531,732	\$ 522,632	NO

**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:

## NOTES TO FINANCIAL STATEMENTS

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

**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 2016 or 2015.

(3) No change

(4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2016 or 2015.

(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 third quarter ended September 30, 2016 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 London Interbank Offered Rate (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

## NOTES TO FINANCIAL STATEMENTS

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.

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

	September 30, 2016			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Bonds:				
Parent, subsidiaries and affiliates	\$ -	\$ 528,639	\$ -	\$ 528,639
Separate account assets <sup>(1)</sup>	915,831,950	2,321,520,839	-	3,237,352,789
Total financial assets carried at fair value	<u>\$ 915,831,950</u>	<u>\$ 2,322,049,478</u>	<u>\$ -</u>	<u>\$ 3,237,881,428</u>

<sup>(1)</sup>\$1,096,222,993 of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the nine months ended September 30, 2016, there were no significant transfers between Level 1 and Level 2.

	December 31, 2015			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Separate account assets <sup>(1)</sup>	\$ 920,856,788	\$ 2,266,948,730	\$ -	\$ 3,187,805,518
Total financial assets carried at fair value	<u>\$ 920,856,788</u>	<u>\$ 2,266,948,730</u>	<u>\$ -</u>	<u>\$ 3,187,805,518</u>

<sup>(1)</sup>\$1,091,012,604 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, 2015, there were no significant transfers between Level 1 and Level 2.

- The Company does not have any Level 3 financial instruments that are carried at fair value.
- 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. There are no financial assets or liabilities classified as Level 3 in 2016 and 2015.
- 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,

## NOTES TO FINANCIAL STATEMENTS

including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit-related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

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

*Derivative assets and liabilities* - These financial instruments are primarily valued using the market approach. The estimated fair value of derivatives is based primarily 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.
- c. The following presents a summary of the carrying values and fair values of the Company's financial instruments:

	September 30, 2016					
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Not Practicable (Carrying Value)
<b>Financial assets:</b>						
<b>Bonds:</b>						
U. S. government and agencies	\$ 55,142,047	\$ 54,316,665	-	\$ 55,142,047	-	-
Special revenue	78,491	69,943	-	78,491	-	-
Industrial and miscellaneous	240,967,349	230,999,049	-	220,457,478	20,509,871	-
Parent, subsidiaries and affiliates	686,149	643,437	-	686,149	-	-
Mortgage loans - residential	4,348,528	4,372,315	-	-	4,348,528	-
Cash, cash equivalents and short-term investments	36,576,159	36,576,159	(995,486)	37,571,645	-	-
Separate account assets	4,372,798,666	4,333,575,782	915,831,950	3,440,001,127	16,965,589	-
<b>Financial liabilities:</b>						
Individual annuity contracts	2,349,702	3,177,545	-	-	2,349,702	-
Supplementary contracts	10,873,871	10,766,209	-	-	10,873,871	-
<b>December 31, 2015</b>						
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Not Practicable (Carrying Value)
<b>Financial assets:</b>						
<b>Bonds:</b>						
U. S. government and agencies	\$ 54,012,879	\$ 54,269,462	-	\$ 54,012,879	-	-
Special revenue	97,732	88,536	-	97,732	-	-
Industrial and miscellaneous	167,805,616	166,830,245	-	156,151,861	11,653,755	-
Parent, subsidiaries and affiliates	1,667,302	1,640,703	-	1,667,302	-	-
Mortgage loans - residential	5,745,384	5,847,458	-	-	5,745,384	-
Cash, cash equivalents and short-term investments	61,289,428	61,289,428	1,211,195	60,078,233	-	-
Separate account assets	4,285,418,011	4,278,818,122	920,856,788	3,345,522,236	19,038,987	-
<b>Financial liabilities:</b>						
Individual annuity contracts	2,266,224	3,168,097	-	-	2,266,224	-
Supplementary contracts	9,928,086	9,829,788	-	-	9,928,086	-

- d. For the nine months ended September 30, 2016, 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,

**NOTES TO FINANCIAL STATEMENTS**

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.

**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

**NOTES TO FINANCIAL STATEMENTS**

- (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:

	September 30, 2016			Nine Months Ended September 30, 2016
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 2,097,222	\$ 1,368,387	\$ 1,794,316	\$ -
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>\$ 2,097,222</u>	<u>\$ 1,368,387</u>	<u>\$ 1,794,316</u>	<u>\$ -</u>

	September 30, 2016			Nine Months Ended September 30, 2016
	Actual Cost	Carrying Value	Fair Value	OTTI
Subprime:				
a. Residential mortgage-backed securities	\$ 3,269,225	\$ 1,836,093	\$ 2,261,959	\$ (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>\$ 3,269,225</u>	<u>\$ 1,836,093</u>	<u>\$ 2,261,959</u>	<u>\$ (6,452)</u>

	December 31, 2015			Year Ended December 31, 2015
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 2,337,013	\$ 1,542,651	\$ 1,965,258	\$ -
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>\$ 2,337,013</u>	<u>\$ 1,542,651</u>	<u>\$ 1,965,258</u>	<u>\$ -</u>

	December 31, 2015			Year Ended December 31, 2015
	Actual Cost	Carrying Value	Fair Value	OTTI
Subprime:				
a. Residential mortgage-backed securities	\$ 3,612,086	\$ 1,934,794	\$ 2,412,225	\$ (2,337)
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>\$ 3,612,086</u>	<u>\$ 1,934,794</u>	<u>\$ 2,412,225</u>	<u>\$ (2,337)</u>

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

g. Retained asset accounts - No change

**Note 22 – Events Subsequent**

Management of the Company has evaluated subsequent events through November 11, 2016, 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



---

## NOTES TO FINANCIAL STATEMENTS

---

**Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination** - No change

**Note 25 – Change in Incurred Losses and Loss Adjustment Expenses**

There was no increase to reserves in 2016 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

**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 [ X ] No [ ]
- 3.3 If the response to 3.2 is yes, provide a brief description of those changes.  
As of September 12, 2016, Babson Capital Management LLC, its subsidiaries Cornerstone Real Estate Advisers LLC and Wood Creek Capital Management, LLC, and Baring Asset Management Limited are now operating as a unified company under the Barings LLC.
- 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
MSI Financial Services, Inc. ....	Springfield, MA .....				YES
OppenheimerFunds Distributor, Inc. ....	New York, NY .....				YES
Society of Grownups, LLC .....	Springfield, MA .....				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 .....	\$ 1,642,655	\$ 643,437
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) .....	\$ 1,642,655	\$ 643,437
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 SEPTEMBER 30, 2016 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 Identify all investment advisors, brokers/dealers or individuals acting on behalf of broker/dealers that have access to the investment accounts, handle securities and have authority to make investments on behalf of the reporting entity:

1 Central Registration Depository	2 Name(s)	3 Address
106006 .....	Barings LLC .....	550 South Tryon Street, Suite 3300, Charlotte, NC 28202 .....

- 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 .....	\$ 4,372,315
1.13	Commercial Mortgages .....	\$ .....
1.14	Total Mortgages in Good Standing .....	\$ 4,372,315
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) .....	\$ 4,372,315
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 .....	\$ .....

STATEMENT AS OF SEPTEMBER 30, 2016 OF THE MML Bay State Life Insurance Company

**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 Domiciliary Jurisdiction	6 Type of Rein- ced	7 Type of Reinsurer	8 Certified Reinsurer Rating (1 through 6)	9 Effective Date of Certified Reinsurer Rating
<b>NONE</b>								

STATEMENT AS OF SEPTEMBER 30, 2016 OF THE MML Bay State Life Insurance Company  
**SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS**

Current Year To Date - Allocated by States and Territories

States, Etc.	1 Active Status	Life Contracts		Direct Business Only			
		2 Life Insurance Premiums	3 Annuity Considerations	4 Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	5 Other Considerations	6 Total Columns 2 Through 5	7 Deposit-Type Contracts
1. Alabama	AL	L	165,415			165,415	
2. Alaska	AK	L	12,780			12,780	
3. Arizona	AZ	L	708,751			708,751	
4. Arkansas	AR	L	52,021			52,021	
5. California	CA	L	3,327,931			3,327,931	
6. Colorado	CO	L	574,249			574,249	
7. Connecticut	CT	L	483,187			483,187	
8. Delaware	DE	L	59,701			59,701	
9. District of Columbia	DC	L	107,487			107,487	
10. Florida	FL	L	1,830,126			1,830,126	
11. Georgia	GA	L	539,663			539,663	
12. Hawaii	HI	L	153,630			153,630	
13. Idaho	ID	L	47,738			47,738	
14. Illinois	IL	L	1,063,474			1,063,474	
15. Indiana	IN	L	497,112			497,112	
16. Iowa	IA	L	438,874	1,350		440,224	
17. Kansas	KS	L	299,051			299,051	
18. Kentucky	KY	L	233,310	6,000		239,310	
19. Louisiana	LA	L	247,052			247,052	
20. Maine	ME	L	142,429			142,429	
21. Maryland	MD	L	891,764	945		892,709	
22. Massachusetts	MA	L	681,082			681,082	
23. Michigan	MI	L	1,386,892	4,050		1,390,942	
24. Minnesota	MN	L	357,659			357,659	
25. Mississippi	MS	L	165,681			165,681	
26. Missouri	MO	L	426,069			426,069	
27. Montana	MT	L	217,959			217,959	
28. Nebraska	NE	L	349,095	1,350		350,445	
29. Nevada	NV	L	215,311			215,311	
30. New Hampshire	NH	L	128,818			128,818	
31. New Jersey	NJ	L	1,173,476			1,173,476	
32. New Mexico	NM	L	65,766			65,766	
33. New York	NY	N	133,294			133,294	
34. North Carolina	NC	L	876,443			876,443	
35. North Dakota	ND	L	4,417			4,417	
36. Ohio	OH	L	956,368			956,368	
37. Oklahoma	OK	L	672,244			672,244	
38. Oregon	OR	L	313,588			313,588	
39. Pennsylvania	PA	L	1,590,579	3,500		1,594,079	
40. Rhode Island	RI	L	118,640			118,640	
41. South Carolina	SC	L	519,121			519,121	
42. South Dakota	SD	L	35,465			35,465	
43. Tennessee	TN	L	507,399			507,399	
44. Texas	TX	L	2,323,085			2,323,085	
45. Utah	UT	L	258,391			258,391	
46. Vermont	VT	L	70,681	900		71,581	
47. Virginia	VA	L	1,183,262			1,183,262	
48. Washington	WA	L	577,468			577,468	
49. West Virginia	WV	L	136,684			136,684	
50. Wisconsin	WI	L	326,565			326,565	
51. Wyoming	WY	L	22,599			22,599	
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	176,743			176,743	
59. Subtotal	(a)	50	27,846,589	18,095		27,864,684	
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	253,097				253,097	
94. Aggregate or other amounts not allocable by State	XXX						
95. Totals (Direct Business)	XXX	28,099,686	18,095			28,117,781	
96. Plus Reinsurance Assumed	XXX						
97. Totals (All Business)	XXX	28,099,686	18,095			28,117,781	
98. Less Reinsurance Ceded	XXX	13,050,793				13,050,793	
99. Totals (All Business) less Reinsurance Ceded	XXX	15,048,893	18,095			15,066,988	
DETAILS OF WRITE-INS							
58001. ZZZ Other Alien	XXX	176,743				176,743	
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	176,743				176,743	
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>
<b>MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY</b>	04-1590850	65935	Massachusetts
<b>Direct &amp; Indirect Owned Subsidiaries:</b>			
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 Re Finance 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
MSI Financial Services, Inc.	13-3175978		Delaware
Country Club Office Plaza LLC*	27-1435692		Delaware
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
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
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		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>
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
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
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
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
Babson 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 Real Estate Advisers LLC	55-0878489		Delaware
ACRE Capital Holdings LLC	None		Delaware
ACRE Capital LLC	None		Michigan
ACRE 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

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

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

### PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings 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 Limited	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
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
Wood Creek Index Company LLC	26-3115362		Delaware
Alchemy Copyrights, LLC	47-2642354		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
Milestone Acquisition Holding, LLC	47-3055009		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Solar Acquisition Holding, LLC	None		Delaware
Sweet Tree Holdings 1, 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

\*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>
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 CLO Investment Partners GP, LLC	None		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Barings TERO Management LLC	None		Delaware
Babson Investment Grade CLO Debt Management LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
Great Lakes III GP, LLC	04-1590850		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
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
OFI Global Trust Company	13-3459790		New York
OFI International, Ltd.	None		United Kingdom
HarbourView Asset Management Corporation	22-2697140		New York
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, Inc.	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
Fern Street LLC	37-1732913		Delaware
First Mercantile Trust Company	62-0951563		Tennessee

\*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>
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
Society of Grownups, LLC	47-1466022		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
MML Re Finance LLC	04-1590850		Delaware
<b>Other Affiliates &amp; Funds:</b>			
Invicta Advisors LLC	56-2574604		Delaware
Jefferies Finance LLC*	27-0105644		Delaware
Apex Credit Partners 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
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
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
100 w. 3 <sup>rd</sup> Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	04-1590850		Delaware
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		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>
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
Babson Capital Emerging Markets Corporate Bond Fund	None		Ireland
Babson Capital Emerging Markets Local Debt Fund	None		Ireland
Babson Capital 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
Babson Capital 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
Babson Investment Grade CLO Debt Fund LP	47-3971963		Delaware
Baring Emerging Market Corp Debt Fund	None		Ireland
Baring Focused EAFE Equity Fund	11-3789446		Delaware
Baring Global Dynamic Asset Allocation Fund	30-0607379		Delaware
Baring International Small Cap Equity Fund	26-4142796		Delaware
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
Connecticut Valley Structured Credit CDO II, Ltd.	None		Cayman Islands
Connecticut Valley Structured Credit CDO III, Ltd.	None		Cayman Islands
Cambridge Hotel, LLC	06-1614196		Delaware
Cheyenne Mountain Resort LLC	04-1590850		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg

\*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>
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
Cornerstone Hotel Income and Equity Fund II LP	26-1828760		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
King Alexander LLC	45-3754085		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
Sapphire Valley CDO I, Ltd.	None		Cayman Islands
SDCOS L.P.	74-3182902		Delaware
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 <sup>th</sup> Street Hotel LLC	05-1590850		Delaware
Whately CDO, 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>
Wood Creek Multi Asset Fund, L.P.	20-4981369		Delaware
<b>Baring Affiliates &amp; Funds:</b>			
Babson Capital Emerging Markets Debt Blended Total Return Fund	None		Ireland
Babson Capital Emerging Markets Debt Short Duration Fund	None		Ireland
Babson Capital Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Floating Rate Income Fund, L.P.	27-3330830		Delaware
Babson Capital 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
<b>Cornerstone Affiliates &amp; Funds:</b>			
12-18 West 55th Street Predevelopment, LLC*	20-2548283		Delaware
50 Liberty LLC*	36-4823011		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
2 Harbor Shore Member LLC*	46-4803557		Delaware
21 West 86 LLC*	45-5257904		Delaware
AT Mid-Atlantic Office Portfolio LLC*	45-2779931		Delaware
Budapester Strasse LLC	04-1590850		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		Delaware
Cornerstone Permanent Mortgage Fund II	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693		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

\*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>
CREA/PPC Venture LLC*	20-0348173		Delaware
Fallon Cornerstone One MPD LLC*	26-1611591		Delaware
Fan Pier Development LLC*	20-3347091		Delaware
Farringdon London Holdings LLC*	46-3880526		Delaware
Infinity SCD Ltd.	None		United Kingdom
Johnston Groves LLC	20-4819358		Delaware
MM Chatham Office LLC*	81-2871333		Delaware
MMI/Hines Harrison LLC*	46-5347643		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
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
<b>MassMutual Premier Funds:</b>			
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
<b>MassMutual Select Funds:</b>			
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
<b>MML Series Investment Funds:</b>			
MML Series International Equity Fund	46-4257056		Massachusetts
<b>MML Series Investment Funds II:</b>			
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

\*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>
<b>MassMutual RetireSMART Funds:</b>			
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual RetireSMART Conservative Fund	45-1618155		Massachusetts
MassMutual RetireSMART Growth Fund	45-1618222		Massachusetts
MassMutual RetireSMART Moderate Fund	45-1618262		Massachusetts
MassMutual RetireSMART Moderate Growth Fund	45-1618046		Massachusetts
<b>Oppenheimer Funds:</b>			
Oppenheimer Global High Yield Fund	45-3417590		Delaware
Oppenheimer Global Multi-Asset Growth Fund	47-3676235		Delaware
Oppenheimer Global Multi-Asset Income Fund	47-1714929		Delaware
Oppenheimer Global Real Estate Fund*	46-1604428		Delaware
Oppenheimer Macquarie Global Infrastructure Fund	81-1080638		Delaware
Oppenheimer SteelPath Panoramic Fund	47-3987967		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.

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
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	UDP	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			06-1041383				CML Re Finance 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							Lyme Adirondack Forest Company, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership	100.000	MMLIC	
0000			20-5305426				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			13-3175978				MSI Financial Services, Inc.	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			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			46-3238013				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	
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	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.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			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	Company	Ownership	100.000	MMLIC	
.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	Company	Ownership	100.000	MMLIC	
.0000			06-1597528				MassMutual Assignment Company	.NC	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 Rothersey Holdco US LLC	.DE	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		MML ISI Financial Alliances, LLC	.DE	NIA	MML Investors Services, LLC	Ownership	51.000	MMLIC	
.0000			04-3313782				MassMutual International LLC	.DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
.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	
.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							Protective Capital (International) Limited	.HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC	
.0000			98-0610331				MassMutual Life Insurance Company	.JPN	IA	MassMutual International LLC	Ownership	100.000	MMLIC	
.0000			98-1033127				MassMutual Internacional (Chile) SpA	.CHL	NIA	MassMutual International 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		0000009015		Barings LLC	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC	
.0000			80-0875475				Barings Finance LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000							BCF Europe Funding Limited	.JRL	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	.JRL	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							Babson GPC GP S.à.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			55-0878489	3456895	0001379495		Barings Real Estate Advisers LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000							ACRE Captial Holdings LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000							ACRE Capital LLC	.MI	NIA	Barings LLC	Ownership	100.000	MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.0000							ACRE 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							BREAIE 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			98-0654412				Barings Real Estate Advisers Europe Finance LLP	.GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-1194368				Barings Real Estate Advisers GmbH	.DEU	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC	
.0000			04-1590850				MassMutual Baring Holding LLC	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC	
.0000			98-0241935	2363071	0000932463		Baring North America LLC	.MA	NIA	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC	
.0000							MassMutual Holdings (Bermuda) Limited	.BMU	NIA	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC	
.0000			98-0241935				Baring Asset Management 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			98-0465031				Baring Asset Management GmbH	.DEU	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0524271				Baring Asset Management (Asia) Holdings Limited	.HKG	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0457465				Baring International Fund Managers (Bermuda) Limited	.BMU	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0457463				Baring Asset Management (Asia) Limited	.HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC	
.0000							Baring Asset Management Korea Limited	.KOR	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC	
.0000			98-0236449				Baring Asset Management (Japan) Limited	.JPN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0457456				Baring Asset Management (Australia) Pty Limited	.AUS	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0524272				Baring International Fund Managers (Ireland) Limited	.IRL	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC	
.0000							Baring Asset Management Switzerland Sarl	.CHE	NIA	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC	
.0000			98-0457707				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							Barings Australia Holding Company Pty Ltd	.AUS	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000			98-0457456				Barings Australia Pty Ltd	.AUS	NIA	Barings 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			26-3115362				Wood Creek Index Company, LLC	.DE	NIA	Wood Creek Capital Management LLC	Ownership	100.000	MMLIC	
.0000			47-2642354				Alchemy Copyrights, LLC	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	15.200	MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.0000			47-2642354				Alchemy Copyrights, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
.0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	30.000	MMLIC	
.0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	Wood Creek Capital Management 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	Wood Creek Capital Management LLC	Influence		MMLIC	
.0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	31.500	MMLIC	
.0000			46-5460309				Red Lake Ventures, LLC	DE	NIA	Wood Creek Capital Management 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	Wood Creek Capital Management LLC	Influence		MMLIC	
.0000							Tamiami Citrus, LLC	DE	NIA	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	Wood Creek Capital Management LLC	Influence		MMLIC	
.0000							U.S. Buyer Broadcasting, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	12.700	MMLIC	
.0000							U.S. Buyer Broadcasting, LLC	DE	NIA	Wood Creek Capital Management 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	Wood Creek Capital Management 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	Wood Creek Capital Management 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	Wood Creek Capital Management 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	Wood Creek Capital Management LLC	Management		MMLIC	
.0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	17.900	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 CLO Investment Partners GP, 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 TERO Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000							Babson Investment Grade CLO Debt 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			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	

133

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.0000			04-1590850				Somerset Special Opportunities Management LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC	
.0000			84-1149206	2897101			Oppenheimer Acquisition Corp.	.DE	NIA	MassMutual Asset Management Holding LLC	Ownership	97.100	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							OFI Institutional Asset Management, Inc.							
.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			22-2697140				HarbourView Asset Management Corporation	.NY	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC	
.0000							Trinity Investment Management Corporation	.PA	NIA	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC	
.0000			25-1951632		0000099782		OFI SteelPath, Inc.	.DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
.0000			84-1128397		0000857468		Shareholder Services, Inc.	.CO	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
.0000			84-1066811		0000276398		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, Inc.	.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 Group Holdings, Inc.	Ownership	100.000	MMLIC	
.0000							Tremont (Bermuda) Limited	.BMU	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			37-1732913				Fern Street LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	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							Massachusetts Mutual Life Insurance Company							
.0000			04-2443240				MML Management Corporation	.MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							MassMutual International Holding MSC, Inc.							
.0000			04-3548444				Society of Grownups, LLC	.MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC	
.0000			47-1466022					.MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			04-1590850				MML Mezzanine Investor II, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			04-1590850				MML Mezzanine Investor III, LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			27-3576835				MassMutual External Benefits Group LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			04-1590850				MML Re Finance LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			56-2574604				Invicta Advisors LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.0000							Massachusetts Mutual Life Insurance Company							
.0000			27-0105644				Jefferies Finance LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC	1
.0000							Apex Credit Partners 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	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.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 2014-11 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC	
.0000							JFIN MM CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC	
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	44.000	MMLIC	
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	56.000	MMLIC	
.0000							JFIN CLO 2015-11 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	33.000	MMLIC	
.0000							JFIN CLO 2015-11 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 2015-11 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			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			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							Babson Capital Emerging Markets Corporate Bond Fund	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.700	MMLIC	
.0000							Babson Capital Emerging Markets Corporate Bond Fund	JRL	NIA	Barings LLC	Management		MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.0000							Babson Capital Emerging Markets Local Debt Fund	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	47.300	MMLIC	
.0000							Babson Capital Emerging Markets Local Debt Fund	JRL	NIA	Barings LLC	Management		MMLIC	
.0000							Babson Capital Global Special Situations Credit Fund 1	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	98.700	MMLIC	
.0000							Babson Capital Global Special Situations Credit Fund 1	JRL	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	
.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							Babson Capital US High Yield Bond Fund	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.600	MMLIC	
.0000							Babson Capital US High Yield Bond Fund	JRL	NIA	Barings LLC	Management		MMLIC	
.0000							Babson CLO Ltd. 2007-I	CYM	NIA	Barings LLC	Influence		MMLIC	4
.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	7
.0000			98-1128827				Babson CLO Ltd. 2013-II	CYM	NIA	Barings LLC	Influence		MMLIC	8
.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	9
.0000							Babson CLO Ltd. 2014-III	CYM	NIA	Barings LLC	Influence		MMLIC	
.0000							Babson CLO Ltd. 2015-I	CYM	NIA	Barings LLC	Influence		MMLIC	10
.0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MMLIC	11
.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			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	93.300	MMLIC	
.0000			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE	NIA	C.M. Life Insurance Company	Ownership	6.700	MMLIC	
.0000			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE	NIA	Barings LLC	Management		MMLIC	
.0000							Baring Emerging Market Corp Debt Fund	JRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	87.700	MMLIC	
.0000							Baring Emerging Market Corp Debt Fund	JRL	NIA	Baring Asset Management Limited	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	



STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....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			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	Baring Asset Management Limited	Management		MMLIC	
.....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		MMLIC	
.....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		MMLIC	
.....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		MMLIC	
.....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	Massachusetts Mutual Life Insurance Company	Ownership	..100.000	MMLIC	
.....0000							Connecticut Valley Structured Credit CDO II, Ltd.	..CYM	.....NIA	Barings LLC	Influence		MMLIC	5
.....0000							Connecticut Valley Structured Credit CDO III, Ltd.	..CYM	.....NIA	Barings LLC	Influence		MMLIC	
.....0000							Barings European Core Property Fund SCSp	..LUX	.....NIA	MassMutual Holding LLC	Ownership/Influence	..94.000	MMLIC	
.....0000							Barings European Core Property Fund SCSp	..LUX	.....NIA	C.M. Life Insurance Company	Ownership	..6.000	MMLIC	
.....0000							Barings European Core Property Fund SCSp	..LUX	.....NIA	Barings Real Estate Advisers LLC	Management		MMLIC	
.....0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	..DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..50.000	MMLIC	
.....0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	..DE	.....NIA	Barings Real Estate Advisers LLC	Management		MMLIC	
.....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		MMLIC	
.....0000			20-8730751				Cornerstone Global Real Estate LP	..DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..92.300	MMLIC	
.....0000			20-8730751				Cornerstone Global Real Estate LP	..DE	.....NIA	C.M. Life Insurance Company	Ownership	..7.600	MMLIC	
.....0000			20-8730751				Cornerstone Global Real Estate LP	..DE	.....NIA	Barings Real Estate Advisers LLC	Management		MMLIC	
.....0000			36-4770946		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		MMLIC	
.....0000			26-1828760		0001423638		Cornerstone Hotel Income & Equity Fund II LP	..DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..16.900	MMLIC	
.....0000			26-1828760		0001423638		Cornerstone Hotel Income & Equity Fund II LP	..DE	.....NIA	Barings Real Estate Advisers LLC	Management		MMLIC	
.....0000			20-5578089				Barings Core Property Fund LP	..DE	.....NIA	MassMutual Holding LLC	Ownership/Influence	..10.300	MMLIC	
.....0000			20-5578089				Barings Core Property Fund LP	..DE	.....NIA	Barings Real Estate Advisers LLC	Management		MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....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		MMLIC	
.....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		MMLIC	
.....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		MMLIC	
.....0000				3981641			Duchess VI CLO B.V.	..GBR	.....NIA	Barings LLC	Influence		MMLIC	
.....0000				4007502			Duchess VII CLO B.V.	..GBR	.....NIA	Barings LLC	Influence		MMLIC	
.....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	MassMutual Holding LLC	Ownership	..8.900	MMLIC	
.....0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	..DE	.....NIA	Barings LLC	Management		MMLIC	
.....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	MassMutual Holding LLC	Ownership	..5.100	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			45-3754085				King Alexander 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							Sapphire Valley CDO I, Ltd.	..CYM	.....NIA	Barings LLC	Influence		MMLIC	6
.....0000			74-3182902				SDCOS L.P.	..DE	.....NIA	Barings LLC	Management		MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....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	..25.800	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			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	..DE	..NIA	MassMutual Holding LLC	Ownership	..2.300	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	MassMutual Holding LLC	Ownership/Influence	..21.800	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	
.....0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P.	..DE	..NIA	MassMutual Holding LLC	Ownership/Influence	..21.300	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			04-3722906		0001228752		Tower Square Capital Partners, L.P.	..DE	..NIA	MassMutual Holding LLC	Ownership	..2.900	MMLIC	
.....0000			04-1590850				West 46th Street Hotel LLC	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership	..100.000	MMLIC	
.....0000							Whately CDO, Ltd.	..CYM	..NIA	Barings LLC	Influence		MMLIC	
.....0000			20-4981369		0001371601		Wood Creek Multi Asset Fund, L.P.	..DE	..NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..100.000	MMLIC	
.....0000			20-4981369		0001371601		Wood Creek Multi Asset Fund, L.P.	..DE	..NIA	Barings LLC	Management		MMLIC	
.....0000							Babson Capital Emerging Markets Debt Blended Total Return Fund	..JRL	..NIA	Barings LLC	Management		MMLIC	
.....0000							Babson Capital Emerging Markets Debt Short Duration Fund	..JRL	..NIA	Barings LLC	Management		MMLIC	
.....0000							Babson Capital Emerging Markets Sovereign Debt Fund	..JRL	..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			27-3330830		0001521404		Babson Capital Floating Rate Income Fund, L.P.	..DE	..NIA	Barings LLC	Management		MMLIC	
.....0000							Babson Capital Loan Strategies Master Fund LP	..CYM	..NIA	Barings LLC	Management		MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....0000							Babson Capital Global Investment Grade Corporate Plus Fund	.....JRL	.....NIA	Barings LLC	Management	.....MMLIC		
.....0000			47-3758432				Barings Emerging Markets Debt Blended Total Return Fund	.....MA	.....NIA	Barings LLC	Management	.....MMLIC		
.....0000			47-3774453				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 Total Return Bond Fund	.....MA	.....NIA	Barings LLC	Management	.....MMLIC		
.....0000			47-3801860				Barings U.S. High Yield Fund	.....MA	.....NIA	Barings LLC	Management	.....MMLIC		
.....0000							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	Wood Creek Capital Management 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							Baring Greater China Equity Fund	.....HKG	.....NIA	Baring Asset Management Limited	Management	.....MMLIC		
.....0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	.....DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	.....89.000	MMLIC	
.....0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	.....DE	.....NIA	C.M. Life Insurance Company	Ownership	.....7.700	MMLIC	
.....0000			46-4803557				2 Harbor Shore Member LLC	.....DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	.....70.800	MMLIC	
.....0000			46-4803557				2 Harbor Shore Member LLC	.....DE	.....NIA	C.M. Life Insurance Company	Ownership	.....7.000	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			45-5257904				21 West 86 LLC	.....DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	.....96.900	MMLIC	
.....0000			45-5257904				21 West 86 LLC	.....DE	.....NIA	C.M. Life Insurance Company	Ownership	.....3.100	MMLIC	
.....0000			45-2779931				AT Mid-Atlantic Office Portfolio LLC	.....DE	.....NIA	Massachusetts Mutual Life Insurance Company	Ownership	.....90.000	MMLIC	
.....0000			45-2779931				AT Mid-Atlantic Office Portfolio LLC	.....DE	.....NIA	C.M. Life Insurance Company	Ownership	.....10.000	MMLIC	
.....0000			04-1590850				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	
.....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	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.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	DE	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			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	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	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	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	Company	Ownership	4.200	MMLIC	
.0000			20-4819358				Johnston Groves LLC	DE	NIA	Company	Ownership	57.200	MMLIC	
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Company	Ownership	83.400	MMLIC	
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Company	Ownership	16.600	MMLIC	
.0000			46-5347643				MMI/Hines Harrison LLC	DE	NIA	Company	Ownership	82.800	MMLIC	
.0000			46-5347643				MMI/Hines Harrison LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.200	MMLIC	
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC	
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	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	Company	Ownership	91.000	MMLIC	
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	C.M. Life Insurance Company	Ownership	9.000	MMLIC	
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Company	Ownership	59.200	MMLIC	
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....0000			45-4606547			UK LIW Manager LLC	UK LIW Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.000	MMLIC	
.....0000			45-4606547			UK LIW Member LLC	UK LIW Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC	
.....0000			45-5401109			Washington Gateway Apartments Venture LLC	Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	92.000	MMLIC	
.....0000			45-5401109			Washington Gateway Apartments Venture LLC	Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC	
.....0000			20-2970495			Waterford Development Associates	Waterford Development Associates	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC	
.....0000			47-1993493			Waterloo London Holdings LLC	Waterloo London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.....0000			46-3122029			WeHo Domain LLC	WeHo Domain LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	77.400	MMLIC	
.....0000			46-3122029			WeHo Domain LLC	WeHo Domain LLC	DE	NIA	C.M. Life Insurance Company	Ownership	12.600	MMLIC	
.....0000			81-1552222			Willowood Lakeside Master LLC	Willowood Lakeside Master LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC	
.....0000			20-5481477			Ygnatio Valley Funding	Ygnatio Valley Funding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC	
.....0000			45-3168892		00	MassMutual Barings Dynamic Allocation Fund	MassMutual Barings Dynamic Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC	
.....0000			51-0529328		0000927972	MassMutual Premier Main Street Fund	MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	2.300	MMLIC	
.....0000			26-3229251		0000927972	MassMutual Premier Strategic Emerging Markets Fund	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	14.900	MMLIC	
.....0000			04-3277550		0000927972	MassMutual Premier Value Fund	MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.600	MMLIC	
.....0000			14-1980900		0000916053	MassMutual Select Diversified International Fund	MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	48.800	MMLIC	
.....0000			01-0821120		0000916053	MassMutual Select Diversified Value Fund	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.300	MMLIC	
.....0000			04-3512593		0000916053	MassMutual Select Fundamental Growth Fund	MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	14.800	MMLIC	
.....0000			04-3513019		0000916053	MassMutual Select Large Cap Value Fund	MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
.....0000			42-1710935		0000916053	MassMutual Select Mid-Cap Value Fund	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.400	MMLIC	
.....0000			02-0769954		0000916053	MassMutual Select Small Capital Value Equity Fund	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.300	MMLIC	
.....0000			04-3584140		0000916053	MassMutual Select Small Company Value Fund	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	42.700	MMLIC	
.....0000			46-4257056		0000067160	MML Series International Equity Fund	MML Series International Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	9.000	MMLIC	
.....0000			47-3517233		0001317146	MML Series II Asset Momentum Fund	MML Series II Asset Momentum Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.700	MMLIC	
.....0000			47-3529636		0001317146	MML Series II Dynamic Bond Fund	MML Series II Dynamic Bond Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.300	MMLIC	
.....0000			47-3544629		0001317146	MML Series II Equity Rotation Fund	MML Series II Equity Rotation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.800	MMLIC	
.....0000			47-3559064		0001317146	MML Series II Special Situations Fund	MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.800	MMLIC	

STATEMENT AS OF SEPTEMBER 30, 2016 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
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)	*
.....0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	25.300	MMLIC	
.....0000			47-5326235		0000916053		MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.500	MMLIC	
.....0000			45-1618155		0000916053		MassMutual RetireSMART Conservative Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	35.700	MMLIC	
.....0000			45-1618222		0000916053		MassMutual RetireSMART Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	74.400	MMLIC	
.....0000			45-1618262		0000916053		MassMutual RetireSMART Moderate Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.400	MMLIC	
.....0000			45-1618046		0000916053		MassMutual RetireSMART Moderate Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	88.500	MMLIC	
.....0000			45-3417590		0001530245		Oppenheimer Global High Yield Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	
.....0000			46-1604428		0001562689		Oppenheimer Global Real Estate Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	89.700	MMLIC	
.....0000			46-1604428		0001562689		Oppenheimer Global Real Estate Fund	DE	NIA	C.M. Life Insurance Company	Ownership	7.400	MMLIC	
.....0000			46-1604428		0001562689		Oppenheimer Global Real Estate Fund	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			81-1080638				Oppenheimer Macquarie Global Infrastructure Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	
.....0000			47-3987967				Oppenheimer SteelPath Panoramic Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns .40% 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 21.6% and includes only Babson Capital Loan Strategies Fund, L.P.
5	Debt investors own .4% and includes only Connecticut Valley Structured Credit CDO III, Ltd.
6	Debt investors own 56% and includes only Babson Capital Loan Strategies Fund, L.P.
7	Debt investors own 8.7% and includes only Babson Capital Loan Strategies Fund, L.P.
8	Debt investors own 3.5% and includes only Great Lakes III, L.P.
9	Debt investors own 5.7% and includes only Great Lakes III, L.P.
10	Debt investors own 1.1% and includes only Great Lakes III, L.P.
11	Debt investors own 4.3% and includes only Great Lakes III, L.P.

# SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

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

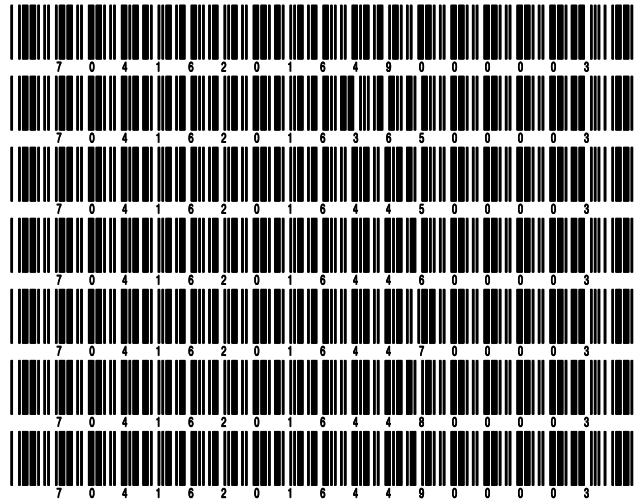
	Response
1. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement? .....	NO
2. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement? .....	NO
3. Will the Reasonableness of Assumptions Certification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

Explanation:

1. Not required.
2. Not required.
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 SEPTEMBER 30, 2016 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 .....	5,847,458	4,170,281
2. Cost of acquired:		
2.1 Actual cost at time of acquisition .....		2,383,218
2.2 Additional investment made after acquisition .....	1,564	11,779
3. Capitalized deferred interest and other .....		
4. Accrual of discount .....	1,009	1,132
5. Unrealized valuation increase (decrease) .....		
6. Total gain (loss) on disposals .....		
7. Deduct amounts received on disposals .....	1,468,731	711,572
8. Deduct amortization of premium and mortgage interest points and commitment fees .....	8,985	7,380
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) .....	4,372,315	5,847,458
12. Total valuation allowance .....		
13. Subtotal (Line 11 plus Line 12) .....	4,372,315	5,847,458
14. Deduct total nonadmitted amounts .....		
15. Statement value at end of current period (Line 13 minus Line 14)	4,372,315	5,847,458

**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 .....	222,828,946	144,280,400
2. Cost of bonds and stocks acquired .....	91,112,231	106,312,490
3. Accrual of discount .....	421,138	901,504
4. Unrealized valuation increase (decrease) .....	(7,197)	
5. Total gain (loss) on disposals .....	124,754	274,487
6. Deduct consideration for bonds and stocks disposed of .....	28,047,437	28,413,616
7. Deduct amortization of premium .....	396,044	523,982
8. Total foreign exchange change in book/adjusted carrying value .....		
9. Deduct current year's other than temporary impairment recognized .....	7,297	2,337
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) .....	286,029,094	222,828,946
11. Deduct total nonadmitted amounts .....		
12. Statement value at end of current period (Line 10 minus Line 11)	286,029,094	222,828,946

STATEMENT AS OF SEPTEMBER 30, 2016 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
<b>BONDS</b>								
1. NAIC 1 (a) .....	164,270,559	36,023,054	3,608,982	(398,754)	155,629,071	164,270,559	196,285,877	138,526,263
2. NAIC 2 (a) .....	135,328,008	252,563,482	266,579,403	144,307	135,869,993	135,328,008	121,456,394	140,892,993
3. NAIC 3 (a) .....	2,559,697	1,042,961	1,051,478	498,443	2,375,892	2,559,697	3,049,623	2,529,021
4. NAIC 4 (a) .....	1,715,465		274,500	(54,728)	1,405,286	1,715,465	1,386,237	136,049
5. NAIC 5 (a) .....	836,085		7,241	(4,014)	872,910	836,085	824,830	745,687
6. NAIC 6 (a) .....	70,385	529,000		(1,607)	72,425	70,385	597,778	77,165
7. Total Bonds	304,780,199	290,158,497	271,521,604	183,647	296,225,577	304,780,199	323,600,739	282,907,179
<b>PREFERRED STOCK</b>								
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	304,780,199	290,158,497	271,521,604	183,647	296,225,577	304,780,199	323,600,739	282,907,179

(a) Book/Adjusted Carrying Value column for the end of the current reporting period includes the following amount of non-rated short-term and cash equivalent bonds by NAIC designation: NAIC 1 \$ ..... ; NAIC 2 \$ .....37,571,645 ; NAIC 3 \$ ..... ; NAIC 4 \$ ..... ; NAIC 5 \$ ..... ; NAIC 6 \$ .....

S102

**SCHEDULE DA - PART 1**

## Short-Term Investments

	1 Book/Adjusted Carrying Value	2 Par Value	3 Actual Cost	4 Interest Collected Year-to-Date	5 Paid for Accrued Interest Year-to-Date
9199999 Totals	5,994,772	xxx	5,979,597		

**SCHEDULE DA - VERIFICATION**

## Short-Term Investments

	1 Year To Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year .....	4,995,929	16,484,333
2. Cost of short-term investments acquired .....	8,472,961	32,445,932
3. Accrual of discount .....	25,882	65,530
4. Unrealized valuation increase (decrease) .....		
5. Total gain (loss) on disposals .....		66
6. Deduct consideration received on disposals .....	7,500,000	43,999,932
7. Deduct amortization of premium .....		
8. Total foreign exchange change in book/adjusted carrying value .....		
9. Deduct current year's other than temporary impairment recognized .....		
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) .....	5,994,772	4,995,929
11. Deduct total nonadmitted amounts .....		
12. Statement value at end of current period (Line 10 minus Line 11)	5,994,772	4,995,929

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

**N O N E**

Schedule DB - Part B - Verification - Futures Contracts

**N O N E**

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

**N O N E**

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

**N O N E**

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

**N O N E**

**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 .....	55,082,304	96,153,220
2. Cost of cash equivalents acquired .....	881,091,484	1,413,157,613
3. Accrual of discount .....	293,421	396,635
4. Unrealized valuation increase (decrease) .....		
5. Total gain (loss) on disposals .....	(936)	89
6. Deduct consideration received on disposals .....	904,889,400	1,454,625,253
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) .....	31,576,873	55,082,304
11. Deduct total nonadmitted amounts .....		
12. Statement value at end of current period (Line 10 minus Line 11)	31,576,873	55,082,304