

QUARTERLY STATEMENT

OF THE

Massachusetts Mutual Life Insurance Company

TO THE

Insurance Department

OF THE

STATE OF

**FOR THE QUARTER ENDED
SEPTEMBER 30, 2017**

LIFE AND ACCIDENT AND HEALTH

2017



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

QUARTERLY STATEMENT

AS OF SEPTEMBER 30, 2017
OF THE CONDITION AND AFFAIRS OF THE

Massachusetts Mutual Life Insurance Company

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

Organized under the Laws of Massachusetts, State of Domicile or Port of Entry MA

Country of Domicile United States of America

Incorporated/Organized 05/15/1851 Commenced Business 08/01/1851

Statutory Home Office 1295 State Street, Springfield, MA, US 01111
(Street and Number) (City or Town, State, Country and Zip Code)

Main Administrative Office 1295 State Street
(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 Sean G. McCallen, 413-744-3193
(Name) (Area Code) (Telephone Number)
smccallen@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 Appointed Actuary Douglas Wright Taylor

OTHER

Elizabeth Ward Chicares, Executive Vice President, Chief Financial Officer and Chief Actuary Michael Robert Fanning, Executive Vice President Melvin Timothy Corbett, Executive Vice President and Chief Investment Officer
Mark Douglas Roellig #, Executive Vice President and Chief Technology and Administrative Officer Adnan Omar Ahmed, Executive Vice President

DIRECTORS OR TRUSTEES

Roger William Crandall - Chairman Karen Hall Bechtel Mark Thomas Bertolini
Kathleen Ann Corbet - Lead Director James Henry DeGraffenreid, Jr. Robert Alan Essner
Isabella Davidov Goren Jeffrey Marc Leiden Marc Francis Racicot
Laura Jeanne Sen William Taylor Spitz Howard Todd Stitzer

State of Massachusetts SS:
County of Hampden

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

Roger William Crandall
President and Chief Executive Officer

Pia Denise Flanagan
Secretary

Todd Garrett Picken
Treasurer

Subscribed and sworn to before me this _____ day of _____

a. Is this an original filing? Yes [X] No []

b. If no,

1. State the amendment number.....

2. Date filed

3. Number of pages attached.....

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

ASSETS

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
1. Bonds	89,402,040,561		89,402,040,561	83,820,817,695
2. Stocks:				
2.1 Preferred stocks	835,059,387		835,059,387	464,925,273
2.2 Common stocks	15,833,396,767		15,833,396,767	15,363,384,808
3. Mortgage loans on real estate:				
3.1 First liens	22,160,386,631		22,160,386,631	20,961,091,565
3.2 Other than first liens.....				
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)	147,102,489		147,102,489	158,135,975
4.2 Properties held for the production of income (less \$603,743,613 encumbrances)	673,112,155		673,112,155	737,451,103
4.3 Properties held for sale (less \$ encumbrances)	514,009		514,009	81,092,879
5. Cash (\$85,866,399), cash equivalents (\$1,901,229,733) and short-term investments (\$508,820,317)	2,495,916,449		2,495,916,449	3,725,936,280
6. Contract loans (including \$ premium notes)	13,141,456,419	513,941	13,140,942,478	12,461,290,555
7. Derivatives	9,257,002,698		9,257,002,698	9,763,460,825
8. Other invested assets	7,281,152,281	37,713,494	7,243,438,787	7,186,889,062
9. Receivables for securities	241,989,259		241,989,259	161,585,825
10. Securities lending reinvested collateral assets				
11. Aggregate write-ins for invested assets				
12. Subtotals, cash and invested assets (Lines 1 to 11)	161,469,129,105	38,227,435	161,430,901,670	154,886,061,845
13. Title plants less \$ charged off (for Title insurers only)				
14. Investment income due and accrued	2,231,679,869	6,560,384	2,225,119,485	1,911,666,108
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	87,396,247	3,941,446	83,454,801	141,093,092
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	630,680,692		630,680,692	642,564,314
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	68,457,735	3,988,349	64,469,386	41,664,064
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	12,167,261		12,167,261	(8,316,304)
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon	401,356,732		401,356,732	44,148,885
18.2 Net deferred tax asset	1,461,933,768		1,461,933,768	1,606,052,936
19. Guaranty funds receivable or on deposit	26,439,242		26,439,242	26,092,893
20. Electronic data processing equipment and software	188,614,065	178,367,518	10,246,547	9,280,689
21. Furniture and equipment, including health care delivery assets (\$)	39,397,548	39,397,548		
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	66,664,356		66,664,356	68,885,410
24. Health care (\$) and other amounts receivable				
25. Aggregate write-ins for other than invested assets	3,753,684,863	1,513,763,692	2,239,921,171	2,097,275,811
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	170,437,601,483	1,784,246,372	168,653,355,111	161,466,469,743
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	66,916,946,948		66,916,946,948	62,203,995,882
28. Total (Lines 26 and 27)	237,354,548,431	1,784,246,372	235,570,302,059	223,670,465,625
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page				
1199. Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)				
2501. Corporate owned life insurance	2,076,824,528		2,076,824,528	1,980,550,440
2502. Fully refundable deposits, prepayments and miscellaneous assets	434,042,697	341,686,304	92,356,393	45,213,945
2503. Employee insurance plan advances	39,184,102	33,188	39,150,914	40,091,324
2598. Summary of remaining write-ins for Line 25 from overflow page	1,203,633,536	1,172,044,200	31,589,336	31,420,102
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	3,753,684,863	1,513,763,692	2,239,921,171	2,097,275,811

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$ 113,372,501,503 less \$ included in Line 6.3 (including \$ 122,115,733 Modco Reserve)	113,372,501,503	109,391,085,184
2. Aggregate reserve for accident and health contracts (including \$ 95,949,205 Modco Reserve)	2,846,518,777	2,794,862,457
3. Liability for deposit-type contracts (including \$ Modco Reserve)	13,145,828,006	11,574,147,866
4. Contract claims:		
4.1 Life	498,710,158	340,468,688
4.2 Accident and health	23,703,805	22,534,817
5. Policyholders' dividends \$ 9,767,222 and coupons \$ due and unpaid	9,767,222	10,022,581
6. Provision for policyholders' dividends and coupons payable in following calendar year - estimated amounts:		
6.1 Dividends apportioned for payment (including \$ Modco)	1,654,291,226	1,599,171,763
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 \$ 9,237,906 accident and health premiums	48,385,643	29,443,441
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	14,595,296	9,612,909
9.3 Other amounts payable on reinsurance, including \$ 8,418,503 assumed and \$ 13,123,287 ceded	21,541,790	34,416,893
9.4 Interest Maintenance Reserve	(13,353)	4,863,663
10. Commissions to agents due or accrued-life and annuity contracts \$ 50,636,114 , accident and health \$ 289,875 and deposit-type contract funds \$ 9,732,249	60,658,238	33,289,525
11. Commissions and expense allowances payable on reinsurance assumed	4,871,696	5,176,675
12. General expenses due or accrued	1,060,374,167	1,120,711,796
13. Transfers to Separate Accounts due or accrued (net) (including \$ (170,288,385) accrued for expense allowances recognized in reserves, net of reinsured allowances)	(233,172,251)	(188,589,116)
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	60,784,612	60,440,244
15.1 Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 Net deferred tax liability		
16. Unearned investment income	234,451,893	147,178,617
17. Amounts withheld or retained by company as agent or trustee	22,903,096	31,994,760
18. Amounts held for agents' account, including \$ agents' credit balances	321,034,758	301,711,951
19. Remittances and items not allocated	375,581,875	(382,509,320)
20. Net adjustment in assets and liabilities due to foreign exchange rates		1,892
21. Liability for benefits for employees and agents if not included above	182,056,142	183,613,798
22. Borrowed money \$ 249,869,167 and interest thereon \$	249,869,167	249,940,070
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	3,265,517,331	3,178,008,369
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	20,722,104	36,595,902
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance		
24.08 Derivatives	6,184,712,133	6,014,042,701
24.09 Payable for securities	223,294,479	168,191,017
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	8,831,455,901	9,281,690,021
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	152,500,945,414	146,052,119,164
27. From Separate Accounts Statement	66,916,940,814	62,194,856,505
28. Total liabilities (Lines 26 and 27)	219,417,886,228	208,246,975,669
29. Common capital stock		
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds		
32. Surplus notes	2,267,519,271	2,231,930,599
33. Gross paid in and contributed surplus		
34. Aggregate write-ins for special surplus funds	3,250,000	3,250,000
35. Unassigned funds (surplus)	13,881,646,560	13,188,309,357
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 \$ 6,134 in Separate Accounts Statement)	16,152,415,831	15,423,489,956
38. Totals of Lines 29, 30 and 37	16,152,415,831	15,423,489,956
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	235,570,302,059	223,670,465,625
DETAILS OF WRITE-INS		
2501. Repurchase agreements	4,262,265,891	4,735,731,002
2502. Derivative collateral	2,647,985,532	2,839,407,087
2503. Derivative accrued interest	1,851,483,528	1,626,497,813
2598. Summary of remaining write-ins for Line 25 from overflow page	69,720,950	80,054,119
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	8,831,455,901	9,281,690,021
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page		
3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)		
3401. Designated surplus for group annuities	2,500,000	2,500,000
3402. Designated surplus for separate account business	750,000	750,000
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page		
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)	3,250,000	3,250,000

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	15,022,709,126	15,652,972,534	21,408,422,772
2. Considerations for supplementary contracts with life contingencies	13,957,507	20,407,455	23,549,023
3. Net investment income	4,930,429,196	4,656,475,300	6,198,498,167
4. Amortization of Interest Maintenance Reserve (IMR)	89,017,678	103,022,212	135,288,595
5. Separate Accounts net gain from operations excluding unrealized gains or losses	1,003,288	3,383	3,135
6. Commissions and expense allowances on reinsurance ceded	85,159,251	73,325,538	398,451,052
7. Reserve adjustments on reinsurance ceded	9,188,939	13,394,713	82,715,440
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	276,762,336	267,148,150	355,790,536
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	773,216,921	347,401,625	446,735,033
9. Totals (Lines 1 to 8.3)	21,201,444,242	21,134,150,910	29,049,453,753
10. Death benefits	1,412,730,877	1,245,189,963	1,691,839,821
11. Matured endowments (excluding guaranteed annual pure endowments)	17,554,353	13,563,773	22,098,524
12. Annuity benefits	1,506,948,090	1,289,324,966	1,716,610,953
13. Disability benefits and benefits under accident and health contracts	278,189,450	273,430,773	364,195,418
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	12,334,249,442	10,246,400,136	14,003,404,091
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	245,486,015	237,949,239	313,262,892
18. Payments on supplementary contracts with life contingencies	9,261,645	8,489,545	11,491,950
19. Increase in aggregate reserves for life and accident and health contracts	4,047,783,983	6,222,682,104	9,611,871,345
20. Totals (Lines 10 to 19)	19,852,203,855	19,537,030,499	27,734,774,994
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	667,172,908	593,773,357	835,574,160
22. Commissions and expense allowances on reinsurance assumed	68,680,815	77,243,971	102,861,238
23. General insurance expenses	1,887,645,071	1,512,273,693	2,242,669,265
24. Insurance taxes, licenses and fees, excluding federal income taxes	173,502,455	164,201,435	237,373,881
25. Increase in loading on deferred and uncollected premiums	(14,322,761)	(13,136,436)	43,039,144
26. Net transfers to or (from) Separate Accounts net of reinsurance	(2,389,250,581)	(604,158,751)	(2,224,883,854)
27. Aggregate write-ins for deductions	(632,490,730)	(1,220,460,169)	(1,355,695,597)
28. Totals (Lines 20 to 27)	19,613,141,032	20,046,767,599	27,615,713,231
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	1,588,303,210	1,087,383,311	1,433,740,522
30. Dividends to policyholders	1,150,627,362	1,214,473,362	1,565,630,560
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	437,675,848	(127,090,051)	(131,890,038)
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	(169,455,781)	(182,566,700)	(326,418,900)
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)	607,131,629	55,476,649	194,528,862
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ (130,471,204) (excluding taxes of \$ (4,372,149) transferred to the IMR)	(414,028,566)	62,116,930	(208,411,773)
35. Net income (Line 33 plus Line 34)	193,103,063	117,593,579	(13,882,911)
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	15,423,489,956	14,982,532,137	14,982,532,137
37. Net income (Line 35)	193,103,063	117,593,579	(13,882,911)
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (121,511,771)	87,009,635	2,271,123,999	1,104,826,359
39. Change in net unrealized foreign exchange capital gain (loss)	632,486,826	(187,416,017)	(440,578,518)
40. Change in net deferred income tax	24,403,046	128,361,928	247,381,944
41. Change in nonadmitted assets	(153,410,499)	(299,358,521)	(326,288,254)
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			(700,000)
44. Change in asset valuation reserve	(87,508,962)	(493,009,808)	(360,870,009)
45. Change in treasury stock			
46. Surplus (contributed to) withdrawn from Separate Accounts during period	10,136,548	137,378	137,379
47. Other changes in surplus in Separate Accounts Statement	(10,136,531)	117,635	22,620
48. Change in surplus notes	35,588,671	293,417	293,417
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	(2,745,922)	36,989,000	230,615,792
54. Net change in capital and surplus for the year (Lines 37 through 53)	728,925,875	1,574,832,590	440,957,819
55. Capital and surplus, as of statement date (Lines 36 + 54)	16,152,415,831	16,557,364,727	15,423,489,956
DETAILS OF WRITE-INS			
08.301. Management and administrative fees	544,772,796	145,070,484	212,191,043
08.302. Change in corporate owned life insurance	110,585,573	67,378,727	58,457,767
08.303. Revenue sharing	106,941,596	117,090,930	151,195,772
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	10,916,956	17,861,484	24,890,451
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	773,216,921	347,401,625	446,735,033
2701. Change in reserves due to reinsurance agreement	(645,448,313)	(1,215,031,836)	(1,509,796,199)
2702. Market value adjustment transfer	(14,871,678)	(28,335,161)	(64,542,484)
2703. Reinsurance ceded adjustment	(13,948,676)		189,419,444
2798. Summary of remaining write-ins for Line 27 from overflow page	41,777,937	22,906,828	29,223,642
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	(632,490,730)	(1,220,460,169)	(1,355,695,597)
5301. Reinsurance ceded adjustment	(13,948,676)		189,419,444
5302. Other changes in surplus	11,202,754	36,989,000	34,927,403
5303. Change in minimum pension liability			6,268,945
5398. Summary of remaining write-ins for Line 53 from overflow page			
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	(2,745,922)	36,989,000	230,615,792

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

CASH FLOW

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
Cash from Operations			
1. Premiums collected net of reinsurance	14,885,798,703	14,980,693,592	20,433,595,404
2. Net investment income	5,077,040,668	4,823,980,484	6,393,738,365
3. Miscellaneous income	726,818,712	626,508,188	1,251,485,821
4. Total (Lines 1 to 3)	20,689,658,083	20,431,182,264	28,078,819,590
5. Benefit and loss related payments	15,498,561,849	13,205,719,709	17,832,334,133
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(3,014,436,505)	(621,295,945)	(2,282,031,154)
7. Commissions, expenses paid and aggregate write-ins for deductions	1,972,569,704	1,207,647,819	1,844,829,215
8. Dividends paid to policyholders	1,095,763,258	1,156,927,933	1,697,939,764
9. Federal and foreign income taxes paid (recovered) net of \$ (106,785,812) tax on capital gains (losses)	51,076,659	(276,882,092)	(352,810,012)
10. Total (Lines 5 through 9)	15,603,534,965	14,672,117,424	18,740,261,946
11. Net cash from operations (Line 4 minus Line 10)	5,086,123,118	5,759,064,840	9,338,557,644
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	15,003,013,999	10,027,376,821	14,659,729,714
12.2 Stocks	459,280,528	453,354,707	651,548,869
12.3 Mortgage loans	2,182,819,182	2,803,065,126	3,846,629,207
12.4 Real estate	225,069,188	27,733,156	59,477,126
12.5 Other invested assets	1,428,861,886	644,475,753	907,794,485
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	25,438,349	(29,380,267)	(38,360,762)
12.7 Miscellaneous proceeds	(381,496,997)	301,877,599	460,436,688
12.8 Total investment proceeds (Lines 12.1 to 12.7)	18,942,986,135	14,228,502,895	20,547,255,327
13. Cost of investments acquired (long-term only):			
13.1 Bonds	19,440,562,161	16,327,679,928	21,393,094,405
13.2 Stocks	882,562,498	1,169,845,458	1,877,459,425
13.3 Mortgage loans	3,263,176,215	2,357,702,541	3,504,567,522
13.4 Real estate	189,499,207	150,088,570	200,908,436
13.5 Other invested assets	980,600,962	1,108,326,206	1,568,129,204
13.6 Miscellaneous applications	387,350,488	(23,367,752)	511,793,079
13.7 Total investments acquired (Lines 13.1 to 13.6)	25,143,751,531	21,090,274,951	29,055,952,071
14. Net increase (or decrease) in contract loans and premium notes	680,364,965	482,538,129	647,665,084
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(6,881,130,361)	(7,344,310,185)	(9,156,361,828)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	35,588,672	293,417	293,417
16.2 Capital and paid in surplus, less treasury stock			
16.3 Borrowed funds	(123,993)	15,004,567	(26,916,744)
16.4 Net deposits on deposit-type contracts and other insurance liabilities	1,358,070,871	215,198,447	755,330,761
16.5 Dividends to stockholders			
16.6 Other cash provided (applied)	(828,548,136)	1,523,517,347	(233,612,080)
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	564,987,412	1,754,013,778	495,095,354
RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18. Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)	(1,230,019,831)	168,768,433	677,291,170
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	3,725,936,280	3,048,645,110	3,048,645,110
19.2 End of period (Line 18 plus Line 19.1)	2,495,916,449	3,217,413,543	3,725,936,280

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

20.0001. Other invested assets contributed to subsidiary	663,297,197	682,102,736	682,102,736
20.0002. Bond conversions and refinancing	404,169,269	329,828,602	419,261,516
20.0003. Bonds received as consideration for a group annuity contract	270,503,724	734,129,647	905,045,062
20.0004. Transfer of real estate to other invested assets	138,468,488		
20.0005. Change in market value of COLI	111,411,520	67,687,802	58,874,190
20.0006. Transfer of affiliated common stock	102,800,714		
20.0007. Other invested assets to bonds	94,448,349	2,582,572	79,797,836
20.0008. Stock conversions	92,967,487	11,999,702	22,066,669
20.0009. Net investment income payment in-kind bonds	20,706,839	2,946,964	3,999,576
20.0010. Dividend reinvestment	6,996,843	28,838,448	28,860,653

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

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

20.0011. Other invested assets to stock	773,601	104,929,743	105,936,231
20.0012. Premium recognized for a group annuity contract		734,129,647	905,045,062
20.0013. Transfer of mortgage loan to other than invested assets		98,392,208	98,392,208
20.0014. Bank loan rollovers		4,591,260	4,591,260
20.0015. Interest capitalization for long-term debt		1,644,296	1,844,174
20.0016. Acquisition of affiliated common stock for bonds and mortgage loans			3,286,679,337
20.0017. Bonds converted from long-term to short-term			88,838,415

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	4,721,215,150	4,318,547,194	6,406,227,881
3. Ordinary individual annuities	1,491,515,067	1,734,267,918	2,428,270,878
4. Credit life (group and individual)			
5. Group life insurance	1,013,506,146	1,176,197,350	1,485,245,423
6. Group annuities	6,865,999,556	7,358,651,286	10,266,489,470
7. A & H - group	161,577	118,524	160,081
8. A & H - credit (group and individual)			
9. A & H - other	543,469,804	527,741,032	709,494,930
10. Aggregate of all other lines of business			
11. Subtotal	14,635,867,300	15,115,523,304	21,295,888,663
12. Deposit-type contracts	4,369,962,475	2,326,273,205	3,890,495,490
13. Total	19,005,829,775	17,441,796,509	25,186,384,153
DETAILS OF WRITE-INS			
1001.			
1002.			
1003.			
1098. Summary of remaining write-ins for Line 10 from overflow page			
1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

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NOTES TO FINANCIAL STATEMENTS

Note 1 – Summary of Significant Accounting Policies and Going Concern

a. Accounting practices:

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

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

	SSAP #	F/S Page	F/S Line #	2017	2016
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 3)	XXX	XXX	XXX	\$ 193,103,063	\$ (13,882,911)
(2) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(3) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	<u>\$ 193,103,063</u>	<u>\$ (13,882,911)</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 16,152,415,831	\$ 15,423,489,956
(6) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(7) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	<u>\$ 16,152,415,831</u>	<u>\$ 15,423,489,956</u>

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

c. Accounting policy:

(1-5) No change

(6) For loan-backed and structured securities, such as asset-backed securities, 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.

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.

(7-11) No change

(12) In March 2017, the Company recorded an impairment on previously capitalized software costs of \$220,750,323. This impairment was recorded as general insurance expenses in the Statutory Statements of Operations. This impairment did not impact surplus, as the asset was previously nonadmitted.

(13-14) No change

d. Going concern - No change

Note 2 – Accounting Changes and Corrections of Errors

a. For the nine months ended September 30, 2017, corrections of prior years' errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		Correction
	Prior Years' Net Income	Current Year Surplus	of Asset or Liability Balances
Partnerships and limited liability companies	\$ -	\$ (1,477,867)	\$ (1,477,867)
Other than invested assets	4,115,825	4,115,825	4,115,825
Policyholders' reserves	5,230,979	5,230,979	(5,230,979)
General expenses due or accrued	(3,835,198)	(3,835,198)	3,835,198
Other Liabilities	246,229	246,229	246,229
Total	<u>\$ 5,757,835</u>	<u>\$ 4,279,968</u>	<u>\$ 1,488,406</u>

Of the \$4,279,968 increase to surplus for prior years' errors, \$5,757,835 was recorded as prior period adjustments and \$1,477,867 was recorded as a change in nonadmitted assets, net of tax in the Statutory Statements of Changes in Surplus.

NOTES TO FINANCIAL STATEMENTS

For the nine months ended September 30, 2016, corrections of prior years' errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		Correction of Asset or Liability Balances
	Prior Years' Net Income	Current Year Surplus	
Policyholders' reserves	\$ 51,416,761	\$ 51,416,761	\$ (51,416,761)
Partnerships and limited liability companies	-	4,646,968	(4,646,968)
Federal income tax receivable	(11,955,610)	(11,955,610)	11,955,610
Fees and other income	(2,472,150)	(2,472,150)	2,472,150
Total	<u>\$ 36,989,001</u>	<u>\$ 41,635,969</u>	<u>\$ (41,635,969)</u>

Of the \$41,635,969 increase to surplus for prior years' errors, \$36,989,001 was recorded as prior period adjustments and \$4,646,968 was recorded as a change in net unrealized capital gains (losses), net of tax in the Statutory Statements of Changes in Surplus.

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

b. Adoption of new accounting standards

In April 2016, the NAIC adopted modifications to SSAP No. 41, *Surplus Notes*, which were effective January 1, 2017. These modifications required that the surplus notes with a designation equivalent to NAIC 3 through 6 be reported at the lesser of amortized cost or fair value. Currently these surplus notes are reported at amortized cost. The modifications also incorporate guidance to clarify when surplus notes shall be nonadmitted, an unrealized loss should be recognized, and an other-than-temporary (OTTI) assessment should be performed. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 26, *Bonds, Excluding Loan-backed and Structured Securities*, and SSAP No. 43R, *Loan-backed and Structured Securities*, which were effective January 1, 2017 and should be prospectively applied. These modifications clarified that the amount of prepayment penalties or acceleration fees reported as investment income should equal the total proceeds received less the par value of the investment; and any difference between the carrying value and the par value at the time of disposal will be reported as realized capital gains and losses. These modifications also added specific disclosures related to securities sold, redeemed or otherwise disposed of as a result of a callable feature. These modifications did not have a significant impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 103R, *Transfers and Servicing of Financial Assets and Extinguishment of Liabilities*, which were effective January 1, 2017. These modifications required that obligations to deliver securities resulting from short sales be accounted for as contra-assets, and measured at fair value with changes in fair value recognized as unrealized gains and losses. The modifications also required new disclosures about short sale transactions. The unrealized gains and losses are realized upon settlement of the short sale obligation. Interest on short sale positions is accrued periodically and reported as interest expense. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted substantive revisions to SSAP No. 51R, *Life Contracts*, to incorporate references to the Valuation Manual (VM) and to facilitate the implementation of PBR, which were effective on January 1, 2017. The adoption of PBR only applies to new life insurance policies issued after January 1, 2017, however the Company plans to adopt these revisions to SSAP No. 51 using the 3-year phased in approach by no later than January 1, 2020. The Company currently uses formulas and assumptions to determine reserves as prescribed by state laws and regulations. Under PBR, the Company will be required to hold the higher of (a) the reserve using prescribed factors and (b) the PBR reserve which considers a wide range of future economic conditions, computed using justified company experience factors, such as mortality, policyholder behavior and expenses. The Company is currently assessing the impact of these modifications on the Company's financial statements.

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

In December 2016, the NAIC adopted modifications to SSAP No. 35R, *Guaranty Fund and Other Assessments*, which became effective March 31, 2017. The modification allows insurers to consider expected renewals of short-term health contracts in determining the assets recognized from accrued guaranty fund liability assessments from insolvencies of entities that write long-term care. Also, in August 2017, the NAIC made an additional modification to SSAP No. 35R to require discounting guaranty fund assessments and the related recoverable tax credit in excess of one year to payment or recovery at the whole life discount rate in effect as of the reporting date. The Company is adopting the modifications, which are not expected to have a significant impact on its financial statements.

In June 2017, the NAIC adopted modifications to SSAP No. 30, *Investment in Common Stock*, SSAP No. 48, *Joint Ventures, Partnerships and Limited Liability Method of Accounting*, and SSAP No. 97, *Investments in Subsidiary Controlled and Affiliated Entities* as they relate to ASU 2016-07, *Simplifying the Transition to the Equity Method of Accounting* which were effective January 1, 2017. These modifications included the definition of control and provided guidance as to when an investment qualified (or no longer qualifies) for the equity method of accounting. These modifications further specified that when the level of investment in a subsidiary, controlled or affiliated (SCA) entity fell below the level of control, defined as the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of the investee in SSAP No. 97, the reporting entity should discontinue the use of the equity method of accounting. When an entity becomes qualified to use the equity method of accounting, the entity should add the cost of acquiring the additional interest in the investee to the current basis of the previously held interest and apply the equity method of accounting, prospectively. The Company has adopted these modifications.

In June 2017, the NAIC adopted modifications to SSAP No. 37, *Mortgage Loans*, which became effective June 8, 2017. These modifications clarify that a reporting entity providing a mortgage loan as a "participant in a mortgage loan agreement", should consider the mortgage loan in the scope of SSAP No. 37. Specifically, in addition to mortgage loans directly originated, a mortgage loan also includes mortgages acquired through assignment, syndication or participation. These modifications also clarify the impairment assessment and incorporate new disclosures for these types of mortgage loans to identify mortgage loans in which the insurer is a participant or co-lender. These modifications did not have a financial impact on the Company. The Company is adding the additional disclosures to the Company's financial statements for the year ended December 31, 2017.

Note 3 – Business Combinations and Goodwill - No change

NOTES TO FINANCIAL STATEMENTS

Note 4 – Discontinued Operations - No change

Note 5 – Investments

a. Mortgage loans, including mezzanine real estate 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	<u>42,292,770</u>	-	<u>429,458</u>	<u>41,863,312</u>
c. Total first quarter	<u>\$ 42,292,770</u>	<u>\$ -</u>	<u>\$ 429,458</u>	<u>\$ 41,863,312</u>
OTTI recognized in the second quarter				
d. Intent to sell	\$ -	\$ -	\$ -	\$ -
e. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>40,538,551</u>	-	<u>729,596</u>	<u>39,808,955</u>
f. Total second quarter	<u>\$ 40,538,551</u>	<u>\$ -</u>	<u>\$ 729,596</u>	<u>\$ 39,808,955</u>
OTTI recognized in the third quarter				
g. Intent to sell	\$ -	\$ -	\$ -	\$ -
h. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	<u>4,436,542</u>	-	<u>3,559,600</u>	<u>876,942</u>
i. Total third quarter	<u>\$ 4,436,542</u>	<u>\$ -</u>	<u>\$ 3,559,600</u>	<u>\$ 876,942</u>
OTTI recognized in the fourth quarter				
j. Intent to sell	\$ -	\$ -	\$ -	\$ -
k. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	-	-	-	-
l. Total fourth quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
m. Annual aggregate total		<u>\$ -</u>	<u>\$ 4,718,654</u>	

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

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

NOTES TO FINANCIAL STATEMENTS

CUSIP	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
17307GH76	\$ 274,893.76	\$ 44,730.49	\$ (230,163.27)	\$ 44,730.49	\$ 152,776.75	March 31, 2017
22541QJR4	11,175.33	53.52	(11,121.81)	53.52	6,865.92	March 31, 2017
32051DCK6	182,177.17	160,728.11	(21,449.06)	160,728.11	179,180.14	March 31, 2017
45660LYW3	504,390.54	471,422.84	(32,967.70)	471,422.84	457,164.86	March 31, 2017
55274SAM3	225,789.88	209,839.17	(15,950.71)	209,839.17	218,832.17	March 31, 2017
86358RA23	1,326,199.14	1,253,635.93	(72,563.21)	1,253,635.93	1,289,098.83	March 31, 2017
86359ACG6	6,287.32	48.80	(6,238.52)	48.80	2.41	March 31, 2017
77277LAF4	22,537,014.10	22,514,590.18	(22,423.92)	22,514,590.18	31,699,906.98	March 31, 2017
77277LAH0	1,136,181.78	1,135,087.94	(1,093.84)	1,135,087.94	2,662,526.10	March 31, 2017
77277LAJ6	16,088,661.07	16,073,174.85	(15,486.22)	16,073,174.85	19,947,746.34	March 31, 2017
76110H4M8	4,413.15	2,326.35	(2,086.80)	2,326.35	4,073.27	June 30, 2017
86358RLG0	3,484.71	2,669.64	(815.07)	2,669.64	30,170.77	June 30, 2017
86359ACG6	16,323.86	2.02	(16,321.84)	2.02	2.49	June 30, 2017
88157QAL2	774,182.08	675,598.95	(98,583.13)	675,598.95	1,947,675.43	June 30, 2017
89789KAC9	17,294.14	8,919.66	(8,374.48)	8,919.66	356,046.75	June 30, 2017
77277LAF4	22,514,590.18	22,167,493.44	(347,096.74)	22,167,493.44	34,318,674.16	June 30, 2017
77277LAH0	1,135,087.94	1,118,158.56	(16,929.38)	1,118,158.56	2,738,435.22	June 30, 2017
77277LAJ6	16,073,174.85	15,833,786.94	(239,387.91)	15,833,786.94	21,595,653.49	June 30, 2017
22541NMA4	42,273.18	41,434.09	(839.09)	41,434.09	41,095.03	September 30, 2017
22541NMB2	11,868.56	11,634.10	(234.46)	11,634.10	11,534.82	September 30, 2017
22541SSD1	12,232.04	19.50	(12,212.54)	19.50	5,978.48	September 30, 2017
52108MDP5	3,497,947.00	-	(3,497,947.00)	-	1,925,412.53	September 30, 2017
55274SAM3	167,196.18	153,990.63	(13,205.55)	153,990.63	179,428.50	September 30, 2017
76110W4J2	1,131.15	229.03	(902.12)	229.03	555.83	September 30, 2017
88157QAL2	686,944.68	660,920.66	(26,024.02)	660,920.66	2,125,942.76	September 30, 2017
89789KAC9	16,949.10	8,714.37	(8,234.73)	8,714.37	357,735.19	September 30, 2017
Totals	\$ 87,267,862.89	\$ 82,549,209.77	\$ (4,718,653.12)	\$ 82,549,209.77	\$ 122,252,515.22	

(4) As of September 30, 2017, the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:

- a. The aggregate amount of unrealized losses:
 1. Less than 12 months \$ (68,442,795)
 2. 12 months or longer \$ (3,879,807)
- b. The aggregate related fair value of securities with unrealized losses:
 1. Less than 12 months \$ 3,567,772,246
 2. 12 months or longer \$ 151,300,017

(5) No change

e. Repurchase agreements:

(1-2) No change

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

(4-6) No change

f. Real estate - No change

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 reports derivative and repurchase agreement assets and liabilities as gross in the financial statements without offsetting.

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

NOTES TO FINANCIAL STATEMENTS

and carrying value of structured notes as of September 30, 2017:

CUSIP Identification	Actual Cost	Fair Value	Book / Adjusted Carrying Value	Mortgage-Referenced Security (YES/NO)
30711XBE3	\$ 70,732	\$ 70,752	\$ 70,732	YES
3137G0EQ8	1,408,498	1,410,305	1,408,498	YES
3137G0HQ5	2,180,719	2,186,999	2,180,719	YES
391164AF7	8,467,560	8,388,699	8,268,451	NO
5262720	1,262,834	1,274,084	1,270,295	NO
912810FR4	4,944,283	6,260,687	4,864,999	NO
912810PS1	1,874,118	2,696,123	1,886,352	NO
912810RF7	67,974,258	81,116,638	68,171,924	NO
BYZK109	9,327,385	10,374,000	9,344,412	NO
Total	\$ 97,510,387	\$ 113,778,286	\$ 97,466,382	XXX

I. 5* Securities

Investment	Number of 5* Securities		Aggregate BACV		Aggregate Fair Value	
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
(1) Bonds - AC	30	33	\$217,005,475	\$295,630,424	\$218,573,182	\$298,894,001
(2) Bonds - FV	-	-	-	-	-	-
(3) LB&SS - AC	-	-	-	-	-	-
(4) LB&SS - FV	-	-	-	-	-	-
(5) Preferred Stock - AC	2	2	12,642,000	12,642,000	14,744,904	13,678,407
(6) Preferred Stock - FV	-	-	-	-	-	-
(7) Total (1+2+3+4+5+6)	32	35	\$229,647,475	\$308,272,424	\$233,318,086	\$312,572,408

AC - Amortized Cost FV - Fair Value

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-c. The Company recorded dividends in net investment income, from MassMutual Holding LLC (MMHLLC) of \$424,470,500 through the nine months ended September 30, 2017 and \$338,076,491 through the nine months ended September 30, 2016.

On July 1, 2016, the Company's purchase of MSI Financial Services (MSIFS) was accounted for under the statutory purchase method, classified as investments in common stocks – subsidiaries and affiliates at a cost of \$126,045,875 which included the recognition of statutory goodwill of \$38,245,161. In March 2017, the Company contributed MSIFS to MMHLLC at carrying value of \$114,824,704, which excluded the remaining unamortized statutory goodwill of \$35,376,774. The remaining unamortized statutory goodwill was transferred from the Company's carrying value of MSIFS to its carrying value of MMHLLC. MSIFS was subsequently merged with MMHLLC's other broker dealer, MML Investor Services LLP.

In June 2017, the Company contributed certain intellectual property, with no carrying value, in an affiliated transaction with Insurance Road LLC (IRLLC), a wholly-owned subsidiary of the Company and therefore no gain or loss was recognized on the transaction. In June 2017, the Company became party to an agreement with MassMutual Intellectual Property LLC (MMIP) effective June 30, 2017 that gave the Company the right to use certain intellectual property in the operation of its business.

In July 2017, the company contributed its ownership in certain partnerships and LLCs with a carrying value of \$663,297,197 to IRLLC in an affiliated transaction and therefore no gain or loss was recognized on the transaction.

In July 2017, IRLLC paid a return of capital to MassMutual of \$700,000,000.

In August 2017, MassMutual International LLC (MMI), a wholly owned subsidiary of the Company, entered into an agreement to sell MassMutual Asia Ltd. (MM Asia), a wholly owned Hong Kong based life insurance and wealth management subsidiary. The sale is expected to close in 2018, subject to regulatory approval and customary closing conditions. Under the terms of the agreement, MMI will receive consideration of approximately \$1,700,000,000 in cash and stock. The stock is from an entity that is expected to own 60 percent of MM Asia. In the third quarter 2017, MMI classified MM Asia as held for sale. Accordingly, the expected gain on disposal will be realized when the sale is finalized.

The Company contributed additional capital of \$20,495,920 to MMHLLC through the nine months ended September 30, 2017 and \$845,418,422 through the nine months ended September 30, 2016. In July 2017, the Company contributed additional capital of \$20,000,000 to MMI. The 2016 capital contributions included the transfer of nine investments with the book value of \$670,164,387 from the Company to MMHLLC. The contribution of the nine investments was recorded at book value, and accordingly, there was no gain or loss recognized.

d-f. No change

NOTES TO FINANCIAL STATEMENTS

- g. Subsidiaries of MMHLLC are involved in litigation and investigations arising in the ordinary course of their business, which seek compensatory damages, punitive damages and equitable remedies. Although the Company is not aware of any actions or allegations that reasonably 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 surplus for a particular period depending upon, among other factors, the size of the loss and the level of the Company's changes in surplus for the period.

The Company has no parent.

h-n. No change

Note 11 – Debt

a. No change

b. Federal Home Loan Bank agreements

- (1) The Company is a member of the Federal Home Loan Bank of Boston (FHLB Boston). Through its membership, the Company has conducted business activity (borrowings) with the FHLB Boston. The Company uses these funding agreements with the FHLB Boston in an investment spread strategy, consistent with its other investment spread operations. The Company has determined the actual maximum borrowing capacity as \$2,000,000,000. The Company's unused capacity was \$895,043,310 as of September 30, 2017.

(2) FHLB Boston capital stock

a. Aggregate totals:

		September 30, 2017		
		1 Total 2+3	2 General Account	3 Separate Account
1. Current Year:				
(a) Membership stock - Class A	\$	-	\$	-
(b) Membership stock - Class B		25,000,000	25,000,000	-
(c) Activity Stock		50,900,000	50,900,000	-
(d) Excess Stock		-	-	-
(e) Aggregate Total		\$ 75,900,000	\$ 75,900,000	\$ -
(f) Actual or Estimated Borrowing Capacity as Determined by the Insurer	\$	2,000,000,000	\$ 2,000,000,000	\$ -
2. Prior Year-end:				
(a) Membership stock - Class A	\$	-	\$	-
(b) Membership stock - Class B		25,000,000	25,000,000	-
(c) Activity Stock		49,500,000	49,500,000	-
(d) Excess Stock		-	-	-
(e) Aggregate Total		\$ 74,500,000	\$ 74,500,000	\$ -
(f) Actual or Estimated Borrowing Capacity as determined by the Insurer	\$	2,000,000,000	\$ 2,000,000,000	\$ -

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

		Nine Months Ended September 30, 2017				
Membership Stock	1 Current Year Total	2 Not Eligible for Redemption	Eligible for Redemption			
			3 Less Than 6 Months	4 6 Months to Less Than 1 Year	5 1 to Less Than 3 Years	6 3 to 5 Years
1. Class A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2. Class B	25,000,000	25,000,000	-	-	-	-

NOTES TO FINANCIAL STATEMENTS

(3) Collateral pledged to FHLB:

a. Amount pledged as of September 30, 2017:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,622,347,550	\$ 1,226,785,949	\$ 1,104,956,690

2. Current year general account:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,622,347,550	\$ 1,226,785,949	\$ 1,104,956,690

3. Current year separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ -	\$ -	\$ -

4. Prior year-end total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,224,828,748	\$ 1,126,084,091	\$ 1,103,883,829

b. Maximum amount pledged for the nine months ended September 30, 2017:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,652,234,854	\$ 1,239,654,463	\$ 1,107,520,273

2. Current year general account:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,652,234,854	\$ 1,239,654,463	\$ 1,107,520,273

3. Current year separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ -	\$ -	\$ -

4. Prior year-end total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,234,077,139	\$ 1,126,695,711	\$ 1,107,803,111

NOTES TO FINANCIAL STATEMENTS

(4) Borrowing from FHLB:

a. Amount:

1. Current year:

September 30, 2017

	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	1,104,956,690	1,104,956,690	-	1,104,956,690
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,104,956,690</u>	<u>\$ 1,104,956,690</u>	<u>\$ -</u>	<u>\$ 1,104,956,690</u>

2. Prior Year-end:

December 31, 2016

	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	1,103,883,829	1,103,883,829	-	1,103,883,829
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,103,883,829</u>	<u>\$ 1,103,883,829</u>	<u>\$ -</u>	<u>\$ 1,103,883,829</u>

b. Maximum Amount:

Nine Months Ended September 30, 2017

	1 Total 2+3	2 General Account	3 Separate Account
1. Debt	\$ -	\$ -	\$ -
2. Funding	1,107,520,273	1,107,520,273	-
3. Other	-	-	-
4. Aggregate	<u>\$ 1,107,520,273</u>	<u>\$ 1,107,520,273</u>	<u>\$ -</u>

c. FHLB - Prepayment Obligations:

Does the company have prepayment obligations under the following arrangements (YES/NO)?

- | | |
|-----------------------|-----|
| 1. Debt | N/A |
| 2. Funding agreements | NO |
| 3. Other | N/A |

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

a. Defined Benefit Plan

- (1) The Company sponsors multiple employee benefit plans, providing retirement, life, health and other benefits to employees of unconsolidated subsidiaries, agents, general agents and retirees who meet plan eligibility requirements.

(2-3) No change

Nine Months Ended September 30,

	2017	2016	2017	2016	2017	2016
	Pension Benefits		Postretirement Benefits		Special or Contractual Benefits per SSAP No 11	
(4) Components of net periodic benefit cost						
a. Service cost	\$ 75,295,640	\$ 75,187,097	\$ 9,032,930	\$ 8,580,000	\$ -	\$ -
b. Interest cost	83,830,421	84,815,087	9,387,629	9,168,750	-	-
c. Expected return on plan assets	(110,042,857)	(108,669,383)	(64,952)	(76,500)	-	-
d. Transition asset or obligation	-	-	-	-	-	-
e. Gains and losses	49,349,603	52,743,703	1,154,320	2,240,250	-	-
f. Prior service cost or (credit) settlement or curtailment	2,342,013	2,342,013	(4,139,625)	(2,364,750)	-	-
h. Total net periodic benefit cost	<u>\$ 100,774,821</u>	<u>\$ 106,418,517</u>	<u>\$ 15,370,301</u>	<u>\$ 17,547,750</u>	<u>\$ -</u>	<u>\$ -</u>

NOTES TO FINANCIAL STATEMENTS

(5-21) No change

b-j No change

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

(1-10) No change

(11) The Company executed a tender offer in March 2017 for \$440,000,000 par value of surplus notes maturing in 2039. The Company paid \$711,000,000 of cash to settle the tender offer which resulted in a pre-tax loss of \$271,000,000. This loss is included in net realized gains (losses) within the Statutory Statements of Operations and is net of a tax benefit of \$95,000,000.

Issue Date	Interest Rate	Par Value (Face Amount of Notes)	Carrying Value of Note*	Interest and/or Principal Approved and Paid Current Year	Unapproved Interest and/or Principal	Total Interest and/or Principal Paid	Date of Maturity
11/15/1993	7.625%	\$ 250,000,000	\$ 250,000,000	\$ 9,531,250	\$ 7,148,438	\$ 447,968,750	11/15/2023
03/01/1994	7.500%	100,000,000	100,000,000	7,500,000	625,000	176,250,000	03/01/2024
05/12/2003	5.625%	250,000,000	249,386,666	7,031,250	5,273,437	196,992,188	05/15/2033
06/01/2009	8.875%	310,000,000	307,082,268	26,013,611	9,170,833	525,232,361	06/01/2039
01/17/2012	5.375%	400,000,000	398,912,200	10,750,000	7,166,667	115,502,778	12/01/2041
04/15/2015	4.500%	500,000,000	491,373,999	11,250,000	-	45,000,000	04/15/2065
03/20/2017	4.500%	475,000,000	470,764,136	-	-	-	04/01/2077
Total		\$ 2,285,000,000	\$ 2,267,519,269	\$ 72,076,111	\$ 29,384,375	\$ 1,506,946,076	

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

All payments of interest and principal are subject to the prior approval of the Division. Anticipated sinking fund payments are due for the notes issued in 1993 and 1994 as follows: \$62,500,000 in 2021, \$87,500,000 in 2022, \$150,000,000 in 2023 and \$50,000,000 in 2024. There are no sinking fund requirements for the notes issued in 2003, 2009, 2012 or 2015. Scheduled interest on the notes issued in 1993 and 2003 is payable on May 15 and November 15 of each year to holders of record on the preceding May 1 or November 1, respectively. Scheduled interest on the note issued in 1994 is payable on March 1 and September 1 of each year to holders of record on the preceding February 15 or August 15, respectively. Scheduled interest on the notes issued in 2009 and 2012 is payable on June 1 and December 1 of each year to holders of record on the preceding May 15 and November 15, respectively. Scheduled interest on the note issued in 2015 is payable on April 15 and October 15 of each year to holders of record on the preceding April 1 and October 1, respectively. Interest expense is not recorded until approval for payment is received from the Division. As of September 30, 2017, the unapproved interest was \$29,384,375 and the approved but unpaid interest was \$23,404,722. Through September 30, 2017, the Company paid cumulative interest of \$1,506,946,076 on surplus notes. Interest of \$72,076,111 was approved and paid during the nine months ended September 30, 2017. Interest of \$151,187,500 was approved and paid during the year ended December 31, 2016.

Note 14 – Liabilities, Contingencies and Assessments

- Contingent commitments - No change
- Assessments - No change
- Gain contingencies - No change
- Claims related to extra contractual obligations - No change
- All other contingencies:

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

In 2009, several lawsuits were filed as putative class actions and later consolidated before the federal district court in Colorado in connection with the investment performance of Oppenheimer Rochester California Municipal Fund (the California Fund Suit). This fund was advised by OppenheimerFunds, Inc. (OFI) and distributed by its subsidiary OppenheimerFunds Distributor, Inc. (OFDI). The plaintiffs in the California Fund Suit asserted claims against the Company, OFI, OFDI and certain present and former trustees and officers of the fund under federal securities laws and alleged, among other things, the disclosure documents of the fund contained misrepresentations and omissions, that the investment policies of the fund were not followed, and that the fund and the other defendants violated federal securities laws and regulations and certain state laws. In 2015, the district court granted the plaintiffs' motion to certify a class and to appoint class representatives and class counsel. In 2016, OFI recorded a liability of \$33 million as an estimate of the probable amount of the costs it would incur in connection with the proposed settlement. At that time, OFI also concluded that a portion of the costs it would incur would be covered by the proceeds of insurance policies and recorded an insurance recovery of \$14 million. In April 2017, the parties executed a memorandum of understanding setting forth the terms of a proposed \$51 million settlement. The proposed settlement is subject to approval by the court. As of September 30, 2017, OFI has recorded an expense of \$51 million for this settlement and an insurance recovery receivable of \$14 million. The final settlement hearing is expected to occur in November 2017.

In 2009, the Company was named as a defendant in a lawsuit filed in North Carolina state court related to certain losses in a bank-owned life insurance (BOLI) policy issued by the Company. The plaintiff alleges, among other things, fraud, breach of contract and breach of fiduciary duty claims against the Company, and it seeks to recover losses arising from investments pursuant to the BOLI policy. In 2015, the plaintiff voluntarily dismissed its complaint and refiled the case. The Company believes it has substantial defenses and will continue to vigorously defend itself in this action. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this suit.

NOTES TO FINANCIAL STATEMENTS

In 2010, Christina Chavez (Chavez) filed a putative class action complaint in California state court against the Company. Chavez alleges that the Company breached its obligations to its term life policyholders in California by not paying dividends on those policies. In 2014, the parties participated in a mediation of their dispute, which did not result in a settlement. In 2015, the judge certified a subclass consisting of one of twenty-six potential term products at issue in this case. All remaining subclasses were dismissed without prejudice. Fact discovery is complete and a trial has been set for October 2017. The Company believes it has substantial defenses and will continue to vigorously defend itself in this action. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

In 2012, Karen Bacchi filed a putative class action complaint against the Company in federal court in Massachusetts alleging that the Company breached its contracts by allegedly failing to distribute surplus in excess of the statutorily prescribed limit. In January 2017, the parties reached a resolution to settle the lawsuit for \$37,500,000 million, which was recorded in December 2016 as a combination of policyholders' benefits, dividends to policyholders and general insurance expenses that include legal fees and other costs. The parties are in the process of seeking the court's approval of the settlement, which is expected to occur in 2017.

In 2013, seven participants in the MassMutual Thrift Plan (the Thrift Plan) filed a putative class action complaint in federal court in Massachusetts. The complaint alleged, among other things, that the Company, the Investment Fiduciary Committee, the Thrift Plan Administrative Committee and individually named "fiduciaries" breached their duties by allowing the Thrift Plan to pay excessive fees and by engaging in self-dealing. In June 2016, the parties reached an agreement to settle the matter. In November 2016, the court entered a final order and judgment approving the settlement, and payments have been made. The final settlement did not have a significant financial impact on the Company.

In January 2016, Deborah Bishop-Bristol filed a putative class action complaint against the Company in federal court in Connecticut. The lawsuit alleges that the Company breached its fiduciary duty by controlling the crediting rate, and therefore the compensation earned on the stable value products. Further, the complaint alleges that the Company failed to adequately disclose the pricing spread and accepted excessive fees for investment, management and administrative services. In April 2016, the court granted the Company's motion to transfer the case to federal court in Massachusetts. The court recently dismissed all of the plaintiff's claims and the plaintiff has filed an amended complaint. The Company believes that it has substantial defenses and will vigorously defend itself in this action. No reasonable estimate can be made regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

In 2017, Jason Berube filed a putative class action complaint against the Company in Massachusetts state court alleging that that he and other similarly situated individuals were improperly classified as independent contractors and that they were inside sales employees who should have been paid minimum wage, overtime and should not have had expenses offset commissions. The Company believes that it has substantial defenses and will vigorously defend itself in this action. No reasonable estimate can be made regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

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 2017 or 2016.

(3) No change

(4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2017 or 2016.

(5-7) No change

c. Wash sales:

(1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio.

(2) The Company did not sell any securities with the NAIC Designation 3 or below through the nine months ended September 30, 2017 that were reacquired within 30 days of the sale date.

Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans - No change

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

Note 20 – Fair Value Measurements

NOTES TO FINANCIAL STATEMENTS

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

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

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

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

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

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

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

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

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

NOTES TO FINANCIAL STATEMENTS

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

	September 30, 2017			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Bonds:				
States, territories and possessions	\$ -	\$ 6,512,500	\$ -	\$ 6,512,500
Special revenue	-	970,200	-	970,200
Industrial and miscellaneous	-	2,734,385	42,070,701	44,805,086
Parent, subsidiaries and affiliates	-	40,471,424	59,527,794	99,999,218
Preferred stocks	-	-	819,257	819,257
Common stock - subsidiaries and affiliates	513,052,793	-	74,944,213	587,997,006
Common stock - unaffiliated	943,148,175	-	301,080,496	1,244,228,671
Derivatives:				
Interest rate swaps	-	7,934,047,430	-	7,934,047,430
Options	-	711,350,662	-	711,350,662
Currency swaps	-	532,277,085	-	532,277,085
Forward contracts	-	49,020,330	-	49,020,330
Credit default swaps	-	628,522	-	628,522
Separate account assets	44,157,072,080	22,051,817,014	708,057,854	66,916,946,948
Total financial assets carried at fair value	\$ 45,613,273,048	\$ 31,329,829,552	\$ 1,186,500,315	\$ 78,129,602,915
Financial liabilities:				
Derivatives:				
Interest rate swaps	\$ -	\$ 5,745,596,759	\$ -	\$ 5,745,596,759
Options	-	7,419,873	-	7,419,873
Currency swaps	-	333,599,274	-	333,599,274
Forward contracts	-	96,504,070	-	96,504,070
Credit default swaps	-	267,307	-	267,307
Total financial liabilities carried at fair value	\$ -	\$ 6,183,387,283	\$ -	\$ 6,183,387,283

The Company reviews the fair value hierarchy classifications each reporting period. Changes in the observability of the valuation attributes and the level of market activity may result in a reclassification of certain financial assets or liabilities between fair value hierarchy classifications. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. For the period ended September 30, 2017, \$298,342,115 of unaffiliated common stock were transferred from Level 2 to Level 1.

NOTES TO FINANCIAL STATEMENTS

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Bonds:				
States, territories and possessions	\$ -	\$ 7,543,820	\$ -	\$ 7,543,820
Special revenue	-	1,229,483	-	1,229,483
Industrial and miscellaneous	-	3,305,960	56,833,539	60,139,499
Parent, subsidiaries and affiliates	-	57,519,736	51,963,109	109,482,845
Preferred stocks	-	-	2,734,341	2,734,341
Common stock - subsidiaries and affiliates	486,881,832	23,261,703	63,196,191	573,339,726
Common stock - unaffiliated	581,611,509	349,552,279	188,576,330	1,119,740,118
Derivatives:				
Interest rate swaps	-	8,084,068,385	-	8,084,068,385
Options	-	653,128,451	-	653,128,451
Currency swaps	-	936,681,635	-	936,681,635
Forward contracts	-	51,760,755	-	51,760,755
Credit default swaps	-	3,816,266	-	3,816,266
Separate account assets	39,641,341,033	21,824,706,549	737,948,300	62,203,995,882
Total financial assets carried at fair value	\$ 40,709,834,374	\$ 31,996,575,022	\$ 1,101,251,810	\$ 73,807,661,206
Financial liabilities:				
Derivatives:				
Interest rate swaps	\$ -	\$ 5,915,235,253	\$ -	\$ 5,915,235,253
Options	-	5,791,830	-	5,791,830
Currency swaps	-	36,740,542	-	36,740,542
Forward contracts	-	55,486,004	-	55,486,004
Credit default swaps	-	789,072	-	789,072
Total financial liabilities carried at fair value	\$ -	\$ 6,014,042,701	\$ -	\$ 6,014,042,701

For the year ended December 31, 2016, there were no significant transfers between Level 1 and Level 2.

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

	Balance as of 01/01/2017		Transfers ⁽¹⁾		Gains (Losses) in Net Income		Gains (Losses) in Surplus		Purchases Issuances		Sales Settlements		Balance as of 09/30/2017
	In	Out	In	Out	Net Income	Surplus	Purchases	Issuances	Sales	Settlements	Sales	Settlements	
Financial assets:													
Bonds:													
Industrial and miscellaneous	\$ 56,833,539	\$ 467,323	\$ (12,708,911)	\$ (852,825)	\$ (598,060)	\$ 14,384	\$ -	\$ -	\$ -	\$ -	\$ (1,084,749)	\$ -	\$ 42,070,701
Parent, subsidiaries and affiliates	51,963,109	-	-	-	7,564,685	-	-	-	-	-	-	-	59,527,794
Preferred stock	2,734,341	-	(1,798,373)	-	(116,711)	-	-	-	-	-	-	-	819,257
Common stock - subsidiaries and affiliates	63,196,191	514,400	(956,129)	9,563	11,542,970	-	-	637,218	-	-	-	-	74,944,213
Common stock - unaffiliated	188,576,330	77,079,954	(7,084,163)	(6,095,743)	26,414,819	29,318,957	-	(5,500,000)	-	(1,629,658)	-	-	301,080,496
Separate account assets	737,948,300	-	-	45,387,880	-	56,619,567	-	(130,412,634)	-	(1,485,259)	-	-	708,057,854
Total financial assets	\$ 1,101,251,810	\$ 78,061,677	\$ (22,547,576)	\$ 38,448,875	\$ 44,807,703	\$ 85,952,908	\$ -	\$ (135,275,416)	\$ -	\$ (4,199,666)	\$ -	\$ -	\$ 1,186,500,315

⁽¹⁾Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis. The common stock unaffiliated assets were transferred from Level 2 to Level 3 due to a change in the observability of pricing inputs.

	Balance as of 01/01/2016		Transfers ⁽¹⁾		Gains (Losses) in Net Income		(Losses) Gains in Surplus		Purchases Issuances		Sales Settlements		Balance as of 12/31/2016
	In	Out	In	Out	Net Income	Surplus	Purchases	Issuances	Sales	Settlements	Sales	Settlements	
Financial assets:													
Bonds:													
Industrial and miscellaneous	\$ 21,822,270	\$ 62,018,704	\$ (400,000)	\$ (11,937,984)	\$ (13,183,256)	\$ 408,913	\$ 4,057,059	\$ (61)	\$ (5,952,106)	\$ -	\$ (19,939,048)	\$ -	\$ 56,833,539
Parent, subsidiaries, and affiliates	44,987,196	8,962,866	-	564,823	6,975,913	1,953,045	10,982,187	(2,523,873)	-	-	-	-	51,963,109
Preferred Stock	2,433,928	-	(1,565,363)	-	(92,373)	1,958,149	-	-	-	-	-	-	2,734,341
Common stock - subsidiaries and affiliates	39,651,503	15,896,989	-	18,529	7,478,296	-	369,403	(18,529)	(200,000)	-	-	-	63,196,191
Common stock - unaffiliated	179,143,468	4,578,828	-	(490,006)	(4,892,076)	12,022,672	791,170	(1,726,973)	(850,753)	-	-	-	188,576,330
Separate account assets	725,326,815	5,096,000	-	21,359,610	-	149,191,756	-	(152,961,206)	(10,064,675)	-	-	-	737,948,300
Total financial assets	\$ 1,013,365,180	\$ 96,553,387	\$ (1,965,363)	\$ 9,514,972	\$ (3,713,496)	\$ 165,534,535	\$ 16,199,819	\$ (157,230,642)	\$ (37,006,582)	\$ -	\$ -	\$ -	\$ 1,101,251,810

⁽¹⁾Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis. Industrial and miscellaneous bonds were transferred from Level 2 to Level 3 due to a change in the observability of pricing inputs.

NOTES TO FINANCIAL STATEMENTS

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

4. *Valuation Techniques and Inputs*

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

A description of the significant valuation techniques and inputs to the determination of estimated fair value for the more significant asset and liability classes measured at fair value on a recurring basis and categorized within Level 2 and Level 3 of the fair value hierarchy is as follows:

Separate account assets - These assets primarily include bonds (industrial and miscellaneous; U.S. government and agencies) and derivatives. Their fair values are determined as follows:

Bonds (Industrial and miscellaneous) - These securities are principally valued using the market or the income approaches. Level 2 valuations are based primarily on quoted prices in markets that are not active, broker quotes, matrix pricing or other similar techniques that use standard market observable inputs such as benchmark yields, spreads versus benchmark yields, new issuances, issuer ratings, duration, and trades of identical or comparable securities. Privately placed securities are valued using discounted cash flow models using standard market observable inputs, and inputs derived from, or corroborated by, market observable data including market yield curve, duration, call provisions, observable prices and spreads for similar publicly traded or privately traded issuances that incorporate the credit quality and industry sector of the issuer. This level also includes securities priced by independent pricing services that use observable inputs. Valuations based on matrix pricing or other similar techniques that utilize significant unobservable inputs or inputs that cannot be derived principally from, or corroborated by, observable market data, including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit-related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

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

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

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

5. Derivative assets and liabilities fair value disclosures on a gross basis are included in paragraph 1 above. Since there are no derivative assets or liabilities classified in Level 3, the reconciliation disclosures required under paragraphs 2 through 4 are not applicable.

- b. The Company provides additional fair value information in Note 21. "Other Items".

NOTES TO FINANCIAL STATEMENTS

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

	September 30, 2017					
	Aggregate	Admitted				Not
	Fair Value	Assets	Level 1	Level 2	Level 3	Practicable (Carrying Value)
Financial assets:						
Bonds:						
U. S. government and agencies	\$ 7,558,656,611	\$ 6,987,909,516	-	\$ 7,557,366,928	\$ 1,289,683	-
All other governments	1,203,399,703	1,122,416,478	-	1,132,689,429	70,710,274	-
States, territories and possessions	659,756,917	603,231,181	-	659,756,917	-	-
Political subdivisions	540,924,801	498,835,499	-	540,924,801	-	-
Special revenue	6,292,427,383	5,606,634,104	-	6,282,048,567	10,378,816	-
Industrial and miscellaneous	71,151,365,300	68,256,564,080	-	41,607,359,360	29,544,005,940	-
Parent, subsidiaries and affiliates	6,443,618,140	6,326,449,703	-	628,421,424	5,815,196,716	-
Preferred stocks	848,194,236	835,059,387	40,766,496	-	807,427,740	-
Common stocks - subsidiaries and affiliates ⁽¹⁾	587,997,006	587,997,006	513,052,793	-	74,944,213	-
Common stocks - unaffiliated	1,244,228,671	1,244,228,671	943,148,175	-	301,080,496	-
Mortgage loans - commercial	20,918,024,025	20,342,819,295	-	-	20,918,024,025	-
Mortgage loans - residential	1,784,895,904	1,817,567,336	-	-	1,784,895,904	-
Cash, cash equivalents and short-term investments	2,495,916,449	2,495,916,449	85,866,399	2,410,050,050	-	-
Derivatives:						
Interest rate swaps	8,544,295,634	7,934,047,430	-	8,544,295,634	-	-
Options	711,350,662	711,350,662	-	711,350,662	-	-
Currency swaps	532,277,085	532,277,085	-	532,277,085	-	-
Forward contracts	56,334,451	49,020,330	-	56,334,451	-	-
Credit default swaps	32,205,565	30,307,191	-	32,205,565	-	-
Separate account assets	66,916,946,948	66,916,946,948	44,157,072,080	22,051,817,014	708,057,854	-
Financial liabilities:						
Repurchase agreements	4,246,243,228	4,246,243,228	-	4,246,243,228	-	-
Commercial paper	249,869,167	249,869,167	-	249,869,167	-	-
Guaranteed interest contracts	8,898,093,282	8,890,084,589	-	-	8,898,093,282	-
Group annuity contracts and other deposits	18,599,752,507	18,079,779,574	-	-	18,599,752,507	-
Individual annuity contracts	7,877,231,624	6,416,640,109	-	-	7,877,231,624	-
Supplementary contracts	1,164,302,702	1,163,161,434	-	-	1,164,302,702	-
Derivatives:						
Interest rate swaps	5,801,196,324	5,745,596,759	-	5,801,196,324	-	-
Options	7,419,873	7,419,873	-	7,419,873	-	-
Currency swaps	333,599,274	333,599,274	-	333,599,274	-	-
Forward contracts	97,011,671	96,504,070	-	97,011,671	-	-
Credit default swaps	1,467,556	1,592,157	-	1,467,556	-	-

⁽¹⁾ Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had a statutory carrying value of \$14,001,171,090.

NOTES TO FINANCIAL STATEMENTS

December 31, 2016

	Aggregate		Admitted			Not Practicable (Carrying Value)
	Fair Value	Assets	Level 1	Level 2	Level 3	
Financial assets:						
Bonds:						
U. S. government and agencies	\$ 7,327,249,403	\$ 6,819,359,058	\$ -	\$ 7,323,337,358	\$ 3,912,045	\$ -
All other governments	934,303,664	923,699,348	-	863,291,001	71,012,663	-
States, territories and possessions	723,249,478	676,412,175	-	723,249,478	-	-
Political subdivisions	514,142,376	482,667,254	-	514,142,376	-	-
Special revenue	6,166,004,840	5,604,643,065	-	6,133,478,774	32,526,066	-
Industrial and miscellaneous	64,477,981,544	62,806,781,196	-	39,230,699,303	25,247,282,241	-
Parent, subsidiaries and affiliates	6,604,482,057	6,508,255,599	-	615,097,030	5,989,385,027	-
Preferred stocks	481,903,752	464,925,273	503,400	30,605,241	450,795,111	-
Common stock - subsidiaries and affiliates ⁽¹⁾	573,339,726	573,339,726	486,881,832	23,261,703	63,196,191	-
Common stock - unaffiliated	1,119,740,118	1,119,740,118	581,611,509	349,552,279	188,576,330	-
Mortgage loans - commercial	19,660,034,378	19,193,187,754	-	-	19,660,034,378	-
Mortgage loans - residential	1,728,006,318	1,767,903,811	-	-	1,728,006,318	-
Cash, cash equivalents and short-term investments	3,725,936,280	3,725,936,280	(95,241,558)	3,821,177,838	-	-
Derivatives:						
Interest rate swaps	8,633,029,641	8,084,068,386	-	8,633,029,641	-	-
Options	653,128,451	653,128,451	-	653,128,451	-	-
Currency swaps	936,681,635	936,681,635	-	936,681,635	-	-
Forward contracts	51,760,755	51,760,756	-	51,760,755	-	-
Credit default swaps	39,763,838	37,821,597	-	39,763,838	-	-
Separate account assets	62,203,995,882	62,203,995,882	39,641,341,033	21,824,706,549	737,948,300	-
Financial liabilities:						
Repurchase agreements	4,729,192,054	4,729,192,054	-	4,729,192,054	-	-
Commercial paper	249,940,069	249,940,069	-	249,940,069	-	-
Guaranteed investment contracts	7,028,012,044	7,090,435,309	-	-	7,028,012,044	-
Group annuity contracts and other deposits	19,661,467,866	19,096,549,135	-	-	19,661,467,866	-
Individual annuity contracts	8,272,459,416	6,714,580,201	-	-	8,272,459,416	-
Supplementary contracts	1,153,297,345	1,152,123,682	-	-	1,153,297,345	-
Derivatives:						
Interest rate swaps	5,960,272,303	5,915,235,253	-	5,960,272,303	-	-
Options	5,791,830	5,791,830	-	5,791,830	-	-
Currency swaps	36,740,542	36,740,542	-	36,740,542	-	-
Forward contracts	55,486,004	55,486,004	-	55,486,004	-	-
Credit default swaps	789,072	789,072	-	789,072	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had statutory carrying values of \$13,670,304,964.

- d. As of September 30, 2017 and December 31, 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:

Common stocks of unconsolidated subsidiaries, primarily MMHLLC and MassMutual International LLC (MMI), are accounted for using the statutory equity method. The Company accounts for the value of MMHLLC and MMI at its underlying U.S. generally accepted accounting principles (GAAP) equity value adjusted to remove certain nonadmitted and intangible assets. MMHLLC's value is also adjusted by a portion of its noncontrolling interests (NCI) and appropriated retained earnings, after consideration of MMHLLC's fair value and the Company's capital levels. The Division has affirmed the statutory recognition of the Company's application of the NCI guidelines in MMHLLC's statutory carrying value. However, the Company has limited this recognition to \$2,597,916,344 as of September 30, 2017 and \$2,675,250,656 as of December 31, 2016. Operating results, less dividends declared, for MMHLLC are reflected as net unrealized capital gains (losses) in the Statutory Statements of Changes in Surplus. Dividend distributions declared from MMHLLC are recorded in net investment income when declared and are limited to MMHLLC's U.S. GAAP retained earnings. The cost basis of common stocks – subsidiaries and affiliates is adjusted for impairments deemed to be other than temporary.

Business risks

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

Insurance and underwriting risks

NOTES TO FINANCIAL STATEMENTS

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, morbidity, longevity, persistency, interest rates and other factors. If actual policy experience emerges that is significantly and adversely different from assumptions used in product pricing, the effect could be material to the profitability of the Company. For participating whole life products, the Company's dividends to policyholders primarily reflect the difference between actual investment, mortality, expense and persistency experience and the experience embedded in the whole life premiums and guaranteed elements. The Company also reinsures certain life insurance and other long-term care insurance policies to mitigate the impact of its underwriting risk.

Investment and interest rate risks

The fair value, cash flows and earnings of investments can be influenced by a variety of factors including changes in interest rates, credit spreads, equity markets, portfolio asset allocation and general economic conditions. The Company employs a rigorous asset/liability management process to help mitigate the economic impacts of various investment risks, in particular interest rate risk. By effectively matching the market sensitivity of assets with the liabilities they support, the impact of interest rate changes is addressed, on an economic basis, as the change in the value of the asset is offset by a corresponding change in the value of the supported liability. The Company uses derivatives, such as interest rate swaps and swaptions, as well as synthetic assets to reduce interest rate and duration imbalances determined in asset/liability analyses.

The levels of U.S. interest rates are influenced by U.S. monetary policies and by the relative attractiveness of U.S. markets to investors versus other global markets. As interest rates increase, certain debt securities may experience amortization or prepayment speeds that are slower than those assumed at purchase, impacting the expected maturity of these securities and the ability to reinvest the proceeds at the higher yields. Rising interest rates may also result in a decrease in the fair value of the investment portfolio. As interest rates decline, certain debt securities may experience accelerated amortization and prepayment speeds than what was assumed at purchase. During such periods, the Company is at risk of lower net investment income as it may not be able to reinvest the proceeds at comparable yields. Declining interest rates may also increase the fair value of the investment portfolio.

Interest rates also have an impact on the Company's products with guaranteed minimum payouts and on interest credited to account holders. As interest rates decrease, investment spreads may contract as crediting rates approach minimum guarantees, resulting in an increased liability.

In periods of increasing interest rates, policy loans, surrenders and withdrawals may increase as policyholders seek investments with higher perceived returns. This could result in cash outflows requiring the Company to sell invested assets at a time when the prices of those assets are adversely affected by the increase in market interest rates, which could cause the Company to realize investment losses.

Currency exchange risk

The Company has currency risk due to its non-U.S. dollar investments and medium-term notes along with its indirect international operations. The Company mitigates currency risk through the use of cross-currency swaps and forward contracts. Cross-currency swaps are used to minimize currency risk for certain non-U.S. dollar assets and liabilities through a pre-specified exchange of interest and principal. Forward contracts are used to hedge movements in exchange rates.

Credit and other market risks

The Company manages its investments to limit credit and other market risks by diversifying its portfolio among various security types and industry sectors as well as purchasing credit default swaps to transfer some of the risk.

Stressed conditions, volatility and disruptions in global capital markets or in particular markets or financial asset classes can have an adverse effect on the Company, in part because the Company has a large investment portfolio and assets supporting the Company's insurance liabilities are sensitive to changing market factors. Global market factors, including interest rates, credit spread quality, equity prices, real estate markets, foreign currency exchange rates, consumer spending, business investment, government spending, the volatility and strength of the capital markets, deflation and inflation, all affect the business and economic environment and, ultimately, the profitability of the Company's business. Disruptions in one market or asset class can also spread to other markets or asset classes. Upheavals in the financial markets can also affect the Company's business through their effects on general levels of economic activity, employment and customer behavior.

Significant volatility in the financial markets, and government actions taken in response, may exacerbate some of the risks the Company faces. The Company holds investments in energy and certain other commodity sectors, which have experienced similar overall market volatility and declines. With the continued weaker economic outlook in these sectors, there may be an increase in reported default rates or potential downgrades to the ratings of companies exposed to these sectors. In addition, concerns over the solvency of certain countries and sovereignties and the entities that have significant exposure to their debt have created market volatility. This volatility may continue to affect the performance of various asset classes until there is an ultimate resolution of the sovereign debt related concerns.

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, 2017			Nine Months Ended September 30, 2017
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 284,394,083	\$ 309,976,561	\$ 381,261,662	\$ 59,456
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	20,933,543	22,482,964	27,112,214	19,015
f. Other assets	-	-	-	-
g. Total	<u>\$ 305,327,626</u>	<u>\$ 332,459,525</u>	<u>\$ 408,373,876</u>	<u>\$ 78,471</u>

	September 30, 2017			Nine Months Ended September 30, 2017
	Actual Cost	Carrying Value	Fair Value	OTTI
Subprime:				
a. Residential mortgage-backed securities	\$ 247,213,749	\$ 287,493,435	\$ 349,786,778	\$ 175,669
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	11,099,697	12,183,517	13,682,288	10,969
f. Other assets	-	-	-	-
g. Total	<u>\$ 258,313,446</u>	<u>\$ 299,676,952</u>	<u>\$ 363,469,066</u>	<u>\$ 186,638</u>

*The Company's SCA, C.M. Life, has investments in Alt-A and subprime mortgages, as does C.M. Life's SCA, MML Bay State. These investments comprise less than 1% of the Company's invested assets.

	December 31, 2016			Year Ended December 31, 2016
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 475,024,785	\$ 346,806,874	\$ 421,952,463	\$ 386,991
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	35,352,414	25,011,780	30,215,621	3,072
f. Other assets	-	-	-	-
g. Total	<u>\$ 510,377,199</u>	<u>\$ 371,818,654</u>	<u>\$ 452,168,084</u>	<u>\$ 390,063</u>

	December 31, 2016			Year Ended December 31, 2016
	Actual Cost	Carrying Value	Fair Value	OTTI
Subprime:				
a. Residential mortgage-backed securities	\$ 426,575,800	\$ 339,118,699	\$ 402,752,703	\$ 42,634
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	2,739,687	-	215,700	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	20,888,528	15,726,076	17,137,869	11,949
f. Other assets	-	-	-	-
g. Total	<u>\$ 450,204,015</u>	<u>\$ 354,844,775</u>	<u>\$ 420,106,272</u>	<u>\$ 54,583</u>

*The Company's SCA, C.M. Life, has investments in Alt-A and subprime mortgages, as does C.M. Life's SCA, MML Bay State. These investments comprise less than 1% of the Company's invested assets.

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

g. Retained asset accounts - No change

NOTES TO FINANCIAL STATEMENTS

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through November 10, 2017, the date the financial statements were available to be issued. No events have occurred subsequent to the date of the statement of financial position and before the date of evaluation that would require disclosure.

Note 23 – Reinsurance - No Change

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

a – d. No change.

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

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses - No change

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 [] No [X]
- 3.3 If the response to 3.2 is yes, provide a brief description of those changes.
- 4.1 Has the reporting entity been a party to a merger or consolidation during the period covered by this statement? Yes [] No [X]
- 4.2 If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation.

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

5. If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved? Yes [] No [X] N/A []
If yes, attach an explanation.
- 6.1 State as of what date the latest financial examination of the reporting entity was made or is being made. 12/31/2014
- 6.2 State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released. 12/31/2014
- 6.3 State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date). 06/30/2016
- 6.4 By what department or departments?
Commonwealth of Massachusetts Division of Insurance
- 6.5 Have all financial statement adjustments within the latest financial examination report been accounted for in a subsequent financial statement filed with Departments? Yes [] No [] N/A [X]
- 6.6 Have all of the recommendations within the latest financial examination report been complied with? Yes [X] No [] N/A []
- 7.1 Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period? Yes [] No [X]
- 7.2 If yes, give full information:
- 8.1 Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board? Yes [] No [X]
- 8.2 If response to 8.1 is yes, please identify the name of the bank holding company.
- 8.3 Is the company affiliated with one or more banks, thrifts or securities firms? Yes [X] No []
- 8.4 If response to 8.3 is yes, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC) and the Securities Exchange Commission (SEC)] and identify the affiliate's primary federal regulator.

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

GENERAL INTERROGATORIES

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

FINANCIAL

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

INVESTMENT

- 11.1 Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.) Yes [] No []
- 11.2 If yes, give full and complete information relating thereto:
 Repurchase agreements, Letter stock or securities restricted as to sale - excluding FHLB Capital Stock, FHLB Capital Stock, On deposit with states, pledged as collateral - excluding collateral pledged to an FHLB and Pledged as collateral to FHLB - including assets backing funding agreements
12. Amount of real estate and mortgages held in other invested assets in Schedule BA: \$1,527,051,877
13. Amount of real estate and mortgages held in short-term investments: \$
- 14.1 Does the reporting entity have any investments in parent, subsidiaries and affiliates? Yes [] No []
- 14.2 If yes, please complete the following:
- | | 1
Prior Year-End
Book/Adjusted
Carrying Value | 2
Current Quarter
Book/Adjusted
Carrying Value |
|---|--|---|
| 14.21 Bonds | \$ 6,508,255,596 | \$ 6,189,347,116 |
| 14.22 Preferred Stock | \$ | \$ |
| 14.23 Common Stock | \$ 13,670,494,513 | \$ 14,001,343,848 |
| 14.24 Short-Term Investments | \$ | \$ |
| 14.25 Mortgage Loans on Real Estate | \$ | \$ |
| 14.26 All Other | \$ 3,484,857,931 | \$ 4,132,084,426 |
| 14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | \$ 23,663,608,040 | \$ 24,322,775,390 |
| 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, 2017 OF THE Massachusetts Mutual 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
JP Morgan Chase Bank N.A.	1 Chase Manhattan Plaza, 19th Floor, New York, NY 10005
Northern Trust	50 South LaSalle Street, Chicago, IL 60603
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105

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

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

- 17.3 Have there been any changes, including name changes, in the custodian(s) identified in 17.1 during the current quarter? Yes [] No [X]
- 17.4 If yes, give full information relating thereto:

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

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

1 Name of Firm or Individual	2 Affiliation
Apollo Aviation Group Capital Markets LLC	U.....
OFI Institutional Asset Management, Inc.	A.....
Barings LLC	A.....
Franklin Advisers, Inc.	U.....
Tortoise Capital Advisors, L.L.C.	U.....
PIMCO- Pacific Investment Management Company LLC	U.....
Earnest Partners LLC	U.....
KA Fund Advisors LLC	U.....
IFM Investors Pty Ltd	U.....
Ashmore Investment Management Limited	U.....
Jefferies Finance LLC	A.....
20 Gates Management, LLC	U.....

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

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

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

1 Central Registration Depository Number	2 Name of Firm or Individual	3 Legal Entity Identifier (LEI)	4 Registered With	5 Investment Management Agreement (IMA) Filed
168456	Apollo Aviation Group Capital Markets LLC		SEC	NO.....
110363	OFI Institutional Asset Management, Inc.		SEC	DS.....
106006	Barings LLC	R6ZXK5P01NP6HXS1S07	SEC	DS.....
104517	Franklin Advisers, Inc.		SEC	NO.....
123711	Tortoise Capital Advisors, L.L.C.		SEC	NO.....
104559	PIMCO- Pacific Investment Management Company LLC		SEC	NO.....
107926	Earnest Partners LLC		SEC	NO.....
141037	KA Fund Advisors LLC		SEC	NO.....
162754	IFM Investors Pty Ltd		SEC	NO.....
185402	Ashmore Investment Management Limited	R6ZXK5P01NP6HXS1S07	SEC	NO.....
162264	Jefferies Finance LLC		SEC	DS.....
155480	20 Gates Management, LLC		SEC	NO.....

- 18.1 Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Investment Analysis Office been followed? Yes [] No [X]
- 18.2 If no, list exceptions:

At 09/30/2017, 42 issues for 33 issuers did not meet the filing requirements of the Purposes and Procedures Manual. The majority of these issues currently lack one or more of the following: Valid cusip/PPN, audited financials and/or executed legal documentation. Exceptions totaled \$146,198,796 or 0.14% of all assets.

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	\$ 1,693,555
1.12	Residential Mortgages	\$ 1,817,567,335
1.13	Commercial Mortgages	\$ 20,341,125,741
1.14	Total Mortgages in Good Standing	<u>\$ 22,160,386,631</u>
1.2	Long-Term Mortgages In Good Standing with Restructured Terms	
1.21	Total Mortgages in Good Standing with Restructured Terms	<u>\$</u>
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	<u>\$</u>
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)	<u>\$ 22,160,386,631</u>
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	<u>\$</u>
2.	Operating Percentages:	
2.1	A&H loss percent	68.040 %
2.2	A&H cost containment percent	1.200 %
2.3	A&H expense percent excluding cost containment expenses	66.840 %
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, 2017 OF THE Massachusetts Mutual 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 Reinsurance Ceded	7 Type of Reinsurer	8 Certified Reinsurer Rating (1 through 6)	9 Effective Date of Certified Reinsurer Rating
.82627	06-0839705	.08/01/2017	Swiss Re Life & Health America (SRN7)	MO	YRT/I	Authorized		
.60054	06-6033492	.03/22/2017	Aetna Life Insurance Corporation	CT	CO/I	Authorized		
.88099	75-1608507	.05/09/2016	Optimum Re Insurance Corporation	TX	CO/G	Authorized		

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

1	Life Contracts		Direct Business Only					
	2	3	4	5	6	7		
States, Etc.	Active Status	Life Insurance Premiums	Annuity Considerations	Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 Through 5	Deposit-Type Contracts	
1. Alabama	AL	L	30,090,562	39,709,110	4,768,687	35,017,302	109,585,661	71,327,605
2. Alaska	AK	L	1,334,567	862,642	217,128	2,625,520	5,039,857	2,421,518
3. Arizona	AZ	L	37,871,673	40,106,490	7,054,972	18,611,409	103,644,544	31,406,934
4. Arkansas	AR	L	14,427,284	17,459,085	1,588,636	1,261,515	34,736,520	9,925,786
5. California	CA	L	522,791,411	208,749,883	44,364,475	244,918,447	1,020,824,216	207,821,393
6. Colorado	CO	L	69,465,501	27,176,962	7,988,698	9,633,840	114,265,001	18,841,640
7. Connecticut	CT	L	126,898,370	44,805,880	15,020,401	205,776,773	392,501,424	26,736,773
8. Delaware	DE	L	80,851,936	22,898,492	1,197,434	147,049,243	251,997,105	2,007,655,084
9. District of Columbia	DC	L	14,084,130	2,898,249	2,965,711	15,669,576	35,617,666	5,942,992
10. Florida	FL	L	344,337,853	110,574,661	22,516,588	534,161,457	1,011,590,559	205,250,093
11. Georgia	GA	L	165,358,798	77,800,255	16,763,231	165,832,224	425,754,508	66,720,830
12. Hawaii	HI	L	13,573,438	9,551,606	2,290,043	5,214,955	30,630,042	9,455,471
13. Idaho	ID	L	17,345,222	5,605,783	926,591	12,027,860	35,905,456	7,827,792
14. Illinois	IL	L	168,468,694	104,296,848	18,661,259	333,146,879	624,573,680	72,135,997
15. Indiana	IN	L	66,114,544	28,438,745	6,889,963	33,780,188	135,223,440	27,886,774
16. Iowa	IA	L	34,295,063	13,444,746	2,727,791	85,217,620	135,685,220	4,624,481
17. Kansas	KS	L	39,317,339	7,768,567	4,112,239	21,403,717	72,601,862	10,591,986
18. Kentucky	KY	L	19,814,215	26,524,678	3,725,029	18,302,967	68,366,889	32,718,912
19. Louisiana	LA	L	29,557,589	12,372,440	4,256,618	12,397,707	58,584,354	44,234,475
20. Maine	ME	L	20,341,428	13,181,403	1,778,450	17,652,732	52,954,013	4,728,683
21. Maryland	MD	L	103,257,044	149,422,509	20,966,595	110,855,982	384,502,130	52,971,603
22. Massachusetts	MA	L	191,677,301	194,741,011	23,750,512	708,427,565	1,118,596,389	38,334,602
23. Michigan	MI	L	104,625,746	72,785,598	10,234,501	87,523,174	275,169,019	72,451,986
24. Minnesota	MN	L	37,358,109	59,831,332	6,326,409	273,018,065	376,533,915	128,604,814
25. Mississippi	MS	L	29,133,545	18,701,261	7,869,363	1,919,354	57,623,523	11,452,777
26. Missouri	MO	L	113,649,735	25,988,138	8,225,930	74,323,561	222,187,364	37,541,897
27. Montana	MT	L	12,191,531	4,044,781	914,072	453,402	17,603,786	8,641,890
28. Nebraska	NE	L	27,105,451	28,368,357	4,376,425	80,376,748	140,226,981	13,447,946
29. Nevada	NV	L	21,543,858	9,031,179	2,476,963	31,250,637	64,302,637	9,090,615
30. New Hampshire	NH	L	25,893,148	26,854,998	3,405,389	15,587,924	71,741,459	6,972,977
31. New Jersey	NJ	L	265,631,688	114,787,319	29,063,219	318,545,622	728,027,848	121,882,000
32. New Mexico	NM	L	13,874,210	8,913,321	1,641,812	834,550	25,263,893	9,159,059
33. New York	NY	L	776,446,026	396,915,251	62,753,839	452,043,432	1,688,158,548	342,902,731
34. North Carolina	NC	L	103,897,583	84,756,072	21,503,288	106,924,532	317,081,475	111,726,727
35. North Dakota	ND	L	10,170,147	5,833,370	495,670	13,567,648	30,266,835	7,220,168
36. Ohio	OH	L	96,501,965	135,425,732	12,095,683	203,621,915	447,645,295	47,986,130
37. Oklahoma	OK	L	60,501,484	15,415,819	5,736,725	43,513,508	125,167,536	17,555,700
38. Oregon	OR	L	19,198,989	12,701,681	3,457,391	18,914,386	54,272,447	8,772,871
39. Pennsylvania	PA	L	225,187,586	99,443,091	29,685,980	289,429,089	643,745,746	14,685,957
40. Rhode Island	RI	L	14,750,962	27,502,681	2,431,946	80,678,105	125,363,694	2,198,251
41. South Carolina	SC	L	58,555,199	20,963,956	10,913,200	15,041,577	105,473,932	42,537,877
42. South Dakota	SD	L	7,680,868	2,416,307	467,203	11,181,856	21,746,234	3,172,547
43. Tennessee	TN	L	138,492,969	45,115,488	12,815,575	141,654,595	338,078,627	25,955,017
44. Texas	TX	L	287,793,415	160,962,983	35,041,405	112,327,284	596,125,087	227,633,076
45. Utah	UT	L	29,681,286	14,194,339	3,122,250	10,629,637	57,627,512	28,802,791
46. Vermont	VT	L	15,751,514	32,988,368	1,113,943	11,489,911	61,343,736	2,297,121
47. Virginia	VA	L	144,630,676	81,621,130	23,027,830	301,502,223	550,781,859	65,193,509
48. Washington	WA	L	44,817,755	31,207,602	7,624,607	55,281,389	138,931,353	5,474,560
49. West Virginia	WV	L	12,727,735	4,586,982	1,066,230	8,987,296	27,368,243	30,561,993
50. Wisconsin	WI	L	57,354,357	44,774,366	4,498,329	65,579,392	172,206,444	3,223,218
51. Wyoming	WY	L	10,611,285	2,120,643	465,726	1,210,491	14,408,145	2,428,560
52. American Samoa	AS	N						
53. Guam	GU	N	1,125		4,562		5,687	6,137
54. Puerto Rico	PR	L	49,334,458	10,849,842	7,200,761	3,804,181	71,189,242	608,926
55. U.S. Virgin Islands	VI	N	9,815	105,576	4,349		119,740	11,113
56. Northern Mariana Islands	MP	N			1,023		1,023	
57. Canada	CAN	N	1,369,706	311,925	98,177		1,779,808	200,110
58. Aggregate Other Aliens	OT	XXX	11,739,045	1,998,521	398,245	50,490,000	64,625,811	
59. Subtotal	(a)	52	4,939,686,933	2,759,908,054	535,089,071	5,620,690,962	13,855,375,020	4,369,962,475
90. Reporting entity contributions for employee benefits plans	XXX							
91. Dividends or refunds applied to purchase paid-up additions and annuities	XXX		898,552,909	1,915,608			900,468,517	
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		20,593,102		9,082,183		29,675,285	
94. Aggregate or other amounts not allocable by State	XXX							
95. Totals (Direct Business)	XXX		5,858,832,944	2,761,823,662	544,171,254	5,620,690,962	14,785,518,822	4,369,962,475
96. Plus Reinsurance Assumed	XXX		38,055,406	27,117,439		981,353,907	1,046,526,752	1,310,482,602
97. Totals (All Business)	XXX		5,896,888,350	2,788,941,101	544,171,254	6,602,044,869	15,832,045,574	5,680,445,077
98. Less Reinsurance Ceded	XXX		585,356,837		90,386,310		675,743,147	
99. Totals (All Business) less Reinsurance Ceded	XXX		5,311,531,513	2,788,941,101	453,784,944	6,602,044,869	15,156,302,427	5,680,445,077
DETAILS OF WRITE-INS								
58001. HKG Hong Kong	XXX		221,451				221,451	
58002. ZZZ Other Alien	XXX		11,517,594	1,998,521	398,245	50,490,000	64,404,360	
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		11,739,045	1,998,521	398,245	50,490,000	64,625,811	
9401.	XXX							
9402.	XXX							
9403.	XXX							
9498. Summary of remaining write-ins for Line 94 from overflow page	XXX							
9499. Totals (Lines 9401 through 9403 plus 9498)(Line 94 above)	XXX							

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

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

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

PART 1 – ORGANIZATIONAL CHART

The following entities are general partner level or above of **Massachusetts Mutual Life Insurance Company** (Parent)

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Mezzanine Investor, LLC	06-1041383		Delaware
CML Mezzanine Investor L, LLC	06-1041383		Delaware
CML Mezzanine Investor III, LLC	06-1041383		Delaware
CML Special Situations Investor LLC	None		Delaware
MML Mezzanine Investor L, LLC	04-1590850		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack Timber Sales, Inc.	20-5305426		New York
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
WP-SC, LLC*	26-4441097		Delaware
MSP-SC, LLC	04-1590850		Delaware
Country Club Office Plaza LLC*	27-1435692		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Invicta Advisors LLC	56-2574604		Delaware
Jefferies Finance LLC	27-0105644		Delaware
Apex Credit Partners LLC	None		Delaware
Apex Credit CLO 2017-II Ltd.	None		Cayman Islands
JFIN Fund III LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
JFAM Loan Fund, LP	None		Delaware
JFIN 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

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

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
JFIN CLO 2012 Ltd.	None		Cayman Islands
JFIN CLO 2013 Ltd.	None		Cayman Islands
JFIN CLO 2014 Ltd.	None		Cayman Islands
JFIN CLO 2014-II Ltd.	None		Cayman Islands
JFIN MM CLO 2014 Ltd.*	None		Cayman Islands
JFIN CLO 2015 Ltd.*	None		Cayman Islands
Apex Credit CLO 2015-II Ltd.*	None		Cayman Islands
JFIN Revolver CLO 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 Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
Apex Credit CLO 2016 Ltd.	None		Cayman Islands
Apex Credit CLO 2017 Ltd.	None		Cayman Islands
MassMutual Retirement Services, LLC	04-1590850		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Mezzanine Investor, LLC	04-1590850		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MMC Equipment Finance LLC	04-1590850		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2009-A	27-1379258		Delaware
MMAF Equipment Finance LLC 2011-A	45-2589019		Delaware
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MSC Holding Company, LLC	45-4376777		Delaware
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
First Mercantile Trust Company	62-0951563		Tennessee
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures LLC	47-1296410		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MMLISI Financial Alliances, LLC	41-2011634		Delaware
Society of Grownups, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
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 SICE (Taiwan) Limited	98-0457707		Taiwan ROC
Baring Asset Management (Japan) Limited	98-0236449		Japan
Baring Asset Management (Australia) Pty Limited	98-0457456		Australia
Barings Investment Advisors (Hong Kong) Limited	None		Hong Kong, Special Administrative Region of China
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Investment Fund (LUX) GP S.à. r.l.	None		Luxembourg
Barings GPC GP S.à. r.l.	None		Luxembourg
Almack Mezzanine GP III Limited	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Almack Mezzanine Fund II Limited	None		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Babson European Direct Lending 1 GP LLP	None		United Kingdom
Barings Advisers (Japan) KK	None		Japan
Barings Multifamily Capital Holdings LLC	None		Delaware
Barings Multifamily Capital LLC	None		Michigan
Barings Multifamily Capital Corporation	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
Barings Real Estate Advisers Japan KK	None		Japan
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate Advisers GmbH	98-1194368		Germany

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Baring Holding LLC	04-1590850		Delaware
Baring North America LLC	98-0241935		Massachusetts
MassMutual Holdings (Bermuda) Limited	None		Bermuda
Baring Asset Management Limited	98-0241935		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Asset Management GmbH	98-0465031		Germany
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sàrl	None		Switzerland
Baring France SAS	98-0497550		France
Baring Fund Managers Limited	98-0457586		United Kingdom
Baring Pension Trustees Limited	98-0457574		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Alchemy Copyrights, LLC.*	47-2642354		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
Solar Acquisition Holding, LLC	None		Delaware
Sweet Tree Holdings 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 I, LLC	46-0687392		Delaware
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
VGS Acquisition Holding, LLC	None		Delaware
Wood Creek Aircraft Holding I, LP	None		Cayman Islands
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Babson Capital Floating Rate Income Fund Management, LLC	04-1590850		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings TERO Management LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
Great Lakes III GP, LLC	04-1590850		Delaware

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Lake Jackson LLC	None		Delaware
Loan Strategies Management LLC	04-1590850		Delaware
Mezzco LLC	04-1590850		Delaware
Mezzco II LLC	02-0767001		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia LLC	90-0666326		Delaware
Mezzco Australia II LLC	None		Delaware
Somerset Special Opportunities Management LLC	04-1590850		Delaware
Oppenheimer Acquisition Corp.	84-1149206		Delaware
OppenheimerFunds, Inc.	13-2527171		Colorado
OppenheimerFunds Distributor, Inc.	13-2953455		New York
Oppenheimer Real Asset Management, Inc.	84-1106295		Delaware
OFI Global Institutional, Inc.	13-4160541		New York
HarbourView Asset Management Corporation	22-2697140		New York
OFI Global Trust Company	13-3459790		New York
OFI International, Ltd.	None		United Kingdom
SNW Asset Management Corporation	None		Delaware
Seattle Northwest Asset Management LLC	None		Washington
Trinity Investment Management Corporation	25-1951632		Pennsylvania
OFI SteelPath, Inc.	84-1128397		Delaware
Shareholder Services, Inc.	84-1066811		Colorado
VTL Associates, LLC	None		Pennsylvania
Index Management Solutions, LLC	None		Pennsylvania
OFI Global Asset Management, Inc.	84-0765063		Delaware
OFI Private Investments Inc.	91-2036414		New York
Tremont Group Holdings, LLC	62-1210532		New York
Tremont Partners, LLC	06-1121864		Connecticut
Tremont GP, LLC	20-8215352		Delaware
Settlement Agent, LLC	90-0874510		Delaware
Tremont (Bermuda) Limited	None		Bermuda
MassMutual International LLC	04-3313782		Delaware
MassMutual Asia Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Asia Investors Ltd.	None		Hong Kong, Special Administrative Region of China
MassMutual Guardian Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Insurance Consultants Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Services Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Trustees Limited	None		Hong Kong, Special Administrative Region of China
Protective Capital (International) Limited	98-0610331		Hong Kong, Special Administrative Region of China

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Life Insurance Company	None		Japan
MassMutual Internacional (Chile) SpA	98-1033127		Chile
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
Cornerstone Global REIT Corporation	20-8730751		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Almack Mezzanine Fund III LP*	None		United Kingdom
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Barings Emerging Markets Local Debt Fund	None		Ireland
Barings Global Special Situations Credit Fund 1	None		Ireland
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 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
Barings CLO Ltd. 2017-I	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
Baring Focused EAFE Equity Fund	11-3789446		Delaware
Baring Global Dynamic Asset Allocation Fund	30-0607379		Delaware
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings Global Private Loan Fund	None		Luxembourg
Barings North American Private Loan Fund LP	38-4010344		Delaware
Barings Real Estate Credit Strategies VII LP	98-1332384		Delaware
Baring International Small Cap Equity Fund	26-4142796		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Benton Street Partners I, L.P.*	98-0536233		Cayman Islands
Benton Street Partners II, L.P.*	98-0536199		Cayman Islands
Braemar Energy Ventures I, L.P. *	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Cornerstone Core Mortgage Venture I LP	27-1701622		Delaware
Cornerstone Enhanced Mortgage Fund I LP	45-3751572		Delaware
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Duchess VI CLO B.V.	None		United Kingdom
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I LP*	80-0691253		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Gillem GA Industrial LLC	04-1590850		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Kazwell Realty Partners LLC	20-3887968		Delaware
KKR-MM Vector LP	82-1512591		Delaware
Marco Hotel LLC	46-4255307		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
Sedona TFMP Land LLC	04-1590850		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Pasco Properties LLC	20-3887968		Delaware

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Tower Square Capital Partners, L.P.*	04-3722906		Delaware
Tower Square Capital Partners II, L.P.*	30-0336246		Delaware
Tower Square Capital Partners II-A, L.P.*	32-0160190		Delaware
Tower Square Capital Partners III, L.P.*	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Tower Square Capital Partners IV-A, L.P.	80-0920367		Delaware
West 46 th Street Hotel LLC	05-1590850		Delaware
Barings Affiliates & Funds:			
Barings Emerging Markets Debt Blended Total Return Fund	None		Ireland
Barings Emerging Markets Debt Short Duration Fund	None		Ireland
Barings Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Floating Rate Income Fund, L.P.	27-3330830		Delaware
Barings Global Investment Grade Corporate Plus Fund	None		Ireland
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings Emerging Markets Debt Blended Total Return Fund	47-3758432		Massachusetts
Barings Emerging Markets Local Currency Debt Fund	47-3774453		Massachusetts
Barings Global High Yield Fund	47-3790192		Massachusetts
Baring Greater China Equity Fund	None		Hong Kong
Barings Total Return Bond Fund	47-3734770		Massachusetts
Barings U.S. High Yield Fund	47-3801860		Massachusetts
Great Lakes II LLC*	71-1018134		Delaware
Great Lakes LLC*	56-2505390		Delaware
Intermodal Holding II LLC*	46-2344300		Delaware
Somerset Special Opportunities Master Fund LP	None		Cayman Islands
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
12-18 West 55th Street Predevelopment, LLC*	20-2548283		Delaware
50 Liberty LLC*	36-4823011		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
Alexandria Towers Investors LLC	04-1590850		Delaware
Budapester Strasse LLC	81-4382111		Delaware
Calgary Railway Holding LLC*	82-2285211		Delaware
Cambridge Hotel 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		Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735		Massachusetts

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
CREA 330 Third LLC*	46-5001122		Delaware
CREA FMF Nashville LLC	46-4367364		Delaware
CREA/LYON West Gateway, LLC*	26-2399532		Delaware
CREA Madison Member LLC	81-0890084		Delaware
CREA/PPC Venture LLC*	20-0348173		Delaware
CCB Montford Park LLC*	82-1563809		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
Landmark Manchester Holdings LLC	81-5360103		Delaware
MM Chatham Office LLC*	81-2871333		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
Sawgrass Village Shopping Center LLC*	27-2977720		Delaware
Seattle 1415 Hotel Owner LLC	04-1590850		Delaware
Ten Fan Pier Boulevard LLC*	None		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Twenty Two Liberty LLC*	35-2484550		Massachusetts
UK LIW Manager LLC	45-4606547		Delaware
UK LIW Member LLC	45-4606547		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterford Development Associates	20-2970495		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
WeHo Domain LLC*	46-3122029		Delaware
Willowood Lakeside Master LLC	81-1552222		Delaware
Ygnatio Valley Funding	20-5481477		Delaware
MassMutual Premier Funds:			
MassMutual Barings Dynamic Allocation Fund	45-3168892		Massachusetts
MassMutual Premier Focused International Fund	02-0754273		Massachusetts
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Premier Value Fund	04-3277550		Massachusetts
MassMutual Select Funds:			
MassMutual Select Diversified International Fund	14-1980900		Massachusetts
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Large Cap Value Fund	04-3513019		Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MML Series II Special Situations Fund	47-3559064		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual RetireSMART Conservative Fund	45-1618155		Massachusetts
MassMutual RetireSMART Growth Fund	45-1618222		Massachusetts
MassMutual RetireSMART Moderate Fund	45-1618262		Massachusetts
MassMutual RetireSMART Moderate Growth Fund	45-1618046		Massachusetts
Oppenheimer Funds:			
Oppenheimer Developing Markets Fund	93-6305075		Delaware
Oppenheimer Developing Markets Equity UCITS	None		Ireland
Oppenheimer Emerging Markets Innovators UCITS	None		Ireland
Oppenheimer Emerging Markets Revenue ETF	46-2984739		Delaware
Oppenheimer ESG Revenue ETF	81-3492794		Delaware
Oppenheimer Global ESG Revenue ETF	81-3480754		Delaware
Oppenheimer Global Equity UCITS	None		Ireland
Oppenheimer Global Multi-Asset Growth Fund	47-3676235		Delaware
Oppenheimer Global Multi-Asset Income Fund	47-1714929		Delaware
Oppenheimer Global Revenue ETF	81-5010075		Delaware
Oppenheimer Global Value Equity UCITS	None		Ireland
Oppenheimer International Growth & Income Fund	81-3136071		Delaware
Oppenheimer International Revenue ETF	81-4969331		Delaware
Oppenheimer Macquarie Global Infrastructure Fund	81-1080638		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, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388	0000225602		Massachusetts Mutual Life Insurance Company (MMLIC)	MA	RE	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	CM Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	MML Baystate Life Ins Co	70416	43-0581430		0000924777		MML Bay State Life Insurance Company	CT	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor, LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor L, LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1041383				CML Mezzanine Investor III, LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000							CML Special Situations Investor LLC	DE	DS	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor L, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MML Special Situations Investor LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	C.M. Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-5322979				Timberland Forest Holding LLC	DE	DS	Wood Creek Capital Management LLC	Management		MMLIC		
.0000							Lyme Adirondack Forest Company, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000			20-5305426				Lyme Adirondack Timber Sales, Inc.	NY	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands I, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000							Lyme Adirondack Timberlands II, LLC	DE	DS	Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Berkshire Way LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-4441097				WP-SC, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	81.400	MMLIC		
.0000			26-4441097				WP-SC, LLC	DE	DS	C.M. Life Insurance Company	Ownership	18.600	MMLIC		
.0000			04-1590850				MSP-SC, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-1435692				Country Club Office Plaza LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	88.100	MMLIC		
.0000			27-1435692				Country Club Office Plaza LLC	DE	DS	C.M. Life Insurance Company	Ownership	11.900	MMLIC		
.0000			56-2574604				Invicta Advisors LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Insurance Road LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		
.0000			04-1590850				MassMutual Trad Private Equity LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Intellectual Property LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LLC	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							JFAM GP LP	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							JFAM Loan Fund, LP	DE	NIA	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
.0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Europe GP, S.a.r.l.	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Europe, SCSp	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Jefferies Finance Business Credit LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Business Credit Fund I LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN High Yield Investments LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000							JFIN CLO 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							Apex Credit CLO 2015-11 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	33.000	MMLIC		
.0000							Apex Credit 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 Revolver CLO 2017 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-11 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2016 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							Apex Credit CLO 2017 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Retirement Services, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-3356880		0000943903		MML Distributors LLC	.MA	.DS	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			04-3356880		0000943903		MML Distributors LLC	.MA	.DS	MassMutual Holding LLC	Ownership	1.000	MMLIC		
.0000							MML Investment Advisers, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			06-1563535	2881445	0001103653		The MassMutual Trust Company, FSB	.CT	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-1590850				MMC Equipment Finance LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	.DE	.DS	MMC Equipment Finance LLC	Ownership	99.600	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	.DE	.DS	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
.0000			27-1379258				MMAF Equipment Finance LLC 2009-A	.DE	.DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			45-2589019				MMAF Equipment Finance LLC 2011-A	.DE	.DS	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Private Placement Investment Company I, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850		0000067160		MML Private Equity Fund Investor LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Private Equity Intercontinental LLC	.DE	NIA	MML Private Equity Fund Investor LLC	Ownership	100.000	MMLIC		
.0000			45-2738137				Pioneers Gate LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			45-4376777				MSC Holding Company, LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			04-3341767				MassMutual Holding MSC, Inc.	.MA	.DS	MSC Holding Company, LLC	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	.DE	.DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			06-1597528				MassMutual Assignment Company	.NC	.DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	.DE	.DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			62-0951563	1160004	0001259664		First Mercantile Trust Company	.TN	.DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	.DE	.DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			04-1590850		0001399869		MassMutual Capital Partners LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1296410				MassMutual Ventures LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			47-1466022				Society of Growups, LLC	MA	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850		0000701059		MML Investors Services, LLC	MA	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Insurance Agency, LLC	MA	DS	MML Investors Services, LLC	Ownership	100.000	MMLIC		
.0000			41-2011634		0001456663		MMLISI Financial Alliances, LLC	DE	DS	MML Investors Services, LLC	Ownership	100.000	MMLIC		
.0000			45-4000072				MML Asset Management Holding LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			51-0504477		0000009015		Barings LLC	DE	DS	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0524271				Baring Asset Management (Asia) Holdings Limited	HKG	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0457465				Baring International Fund Managers (Bermuda) Limited	BMU	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457463				Baring Asset Management (Asia) Limited	HKG	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Korea Limited	KOR	DS	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		
.0000			98-0457707				Baring SICE (Taiwan) Limited	TWN	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0236449				Baring Asset Management (Japan) Limited	JPN	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457456				Baring Asset Management (Australia) Pty Limited	AUS	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Advisors (Hong Kong) Limited	HKG	DS	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MMLIC		
.0000			80-0875475				Barings Finance LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							BCF Europe Funding Limited	IRL	DS	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000							BCF Senior Funding I LLC	DE	DS	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000							BCF Senior Funding I Designated Activity Company	IRL	DS	Barings Finance LLC	Ownership	100.000	MMLIC		
.0000			04-3238351		0000930012		Barings Securities LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0437588				Barings Guernsey Limited	GGY	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	GBR	DS	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings Europe Limited	GBR	DS	Barings Guernsey Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.à. r.l	LUX	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Fund (LUX) GP S.à. r.l	LUX	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine GP III Limited	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Holding Partnership GP Limited	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund Limited	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund II Limited	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000			98-1012393				Barings Global Advisors Limited	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							BCGSS 2 GP LLP	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Babson European Direct Lending 1 GP LLP	GBR	DS	Barings (U.K.) Limited	Ownership	100.000	MMLIC		
.0000							Barings Advisers (Japan) KK	JPN	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Holdings LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital LLC	MI	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Multifamily Capital Corporation	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895	0001011148		Barings Real Estate Advisers Inc.	CA	DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate Advisers Japan KK	JPN	DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate UK Holdings Limited	DE	DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							BREA E AIFM LLP	GBR	DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000			98-0654401				Barings Real Estate Advisers (Continental Europe) Limited	GBR	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654388				Barings Real Estate Advisers Europe LLP	GBR	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			98-0654412				Barings Real Estate Advisers Europe Finance LLP	.GBR	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-1194368				Barings Real Estate Advisers GmbH	.DEU	.DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Baring Holding LLC	.DE	.DS	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0241935	2363071	0000932463		Baring North America LLC	.MA	.DS	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0241935				MassMutual Holdings (Bermuda) Limited	.BMU	.DS	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0457328		0001568131		Baring Asset Management Limited	.GBR	.DS	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457587				Baring International Investment Management Holdings	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	.GBR	.DS	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0465031				Baring Asset Management GmbH	.DEU	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0524272				Baring International Fund Managers (Ireland) Limited	.IRL	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Switzerland Sarl	.CHE	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0497550				Baring France SAS	.FRA	.DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457574				Baring Pension Trustees Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457578				Baring Investment Services Limited	.GBR	.DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457456				Barings Australia Holding Company Pty Ltd	.AUS	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			47-2642354				Barings Australia Pty Ltd	.AUS	.DS	Baring Australia Holding Company Pty Ltd.	Ownership	100.000	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC	.DE	.NIA	MassMutual Holding LLC	Ownership/Influence	5.300	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			81-2244465				Alchemy Copyrights, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.000	MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	.DE	.NIA	MassMutual Holding LLC	Ownership/Influence	18.300	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.800	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.CT	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.300	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.CT	.NIA	Barings LLC	Influence		MMLIC		
.0000			46-3123110				Sweet Tree Holdings 1, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	16.100	MMLIC		
.0000			46-3123110				Sweet Tree Holdings 1, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000							Tamiami Citrus, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership	15.700	MMLIC		
.0000							Teaktree Acquisition, LLC	.DE	.NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000							U.S. Buyer Broadcasting, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	12.700	MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000							U.S. Buyer Broadcasting, LLC	DE	NIA	Barings LLC	Influence				
.0000			46-1500495				U.S. WIG Holdings, LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	11.700			
.0000			46-1500495				U.S. WIG Holdings, LP	DE	NIA	Barings LLC	Influence				
.0000			46-0687392				US Pharmaceutical Holdings I, LLC	DE	NIA	Wood Creek Capital Management LLC	Management				
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	32.600			
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Barings LLC	Influence				
.0000							Solar Acquisition Holding, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	39.200			
.0000							Solar Acquisition Holding, LLC	DE	NIA	Barings LLC	Management				
.0000							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	33.300			
.0000							VGS Acquisition Holding, LLC	DE	NIA	Barings LLC	Management				
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.100			
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Wood Creek Capital Management LLC	Management				
.0000							Baring Asset-Based Income Fund (US) GP, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			04-1590850		0001501011		Babson Capital Floating Rate Income Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Babson Global Loan Feeder Management, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Barings CLO Investment Partners GP, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Barings North American Private Loan Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Barings TERO Management LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			98-0536233				Benton Street Advisors, Inc.	CYM	DS	Barings LLC	Ownership	100.000			
.0000			04-1590850				Great Lakes III GP, LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000							Lake Jackson LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			04-1590850				Loan Strategies Management LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			04-1590850				Mezzco LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			02-0767001				Mezzco II LLC	DE	DS	Barings LLC	Ownership	98.400			
.0000			41-2280126				Mezzco III LLC	DE	DS	Barings LLC	Ownership	99.300			
.0000			80-0920285				Mezzco IV LLC	DE	DS	Barings LLC	Ownership	99.300			
.0000			90-0666326				Mezzco Australia LLC	DE	DS	Barings LLC	Ownership	72.000			
.0000							Mezzco Australia II LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			04-1590850				Somerset Special Opportunities Management LLC	DE	DS	Barings LLC	Ownership	100.000			
.0000			84-1149206	2897101			Oppenheimer Acquisition Corp.	DE	DS	MassMutual Asset Management Holding LLC	Ownership	97.000			
.0000			13-2527171	2679183	0000820031		OppenheimerFunds, Inc.	CO	DS	Oppenheimer Acquisition Corp.	Ownership	100.000			
.0000			13-2953455	2679183	0000276541		OppenheimerFunds Distributor, Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			84-1106295				Oppenheimer Real Asset Management, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			13-4160541	3458125	0001179479		OFI Global Institutional, Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			22-2697140				HarbourView Asset Management Corporation	NY	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000			13-3458790	2914875			OFI Global Trust Company	NY	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000							OFI International, Ltd.	GBR	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000							SNW Asset Management Corporation	DE	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000			60-2233720				Seattle Northwest Asset Management LLC	WA	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000			25-1951632		0000099782		Trinity Investment Management Corporation	PA	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000			
.0000			84-1128397		0000857468		OFI SteelPath, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			84-1066811		0000276398		Shareholder Services, Inc.	CO	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000							VTL Associates, LLC	PA	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000							Index Management Solutions, LLC	PA	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			84-0765063		0001041674		OFI Global Asset Management, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000			
.0000			91-2036414		0001179480		OFI Private Investments Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000			

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.0000			62-1210532				Tremont Group Holdings, LLC	NY	DS	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		
.0000			06-1121864		0000764139		Tremont Partners, LLC	CT	DS	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			20-8215352				Tremont GP, LLC	DE	DS	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			90-0874510				Settlement Agent, LLC	DE	DS	Tremont GP	Ownership	100.000	MMLIC		
.0000							Tremont (Bermuda) Limited	BMU	DS	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
.0000			04-3313782				MassMutual International LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Asia Limited	HKG	DS	MassMutual International LLC	Ownership	100.000	MMLIC		Y
.0000							MassMutual Asia Investors Ltd.	HKG	DS	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Guardian Limited	HKG	DS	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Insurance Consultants Limited	HKG	DS	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Services Limited	HKG	DS	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000							MassMutual Trustees Limited	HKG	DS	MassMutual Asia Limited	Ownership	80.000	MMLIC		
.0000			98-0610331				Protective Capital (International) Limited	HKG	DS	MassMutual Asia Limited	Ownership	100.000	MMLIC		
.0000			98-1033127				MassMutual Internacional (Chile) SpA	CHL	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Life Insurance Company	JPN	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000			04-2443240				MML Management Corporation	MA	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		Y
.0000			04-3548444				MassMutual International Holding MSC, Inc.	MA	DS	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor II, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MML Mezzanine Investor III, LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-8730751				Cornerstone Global REIT Corporation	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				100 w. 3rd Street LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-2432216				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							Almack Mezzanine Fund I LP	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	41.300	MMLIC		
.0000							Almack Mezzanine Fund I LP	GBR	NIA	C.M. Life Insurance Company	Ownership	4.600	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	72.600	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	34.000	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	C.M. Life Insurance Company	Ownership	3.800	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	Barings (U.K.) Limited	Management		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund			Massachusetts Mutual Life Insurance Company	Ownership/Influence	96.800	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Local Debt Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	18.100	MMLIC		
.0000							Barings Emerging Markets Local Debt Fund	IRL	NIA	Barings LLC	Management		MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000							Barings Global Special Situations Credit Fund 1	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000							Barings Global Special Situations Credit Fund 1	.IRL	NIA	Barings LLC	Management		MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	23.500	MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MLLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	Company	Ownership/Influence	79.200	MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	C.M. Life Insurance Company	Ownership	3.800	MLLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings US High Yield Bond Fund	.IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	46.300	MLLIC		
.0000							Barings US High Yield Bond Fund	.IRL	NIA	C.M. Life Insurance Company	Ownership	6.100	MLLIC		
.0000							Barings US High Yield Bond Fund	.IRL	NIA	Barings LLC	Management		MLLIC		
.0000							Babson CLO Ltd. 2012-II	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson CLO Ltd. 2013-I	.CYM	NIA	Barings LLC	Influence		MLLIC		4
.0000			98-1128827				Babson CLO Ltd. 2013-II	.CYM	NIA	Barings LLC	Influence		MLLIC		5
.0000							Babson CLO Ltd. 2014-I	.CYM	NIA	Barings LLC	Influence		MLLIC		2
.0000							Babson CLO Ltd. 2014-II	.CYM	NIA	Barings LLC	Influence		MLLIC		6
.0000							Babson CLO Ltd. 2014-III	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson CLO Ltd. 2015-I	.CYM	NIA	Barings LLC	Influence		MLLIC		7
.0000							Babson CLO Ltd. 2015-II	.CYM	NIA	Barings LLC	Influence		MLLIC		8
.0000							Babson CLO Ltd. 2016-I	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson CLO Ltd. 2016-II	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson CLO Ltd. 2017-I	.CYM	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2014-I BV	.NLD	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2014-II BV	.NLD	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2015-I BV	.NLD	NIA	Barings LLC	Influence		MLLIC		
.0000							Babson Euro CLO 2016-I BV	.NLD	NIA	Barings LLC	Influence		MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Company	Ownership/Influence	99.300	MLLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	90.000	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	C.M. Life Insurance Company	Ownership	10.000	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.GBR	NIA	Barings LLC	Management		MLLIC		
.0000			11-3789446				Baring Focused EAFE Equity Fund	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.200	MLLIC		
.0000			11-3789446				Baring Focused EAFE Equity Fund	.DE	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000			30-0607379		0001497049		Baring Global Dynamic Asset Allocation Fund	.DE	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	97.900	MLLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000							Barings Global Private Loan Fund	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	16.200	MLLIC		
.0000							Barings Global Private Loan Fund	.LUX	NIA	Barings LLC	Management		MLLIC		

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.0000			38-4010344				Barings North American Private Loan Fund LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	78.400	MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	DE	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			98-1332384				Barings Real Estate Credit Strategies VII LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.600	MMLIC		
.0000			98-1332384				Barings Real Estate Credit Strategies VII LP	DE	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	64.300	MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Barings 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	89.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings European Core Property Fund SCSp	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	39.400	MMLIC		
.0000							Barings European Core Property Fund SCSp	LUX	NIA	C.M. Life Insurance Company	Ownership	2.500	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	MassMutual Holding LLC	Ownership/Influence	50.000	MMLIC		
.0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			45-3751572		0001534877		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	15.500	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			20-5578089				Barings Core Property Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	10.800	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	7.100	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	24.700	MMLIC		
.0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	C.M. Life Insurance Company	Ownership	2.800	MMLIC		
.0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.300	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		

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.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	71.200	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	7.700	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.600	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership	5.500	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	35.400	MMLIC		
.0000			37-1708623		0001565779		Great Lakes III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				Gillem GA Industrial LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			38-4041011				JPMCC Commercial Mortgage Securities Trust 2017-JP7	NY	NIA	Barings LLC	Management		MMLIC		
.0000			38-4032059				JPMDB Commercial Mortgage Securities Trust 2017-CS	NY	NIA	Barings LLC	Management		MMLIC		
.0000			20-3887968				Kazwell Realty Partners LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-1512591				KKR-MM Vector LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	90.000	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			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	63.600	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	2.900	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			20-3887968				South Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.600	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	4.000	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	85.000	MMLIC		
.0000			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	15.000	MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
.0000			32-0160190				Tower Square Capital Partners II-A, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	4.800	MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.900	MMLIC		
.0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	94.900	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	Massachusetts Mutual Life Insurance Company	Ownership/Influence	20.800	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	36.600	MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	0.500	MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				West 46th Street Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Emerging Markets Debt Blended Total Return Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Debt Short Duration Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Emerging Markets Sovereign Debt Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson Capital Floating Rate Income Fund, L.P.	DE	NIA	MassMutual Holding LLC	Ownership	0.000	MMLIC		
.0000			27-3330830		0001521404		Babson Capital Loan Strategies Master Fund LP	CYM	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Investment Grade Corporate Plus Fund	IRL	NIA	Barings LLC	Management		MMLIC		
.0000			47-3758432				Barings Emerging Markets Debt Blended Total Return Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3774453				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							Barings Greater China Equity Fund	HKG	NIA	Barings Asset Management Limited	Management		MMLIC		
.0000			47-3734770				Barings Total Return Bond Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			47-3801860				Barings U.S. High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	11.200	MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	C.M. Life Insurance Company	Ownership	1.000	MMLIC		
.0000			56-2505390				Great Lakes LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.400	MMLIC		
.0000			56-2505390				Great Lakes LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.500	MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Somerset Special Opportunities Master Fund LP	CYM	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.000	MMLIC		
.0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	89.200	MMLIC		
.0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.800	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.100	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.800	MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	49.900	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.900	MMLIC		
.0000			16-1720387				Alexandria Towers Investors LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-4382111				Budapester Strasse LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-2285211				Calgary Railway Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			82-2285211				Calgary Railway Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MMLIC		
.0000			04-1590850				Cambridge Hotel 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		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.600	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			35-2531693				Cornerstone Permanent Mortgage Fund III	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV		NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	92.000	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	C.M. Life Insurance Company	Ownership	8.000	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	Massachusetts Mutual Life Insurance Company	Ownership	54.000	MMLIC		
.0000			26-2399532				CREA/LYON West Gateway, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.000	MMLIC		
.0000			81-0890084				CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	93.400	MMLIC		
.0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.600	MMLIC		
.0000			82-1563809				CCB Montford Park LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	75.200	MMLIC		
.0000			82-1563809				CCB Montford Park LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC		
.0000			26-1611591	3956836			Fallon Cornerstone One MPD LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	87.700	MMLIC		
.0000			26-1611591	3956836			Fallon Cornerstone One MPD LLC	DE	NIA	C.M. Life Insurance Company	Ownership	8.700	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.300	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			46-3880526				Farringdon London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.500	MMLIC		
.0000			46-3880526				Farringdon London Holdings LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.500	MMLIC		

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000							Infinity SCD Ltd	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.200	MLLIC		
.0000			20-4819358				Johnston Groves LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	57.200	MLLIC		
.0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	83.400	MLLIC		
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.600	MLLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MLLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	84.200	MLLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	C.M. Life Insurance Company	Ownership	15.800	MLLIC		
.0000			46-5491311				Seattle 1415 Hotel Owner LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MLLIC		
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MLLIC		
.0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MLLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.200	MLLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	5.900	MLLIC		
.0000			45-4606547				UK LIW Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.000	MLLIC		
.0000			45-4606547				UK LIW Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MLLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	92.000	MLLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MLLIC		
.0000			20-2970495				Waterford Development Associates	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MLLIC		
.0000			47-1993493				Waterloo London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			46-3122029				WeHo Domain LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	77.400	MLLIC		
.0000			46-3122029				WeHo Domain LLC	DE	NIA	C.M. Life Insurance Company	Ownership	12.600	MLLIC		
.0000			81-1552222				Willowood Lakeside Master LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MLLIC		
.0000			20-5481477				Ygnatio Valley Funding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MLLIC		
.0000			45-3168892			00	MassMutual Barings Dynamic Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MLLIC		
.0000			51-0529328		0000927972	00	MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MLLIC		
.0000			26-3229251		0000927972	00	MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MLLIC		
.0000			04-3277550		0000927972	00	MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.100	MLLIC		
.0000			14-1980900		0000916053	00	MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MLLIC		

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

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PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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.0000			01-0821120		0000916053	QO	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3512593		0000916053	QO	MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3513019		0000916053	QO	MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	17.600	MMLIC		
.0000			42-1710935		0000916053	QO	MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	79.400	MMLIC		
.0000			02-0769954		0000916053	QO	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3584140		0000916053	QO	MassMutual Select Small Company Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	17.700	MMLIC		
.0000			46-4257056		0000067160		MML Series International Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3517233		0001317146		MML Series II Asset Momentum Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			47-3529636		0001317146		MML Series II Dynamic Bond Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			47-3544629		0001317146		MML Series II Equity Rotation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.400	MMLIC		
.0000			47-3559064		0001317146		MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	97.900	MMLIC		
.0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	23.100	MMLIC		
.0000			47-5326235		0000916053		MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	91.500	MMLIC		
.0000			45-1618155		0000916053		MassMutual RetireSMART Conservative Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618222		0000916053		MassMutual RetireSMART Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618262		0000916053		MassMutual RetireSMART Moderate Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			45-1618046		0000916053		MassMutual RetireSMART Moderate Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			93-6305075				Oppenheimer Developing Markets Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership	32.800	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Emerging Markets Innovators UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			46-2984739				Oppenheimer Emerging Markets Revenue ETF	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3492794				Oppenheimer ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Global Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3480754				Oppenheimer Global ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			47-3676235				Oppenheimer Global Multi-Asset Growth Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			47-1714929				Oppenheimer Global Multi-Asset Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-5010075				Oppenheimer Global Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Global Value Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3136071				Oppenheimer International Growth & Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-4969331				Oppenheimer International Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

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SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domiciliary Location	Relationship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Required? (Y/N)	*
..0000			81-1080638				Oppenheimer Macquarie Global Infrastructure Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns .26% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 8.3% and includes only Great Lakes III, L.P.
3	Partnership investors own 99% and include Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own 8.6% and includes only Babson Capital Loan Strategies Fund, L.P.
5	Debt investors own 6.9% and includes only Great Lakes III, L.P.
6	Debt investors own 8.9% and includes only Great Lakes III, L.P.
7	Debt investors own 6.9% and includes only Great Lakes III, L.P.
8	Debt investors own 3.6% 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.

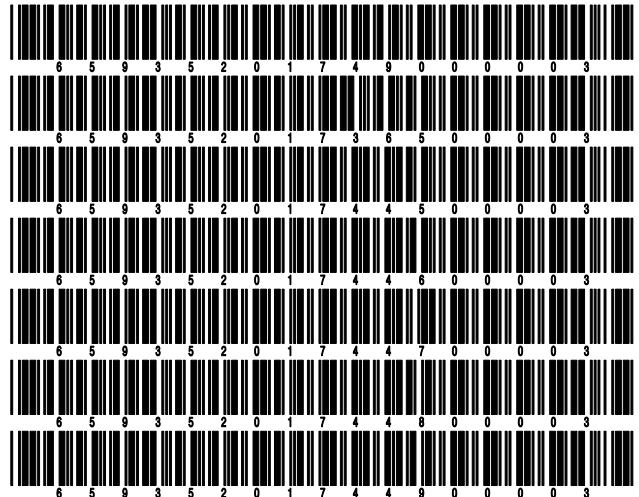
	Response
1. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3. Will the Reasonableness of Assumptions Certification required 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. This line of business is not written by the company.
3. Not Required
4. Not Required
5. Not Required
6. Not Required
7. Not Required

Bar Code:

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



OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Assets Line 25

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
2504. Investment in trust	31,589,336		31,589,336	31,420,102
2505. Pension plan asset	646,086,857	646,086,857		
2506. Cash advances to agents	255,021,412	255,021,412		
2507. Intangible assets	115,830,530	115,830,530		
2508. Disallowed interest maintenance reserve	114,538,031	114,538,031		
2509. Commissions and expenses on long-term lease	40,055,818	40,055,818		
2510. Bills receivable	511,552	511,552		
2597. Summary of remaining write-ins for Line 25 from overflow page	1,203,633,536	1,172,044,200	31,589,336	31,420,102

Additional Write-ins for Liabilities Line 25

	1 Current Statement Date	2 December 31 Prior Year
2504. Funds awaiting escheat and other miscellaneous	53,825,890	60,133,964
2505. Deferred income	15,895,060	19,920,155
2597. Summary of remaining write-ins for Line 25 from overflow page	69,720,950	80,054,119

Additional Write-ins for Summary of Operations Line 8.3

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
08.304. Miscellaneous	10,916,956	17,861,484	24,890,451
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	10,916,956	17,861,484	24,890,451

Additional Write-ins for Summary of Operations Line 27

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
2704. Change in liability for employee/agent benefit plans	34,733,778	17,004,881	18,694,135
2705. Miscellaneous charges to operations	7,044,159	5,901,947	10,529,507
2797. Summary of remaining write-ins for Line 27 from overflow page	41,777,937	22,906,828	29,223,642

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	976,679,957	928,176,765
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	47,212,065	5,118,335
2.2 Additional investment made after acquisition	216,251,975	293,276,410
3. Current year change in encumbrances	(73,964,833)	(97,486,309)
4. Total gain (loss) on disposals	83,910,658	14,852,798
5. Deduct amounts received on disposals	353,033,252	59,477,126
6. Total foreign exchange change in book/adjusted carrying value		
7. Deduct current year's other than temporary impairment recognized		1,118,221
8. Deduct current year's depreciation	76,327,916	106,662,695
9. Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	820,728,654	976,679,957
10. Deduct total nonadmitted amounts		
11. Statement value at end of current period (Line 9 minus Line 10)	820,728,654	976,679,957

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	20,963,341,565	22,007,729,394
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	3,142,734,333	3,204,413,320
2.2 Additional investment made after acquisition	121,409,005	300,154,202
3. Capitalized deferred interest and other	20,780,985	42,853,290
4. Accrual of discount	1,650,887	2,678,459
5. Unrealized valuation increase (decrease)		
6. Total gain (loss) on disposals	(12,587,844)	(7,048,196)
7. Deduct amounts received on disposals	2,202,656,043	4,422,106,220
8. Deduct amortization of premium and mortgage interest points and commitment fees	1,668,706	(652,780)
9. Total foreign exchange change in book value/recorded investment excluding accrued interest	127,382,449	(159,297,451)
10. Deduct current year's other than temporary impairment recognized		6,688,012
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	22,160,386,631	20,963,341,565
12. Total valuation allowance		(2,250,000)
13. Subtotal (Line 11 plus Line 12)	22,160,386,631	20,961,091,565
14. Deduct total nonadmitted amounts		
15. Statement value at end of current period (Line 13 minus Line 14)	22,160,386,631	20,961,091,565

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	7,233,113,042	7,535,417,690
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	1,008,899,311	551,830,195
2.2 Additional investment made after acquisition	791,495,472	1,114,188,548
3. Capitalized deferred interest and other		
4. Accrual of discount		
5. Unrealized valuation increase (decrease)	840,882,583	449,015,490
6. Total gain (loss) on disposals	(25,119,499)	2,647,530
7. Deduct amounts received on disposals	2,648,926,468	2,366,873,704
8. Deduct amortization of premium and depreciation	333,236	1,542,812
9. Total foreign exchange change in book/adjusted carrying value	89,823,095	(44,247,946)
10. Deduct current year's other than temporary impairment recognized	8,682,019	7,321,949
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	7,281,152,281	7,233,113,042
12. Deduct total nonadmitted amounts	37,713,494	46,223,980
13. Statement value at end of current period (Line 11 minus Line 12)	7,243,438,787	7,186,889,062

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	99,649,127,776	89,179,507,736
2. Cost of bonds and stocks acquired	21,296,654,622	28,841,807,585
3. Accrual of discount	210,033,038	333,689,372
4. Unrealized valuation increase (decrease)	405,365,812	1,056,408,233
5. Total gain (loss) on disposals	15,007,792	(196,627,884)
6. Deduct consideration for bonds and stocks disposed of	16,060,228,689	18,821,905,883
7. Deduct amortization of premium	120,623,023	170,788,494
8. Total foreign exchange change in book/adjusted carrying value	770,278,534	(481,759,150)
9. Deduct current year's other than temporary impairment recognized	95,119,147	91,203,739
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	106,070,496,715	99,649,127,776
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	106,070,496,715	99,649,127,776

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE D - PART 1B

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

NAIC Designation	1 Book/Adjusted Carrying Value Beginning of Current Quarter	2 Acquisitions During Current Quarter	3 Dispositions During Current Quarter	4 Non-Trading Activity During Current Quarter	5 Book/Adjusted Carrying Value End of First Quarter	6 Book/Adjusted Carrying Value End of Second Quarter	7 Book/Adjusted Carrying Value End of Third Quarter	8 Book/Adjusted Carrying Value December 31 Prior Year
BONDS								
1. NAIC 1 (a)	48,397,145,544	3,209,733,730	2,981,673,363	194,875,848	48,532,942,244	48,397,145,544	48,820,081,759	48,353,781,399
2. NAIC 2 (a)	33,196,167,392	11,322,191,011	9,933,011,765	88,536,884	33,277,158,464	33,196,167,392	34,673,883,522	31,810,151,289
3. NAIC 3 (a)	4,081,603,298	10,321,702,448	10,142,443,088	(35,956,131)	4,194,558,569	4,081,603,298	4,224,906,527	3,678,759,881
4. NAIC 4 (a)	2,417,508,269	940,337,800	490,822,673	(50,185,936)	2,357,218,363	2,417,508,269	2,816,837,460	2,390,149,329
5. NAIC 5 (a)	1,031,313,083	21,588,091	80,310,211	2,260,134	939,000,699	1,031,313,083	974,851,097	1,048,929,782
6. NAIC 6 (a)	278,367,023	32,072,527	100,029,073	91,119,770	316,091,981	278,367,023	301,530,247	360,223,856
7. Total Bonds	89,402,104,608	25,847,625,607	23,728,290,173	290,650,569	89,616,970,319	89,402,104,608	91,812,090,611	87,641,995,535
PREFERRED STOCK								
8. NAIC 1	166,700,000	351,000,000			166,700,000	166,700,000	517,700,000	144,700,000
9. NAIC 2	159,240,945			(13,207,257)	155,140,145	159,240,945	146,033,688	165,906,546
10. NAIC 3	123,000,000	869,978		16,612,857	135,500,002	123,000,000	140,482,835	123,000,000
11. NAIC 4	2,385,037			(5,344)	2,471,066	2,385,037	2,379,693	2,797,430
12. NAIC 5	13,157,003			241,599	13,096,601	13,157,003	13,398,602	13,131,970
13. NAIC 6	14,884,503		326,452	506,518	15,357,915	14,884,503	15,064,569	15,389,326
14. Total Preferred Stock	479,367,488	351,869,978	326,452	4,148,373	488,265,729	479,367,488	835,059,387	464,925,272
15. Total Bonds and Preferred Stock	89,881,472,096	26,199,495,585	23,728,616,625	294,798,942	90,105,236,048	89,881,472,096	92,647,149,998	88,106,920,807

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

NAIC 1 \$ 103,337,239 ; NAIC 2 \$ 1,814,803,302 ; NAIC 3 \$ 491,909,509 ; NAIC 4 \$; NAIC 5 \$; NAIC 6 \$

SCHEDULE DA - PART 1

Short-Term Investments

	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Actual Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
9199999 Totals	508,820,317	xxx	507,895,601	180,274	

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	707,992,227	167,854,960
2. Cost of short-term investments acquired	3,309,864,406	2,154,741,437
3. Accrual of discount	4,100,148	10,354,668
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	34,725	39,287
6. Deduct consideration received on disposals	3,513,171,189	1,624,998,125
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)	508,820,317	707,992,227
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	508,820,317	707,992,227

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1. Book/Adjusted Carrying Value, December 31, prior year (Line 9, prior year)	3,749,418,124
2. Cost Paid/(Consideration Received) on additions	442,453,950
3. Unrealized Valuation increase/(decrease)	(816,757,935)
4. Total gain (loss) on termination recognized	(322,077,940)
5. Considerations received/(paid) on terminations	(20,880,026)
6. Amortization	(1,625,659)
7. Adjustment to the Book/Adjusted Carrying Value of hedged item	
8. Total foreign exchange change in Book/Adjusted Carrying Value	
9. Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4-5+6+7+8)	3,072,290,566
10. Deduct nonadmitted assets	
11. Statement value at end of current period (Line 9 minus Line 10)	3,072,290,566

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1. Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)	
2. Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cumulative Cash Change column)	
3.1 Add:	
Change in variation margin on open contracts - Highly Effective Hedges	
3.11 Section 1, Column 15, current year to date minus	
3.12 Section 1, Column 15, prior year	
Change in variation margin on open contracts - All Other	
3.13 Section 1, Column 18, current year to date minus	(72,161,743)
3.14 Section 1, Column 18, prior year	(30,561,317)
	(41,600,426)
	(41,600,426)
3.2 Add:	
Change in adjustment to basis of hedged item	
3.21 Section 1, Column 17, current year to date minus	
3.22 Section 1, Column 17, prior year	
Change in amount recognized	
3.23 Section 1, Column 19, current year to date minus	(72,161,743)
3.24 Section 1, Column 19, prior year	(30,561,317)
	(41,600,426)
	(41,600,426)
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year	124,773,442
4.2 Less:	
4.21 Amount used to adjust basis of hedged item	
4.22 Amount recognized	155,334,759
	155,334,759
4.3 Subtotal (Line 4.1 minus Line 4.2)	(30,561,317)
5. Dispositions gains (losses) on contracts terminated in prior year:	
5.1 Total gain (loss) recognized for terminations in prior year	
5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	30,561,317
6. Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	
7. Deduct total nonadmitted amounts	
8. Statement value at end of current period (Line 6 minus Line 7)	

STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2	50,000,000	45,000,000	45,420,229	10/01/2012	10/01/2042	Interest Rate Swaps	277,984		85815X-AQ-6	STEELE CREEK CLO LTD-STCR 2014-1A A1R	1	45,000,000	45,142,245
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		11,235,402	12,333,750	10/01/2012	10/01/2042	Interest Rate Swaps			320808-AD-0	FIRST MARYLAND CAP I-LIMITED GUARANTEE NOTE	2	11,235,402	12,333,750
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2	50,000,000	5,600,000	5,841,569	10/01/2012	10/01/2042	Interest Rate Swaps		220,009	87246M-AA-0	TICP CLO LTD-SERIES 2016-6A CLASS A SASOL CHEMICALS (USA) LL TERM LOAN	1	5,600,000	5,621,560
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		27,744,746	27,926,125	10/01/2012	10/01/2042	Interest Rate Swaps			67818N-ZZ-5	ROCKALL CLO BV Variable Funding Note- USD	2	27,744,746	27,926,125
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		5,496,474	5,496,474	10/01/2012	10/01/2042	Interest Rate Swaps			77277L-A7-2	SILVER STATE SOLAR SOUTH TERM LOAN	1	5,496,474	5,496,474
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		4,948,479	5,012,485	10/01/2012	10/01/2042	Interest Rate Swaps			U8270Y-ZZ-4	THAYER PARK CLO LTD.-THAYR 2017-1A	2	4,948,479	5,012,485
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		5,470,000	5,499,215	10/01/2012	10/01/2042	Interest Rate Swaps			883310-AE-4	CATAMARAN CLO 2015-1 LTD NT CL B	1	5,470,000	5,499,215
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		2,968,493	2,973,157	10/01/2012	10/01/2042	Interest Rate Swaps			14889K-AC-6	OAK HILL CREDIT PARTNERS-SERIES 2013 - 8A CLASS B	1	2,968,493	2,973,157
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		6,962,148	6,880,383	10/01/2012	10/01/2042	Interest Rate Swaps			67104C-AB-3	Pioneers Gate LLC 2017-3 AEF (Amur)	1	6,962,148	6,880,383
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	264,000,000	18,675,000	18,939,059	11/29/2012	11/29/2042	Interest Rate Swaps		293,939	72403Z-NB-6	SLMA 2006 6 NT CL B	1	18,675,000	18,645,120
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,623,326	7,409,491	11/29/2012	11/29/2042	Interest Rate Swaps			83149F-AD-6	OHA CREDIT PARTNERS LTD-OAKC 2014-10A CR	1	6,623,326	7,409,491
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,017,892	11/29/2012	11/29/2042	Interest Rate Swaps			67106J-AS-9	CAVALRY CLO IV LTD-SR SEC NT CL A MASSMUTUAL ASSET FIN LLC SR SECD REV NT	1	7,000,000	7,017,892
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,410,778	45,780,190	11/29/2012	11/29/2042	Interest Rate Swaps			14955A-AA-1	CVP CASCADE CLO LTD-CVPC 2014-2A A1R	1	46,410,778	45,780,190
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,965,813	18,862,448	11/29/2012	11/29/2042	Interest Rate Swaps			57542Z-A0-7	WELLFLEET CLO LTD-WELF 2017-1A B ALLEGRO CLO V LTD-SERIES 17-1A CLASS MEZ FLT	1	18,965,813	18,862,448
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		154,000,000	154,245,630	11/29/2012	11/29/2042	Interest Rate Swaps			126611-AL-6	APIDOS CLO-SERIES 13-15A CLASS B1R	1	154,000,000	154,245,630
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,200,000	6,223,014	11/29/2012	11/29/2042	Interest Rate Swaps			94950G-AE-7	WASHINGTON MILL CLO LTD-WAMI 2014-1A A1R	1	6,200,000	6,223,014
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,525,000	5,525,000	11/29/2012	11/29/2042	Interest Rate Swaps			01748R-AE-5	SOUND POINT CLO LTD-SNDPT 2017-1A C	1	5,525,000	5,525,000
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,750,000	5,750,828	11/29/2012	11/29/2042	Interest Rate Swaps			03764Q-AU-6	CENT CDO 12 LTD-SR NT SER 2006-12A CL A 144A	1	5,750,000	5,750,828
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	25,000,000	28,732,659	12/27/2012	12/27/2042	Interest Rate Swaps		3,702,109	939218-AU-7	BARBON CLO LTD-SERIES 15-1A CLASS B	1	25,000,000	25,030,550
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,024,484	12/27/2012	12/27/2042	Interest Rate Swaps			83609R-AE-1	SEVEN STICKS CLO LTD-SR SEC NT CL A-1 144A	1	4,000,000	4,024,484
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,463,316	2,433,097	12/27/2012	12/27/2042	Interest Rate Swaps			15135A-AA-1	JFIN CLO2015 LTD-MEZZ SEC DEF NT CL C1	1	2,463,316	2,433,097
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,112,451	4,115,659	12/27/2012	12/27/2042	Interest Rate Swaps			05616Z-AC-4	Statoil ASA-SENIOR UNSECURED NOTE ATRIUM XI I LLC-NOTE SERIES 12A CLASS B 144A	1	4,112,451	4,115,659
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,400,000	17,468,991	12/27/2012	12/27/2042	Interest Rate Swaps			81789G-AA-9	WELLFLEET CLO LTD-WELF 2016-2A A1	1	17,400,000	17,468,991
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,890,000	6,897,214	12/27/2012	12/27/2042	Interest Rate Swaps			46617Y-AD-5	MAGNETITE CLO LTD-SERIES 2015-12A CLASS BR	1	6,890,000	6,897,214
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,908,067	17,283,605	12/27/2012	12/27/2042	Interest Rate Swaps			24820R-AA-6	WACHOVIA STUDENT LOAN TR-WSLT 2005-1 B	1	13,908,067	17,283,605
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,147,156	11,997,609	12/27/2012	12/27/2042	Interest Rate Swaps			04965C-AC-2	ATRIVM CDO CORP-SERIES 9A CLASS BR	1	12,147,156	11,997,609
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,547,712	12/27/2012	12/27/2042	Interest Rate Swaps			94949L-AA-8	VOYA CLO LTD-VOYA 2014-2A A2AR	1	10,500,000	10,547,712
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,063,890	12/27/2012	12/27/2042	Interest Rate Swaps			55953H-AL-7		1	10,000,000	10,063,890
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	17,023,725	20,691,509	12/27/2012	12/27/2042	Interest Rate Swaps		3,702,109	92977H-AG-3		1	17,023,725	16,989,400
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,990,000	19,129,747	12/27/2012	12/27/2042	Interest Rate Swaps			04964K-AN-1		1	18,990,000	19,129,747
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,810,000	18,881,704	12/27/2012	12/27/2042	Interest Rate Swaps			92912V-AQ-8		1	18,810,000	18,881,704

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,800,000	6,823,902	12/27/2012	12/27/2042	Interest Rate Swaps			48251B-AA-8	KKR FINANCIAL CLO LTD-KKR 16 A1 DRYDEN XXVI SR LN FD SR SEC NT CL	1	6,800,000	6,823,902
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		35,067,632	35,009,520	12/27/2012	12/27/2042	Interest Rate Swaps			26250U-AC-9	OCTAGON INV PARTNERS XVI LTD-SR SEC NT CL C1	1	35,067,632	35,009,520
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,900,000	4,910,315	12/27/2012	12/27/2042	Interest Rate Swaps			67590B-AE-0	REGATTA IX FUNDING LTD-SERIES 17-1A CLASS B	1	4,900,000	4,910,315
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	8,560,000	13,130,953	12/28/2012	12/28/2042	Interest Rate Swaps		4,551,505	75887V-AC-5	LOM LTD PARTNERSHIP-SERIES 16A CLASS CR	1	8,560,000	8,579,448
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,510,013	12/28/2012	12/28/2042	Interest Rate Swaps			50181G-AU-4	DRYDEN SENIOR LOAN FUND-SERIES 17-49A CLASS B	1	8,500,000	8,510,013
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,522,449	12/28/2012	12/28/2042	Interest Rate Swaps			262440-AB-9	SYMPHONY CLO V LTD-SR SEC NT CL A-2 144A	1	8,500,000	8,522,449
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,189,765	9,178,191	12/28/2012	12/28/2042	Interest Rate Swaps			87155M-AC-5	MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS BR	1	9,189,765	9,178,191
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,069,650	12/28/2012	12/28/2042	Interest Rate Swaps			55818X-BA-0	WIND RIVER CLO LTD-WINDR 2017-1A B	1	7,000,000	7,069,650
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,050,000	11,066,774	12/28/2012	12/28/2042	Interest Rate Swaps			88432M-AC-8	WELLFLEET CLO 2015-1 LTD-SR SEC NT CL A-1 144A	1	11,050,000	11,066,774
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	50,438,350	12/28/2012	12/28/2042	Interest Rate Swaps			949496-AC-7	CHA LN FDG 2013-2 LTD-SR SEC NT CL	1	50,000,000	50,438,350
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	34,581,649	38,462,726	12/28/2012	12/28/2042	Interest Rate Swaps		4,551,505	67104L-AA-5	GOLDENTREE LOAN OPP VII LTD-SR SEC NT CL B-1	1	34,581,649	33,911,221
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,180,771	12/28/2012	12/28/2042	Interest Rate Swaps			38137D-AC-1	JFIN CLO 2014 LTD-SR SEC NOTE CLASS B-1	1	9,150,000	9,180,771
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,369,197	16,212,733	12/28/2012	12/28/2042	Interest Rate Swaps			46617E-AC-1	1828 CLO LTD-SR SEC NT CL A-1-S 144A	1	16,369,197	16,212,733
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,040,000	16,146,153	12/28/2012	12/28/2042	Interest Rate Swaps			282523-AB-5	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS B1R	1	16,040,000	16,146,153
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,725,400	12/28/2012	12/28/2042	Interest Rate Swaps			55818Y-BE-0	TRYON PARK CLO LTD-SR SEC NT CL A-2 144A	1	12,700,000	12,725,400
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,900,000	17,945,180	12/28/2012	12/28/2042	Interest Rate Swaps			89852T-AC-2	GOLDENTREE LOAN OPP VII LTD-SR SEC NT CL C-1	1	17,900,000	17,945,180
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	5,400,000	9,964,562	12/28/2012	12/28/2042	Interest Rate Swaps		4,551,505	38137D-AG-2	BLUEMOUNTAIN CLO 2013-2 LTD-SR SEC NOTE CL B1	1	5,400,000	5,413,057
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,100,000	10,103,091	12/28/2012	12/28/2042	Interest Rate Swaps			09626Y-AC-4	PALMER SQUARE CLO LTD-SERIES 2014-14 CLASS A2R	1	10,100,000	10,103,091
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,600,000	10,623,182	12/28/2012	12/28/2042	Interest Rate Swaps			69688X-AL-5	SLM STUDENT LOAN TRUST-SLMA 2013-3	1	10,600,000	10,623,182
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,814,404	8,698,783	12/28/2012	12/28/2042	Interest Rate Swaps			78447Y-AD-4	WELLFLEET CLO 2016-2 LTD-WELF 2016-2A A2	1	8,814,404	8,698,783
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,911,839	6,914,841	12/28/2012	12/28/2042	Interest Rate Swaps			94949L-AC-4	LOM XIV LTD PARTNERSHIP-DEF MEZZ NT CL C	1	6,911,839	6,914,841
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,056,558	5,013,445	12/28/2012	12/28/2042	Interest Rate Swaps			50184V-AG-9	MADISON PARK FUNDING LTD-SERIES 2017-23A CLASS B	1	5,056,558	5,013,445
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,900,000	8,992,124	12/28/2012	12/28/2042	Interest Rate Swaps			55820T-AC-2	FLATIRON CLO LTD-FLAT 2017-1A C LOM LTD PARTNERSHIP-SERIES 22A CLASS A2	1	8,900,000	8,992,124
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,650,000	8,683,847	12/28/2012	12/28/2042	Interest Rate Swaps			33882G-AC-2	BLUEMOUNTAIN CLO LTD-BLUEM 2013-1A BR	1	8,650,000	8,683,847
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,825,000	6,842,684	12/28/2012	12/28/2042	Interest Rate Swaps			50189G-AC-6	DRYDEN SENIOR LOAN FUND-SERIES 2014-36A CLASS CR	1	6,825,000	6,842,684
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,301,485	12/28/2012	12/28/2042	Interest Rate Swaps			09626U-AQ-1	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	4,250,000	4,301,485
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,350,000	6,431,712	12/28/2012	12/28/2042	Interest Rate Swaps			26249K-AM-3	CARLYLE GLOBAL MARKET ST-SERIES 2014-2A CLASS CR	1	6,350,000	6,431,712
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,761,000	12,809,544	12/28/2012	12/28/2042	Interest Rate Swaps			78447M-AD-0	BLUEMOUNTAIN CLO LTD-BLUEM 2013-4A B1R	1	12,761,000	12,809,544
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,024,832	12/28/2012	12/28/2042	Interest Rate Swaps			14310V-AN-7	CATAMARAN CLO 2015-1 LTD NT CL B	1	8,000,000	8,024,832
57629*AJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	13,560,000	15,841,759	12/28/2012	12/28/2042	Interest Rate Swaps		2,275,752	09627D-AQ-8		1	13,560,000	13,566,007
57629*AJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,031,507	10,047,266	12/28/2012	12/28/2042	Interest Rate Swaps			14889K-AC-6		1	10,031,507	10,047,266

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,438,199	9,415,567	12/28/2012	12/28/2042	Interest Rate Swaps			63940A-AD-0	NAVIENT STUDENT LOAN TRU-SERIES 17-4A CLASS B	1	9,438,199	9,415,567
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,600,000	9,660,941	12/28/2012	12/28/2042	Interest Rate Swaps			00191Y-AM-6	ARES CLO LTD-SERIES 2015 1-A CLASS A2R	1	9,600,000	9,660,941
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,666,170	12/28/2012	12/28/2042	Interest Rate Swaps			26245C-AE-3	DRYDEN SENIOR LOAN FUND-SERIES 2016-43A CLASS B	1	7,500,000	7,666,170
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	7,431,239	9,933,521	12/28/2012	12/28/2042	Interest Rate Swaps		2,275,752	15135D-AC-1	CENT CDO 14 LTD-SR TERM NT SER 2007-14A CL B	1	7,431,239	7,657,769
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,000,000	12,041,820	12/28/2012	12/28/2042	Interest Rate Swaps			03765P-AC-7	APIDOS CLO XX1-SR SECURED NOTE CL A-2	1	12,000,000	12,041,820
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,725,000	11,776,778	12/28/2012	12/28/2042	Interest Rate Swaps			38137P-AE-0	GOLDENTREE LOAN OPP X LTD-SR SEC NT CL B	1	11,725,000	11,776,778
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,585,022	12/28/2012	12/28/2042	Interest Rate Swaps			48249V-AQ-4	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A2R	1	13,570,000	13,585,022
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,195,000	11,223,592	12/28/2012	12/28/2042	Interest Rate Swaps			26250D-AS-2	DRYDEN XXIV SR LN FD-SR SEC NT CL B-R	1	11,195,000	11,223,592
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	12,242,404	14,104,927	12/28/2012	12/28/2042	Interest Rate Swaps		2,275,752	14310D-AG-2	CARLYLE GLOBAL MKT CLO 2013-2 MEZZ SEC DEF NT CL C	1	12,242,404	11,829,175
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,916,964	12,170,499	12/28/2012	12/28/2042	Interest Rate Swaps			78442G-PL-4	SLM STUDENT LOAN TRUST-SERIES 2005-4 CLASS B	1	11,916,964	12,170,499
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,920,000	8,940,293	12/28/2012	12/28/2042	Interest Rate Swaps			10302V-BC-8	BOHMAN PARK CLO LTD-BOIWPK 2014-1A B1R	1	8,920,000	8,940,293
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,850,000	6,877,188	12/28/2012	12/28/2042	Interest Rate Swaps			674000-AQ-7	OAKTREE CLO LTD-SERIES 14-1A CLASS A2R	1	6,850,000	6,877,188
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,840,000	6,839,419	12/28/2012	12/28/2042	Interest Rate Swaps			88433R-AE-2	WIND RIVER CLO LTD-SERIES 17-2A CLASS B	1	6,840,000	6,839,419
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,002,255	12/28/2012	12/28/2042	Interest Rate Swaps			50188Y-AB-0	LOM LTD PARTNERSHIP-LOM 24A B	1	5,000,000	5,002,255
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	5,400,000	7,689,787	12/28/2012	12/28/2042	Interest Rate Swaps		2,275,752	12548J-AE-2	CIFC FUNDING LTD-SERIES 17-3A CLASS A2	1	5,400,000	5,414,035
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,847,380	10,748,981	12/28/2012	12/28/2042	Interest Rate Swaps			62953G-AC-5	NZCG FUNDING LTD-SERIES 2015-2A CLASS A2	1	10,847,380	10,748,981
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,050,000	3,086,451	12/28/2012	12/28/2042	Interest Rate Swaps			00191Y-AP-9	ARES CLO LTD-SERIES 2015 1-A CLASS B2R	1	3,050,000	3,086,451
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,551,435	12/28/2012	12/28/2042	Interest Rate Swaps			50184K-AH-8	LOM LTD PARTNERSHIP-SERIES 13A CLASS CR	1	4,500,000	4,551,435
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,062,940	12/28/2012	12/28/2042	Interest Rate Swaps			08181L-AA-5	BENEFIT STREET PARTNERS -BSP 2016-10A A1	1	5,000,000	5,062,940
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,025,460	12/28/2012	12/28/2042	Interest Rate Swaps			43132W-AC-4	HILDENE CLO IV LTD-SR SEC NT SER 2015-4A CL A-2	1	10,000,000	10,025,460
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,750,000	8,786,348	12/28/2012	12/28/2042	Interest Rate Swaps			05618L-AH-9	BABSON CLO LTD-BABSON 2014-11A CR	1	8,750,000	8,786,348
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,914,118	12/28/2012	12/28/2042	Interest Rate Swaps			05875F-AC-1	BALLYROCK LTD-SERIES 16-1A CLASS B1	1	3,900,000	3,914,118
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	6,500,000	8,019,204	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	14311A-AN-2	CARLYLE GLOBAL MARKET ST-SERIES 14-5A CLASS BR	1	6,500,000	6,516,809
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,475,000	9,578,192	12/31/2012	12/31/2042	Interest Rate Swaps			26249Q-AG-3	DRYDEN 38 SR LN FD SR SEC NT CL B	1	9,475,000	9,578,192
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,721,693	8,641,681	12/31/2012	12/31/2042	Interest Rate Swaps			39808P-AC-0	GREYWOLF CLO V LTD-SR SEC NT CL A-2 144A	1	8,721,693	8,641,681
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,550,000	7,634,907	12/31/2012	12/31/2042	Interest Rate Swaps			74982L-AS-9	RACE POINT CLO LTD-SERIES 13-8A CLASS CR	1	7,550,000	7,634,907
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,625,000	8,639,913	12/31/2012	12/31/2042	Interest Rate Swaps			26829C-AC-1	ECP CLO 2015-7 LTD SR SEC NT CL A-2 144A	1	8,625,000	8,639,913
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,455,030	6,482,515	12/31/2012	12/31/2042	Interest Rate Swaps			55817X-AB-0	MADISON PARK FDG V LTD-NT CL A-1B 144A	1	6,455,030	6,482,515
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,366,060	12/31/2012	12/31/2042	Interest Rate Swaps			55954E-AJ-8	MAGNETITE XVII LTD-DEF MEZZ NT SER 16-17A CL C	1	4,330,000	4,366,060
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2	50,000,000	13,560,000	15,097,515	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	09627R-AL-8	BLUEMOUNTAIN CLO LTD-BLUEM 2014-3A A2AR	1	13,560,000	13,595,120
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		15,000,000	14,999,850	12/31/2012	12/31/2042	Interest Rate Swaps			87247U-AU-7	TICP CLO LTD-TICP 2014-3A B1R	1	15,000,000	14,999,850

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		12,800,000	12,822,579	12/31/2012	12/31/2042	Interest Rate Swaps			36319G-AP-9	GALAXY CLO LTD-GALXY 2014-18A AR	1	12,800,000	12,822,579
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		9,600,000	9,647,462	12/31/2012	12/31/2042	Interest Rate Swaps			14308L-AS-2	CARLYLE GLOBAL MARKET ST-CGMS 2014-3A A2R	1	9,600,000	9,647,462
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		2,000,000	2,004,646	12/31/2012	12/31/2042	Interest Rate Swaps			941848-D8-9	Waters Corporation Gtd Senior Note	2	2,000,000	2,004,646
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	14,300,000	15,848,956	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	55820J-AC-4	MADISON PARK FUNDING LTD-SERIES 2016-21A CLASS A2	1	14,300,000	14,346,561
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,849,376	13,778,146	12/31/2012	12/31/2042	Interest Rate Swaps			948214-AC-5	WEBSTER PK CLO SR SEC NT CL A-2	1	13,849,376	13,778,146
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,754,989	6,613,636	12/31/2012	12/31/2042	Interest Rate Swaps			67104L-AC-1	OHA LN FDG 2013-2 LTD-MEZZ SEC DEF NT CL C	1	6,754,989	6,613,636
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,350,000	4,383,064	12/31/2012	12/31/2042	Interest Rate Swaps			020053-AS-3	ALM LOAN FUNDING-SERIES 13-8A CLASS A1R	1	4,350,000	4,383,064
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,700,000	2,711,216	12/31/2012	12/31/2042	Interest Rate Swaps			87154E-AN-0	SYMPHONY CLO LTD-SERIES 14-15A CLASS CR	1	2,700,000	2,711,216
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,664,060	8,741,081	12/31/2012	12/31/2042	Interest Rate Swaps			59883H-AB-5	MILL CREEK CLO II LTD-SR SEC NT CL B-1 144A	1	8,664,060	8,741,081
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	5,263,544	6,315,896	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	BCC0XF-V8-9	RESOURCE EUROPE CLO I BV-SR SEC REG NT CL A	1	5,263,544	4,813,501
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,400,000	7,427,913	12/31/2012	12/31/2042	Interest Rate Swaps			92916M-AC-5	VOYA CLO LTD-VOYA 2017-1A B	1	7,400,000	7,427,913
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,350,000	5,384,529	12/31/2012	12/31/2042	Interest Rate Swaps			69689A-AN-0	PALMER SQUARE CLO LTD-SERIES 15-1A CLASS A2R	1	5,350,000	5,384,529
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,515,791	12/31/2012	12/31/2042	Interest Rate Swaps			26244M-AC-6	DRYDEN SENIOR LOAN FUND-DRSLF 2016-45A B	1	4,500,000	4,515,791
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,150,000	7,175,797	12/31/2012	12/31/2042	Interest Rate Swaps			09628Q-AC-9	BLUEMOUNTAIN CLO 2016-1 LTD -SR SEC NT CL B	1	7,150,000	7,175,797
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,700,000	3,703,626	12/31/2012	12/31/2042	Interest Rate Swaps			24823B-AC-4	DENALI CAPITAL CLO X LTD-SR SEC CL A2L 144A	1	3,700,000	3,703,626
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,025,000	8,076,914	12/31/2012	12/31/2042	Interest Rate Swaps			05618P-AJ-6	BARSON CLO LTD 2016-I SEC DEF MEZZ CL C	1	8,025,000	8,076,914
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,740,000	12,865,897	12/31/2012	12/31/2042	Interest Rate Swaps			09626U-AN-8	BLUEMOUNTAIN CLO LTD-BLUEM 2013-1A A2R	1	12,740,000	12,865,897
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	9,245,080	10,609,393	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	46616K-AE-4	JFIN CLO 2013 LTD SR SEC DEF NT CL B	1	9,245,080	9,106,998
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,665,312	11,326,973	12/31/2012	12/31/2042	Interest Rate Swaps			03764D-AD-3	APIDOS CLO XII MEZZ DEF NT CL C	1	11,665,312	11,326,973
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,850,419	14,510,774	12/31/2012	12/31/2042	Interest Rate Swaps			50184V-AE-4	LOM XV LTD PARTNERSHIP-SR SEC NT SER 15A CL C	1	14,850,419	14,510,774
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,067,180	12/31/2012	12/31/2042	Interest Rate Swaps			50188Q-AE-1	LOM XIX LTD PARTNERSHIP DEF MEZZ NT CL C	1	10,000,000	10,067,180
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,675,000	10,694,610	12/31/2012	12/31/2042	Interest Rate Swaps			38137Q-AC-2	GOLDENTREE LOAN OPPORTUN-GOLD9 2014-9A B1R	1	10,675,000	10,694,610
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	5,071,497	6,403,400	12/31/2012	12/31/2042	Interest Rate Swaps		1,502,395	15136R-AJ-4	CENT CLO 18 LP-DEF NT SER 2013-18A CL C-1 144A	1	5,071,497	4,901,005
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,325,000	12,338,570	12/31/2012	12/31/2042	Interest Rate Swaps			38137L-AQ-2	GOLDENTREE LOAN OPPORTUN-SERIES 2014-8A CLASS B1R	1	12,325,000	12,338,570
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,904,372	12/31/2012	12/31/2042	Interest Rate Swaps			48251F-AB-7	KKR FINANCIAL CLO LTD-SERIES 17 CLASS B	1	5,900,000	5,904,372
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,850,000	5,869,890	12/31/2012	12/31/2042	Interest Rate Swaps			55818M-AQ-0	MADISON PARK FUNDING LTD-MDPK 2014-13A B1R	1	5,850,000	5,869,890
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,750,000	21,785,192	12/31/2012	12/31/2042	Interest Rate Swaps			38808P-AA-4	GREYWOLF CLO V LTD SR SEC NT CL A-1	1	21,750,000	21,785,192
57629*AI11	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	23,138,700	25,445,547	04/09/2013	04/09/2043	Interest Rate Swaps		2,595,519	04014J-AA-2	ARES XXVI CLO LTD SR NT CL A	1	23,138,700	22,850,028
57629*AI11	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,816,327	4,812,887	04/09/2013	04/09/2043	Interest Rate Swaps			36248M-AB-3	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS B	1	4,816,327	4,812,887
57629*AI11	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,100,000	6,128,231	04/09/2013	04/09/2043	Interest Rate Swaps			72349B-AL-8	PINNACLE PARK CLO LTD-SERIES 2014-1A CLASS CR	1	6,100,000	6,128,231
57629*AI11	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,100,000	6,112,139	04/09/2013	04/09/2043	Interest Rate Swaps			94951M-AC-7	WELLFLEET CLO 2017-2 LTD-SERIES 17-2A CLASS A2	1	6,100,000	6,112,139

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,356,560	04/09/2013	04/09/2043	Interest Rate Swaps			64130H-AE-1	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A C	1	4,330,000	4,356,560
57629*AW1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,653,089	04/09/2013	04/09/2043	Interest Rate Swaps			64129J-AQ-3	NEUBERGER BERMAN CLO LTD-NEUB 2013-14A A1R	1	13,560,000	13,653,089
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		60,000,000	22,400,000	04/09/2013	04/09/2043	Interest Rate Swaps		2,831,476	04941G-AC-2	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS B	1	22,400,000	22,402,710
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,180,771	04/09/2013	04/09/2043	Interest Rate Swaps			38137D-AC-1	GOLDENTREE LOAN OPP VII LTD-SR SEC NT CL B-1	1	9,150,000	9,180,771
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,071,300	04/09/2013	04/09/2043	Interest Rate Swaps			14310M-AS-6	CARLYLE GLOBAL MARKET ST-SERIES 2014-1A CLASS CR	1	10,000,000	10,071,300
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,750,000	12,881,899	04/09/2013	04/09/2043	Interest Rate Swaps			27830B-AQ-7	EATON VANCE CDO LTD-SERIES 2013-1A CLASS A2R	1	12,750,000	12,881,899
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,800,000	12,852,749	04/09/2013	04/09/2043	Interest Rate Swaps			67102Q-AK-4	CHA CREDIT PARTNERS LTD-SERIES 2012-7A CLASS B1R	1	12,800,000	12,852,749
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		55,000,000	7,888,231	04/09/2013	04/09/2043	Interest Rate Swaps		2,691,613	50184V-AG-9	LOM XIV LTD PARTNERSHIP-DEF MEZZ NT CL C	1	7,888,231	7,820,974
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,500,000	12,527,575	04/09/2013	04/09/2043	Interest Rate Swaps			50188G-AE-3	LOM XVII LTD PARTNERSHIP-SR NT SER 18A CL B-1	1	12,500,000	12,527,575
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,131,225	3,029,960	04/09/2013	04/09/2043	Interest Rate Swaps			67104L-AB-3	CHA LN FDG 2013-2 LTD-SR SEC NT CL B	1	3,131,225	3,029,960
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,583,329	8,727,785	04/09/2013	04/09/2043	Interest Rate Swaps			78442G-OA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	8,583,329	8,727,785
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,775,000	10,835,803	04/09/2013	04/09/2043	Interest Rate Swaps			74982L-AQ-3	RACE POINT CLO LTD-SERIES 13-8A CLASS BR	1	10,775,000	10,835,803
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,056,563	04/09/2013	04/09/2043	Interest Rate Swaps			26244Y-AC-0	DRYDEN 42 SR LN FD-SR SEC NT CL B	1	13,000,000	13,056,563
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		55,000,000	20,859,022	04/09/2013	04/09/2043	Interest Rate Swaps		2,691,613	27829K-AE-7	EATON VANCE CDO LTD-SERIES 2007-10A CLASS B2	1	20,859,022	20,960,751
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,109,153	3,073,026	04/09/2013	04/09/2043	Interest Rate Swaps			50184V-AC-8	LOM XIV LTD PARTNERSHIP-SR NT SER 14A CL A 144A	1	3,109,153	3,073,026
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,610,000	8,671,226	04/09/2013	04/09/2043	Interest Rate Swaps			860444-AC-2	Stewart Park CLO Ltd -SR SECURED NOTE CLASS B 144A	1	8,610,000	8,671,226
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,653,406	8,585,823	04/09/2013	04/09/2043	Interest Rate Swaps			26829C-AJ-6	ECP CLO 2015-7 LTD SR SEC DEF NT CL B-1	1	8,653,406	8,585,823
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,190,000	5,204,506	04/09/2013	04/09/2043	Interest Rate Swaps			00900A-AN-8	AIMCO-SERIES 14-AA CLASS C1R	1	5,190,000	5,204,506
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,024,913	04/09/2013	04/09/2043	Interest Rate Swaps			50188Q-AC-5	LOM XIX LTD PARTNERSHIP SR NT CL B	1	7,000,000	7,024,913
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,825,000	4,834,882	04/09/2013	04/09/2043	Interest Rate Swaps			89473L-AB-0	TREMAN PK CLO LTD SR SEC NT CL B-1	1	4,825,000	4,834,882
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		55,000,000	28,740,601	04/09/2013	04/09/2043	Interest Rate Swaps		2,360,938	67110H-AA-6	OZLM XIV LTD SR SEC NT CL A-1A	1	28,740,601	28,902,355
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,011,130	04/09/2013	04/09/2043	Interest Rate Swaps			08179C-AE-1	BENEFIT STREET PARTNERS -BSP 2017-11A A2A	1	15,000,000	15,011,130
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,054,145	04/09/2013	04/09/2043	Interest Rate Swaps			50189C-AE-1	LOM XXI LTD PARTNERSHIP-SR NT SER 21A CL B-1	1	13,000,000	13,054,145
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		60,000,000	38,037,962	04/09/2013	04/09/2043	Interest Rate Swaps		2,575,568	04941G-AA-6	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS A	1	38,037,962	37,999,392
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,206,405	24,964,571	04/09/2013	04/09/2043	Interest Rate Swaps			14310G-AA-8	CARLYLE GLOBAL MKT CLO 2013-3 SR SEC NT CL A1	1	25,206,405	24,964,571
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	42,222,816	04/09/2013	04/09/2043	Interest Rate Swaps		2,155,136	87247U-AS-2	TICP CLO LTD-TICP 2014-3A AR	1	40,000,000	40,067,680
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,122,522	04/09/2013	04/09/2043	Interest Rate Swaps			38137P-AE-0	GOLDENTREE LOAN OPP X LTD-SR SEC NT CL B	1	5,100,000	5,122,522
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,009,292	04/09/2013	04/09/2043	Interest Rate Swaps			94184B-D8-9	Waters Corporation Gtd Senior Note	2	4,000,000	4,009,292
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		948,687	922,089	04/09/2013	04/09/2043	Interest Rate Swaps			49638W-AD-8	KINGSLAND VI LTD-SEC DEF MEZZ NT CL C 144A	1	948,687	922,089
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		694,621	671,175	04/09/2013	04/09/2043	Interest Rate Swaps			14310D-AG-2	CARLYLE GLOBAL MKT CLO 2013-2 MEZZ SEC DEF NT CL C	1	694,621	671,175
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		500,000	501,053	04/09/2013	04/09/2043	Interest Rate Swaps			67590B-AE-0	OCTAGON INV PARTNERS XVI LTD-SR SEC NT CL C1	1	500,000	501,053

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	60,500,000	62,682,059	04/09/2013	04/09/2043	Interest Rate Swaps	2,155,136	2,155,136	126612-AJ-9	CVP CASCADE CLO LTD-CVPC 2013-CLO1 A1R	1	60,500,000	60,526,923
92553PA*3	Viacom, Inc. Senior Note	2	20,000,000	23,669,955	25,291,682	12/20/2013	03/20/2019	5 Yr Credit Default Swap	169,955	194,622	Q3915F-AB-2	Fletcher Building Intern Gtd Senior Note	2	23,500,000	25,097,060
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	6,800,000	19,693,264	03/05/2014	03/05/2034	Interest Rate Swaps	12,887,538	12,887,538	92915Q-AE-3	VOYA CLO LTD-SERIES 2017-3A CLASS A1B	1	6,800,000	6,805,726
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	6,779,919	6,780,000	6,779,919	03/05/2014	03/05/2034	Interest Rate Swaps			88434G-AC-9	THL CREDIT WIND RIVER 20-SERIES 2017-3A CLASS B	1	6,780,000	6,779,919
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	4,920,000	4,920,000	4,941,751	03/05/2014	03/05/2034	Interest Rate Swaps			48249V-AS-0	YKR FINANCIAL CLO LTD-SERIES 13-1A CLASS BR	1	4,920,000	4,941,751
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	21,100,000	21,100,000	21,245,442	03/05/2014	03/05/2034	Interest Rate Swaps			55818Y-BA-8	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS AR	1	21,100,000	21,245,442
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	21,015,000	21,015,000	21,130,561	03/05/2014	03/05/2034	Interest Rate Swaps			48249V-AN-1	YKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A1R	1	21,015,000	21,130,561
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	20,800,000	20,800,000	20,856,826	03/05/2014	03/05/2034	Interest Rate Swaps			22616C-AA-1	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS A	1	20,800,000	20,856,826
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	8,060,000	8,060,000	8,109,287	03/05/2014	03/05/2034	Interest Rate Swaps			74983D-AC-1	RACE POINT X CLO LTD SR SEC2 NT CL B-1	1	8,060,000	8,109,287
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	12,200,000	12,200,000	12,260,183	03/05/2014	03/05/2034	Interest Rate Swaps			55818P-AS-9	MADISON PARK FUNDING LTD-MDPK 2014-12A CR	1	12,200,000	12,260,183
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	20,049,799	31,742,394	03/05/2014	03/05/2034	Interest Rate Swaps	12,915,394	12,915,394	346845-AC-4	FORT BENNING FHM-UNSECURED	1	20,049,799	18,827,000
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	11,800,000	11,800,000	11,818,078	03/05/2014	03/05/2034	Interest Rate Swaps			14311D-AY-2	CARLYLE GLOBAL MARKET ST-SERIES 15-1A CLASS BR	1	11,800,000	11,818,078
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	11,182,086	11,182,086	11,176,394	03/05/2014	03/05/2034	Interest Rate Swaps			38021X-AB-8	GOAL STRUCTURED SOLUTION-SERIES 2016-A CLASS A2	1	11,182,086	11,176,394
57629*BC4	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1	44,657,995	44,657,995	45,685,800	03/05/2014	03/05/2034	Interest Rate Swap			16892D-AC-2	CHINA SOUTHERN POWER GRI-SENIOR UNSECURED	1	44,657,995	45,685,800
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	4,035,571	4,035,571	4,265,606	03/05/2014	03/05/2034	Interest Rate Swaps			29365T-AA-2	ENERGY TEXAS INC-NOTE	1	4,035,571	4,265,606
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	10,850,000	10,850,000	10,849,816	03/05/2014	03/05/2034	Interest Rate Swaps			883310-AC-8	THAYER PARK CLO LTD.-THAYR 2017-1A A2	1	10,850,000	10,849,816
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	116,608,603	140,226,422	05/19/2014	05/19/2044	Interest Rate Swaps	22,040,761	22,040,761	77277L-G0-1	ROCKALL CLO BV EURO CL VF-1 SR SEC2 VAR FDG NT	1	116,608,603	118,185,661
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	12,100,000	12,100,000	12,153,131	05/19/2014	05/19/2044	Interest Rate Swaps			40436Q-AC-6	HIGHBRIDGE LOAN MANAGEME-HLM 9A-2016 A2	1	12,100,000	12,153,131
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	12,070,000	12,070,000	12,212,885	05/19/2014	05/19/2044	Interest Rate Swaps			14312L-AC-1	CARLYLE GLOBAL MKT CLO 2016-2 SR SEC NT CL A2A	1	12,070,000	12,212,885
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	9,100,000	9,100,000	9,142,379	05/19/2014	05/19/2044	Interest Rate Swaps			09627R-AN-4	BLUEMOUNTAIN CLO LTD-BLUEM 2014-3A BR	1	9,100,000	9,142,379
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	9,100,000	9,100,000	9,149,613	05/19/2014	05/19/2044	Interest Rate Swaps			40436V-AC-5	HIGHBRIDGE LOAN MANAGEME-HLM 11A-17 C	1	9,100,000	9,149,613
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	8,950,000	8,950,000	9,050,079	05/19/2014	05/19/2044	Interest Rate Swaps			50184N-AP-7	LOM LTD PARTNERSHIP-SERIES 15A CLASS CR	1	8,950,000	9,050,079
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	32,150,470	05/19/2014	05/19/2034	Interest Rate Swaps	12,079,990	12,079,990	67105V-AW-4	OHA CREDIT PARTNERS LTD-OAKC 2013-9A B1R	1	20,000,000	20,070,480
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	39,121,811	39,121,811	38,024,966	05/19/2014	05/19/2034	Interest Rate Swaps			49638W-AD-8	KINGSLAND VI LTD-SEC2 DEF MEZZ NT CL C 144A	1	39,121,811	38,024,966
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	20,000,000	20,000,000	20,038,980	05/19/2014	05/19/2034	Interest Rate Swaps			872455-AS-9	TICP CLO LTD-TICP 2014-1A A2BR SYMPHONY CLO LTD-SERIES 13-12A CLASS B1R	1	20,000,000	20,038,980
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	20,000,000	20,000,000	19,999,840	05/19/2014	05/19/2034	Interest Rate Swaps			13080B-AB-7	ALM LOAN FUNDING-SERIES 14-14A CLASS A1R	1	20,000,000	19,999,840
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	20,000,000	20,000,000	20,058,240	05/19/2014	05/19/2034	Interest Rate Swaps			00164K-AJ-6	OAK HILL CREDIT PARTNERS-SERIES 2013-8A CLASS C	1	20,000,000	20,058,240
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	9,000,000	9,000,000	9,024,093	05/19/2014	05/19/2034	Interest Rate Swaps			67104C-AC-1	HILDENE CLO LTD-SERIES 13-1A CLASS AR	1	9,000,000	9,024,093
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	95,000,000	117,379,408	05/19/2014	05/19/2044	Interest Rate Swaps	22,336,753	22,336,753	43132R-AN-0	APIDOS CLO-APID 2014-18A A2AR	1	95,000,000	95,042,655
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	34,000,000	34,000,000	34,041,140	05/19/2014	05/19/2044	Interest Rate Swaps			03765D-AN-0	BIRCHWOOD PARK CLO LTD-BRCHW 2014-1A B1R	1	34,000,000	34,041,140
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	11,350,000	11,350,000	11,373,494	05/19/2014	05/19/2044	Interest Rate Swaps			09073V-AS-3		1	11,350,000	11,373,494

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,359,463	7,430,832	05/19/2014	05/19/2044	Interest Rate Swaps			38021B-AG-5	GOAL CAPITAL FUNDING TRU-SERIES 2006-1 CLASS B	1	7,359,463	7,430,832
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,102,410	4,371,450	05/19/2014	05/19/2044	Interest Rate Swaps			429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	4,102,410	4,371,450
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	15,000,000	37,395,226	05/19/2014	05/19/2044	Interest Rate Swaps		22,283,626	00164B-AS-6	ALM LOAN FUNDING-SERIES 2013-7R2A CLASS A2R	1	15,000,000	15,111,600
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,087,000	05/19/2014	05/19/2044	Interest Rate Swaps			09627V-AS-4	BLUEMOUNTAIN CLO LTD-SERIES 2014-4A CLASS B1R	1	15,000,000	15,087,000
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,023,730	05/19/2014	05/19/2044	Interest Rate Swaps			38137F-AE-2	GOLDENTREE LOAN OPPORTUN-GLD11 2015-11A BR	1	15,000,000	15,023,730
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,091,905	05/19/2014	05/19/2044	Interest Rate Swaps			67091H-AK-7	CHA LOAN FUNDING LTD-OHALF 2012-1A B1R	1	15,000,000	15,091,905
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,600,000	14,893,898	05/19/2014	05/19/2044	Interest Rate Swaps			09628W-AC-6	BLUEMOUNTAIN CLO LTD-SERIES 16-2A CLASS A2	1	14,600,000	14,893,898
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,930,566	05/19/2014	05/19/2044	Interest Rate Swaps			92915P-AB-1	VOYA CLO LTD-INGIM 2014-1A A2AR	1	13,900,000	13,930,566
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,941,549	05/19/2014	05/19/2044	Interest Rate Swaps			09626R-AQ-8	BLUEMOUNTAIN CLO LTD-BLUEM 2012-2A BR	1	13,850,000	13,941,549
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,935,164	05/19/2014	05/19/2044	Interest Rate Swaps			11014P-AB-1	BRISTOL PARK CLO LTD-SERIES 2016-1A CLASS B	1	13,850,000	13,935,164
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,625,000	12,649,808	05/19/2014	05/19/2044	Interest Rate Swaps			88433A-AC-3	THL CR WIND RIV 2016-1 CLO-SR SECD NT CL B 144A	1	12,625,000	12,649,808
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,150,000	12,205,295	05/19/2014	05/19/2044	Interest Rate Swaps			05682B-AC-0	BAIN CAPITAL CREDIT CLO -SERIES BCC 2016-2A CLASS B	1	12,150,000	12,205,295
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,895,518	7,046,243	05/19/2014	05/19/2044	Interest Rate Swaps			23340L-AA-2	DRB PRIME STUDENT LOAN T-SERIES 2015-B CLASS A1	1	6,895,518	7,046,243
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,781,949	4,728,567	05/19/2014	05/19/2044	Interest Rate Swaps			26249B-AE-1	DRYDEN 30 SR LN FD-MEZZ SEC DEF NT CL C	1	4,781,949	4,728,567
57629*BJ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	142,236,770	161,936,688	05/19/2014	05/19/2044	Interest Rate Swaps		21,919,328	49638W-AB-2	KINGSLAND VI LTD-SR SECD NT CL A1 144A	1	142,236,770	140,017,360
57629*BJ9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,722,362	10,869,028	05/19/2014	05/19/2044	Interest Rate Swaps			05617W-AA-1	BABSON CLO LTD 2013-1-SR SECD NT CL A 144A	1	10,722,362	10,869,028
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	145,316,057	165,010,133	05/19/2014	05/19/2044	Interest Rate Swaps		21,919,328	49638Y-AA-0	KINGSLAND VII LTD-SR SECD NT CL A 144A	1	145,316,057	143,090,805
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,387,549	15,399,551	05/19/2014	05/19/2044	Interest Rate Swaps			056162-AC-4	BABSON CLO LTD-SERIES 15-1A CLASS B	1	15,387,549	15,399,551
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,198,605	05/19/2014	05/19/2044	Interest Rate Swaps			79410U-AC-5	SALEM FIELDS CLO LTD-SERIES 16-2A CLASS A2	1	9,150,000	9,198,605
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	40,649,678	61,994,444	05/19/2014	05/19/2044	Interest Rate Swaps		21,980,044	36248M-AA-5	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS A	1	40,649,678	40,014,400
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		45,000,000	45,161,325	05/19/2014	05/19/2044	Interest Rate Swaps			14954W-AL-0	BAIN CAPITAL CREDIT CLO -SERIES 2017-2A CLASS AR	1	45,000,000	45,161,325
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,300,000	25,327,678	05/19/2014	05/19/2044	Interest Rate Swaps			04943A-AC-3	ATLAS SENIOR LOAN FUND L-SERIES 2017-8A CLASS B	1	25,300,000	25,327,678
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,448,012	32,070,976	05/19/2014	05/19/2044	Interest Rate Swaps			50184V-AC-8	LXM XIV LTD PARTNERSHIP-SR NT SER 14A CL A 144A	1	32,448,012	32,070,976
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,800,000	12,860,890	05/19/2014	05/19/2044	Interest Rate Swaps			87159Q-BG-2	SYMPHONY CLO LTD-SYMP 2014-14A B1R	1	12,800,000	12,860,890
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	45,000,000	67,137,468	05/19/2014	05/19/2044	Interest Rate Swaps		21,995,223	85815X-AQ-6	STEELE CREEK CLO LTD-STCR 2014-1A A1R	1	45,000,000	45,142,245
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		31,694,175	31,901,373	05/19/2014	05/19/2044	Interest Rate Swaps			67818N-ZZ-5	SASOL CHEMICALS (USA) LL TERM LOAN	2	31,694,175	31,901,373
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,445,337	6,983,026	05/19/2014	05/19/2044	Interest Rate Swaps			00764M-GG-6	AEGIS ASSET BACKED SECUR-SERIES 2005-4 CLASS M1	1	6,445,337	6,983,026
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,355,233	4,930,890	05/19/2014	05/19/2044	Interest Rate Swaps			247358-CC-6	EAI V Delta MSN 15181	1	5,355,233	4,930,890
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,550,000	21,584,071	05/19/2014	05/19/2044	Interest Rate Swaps			04964W-AQ-8	TRIUM CDO CORP-ATRM 11A BR	1	21,550,000	21,584,071
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,559,824	05/19/2014	05/19/2044	Interest Rate Swaps			64130H-AA-9	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A A	1	13,560,000	13,559,824
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,600,000	13,599,769	05/19/2014	05/19/2044	Interest Rate Swaps			64130H-AC-5	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A B1	1	13,600,000	13,599,769

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,047,745	05/19/2014	05/19/2044	Interest Rate Swaps			817176-AN-0	SENECA PARK CLO LTD-SPARK 2014-1A B1R	1	15,000,000	15,047,745
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	135,000,000	151,000,000	171,564,233	05/19/2014	05/19/2044	Interest Rate Swaps		20,219,198	05363U-AS-2	EVERY POINT CLO LTD-SERIES 14-1A CLASS AR	1	151,000,000	151,345,035
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,227,425	05/19/2014	05/19/2044	Interest Rate Swaps			55952Y-AL-1	MAGNETITE CLO LTD-MAGNE 2014-BA CLASS CR	1	7,200,000	7,227,425
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	85,000,000	51,273,700	55,589,502	05/09/2014	05/09/2034	Interest Rate Swaps		9,514,978	77277L-B8-9	ROCKALL CLO BV Variable Funding Note - GBP	1	51,273,700	46,074,524
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,930,288	05/09/2014	05/09/2034	Interest Rate Swaps			55952Y-AK-3	MAGNETITE CLO LTD-SERIES 14-BA CLASS BR	1	13,900,000	13,930,288
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,600,709	05/09/2014	05/09/2034	Interest Rate Swaps			04016P-AC-2	ARES CLO LTD-SERIES 17-43A CLASS B	1	13,570,000	13,600,709
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,580,191	05/09/2014	05/09/2034	Interest Rate Swaps			22616C-AC-7	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS B	1	13,570,000	13,580,191
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	36,775,000	46,848,774	06/05/2014	06/05/2044	Interest Rate Swaps		10,035,087	43132V-AN-2	HILDENE CLO LTD-HLDN 2014-3A AR	1	36,775,000	36,813,687
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,431,113	4,983,649	06/05/2014	06/05/2044	Interest Rate Swaps			247358-EE-0	EAIV Delta MSN 15187	1	5,431,113	4,983,649
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,432,130	4,949,893	06/05/2014	06/05/2044	Interest Rate Swaps			247358-FG-4	EAIV Delta MSN 15200	1	5,432,130	4,949,893
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,344,486	4,929,091	06/05/2014	06/05/2044	Interest Rate Swaps			247358-LL-6	EAIV Delta MSN 15176	1	5,344,486	4,929,091
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,417,802	4,971,435	06/05/2014	06/05/2044	Interest Rate Swaps			247358-MT-8	EAIV Delta MSN 15186	1	5,417,802	4,971,435
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,234,911	4,828,033	06/05/2014	06/05/2044	Interest Rate Swaps			247358-VV-3	EAIV Delta MSN 15170	1	5,234,911	4,828,033
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	22,185,916	40,380,754	07/22/2014	07/22/2044	Interest Rate Swaps		17,758,733	455130-ZZ-0	INDIANA TOLL ROAD CONCES 2015 TERM LOAN	2	22,185,916	22,622,021
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,066,780	07/22/2014	07/22/2044	Interest Rate Swaps			38137M-AC-1	Goldentree Loan Opportun-SERIES 16-12A CLASS A2	1	15,000,000	15,066,780
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,400,000	14,408,698	07/22/2014	07/22/2044	Interest Rate Swaps			05617Y-AS-8	BABSON CLO LTD-BABSON 2013-11A A2R THL CR WIND RIV 2014-2 CLO SR SECD NT CL B-1	1	14,400,000	14,408,698
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,170,098	14,048,048	07/22/2014	07/22/2044	Interest Rate Swaps			88390A-AF-7	CAVALRY CLO IV LTD SR SECD NT CL B-1	1	14,170,098	14,048,048
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,240,689	14,002,363	07/22/2014	07/22/2044	Interest Rate Swaps			14955A-AC-7	CARLYLE GLOBAL MARKET ST-SERIES 17-2A CLASS A1B	1	14,240,689	14,002,363
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		34,802,841	34,998,040	07/22/2014	07/22/2044	Interest Rate Swaps			14315J-AL-3	HIGHBRIDGE LOAN MANAGEME-SERIES 2014 CLASS BR	1	34,802,841	34,998,040
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,917,529	07/22/2014	07/22/2044	Interest Rate Swaps			40436X-AG-2	JFIN CLO 2015 LTD SR SECD NT CL B-1	1	5,900,000	5,917,529
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,902,599	5,843,497	07/22/2014	07/22/2044	Interest Rate Swaps			46617Y-AB-9	ARES CLO LTD-SERIES 13-3A CLASS B1R	1	5,902,599	5,843,497
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	37,771,262	07/22/2014	07/22/2044	Interest Rate Swaps		17,771,442	00191L-AQ-5	WIND RIVER CLO LTD-SERIES 14-3A CLASS BR	1	20,000,000	19,999,820
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,400,000	11,414,729	07/22/2014	07/22/2044	Interest Rate Swaps			88432D-AS-3	WIND RIVER CLO LTD-SERIES 17-2A CLASS A	1	11,400,000	11,414,729
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,590,000	19,588,805	07/22/2014	07/22/2044	Interest Rate Swaps			88433R-AC-6	ARES CLO LTD-ARES 2017-43A A CEDAR FUNDING LTD-SERIES 13-1A CLASS BR	1	19,590,000	19,588,805
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,500,000	19,499,747	07/22/2014	07/22/2044	Interest Rate Swaps			04016P-AA-6	CIFC FUNDING LTD-SERIES 17-4A CLASS A2	1	19,500,000	19,499,747
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,521,174	07/22/2014	07/22/2044	Interest Rate Swaps			15032T-AW-6	BABSON CLO LTD-SERIES 17-1A CLASS C	1	8,500,000	8,521,174
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,007,944	07/22/2014	07/22/2044	Interest Rate Swaps			12551J-AE-6	MARBLE POINT CLO X LTD-SERIES 2017-1A CLASS B	1	8,000,000	8,007,944
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,131,079	07/22/2014	07/22/2044	Interest Rate Swaps			06760B-AJ-1	DRYDEN 30 SR LN FD-SR SEC NT CL A OHA CREDIT PARTNERS LTD-SERIES 2012-7A CLASS CR	1	5,100,000	5,131,079
57629*BT7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,099,929	07/22/2014	07/22/2044	Interest Rate Swaps			566061-AE-7		1	5,100,000	5,099,929
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,741,331	7,626,471	04/09/2013	04/09/2043	Interest Rate Swaps			26249B-AA-9		1	7,741,331	7,626,471
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,975,000	3,005,595	04/09/2013	04/09/2043	Interest Rate Swaps			67102Q-AP-3		1	2,975,000	3,005,595

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,540,000	6,610,455	04/09/2013	04/09/2043	Interest Rate Swaps			87231L-AC-5	TC1-CENT CLO 2016-1 LTD.-TCENT 2016-1A A2	1	6,540,000	6,610,455
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,250,000	9,264,143	04/09/2013	04/09/2043	Interest Rate Swaps			94950G-AA-5	WELLFLEET CLO LTD-WELF 2017-1A A1	1	9,250,000	9,264,143
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,750,000	5,768,596	04/09/2013	04/09/2043	Interest Rate Swaps			88433B-AC-1	WIND RIVER CLO LTD-SERIES 16-2A CLASS B	1	5,750,000	5,768,596
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	17,000,000	34,785,297	07/22/2014	07/22/2044	Interest Rate Swaps		17,771,442	04014H-AL-9	ARES CLO LTD-ARES 2014-1A A2R	1	17,000,000	17,013,855
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,021,969	8,964,365	07/22/2014	07/22/2044	Interest Rate Swaps			67590B-AA-8	OCTAGON INV PARTNERS XVI LTD-SR SEC2 NT CL A	1	9,021,969	8,964,365
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,043,277	07/22/2014	07/22/2044	Interest Rate Swaps			48250W-AA-3	KKR CLO 14 LTD-SR SEC2 NT SER 14 CL A-1A	1	13,000,000	13,043,277
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,506,531	8,308,018	07/22/2014	07/22/2044	Interest Rate Swaps			24823B-AE-0	DENALI CAPITAL CLO X LTD-SR SEC2 DEF NT CL A3L	1	8,506,531	8,308,018
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,488,433	4,578,076	07/22/2014	07/22/2044	Interest Rate Swaps			03765L-AG-7	APIDOS CLO XX-MEZZ DEF NT CL C	2	4,488,433	4,578,076
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	17,040,885	07/22/2014	07/22/2044	Interest Rate Swaps			55818P-AN-0	MADISON PARK FUNDING LTD-MDPK 2014-12A B1R	1	17,000,000	17,040,885
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,294,593	8,259,941	07/22/2014	07/22/2044	Interest Rate Swaps			75887N-AC-3	REGATTA VI FUNDING LTD-SER 2016-1A CL A	1	8,294,593	8,259,941
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,900,000	6,921,066	07/22/2014	07/22/2044	Interest Rate Swaps			38136F-AL-7	GoldenTree Loan Managem-GLM 2017-1A C	1	6,900,000	6,921,066
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,650,000	5,675,357	07/22/2014	07/22/2044	Interest Rate Swaps			50184N-AN-2	LGM LTD PARTNERSHIP-SERIES 15A CLASS BR	1	5,650,000	5,675,357
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,800,954	4,707,971	07/22/2014	07/22/2044	Interest Rate Swaps			388079-AE-3	GREYWOLF CLO II LTD SR SEC2 DEF NT CL B	1	4,800,954	4,707,971
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,142,201	9,267,332	07/22/2014	07/22/2044	Interest Rate Swaps			61945C-AA-1	MOAIC CO/THE-SENIOR UNSECURED NOTE	2	9,142,201	9,267,332
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,000,000	21,398,648	07/22/2014	07/22/2044	Interest Rate Swaps			67332F-AG-8	RRPF Engine Leasing Ltd Senior Secured	2	23,000,000	21,398,648
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	7,806,568	25,435,491	07/22/2014	07/22/2044	Interest Rate Swaps		17,720,605	67104C-AB-3	OAK HILL CREDIT PARTNERS-SERIES 2013 - 8A CLASS B	1	7,806,568	7,714,886
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,600,000	7,622,040	07/22/2014	07/22/2044	Interest Rate Swaps			75888K-AC-8	REGATTA VIII FUNDING LTD-SERIES 2017-1A CLASS B	1	7,600,000	7,622,040
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,460,000	7,463,626	07/22/2014	07/22/2044	Interest Rate Swaps			00900C-AA-2	AIMCO-AIMCO 2017-AA A	1	7,460,000	7,463,626
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,688,030	24,421,789	07/22/2014	07/22/2044	Interest Rate Swaps			03764D-AB-7	APIDOS CLO XII SR SEC2 NT CL B-1	1	24,688,030	24,421,789
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,720,768	22,050,974	07/22/2014	07/22/2044	Interest Rate Swaps			49638W-AE-6	KINGSLAND LTD-SERIES 2013-6A CLASS C	1	22,720,768	22,050,974
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,680,949	20,012,120	07/22/2014	07/22/2044	Interest Rate Swaps			67104L-AB-3	CHA LN FDG 2013-2 LTD-SR SEC2 NT CL B	1	20,680,949	20,012,120
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,024,750	07/22/2014	07/22/2044	Interest Rate Swaps			26249E-AQ-8	DRYDEN SENIOR LOAN FUND-SERIES 14-31A CLASS BR	1	15,000,000	15,024,750
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,059,160	07/22/2014	07/22/2044	Interest Rate Swaps			46619T-AA-0	JFIN CLO 2016 LTD - Sr Sec2 NT CL A-1	1	15,000,000	15,059,160
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,414,016	8,213,579	07/22/2014	07/22/2044	Interest Rate Swaps			09626Y-AE-0	BLUEMOUNTAIN CLO 2013-2 LTD SR SEC2 DEF NT CL C	1	8,414,016	8,213,579
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	5,266,392	22,590,381	07/22/2014	07/22/2044	Interest Rate Swaps		17,733,314	247358-XT-6	EAIV Delta MSN 15166	1	5,266,392	4,857,067
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,646,199	5,024,170	07/22/2014	07/22/2044	Interest Rate Swaps			40431X-AF-9	HOUSEHOLD HOME EQUITY LO-SERIES 2007-3 CLASS M1	1	3,646,199	5,024,170
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,128,380	3,101,556	07/22/2014	07/22/2044	Interest Rate Swaps			46616A-AE-6	JFIN CLO 2012 LTD NT CL B	1	3,128,380	3,101,556
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,819,130	4,895,552	07/22/2014	07/22/2044	Interest Rate Swaps			57643L-FG-6	MASTR ASSET BACKED SECUR-SERIES 2004-OPT2 CLASS A1	1	4,819,130	4,895,552
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,295,000	5,322,836	07/22/2014	07/22/2044	Interest Rate Swaps				APIDOS CLO-SERIES 17-26A CLASS B	1	5,295,000	5,322,836
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,174,719	13,168,463	07/22/2014	07/22/2044	Interest Rate Swaps			38021G-AC-3	GOAL STRUCTURED SOLUTION-SERIES 2016-B CLASS A2	1	13,174,719	13,168,463
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,300,000	16,299,381	07/22/2014	07/22/2044	Interest Rate Swaps			33882G-AA-6	FLATIRON CLO LTD-FLAT 2017-1A A	1	16,300,000	16,299,381

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,280,000	16,304,941	07/22/2014	07/22/2044	Interest Rate Swaps			150323-AQ-6	CEDAR FUNDING LTD-SERIES 14-4A CLASS BR	1	16,280,000	16,304,941
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,184,934	22,949,127	07/22/2014	07/22/2044	Interest Rate Swaps			38137D-AA-5	GOLDENTREE LOAN OPP VII LTD-SR SEC NT CL A	1	23,184,934	22,949,127
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,400,000	22,427,910	07/22/2014	07/22/2044	Interest Rate Swap			053635-AC-2	AVERY POINT II CLO LTD SR SEC2 NT CL B-1	1	22,400,000	22,427,910
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,299,143	07/22/2014	07/22/2044	Interest Rate Swap			76761R-AE-9	Riserva Clo Ltd-SERIES 2016-3A CLASS C1	1	4,250,000	4,299,143
57629*B1W0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,621,967	07/22/2014	07/22/2044	Interest Rate Swap			87231L-AA-9	TCI-CENT CLO 2016-1 LTD.-TCENT 2016-1A A1	1	8,500,000	8,621,967
57629*B1X8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	30,000,000	15,000,000	18,920,297	08/18/2014	08/18/2044	Interest Rate Swap		3,888,692	88322U-AM-1	THACHER PARK CLO-THPK 2014-1A BR SYMPHONY CLO LTD-SERIES 14-15A CLASS B1R	1	15,000,000	15,031,605
57629*B1X8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,400,000	9,419,561	08/18/2014	08/18/2044	Interest Rate Swap			87154E-AJ-9	EDUCATION LOAN ASSET-BAC-SERIES 13-1 CLASS B1	1	9,400,000	9,419,561
57629*B1X8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,034,991	6,028,355	08/18/2014	08/18/2044	Interest Rate Swap			28140D-AC-7	COPI CLO 2016-12 Ltd-SERIES 16-12A CLASS A1	1	6,034,991	6,028,355
57629*B23	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,570,243	16,691,692	08/27/2014	08/27/2044	Interest Rate Swap		6,115,147	67092R-AA-6	JFIN CLO 2015 LTD SR SEC2 NT CL B-1	1	10,570,243	10,576,545
57629*B23	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,653,057	9,556,401	08/27/2014	08/27/2044	Interest Rate Swap			46617Y-AB-9	CARLYLE GLOBAL MARKET ST-CGMS 2017-1A A2	1	9,653,057	9,556,401
57629*B23	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,011,220	08/27/2014	08/27/2044	Interest Rate Swap			14314B-AC-1	STEELE CREEK CLO LTD-SERIES 15-1A CLASS BR	1	15,000,000	15,011,220
57629*B23	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,560,000	8,587,503	08/27/2014	08/27/2044	Interest Rate Swap			85816B-CQ-1	VOYA CLO LTD-VOYA 2014-2A A1R	1	8,560,000	8,587,503
57629*B23	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,050,000	9,114,934	08/27/2014	08/27/2044	Interest Rate Swap			92912V-AN-5	CVP CASCADE CLO LTD-CVPC 2013-CLO1 A1R	1	9,050,000	9,114,934
57629*CA7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	60,500,000	66,662,462	08/27/2014	08/27/2044	Interest Rate Swap		6,135,539	126612-AJ-9	GREYWOLF CLO LTD-SERIES 2014-2A CLASS BR	1	60,500,000	60,526,923
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	6,800,000	12,923,789	08/27/2014	08/27/2044	Interest Rate Swap		6,084,560	398080-AN-1	AIMCO-SERIES 14-AA CLASS B1R	1	6,800,000	6,839,229
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,800,000	6,808,140	08/27/2014	08/27/2044	Interest Rate Swap			00900A-AJ-7	WIND RIVER CLO LTD-WINDR 2014-1A B1R	1	6,800,000	6,808,140
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,016,440	08/27/2014	08/27/2044	Interest Rate Swap			88432C-AS-5	SYMPHONY CLO LTD-SYMP 2014-15A DR	2	15,000,000	15,016,440
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,600,000	3,620,416	08/27/2014	08/27/2044	Interest Rate Swap			87154E-AQ-3	BARINGS CLO LTD-BABS 2016-3A A1	1	3,600,000	3,620,416
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,100,000	14,159,812	08/27/2014	08/27/2044	Interest Rate Swap			06759Y-AA-3	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS A	1	14,100,000	14,159,812
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,530,519	5,524,912	08/27/2014	08/27/2044	Interest Rate Swap			04941G-AA-6	BLUEMOUNTAIN CLO LTD-BLUEM 2014-1A B1R	1	5,530,519	5,524,912
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	21,300,000	27,379,780	08/27/2014	08/27/2044	Interest Rate Swap		6,048,874	09627L-AN-7	KINGSLAND VII LTD-SR SEC2 NT CL B 144A	1	21,300,000	21,330,906
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,886,884	18,523,569	08/27/2014	08/27/2044	Interest Rate Swap			49638Y-AC-6	ATLAS SENIOR LOAN FUND L-ATCLO 2014-6A BR	1	18,886,884	18,523,569
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,200,000	19,229,741	08/27/2014	08/27/2044	Interest Rate Swap			04941R-AL-8	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS C	1	19,200,000	19,229,741
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	30,000,000	6,380,000	9,947,492	09/04/2014	09/04/2044	Interest Rate Swap		3,548,154	22616C-AE-3	DRYDEN SENIOR LOAN FUND-SERIES 2014-34A CLASS BR	1	6,380,000	6,399,338
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,250,000	6,262,938	09/04/2014	09/04/2044	Interest Rate Swap			26244E-AQ-3	BABSON CLO LTD 2013-1-SR SEC2 NT CL B 144A	1	6,250,000	6,262,938
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,992,834	4,990,003	09/04/2014	09/04/2044	Interest Rate Swap			05617W-AC-7	MADISON PARK FUNDING LTD-SERIES 14-14A CLASS BR	1	4,992,834	4,990,003
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,591,712	09/04/2014	09/04/2044	Interest Rate Swap			55818R-AS-5	TICP CLO LTD-TICP 2014-1A A1R	1	13,570,000	13,591,712
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	110,000,000	128,646,157	09/08/2014	09/08/2044	Interest Rate Swap		18,219,027	872455-AN-0	AUST & NZ BANKING GROUP-SUBORDINATED NOTE	2	110,000,000	110,427,130
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,465,000	32,474,804	09/08/2014	09/08/2044	Interest Rate Swap			ZZ2066-36-8	MADISON PARK FUNDING LTD-SERIES 14-14A CLASS C1R	1	21,465,000	32,474,804
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,380,000	11,416,439	09/08/2014	09/08/2044	Interest Rate Swap			55818R-AT-3	AVERY POINT II CLO LTD-SR SEC2 DEF NT CL C	1	11,380,000	11,416,439
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,000,000	9,013,482	09/08/2014	09/08/2044	Interest Rate Swap			053635-AG-3		1	9,000,000	9,013,482

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	30,000,000	14,000,000	18,774,431	09/17/2014	09/17/2044	Interest Rate Swap		4,731,619	39862E-AB-0	GRIFFEN PARK CLO LTD-SERIES 17-1A CLASS B	1	14,000,000	14,042,812
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,600,000	6,663,254	09/17/2014	09/17/2044	Interest Rate Swap			05618M-AY-0	BABSON CLO LTD-BABSON 2014-3A C1R CARLYLE GLOBAL MKT CLO 2013-4 SR	1	6,600,000	6,663,254
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,000,000	18,032,940	09/17/2014	09/17/2044	Interest Rate Swap			14310K-AC-5	SEC NT CL A1	1	18,000,000	18,032,940
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	10,850,000	15,082,684	10/06/2014	10/06/2034	Interest Rate Swap		4,158,633	03763Y-AQ-9	APIDOS CLO-APID 2012-11A BR	1	10,850,000	10,924,051
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,024,780	10/06/2014	10/06/2034	Interest Rate Swap			00164K-AL-1	ALM LOAN FUNDING-SERIES 14-14A CLASS A2R	1	15,000,000	15,024,780
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,378,384	9,373,066	10/06/2014	10/06/2034	Interest Rate Swap			05617W-AC-7	BABSON CLO LTD 2013-1-SR SECD NT CL B 144A	1	9,378,384	9,373,066
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,407,539	9,206,403	10/06/2014	10/06/2034	Interest Rate Swap			04941G-AE-8	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS C	1	9,407,539	9,206,403
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,796,892	3,762,536	10/06/2014	10/06/2034	Interest Rate Swap			50188G-AN-3	LOM XVIII LTD PARTNERSHIP-DEF MEZZ NT CL D 144A	2	3,796,892	3,762,536
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,732,572	3,775,716	10/06/2014	10/06/2034	Interest Rate Swap			05616Z-AG-5	BABSON CLO LTD 2015-1-SR SECD DEF NT CL D-1	2	3,732,572	3,775,716
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,025,820	10/06/2014	10/06/2034	Interest Rate Swap			817176-AS-9	SENECA PARK CLO LTD-SPARK 2014-1A CR	1	5,000,000	5,025,820
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	45,000,000	56,700,040	10/06/2014	10/06/2044	Interest Rate Swap		11,557,795	85815X-AQ-6	STEELE CREEK CLO LTD-STOR 2014-1A A1R	1	45,000,000	45,142,245
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,641,462	9,594,760	10/06/2014	10/06/2044	Interest Rate Swap			61744C-NB-8	MORGAN STANLEY CAPITAL I-SERIES 2005-HE2 CLASS M1	1	9,641,462	9,594,760
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,900,000	4,909,570	10/06/2014	10/06/2044	Interest Rate Swap			12481K-AC-2	CBAM 2017-2 LTD-SERIES 17-2A CLASS B1	1	4,900,000	4,909,570
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,950,000	2,966,803	10/06/2014	10/06/2044	Interest Rate Swap			13080B-AD-3	SYMPHONY CLO LTD-SERIES 13-12A CLASS CR	1	2,950,000	2,966,803
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,600	10/06/2014	10/06/2044	Interest Rate Swap			94950G-AC-1	WELLFLEET CLO LTD-WELF 2017-1A A2	1	20,000,000	19,999,600
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,375,000	15,440,820	10/06/2014	10/06/2044	Interest Rate Swap			87247C-AQ-6	TICP CLO LTD-TICP 2014-2A A2AR WASATCH LTD-SERIES 2006-1A CLASS	1	15,375,000	15,440,820
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,392,811	4,344,282	10/06/2014	10/06/2044	Interest Rate Swap			93677P-AB-7	A1B RPPF Engine Leasing Ltd Senior Secured	1	4,392,811	4,344,282
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	175,000,000	60,000,000	76,411,260	10/10/2014	10/10/2044	Interest Rate Swap		17,511,600	67332F-AD-5		2	60,000,000	58,899,660
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,026,153	28,330,500	10/10/2014	10/10/2044	Interest Rate Swap			629394-AA-5	NTC CAPITAL I-UNSECURED BOND CULLEN/FROST CAP TR II-SUBORDINATED	2	27,026,153	28,330,500
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,814,035	21,212,820	10/10/2014	10/10/2044	Interest Rate Swap			230000-AB-7	NOTE BLLEMOUNTAIN CLO LTD-SERIES 2015-1A CLASS A2R	2	20,814,035	21,212,820
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,500,000	20,662,217	10/10/2014	10/10/2044	Interest Rate Swap			09627X-AW-1	PINNACLE PARK CLO LTD-SERIES 2014-1A CLASS BR	1	20,500,000	20,662,217
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,700,000	18,750,976	10/10/2014	10/10/2044	Interest Rate Swap			72349B-AK-0	Taconic Park CLO Ltd 201-SERIES 2016-1A CLASS A2	1	18,700,000	18,750,976
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,100,000	16,187,922	10/10/2014	10/10/2044	Interest Rate Swap			873549-AC-3	BLLEMOUNTAIN CLO 2014-1 LTD SR SEC DEF NT CL D	2	16,100,000	16,187,922
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,854,910	1,877,603	10/10/2014	10/10/2044	Interest Rate Swap			09627L-AJ-6	BLLEMOUNTAIN CLO 2014-4 LTD-SR SEC DEF NT CL D	2	1,854,910	1,877,603
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,523,740	4,589,333	10/10/2014	10/10/2044	Interest Rate Swap			09627V-AG-0	BABSON CLO LTD 2013-1-SR SECD DEF NT CL C 144A	1	4,523,740	4,589,333
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,178,899	3,250,722	10/10/2014	10/10/2044	Interest Rate Swap			05617Y-AG-4	SLMA 2005-9 STUDENT LN-BKD NT CL B	1	3,178,899	3,250,722
57629*CJK8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,517,812	7,142,541	10/10/2014	10/10/2044	Interest Rate Swap			78442G-RC-2	CARLYLE GLOBAL MARKET ST-SERIES 14-5A CLASS A1R	1	6,517,812	7,142,541
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	75,000,000	87,740,312	11/04/2014	11/04/2044	Interest Rate Swap		12,489,812	14311A-AJ-1	ATRUM CDO CORP-ATRM 11A A1R	1	75,000,000	75,250,500
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	50,153,950	11/04/2014	11/04/2044	Interest Rate Swap			04964H-AL-9	WELLFLEET CLO 2015-1 LTD-SR SECD NT CL A-1 144A	1	50,000,000	50,153,950
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	65,000,000	78,085,278	11/04/2014	11/04/2044	Interest Rate Swap		12,515,423	949496-AC-7	QHA CREDIT PARTNERS LTD-OAKC 2014-10A BR	1	65,000,000	65,569,855
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		38,750,000	38,812,000	11/04/2014	11/04/2044	Interest Rate Swap			67106J-AQ-3		1	38,750,000	38,812,000

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,843,504	21,502,666	11/04/2014	11/04/2044	Interest Rate Swap			49638W-AB-2	KINGSLAND VI LTD-SR SEC'D NT CL A1 144A	1	21,843,504	21,502,666
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	50,000,000	62,937,512	11/04/2014	11/04/2044	Interest Rate Swap		12,720,312	67106J-AN-0	OHA CREDIT PARTNERS LTD-OAKC 2014-10A AR	1	50,000,000	50,217,200
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,000,000	46,030,222	11/04/2014	11/04/2044	Interest Rate Swap			92329X-AK-4	VENTURE CDO LTD-VENTR 2014-16A A1R	1	46,000,000	46,030,222
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,106,770	11/04/2014	11/04/2044	Interest Rate Swap			38172X-AG-4	GOLUB CAPITAL PARTNERS C-SERIES 13-16A CLASS A1R	1	30,000,000	30,106,770
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	14,727,410	26,703,409	11/04/2014	11/04/2044	Interest Rate Swap		12,745,923	66776M-ZZ-9	ORANGE GROVE ENERGY, L.P DELAYED DRAW TE	2	14,727,410	13,957,486
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,983,393	4,633,848	11/04/2014	11/04/2044	Interest Rate Swap			247358-BB-9	EAIV Delta MSN 15153	1	4,983,393	4,633,848
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,862,172	4,513,992	11/04/2014	11/04/2044	Interest Rate Swap			247358-DD-3	EAIV Delta MSN 15161	1	4,862,172	4,513,992
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,992,264	4,649,555	11/04/2014	11/04/2044	Interest Rate Swap			247358-PP-3	EAIV Delta MSN 15147	1	4,992,264	4,649,555
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,992,462	4,556,241	11/04/2014	11/04/2044	Interest Rate Swap			247358-RR-7	EAIV 2017 Delta MSN 15146	1	4,992,462	4,556,241
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,862,172	4,513,992	11/04/2014	11/04/2044	Interest Rate Swap			247358-RW-6	EAIV Delta MSN 15162	1	4,862,172	4,513,992
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,771,668	11,979,864	11/04/2014	11/04/2044	Interest Rate Swap			39808C-AB-4	GRIDIRON FDG LLC Term Facility	2	11,771,668	11,979,864
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		48,611,047	46,976,549	11/04/2014	11/04/2044	Interest Rate Swap			83416T-RR-3	Arpad Solar Borrower LLC Term Loan	2	48,611,047	46,976,549
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		26,700,000	26,711,855	11/04/2014	11/04/2044	Interest Rate Swap			291080-AY-8	EMERSON PARK CLO LTD-SERIES 13-1A ATRIUM CDO CORP-SERIES 9A CLASS AR	1	26,700,000	26,711,855
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	48,000,000	61,273,812	11/04/2014	11/04/2044	Interest Rate Swap		12,822,756	04964K-AL-5	CAMERON LNG CONSTRUCTION FA JFIN CLO LTD-SERIES 14-2A CLASS A1AR	1	48,000,000	48,451,056
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		38,550,000	38,599,460	11/04/2014	11/04/2044	Interest Rate Swap			87247C-AN-3	TICP CLO LTD-TICP 2014-2A A1AR	1	38,550,000	38,599,460
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		40,764,226	41,067,623	11/04/2014	11/04/2044	Interest Rate Swap			13345*-AA-5	CAMERON LNG CONSTRUCTION FA JFIN CLO LTD-SERIES 14-2A CLASS A1AR	1	40,764,226	41,067,623
57629*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	72,000,000	85,074,919	11/04/2014	11/04/2044	Interest Rate Swap		12,976,423	46617N-AQ-0	ANCHORAGE CAPITAL CLO LT-SERIES 2016-8A CLASS A1	1	72,000,000	72,098,496
57629*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		37,400,000	39,976,897	11/04/2014	11/04/2044	Interest Rate Swap			74992*-AB-1	RXR Realty, LLC Senior Secured	2	37,400,000	39,976,897
57629*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,682,595	16,568,508	11/04/2014	11/04/2044	Interest Rate Swap			03329K-AA-1	CARLYLE GLOBAL MARKET ST-CGMS 2014-4A BR	1	16,682,595	16,568,508
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2	125,000,000	13,760,000	26,739,295	11/04/2014	11/04/2044	Interest Rate Swap		12,950,812	14310U-AQ-2	EVERY POINT IV CLO LTD-SERIES 14-1A CLASS CR	1	13,760,000	13,788,483
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		13,660,000	13,726,114	11/04/2014	11/04/2044	Interest Rate Swap			05363U-AW-3	ATRIUM CDO CORP-SERIES 9A CLASS CR	1	13,660,000	13,726,114
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		13,660,000	13,793,171	11/04/2014	11/04/2044	Interest Rate Swap			04964K-AS-0	PRPF Engine Leasing Ltd Senior Secured	2	13,660,000	13,793,171
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		13,000,000	11,674,468	11/04/2014	11/04/2044	Interest Rate Swap			67332F-AH-6	CARLYLE GLOBAL MARKET ST-SERIES 2014-1A CLASS BR	1	13,000,000	11,674,468
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		10,000,000	10,024,640	11/04/2014	11/04/2044	Interest Rate Swap			14310M-AQ-0	TCI-CENT CLO 2016-1 LTD-SERIES 17-1A CLASS A1	1	10,000,000	10,024,640
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		30,000,000	30,272,250	11/04/2014	11/04/2044	Interest Rate Swap			87806L-AC-0	EVERSOURCE ENERGY-UNSECURED NOTE MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS A2R	1	30,000,000	30,272,250
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		20,000,000	20,043,120	11/04/2014	11/04/2044	Interest Rate Swap			12550Y-AC-8	CIFC FUNDING LTD-CIFC 2017-2A A	1	20,000,000	20,043,120
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		9,389,070	9,724,417	11/04/2014	11/04/2044	Interest Rate Swap			035242-AP-1	ANHEUSER-BUSCH INBEV FIN GTD NT	2	9,389,070	9,724,417
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		1,797,682	1,813,961	11/04/2014	11/04/2044	Interest Rate Swap			664397-AK-2	EVERSOURCE ENERGY-UNSECURED NOTE MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS A2R	2	1,797,682	1,813,961
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	12,740,000	25,844,043	11/04/2014	11/04/2044	Interest Rate Swap		13,002,034	55818X-AY-9	MAGNETITE CLO LTD-SERIES 14-11A CLASS A1R	1	12,740,000	12,842,009
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,675,000	12,702,872	11/04/2014	11/04/2044	Interest Rate Swap			55953E-AJ-9	APIDOS CLO-SERIES 17-26A CLASS A2	1	12,675,000	12,702,872
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,240,000	12,261,457	11/04/2014	11/04/2044	Interest Rate Swap			037666-AE-2		1	12,240,000	12,261,457

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,980,000	11,998,234	11/04/2014	11/04/2044	Interest Rate Swap			149420-AE-1	CATSKILL PARK CLO LTD.-SERIES 17-1A CLASS A2	1	11,980,000	11,998,234
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,995,994	4,970,235	11/04/2014	11/04/2044	Interest Rate Swap			55817X-AC-8	MADISON PARK FDG V LTD-NT CL A-2 144A	1	4,995,994	4,970,235
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,100,000	21,126,059	11/04/2014	11/04/2044	Interest Rate Swap			48250L-AL-3	KKR FINANCIAL CLO LTD-SERIES 9 CLASS AR	1	21,100,000	21,126,059
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,900,000	16,975,137	11/04/2014	11/04/2044	Interest Rate Swap			00164M-DG-5	ALM LOAN FUNDING-SERIES 15-12A CLASS A1R	1	16,900,000	16,975,137
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,100,000	18,147,657	11/04/2014	11/04/2044	Interest Rate Swap			05873L-AK-2	BALLYROCK LTD-BALLY 2014-1A A2R HIGHBRIDGE LOAN MANAGEM-HLM 11A-17	1	18,100,000	18,147,657
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,100,000	18,145,467	11/04/2014	11/04/2044	Interest Rate Swap			40436V-AA-9	SILVER STATE SOLAR SOUTH TERM LOAN	1	18,100,000	18,145,467
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	32,675,311	38,549,643	12/16/2014	12/16/2044	Interest Rate Swap		5,451,694	U8270Y-ZZ-4	KINGSLAND V LTD-SR SEC2 NT CL A2B 144A	2	32,675,311	33,097,949
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,781,998	5,694,458	12/16/2014	12/16/2044	Interest Rate Swap			49636R-AL-3	DRYDEN 30 SR LN FD-SR SEC NT CL B BALLYROCK LTD-SERIES 2013-1A CLASS	1	5,781,998	5,694,458
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,522,776	11,174,821	12/16/2014	12/16/2044	Interest Rate Swap			26249B-AC-5	BENEFIT STREET PRTRNS CLO VII SR SEC NT CL A-2	1	11,522,776	11,174,821
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,490,931	11,207,806	12/16/2014	12/16/2044	Interest Rate Swap			05874P-AE-6	OCTAGON INV PARTNERS XVI LTD-SR SEC2 NT CL B1	1	11,490,931	11,207,806
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,126,807	15,029,670	12/16/2014	12/16/2044	Interest Rate Swap			08180R-AC-9	CARLYLE GLOBAL MARKET ST-CGMS 2014-2A BR	1	15,126,807	15,029,670
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,950,000	10,975,908	12/16/2014	12/16/2044	Interest Rate Swap			67590B-AC-4	BABSON CLO LTD-SERIES 17-1A CLASS A2	1	10,950,000	10,975,908
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,040,000	11,057,134	12/16/2014	12/16/2044	Interest Rate Swap			14310V-AM-9	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS B	1	11,040,000	11,057,134
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,729,527	12/16/2014	12/16/2044	Interest Rate Swap			06760B-AC-6	ALM LOAN FUNDING-SERIES 15-16A CLASS A2R	1	6,700,000	6,729,527
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,960,000	4,990,276	12/16/2014	12/16/2044	Interest Rate Swap			55820R-AE-2	JFIN CLO 2012 LTD-NOTE CLASS A2B 144A	1	4,960,000	4,990,276
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,550,000	3,565,620	12/16/2014	12/16/2044	Interest Rate Swap			00162L-CE-5	GOLDENTREE LOAN OPPORTUN-SERIES 14-9A CLASS AR	1	3,550,000	3,565,620
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,901,521	10,807,700	12/16/2014	12/16/2044	Interest Rate Swap			46616A-AJ-5	CARLYLE GLOBAL MKT CLO 2013-3 SR SEC DEF NT CL B	1	10,901,521	10,807,700
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,054,666	10,018,440	12/16/2014	12/16/2044	Interest Rate Swap			38137Q-AA-6	ALM XIX Ltd SR SEC2 NT CL A-2 BABSON CLO LTD 2013-1-SR SEC2 NT CL C 144A	1	10,054,666	10,018,440
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,447,750	7,239,024	12/16/2014	12/16/2044	Interest Rate Swap			14310G-AG-5	JFIN CLO 2014 LTD-MEZZ SEC2 DEF NT CL C	1	7,447,750	7,239,024
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,100,000	8,172,689	12/16/2014	12/16/2044	Interest Rate Swap			001626-AC-4	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS A2	1	8,100,000	8,172,689
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	9,000,000	14,157,496	12/16/2014	12/16/2044	Interest Rate Swap		5,143,411	05617W-AE-3	CARLYLE GLOBAL MKT CLO 2013-2 SR SEC NT CL B	1	9,000,000	9,014,085
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,219,345	7,112,311	12/16/2014	12/16/2044	Interest Rate Swap			46617E-AE-7	KINGSLAND VI LTD-SEC2 DEF MEZZ NT CL C 144A	1	7,219,345	7,112,311
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,470,000	14,525,348	12/16/2014	12/16/2044	Interest Rate Swap			55820R-AC-6	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS A2	1	14,470,000	14,525,348
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,006,363	12/16/2014	12/16/2044	Interest Rate Swap			14310D-AE-7	CARLYLE GLOBAL MKT CLO 2013-2 SR SEC NT CL B	1	7,000,000	7,006,363
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,963,494	2,880,407	12/16/2014	12/16/2044	Interest Rate Swap			49638W-AD-8	KINGSLAND VI LTD-SEC2 DEF MEZZ NT CL C 144A	1	2,963,494	2,880,407
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,179,411	2,469,958	12/16/2014	12/16/2044	Interest Rate Swap			15135A-AD-5	CENT CDO 12 LTD-DEF MEZZ NT SER 2006-12A CL D	1	2,179,411	2,469,958
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,323,957	6,346,455	12/16/2014	12/16/2044	Interest Rate Swap			92557W-AE-3	VIBRANT CLO IV LTD-SR SEC2 NT CL B 144A	1	6,323,957	6,346,455
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		41,400,000	41,535,212	12/16/2014	12/16/2044	Interest Rate Swap			74983D-AA-5	RACE POINT X CLO LTD SR SEC2 NT CL A	1	41,400,000	41,535,212
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,725,015	17,802,327	12/16/2014	12/16/2044	Interest Rate Swap			94949R-AC-1	WHEELFLEET CLO 2016-1 LTD-SR SEC2 NT CL A 144A	1	17,725,015	17,802,327
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,504,749	17,380,249	12/16/2014	12/16/2044	Interest Rate Swap			858102-AD-8	STEELE GREEK CLO 2016-1 LTD-SR SEC2 NT CL A-1 144A	1	17,504,749	17,380,249
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,022,393	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AN-4	BABSON CLO LTD-BABSON 2014-1A BR	1	7,000,000	7,022,393

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,634,272	5,624,936	12/16/2014	12/16/2044	Interest Rate Swap			26250U-AC-9	DRYDEN XXVI SR LN FD SR SEC2 NT CL	1	5,634,272	5,624,936
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,750,000	13,842,579	12/16/2014	12/16/2044	Interest Rate Swap			02014P-AC-8	ALM XVII LTD-SR SECURED NOTE CLASS A2L	1	13,750,000	13,842,579
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	33,649,658	43,325,196	12/16/2014	12/16/2044	Interest Rate Swap		9,240,298	U8270Y-ZZ-4	SILVER STATE SOLAR SOUTH TERM LOAN	2	33,649,658	34,084,898
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,000,000	14,006,804	12/16/2014	12/16/2044	Interest Rate Swap			15136G-AQ-2	CENT CLO 16 LP NT CL A-2-R	1	14,000,000	14,006,804
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,500,000	23,528,153	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AL-8	BABSON CLO LTD-BABSON 2014-1A A2R	1	23,500,000	23,528,153
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,022,077	23,131,763	12/16/2014	12/16/2044	Interest Rate Swap			83610K-AA-1	SOUND POINT CLO LTD-SERIES 2017-2A CLASS A	1	23,022,077	23,131,763
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,750,000	12,833,933	12/16/2014	12/16/2044	Interest Rate Swap			50184K-AU-2	LOM LTD PARTNERSHIP-SERIES 13A CLASS BR	1	12,750,000	12,833,933
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,593,881	19,620,263	12/16/2014	12/16/2044	Interest Rate Swap			88576P-AE-3	321 HENDERSON RECEIVABLE-SERIES 05-1A CLASS A1	1	19,593,881	19,620,263
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,600,000	22,668,184	12/16/2014	12/16/2044	Interest Rate Swap			09627R-AJ-3	BLUEMOUNTAIN CLO LTD-BLUEM 2014-3A A1R	1	22,600,000	22,668,184
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,014,780	12/16/2014	12/16/2044	Interest Rate Swap			58806P-AC-2	MERCER FIELD CLO LP-MERCL 2017-1A A2	1	20,000,000	20,014,780
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,525,400	12/16/2014	12/16/2044	Interest Rate Swap			03765D-AS-9	APIDOS CLO-APID 2014-18A BR	1	10,500,000	10,525,400
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,070,591	6,013,272	12/16/2014	12/16/2044	Interest Rate Swap			43132W-AE-0	HILDENE CLO IV LTD-DEF MEZZ NT SER 2015-4A CL B	1	6,070,591	6,013,272
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,950,000	5,980,416	12/16/2014	12/16/2044	Interest Rate Swap			10302V-BG-9	BOWMAN PARK CLO LTD-BOWPK 2014-1A CR	1	5,950,000	5,980,416
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,084,208	13,158,691	12/16/2014	12/16/2044	Interest Rate Swap			87230A-AA-4	TCI-FLATIRON CLO 2016-1 LTD SR SEC2 NT CL A	1	13,084,208	13,158,691
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,690,000	14,762,804	12/16/2014	12/16/2044	Interest Rate Swap			81717E-AL-4	SENECA PARK CLO LTD-SPARK 2014-1A AR	1	14,690,000	14,762,804
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,499,865	12/16/2014	12/16/2044	Interest Rate Swap			38136F-AG-8	Goldentree Loan Managem-GLM 2017-1A B1	1	13,500,000	13,499,865
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,800,000	10,801,609	12/16/2014	12/16/2044	Interest Rate Swap			03764Q-AQ-5	APIDOS CLO-SERIES 13-15A CLASS A2AR	1	10,800,000	10,801,609
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,250,000	8,278,430	12/16/2014	12/16/2044	Interest Rate Swap			09628B-AA-6	BLUEMOUNTAIN CLO 2015-2 LTD SR SEC2 NT CL A-1	1	8,250,000	8,278,430
57629*CU3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	328,073,426	334,549,469	12/16/2014	12/16/2044	Interest Rate Swap		8,264,067	57542Z-AO-7	MASSMUTUAL ASSET FIN LLC SR SEC2 REV NT	1	328,073,426	326,285,402
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	200,000,000	16,900,000	23,120,979	12/16/2014	12/16/2044	Interest Rate Swap		6,200,209	03328Q-AN-1	ANCHORAGE CAPITAL CLO LT-SERIES 2015-6A CLASS AR	1	16,900,000	16,920,770
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,300,000	14,355,327	12/16/2014	12/16/2044	Interest Rate Swap			00163E-BE-1	ALM LOAN FUNDING-SERIES 12-6A CLASS A2RR	1	14,300,000	14,355,327
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,780,000	6,779,675	12/16/2014	12/16/2044	Interest Rate Swap			33882G-AB-4	FLATIRON CLO LTD-FLAT 2017-1A B	1	6,780,000	6,779,675
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,010,989	10,999,824	12/16/2014	12/16/2044	Interest Rate Swap			04941G-AA-6	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS A	1	11,010,989	10,999,824
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,850,000	5,895,326	12/16/2014	12/16/2044	Interest Rate Swap			55819T-AG-6	MADISON PARK FDG XX LTD-SEC2 DEF NT CL C-1 144A	1	5,850,000	5,895,326
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,220,000	22,364,186	12/16/2014	12/16/2044	Interest Rate Swap			83609J-AA-7	SOUND POINT CLO XI LTD-SR SEC2 NT CL A 144A	1	22,220,000	22,364,186
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,675,000	21,696,740	12/16/2014	12/16/2044	Interest Rate Swap			08180R-AA-3	BENEFIT STR PARTNERS CLO VII LTD SR SEC2 NT CL A-1A	1	21,675,000	21,696,740
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,120,000	17,235,218	12/16/2014	12/16/2044	Interest Rate Swap			674000-AN-4	OAKTREE CLO LTD-SERIES 14-1A CLASS A1R	1	17,120,000	17,235,218
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	17,026,333	12/16/2014	12/16/2044	Interest Rate Swap			03328E-AN-5	ANCHORAGE CAPITAL CLO LT-ANCHC 2014-5A BR	1	17,000,000	17,026,333
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,600,000	16,672,774	12/16/2014	12/16/2044	Interest Rate Swap			05874P-AC-0	BALLYROCK LTD-SERIES 2013-1A CLASS B	1	16,600,000	16,672,774
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		56,000,000	55,694,796	12/16/2014	12/16/2044	Interest Rate Swap			57542Z-AO-7	MASSMUTUAL ASSET FIN LLC SR SEC2 REV NT	1	56,000,000	55,694,796
57629*CV5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,100,000	3,047,184	02/05/2015	02/05/2045	Interest Rate Swap		(7,064,764)	50181G-AS-9	LOM LTD PARTNERSHIP-SERIES 16A CLASS BR	1	10,100,000	10,111,948

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,020,000	10,080,761	02/05/2015	02/05/2045	Interest Rate Swap			92912V-AS-4	VOYA CLO LTD-VOYA 2014-2A BR	1	10,020,000	10,080,761
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,510,421	10,391,777	02/05/2015	02/05/2045	Interest Rate Swap			564759-QB-7	MANUF & TRADERS TRUST CO-SUBORDINATED NOTE	1	10,510,421	10,391,777
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,559,103	02/05/2015	02/05/2045	Interest Rate Swap			87806L-AE-6	TCI-CENT CLO 2016-1 LTD--SERIES 17-1A CLASS A2	1	13,500,000	13,559,103
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,523,274	02/05/2015	02/05/2045	Interest Rate Swap			06760B-AE-2	BARSON CLO LTD-SERIES 17-1A CLASS B1	1	13,500,000	13,523,274
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,735,890	02/05/2015	02/05/2045	Interest Rate Swap			398080-AL-5	GREYWOLF CLO LTD-SERIES 2014-2A CLASS A2R	1	12,700,000	12,735,890
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,738,100	02/05/2015	02/05/2045	Interest Rate Swap			40436X-AE-7	HIGHBRIDGE LOAN MANAGEME--SERIES 2014 CLASS A2R	1	12,700,000	12,738,100
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,400,000	11,450,810	02/05/2015	02/05/2045	Interest Rate Swap			14954W-AN-6	BAIN CAPITAL CREDIT CLO --SERIES 17-2A CLASS BR	1	11,400,000	11,450,810
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,200,000	11,199,563	02/05/2015	02/05/2045	Interest Rate Swap			05682Q-AC-0	BAIN CAPITAL CREDIT CLO --SERIES 17-1A CLASS A1	1	11,200,000	11,199,563
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,200,000	10,244,645	02/05/2015	02/05/2045	Interest Rate Swap			00162L-CG-0	ALM LOAN FUNDING--SERIES 15-16A CLASS BR	1	10,200,000	10,244,645
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,300,000	11,306,825	02/05/2015	02/05/2045	Interest Rate Swap			053633-AH-6	EVERETT CLO LTD-SERIES 13-3A CLASS B1R	1	11,300,000	11,306,825
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,719,624	6,895,946	02/05/2015	02/05/2045	Interest Rate Swap			00287Y-AL-3	AbbVie Inc-SENIOR UNSECURED NOTE	2	6,719,624	6,895,946
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	5,280,000	(1,959,816)	02/05/2015	02/05/2045	Interest Rate Swap		(7,272,341)	00900C-AE-4	AIMCO-AIMCO 2017-AA C CLASS A2R	1	5,280,000	5,312,525
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,330,000	32,414,802	02/05/2015	02/05/2045	Interest Rate Swap			053633-AG-8	EVERETT CLO LTD-SERIES 13-3A CLASS AR	1	32,330,000	32,414,802
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,100,000	32,173,092	02/05/2015	02/05/2045	Interest Rate Swap			05363U-AU-7	EVERETT CLO LTD-SERIES 14-1A CLASS BR	1	32,100,000	32,173,092
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,000,000	32,111,904	02/05/2015	02/05/2045	Interest Rate Swap			67706T-AS-1	CHA LOAN FUNDING LTD-OHALF 2014-1A A1R	1	32,000,000	32,111,904
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,700,000	18,820,035	02/05/2015	02/05/2045	Interest Rate Swap			05618M-AU-8	BARSON CLO LTD-BARSON 2014-3A B1R	1	18,700,000	18,820,035
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,019,236	02/05/2015	02/05/2045	Interest Rate Swap			26249E-AS-4	DRYDEN SENIOR LOAN FUND--SERIES 14-31A CLASS CR	1	7,000,000	7,019,236
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,268,225	5,478,135	02/05/2015	02/05/2045	Interest Rate Swap			00507U-AS-0	ACTAVIS FUNDING SCS--SENIOR UNSECURED NOTE	2	5,268,225	5,478,135
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	18,100,000	11,016,086	02/05/2015	02/05/2045	Interest Rate Swap		(7,089,235)	43132R-AS-0	HILDENE CLO LTD-SERIES 13-1A CLASS BR	1	18,100,000	18,105,321
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,200,000	27,335,102	02/05/2015	02/05/2045	Interest Rate Swap			55818R-AQ-9	MADISON PARK FUNDING LTD-MDPK 2014-14A A1R	1	27,200,000	27,335,102
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,750,000	24,822,542	02/05/2015	02/05/2045	Interest Rate Swap			26249E-AN-5	DRYDEN SENIOR LOAN FUND--SERIES 14-31A CLASS AR	1	24,750,000	24,822,542
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,012,812	18,117,171	02/05/2015	02/05/2045	Interest Rate Swap			77340E-AC-0	ROCKFORD TOWER CLO LTD-ROCKT 2017-1A B	1	18,012,812	18,117,171
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,730,000	5,776,619	02/05/2015	02/05/2045	Interest Rate Swap			64129J-AU-4	NEUBERGER BERMAN CLO LTD-NEUB 2013-14A B1R	1	5,730,000	5,776,619
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,600,000	4,611,376	02/05/2015	02/05/2045	Interest Rate Swap			00164K-AN-7	ALM LOAN FUNDING--SERIES 14-14A CLASS BR	1	4,600,000	4,611,376
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,090,000	24,100,937	02/05/2015	02/05/2045	Interest Rate Swap			92916X-AA-5	VOYA CLO LTD-INGIM 2013-3A A1R	1	24,090,000	24,100,937
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,300,000	4,314,616	02/05/2015	02/05/2045	Interest Rate Swap			87248T-AE-5	TICOP CLO VII LTD	1	4,300,000	4,314,616
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,144,322	9,084,723	02/05/2015	02/05/2045	Interest Rate Swap			15135A-AC-7	CENT CDO 12 LTD DEF MEZZ NT CL C	1	9,144,322	9,084,723
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	6,841,067	(580,610)	02/05/2015	02/05/2045	Interest Rate Swap		(7,425,727)	55951P-AR-8	MAGNETITE CLO LTD-MAGNE 2012-7A A2R	1	6,841,067	6,845,117
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,325,000	7,353,209	02/05/2015	02/05/2045	Interest Rate Swap			55954K-AC-9	MAGNETITE CLO LTD-SERIES 17-19A CLASS B	1	7,325,000	7,353,209
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,214,882	02/05/2015	02/05/2045	Interest Rate Swap			92915Q-AG-8	VOYA CLO LTD-SERIES 2017-3A CLASS A2	1	7,200,000	7,214,882
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,227,418	02/05/2015	02/05/2045	Interest Rate Swap			00164M-DH-3	ALM LOAN FUNDING--SERIES 15-12A CLASS A2AR	1	7,200,000	7,227,418

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,009,576	02/05/2015	02/05/2045	Interest Rate Swap			00900A-AJ-7	AIMCO-SERIES 14-AA CLASS B1R	1	8,000,000	8,009,576
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		26,209,073	26,041,730	02/05/2015	02/05/2045	Interest Rate Swap			67590B-AA-8	OCTAGON INV PARTNERS XVI LTD-SR SECD NT CL A	1	26,209,073	26,041,730
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,850,000	7,859,561	02/05/2015	02/05/2045	Interest Rate Swap			15136R-AE-5	CENT CLO 18 LP-NT SER 2013-18A CL B 144A	1	7,850,000	7,859,561
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,150,000	46,206,118	02/05/2015	02/05/2045	Interest Rate Swap			589433-G8-4	Meredith Corp. Senior Note Ser	3	46,150,000	46,206,118
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,477,606	7,472,264	02/05/2015	02/05/2045	Interest Rate Swap			36248M-AB-3	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS B	1	7,477,606	7,472,264
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,800,000	3,814,638	02/05/2015	02/05/2045	Interest Rate Swap			88432C-AW-6	WIND RIVER CLO LTD-WINDR 2014-1A CR	1	3,800,000	3,814,638
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,137,458	26,267,595	02/05/2015	02/05/2045	Interest Rate Swap			24820R-AA-6	Statoil ASA-SENIOR UNSECURED NOTE	1	21,137,458	26,267,595
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	517,000,000	407,312,693	431,303,357	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	10,413,382	11,276,402	912828-PX-2	US TREAS N/B-NOTE	1	396,899,311	420,026,955
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2		237,894,850	265,586,954	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index			76116F-AG-2	RFSCP PRINCIPAL STRIP	1	237,894,850	265,586,954
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	519,000,000	312,301,166	330,327,838	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	10,858,652	11,320,024	912828-PX-2	US TREAS N/B-NOTE	1	301,442,514	319,007,814
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2		303,695,553	339,047,176	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index			76116F-AG-2	RFSCP PRINCIPAL STRIP	1	303,695,553	339,047,176
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	257,000,000	329,208,489	348,379,380	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	5,308,507	5,605,484	912828-PX-2	US TREASURY N/B Note Resolution Funding Corp Principal Strip	1	323,899,982	342,773,896
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2		74,236,691	82,878,198	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index			76116F-AG-2	US Treasury 3.875% DUE 8/15/2040	1	74,236,691	82,878,198
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	70,000,000	129,789,610	167,995,536	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	1,413,075	1,526,786	912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	128,376,535	166,468,750
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	35,000,000	64,888,177	83,997,768	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	699,910	763,393	912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	64,188,267	83,234,375
57629*DB4	Filed with the SVO and awaiting RSAT Credit Default Indices (CDIG529/CDX.NA.IG.29)	2	35,000,000	64,889,223	83,997,768	09/20/2017	12/20/2022	5 Yr Credit Default Swap Index	700,956	763,393	912810-QK-7	US Treasury 3.875% DUE 8/15/2040 Grupo Aeromexico S.A.B. Floating Rate S	1	64,188,267	83,234,375
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	17,865,000	20,047,674	12/05/2016	12/05/2046	Interest Rate Swap		1,360,290	MXP001-TT-1	SMB PRIVATE ED LN TR 2016-A NT	1	17,865,000	18,687,384
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		28,410,000	29,224,177	12/05/2016	12/05/2046	Interest Rate Swap			78449F-AC-5	NAVIENT STUDENT LOAN TRU-SERIES 16-2 CLASS A3	1	28,410,000	29,224,177
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,420,000	23,254,199	12/05/2016	12/05/2046	Interest Rate Swap			63940F-AC-1	ECMC GROUP STUDENT LOAN -SERIES 2016-1A CLASS A	1	22,420,000	23,254,199
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,060,919	13,069,282	12/05/2016	12/05/2046	Interest Rate Swap			26827X-AA-1	BABSON CLO LTD-BABSON 2014-11A BR	1	13,060,919	13,069,282
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,250,000	13,270,657	12/05/2016	12/05/2046	Interest Rate Swap			05618L-AG-1	VOYA CLO LTD-VOYA 2017-1A A2	1	13,250,000	13,270,657
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,500,000	11,460,130	12/05/2016	12/05/2046	Interest Rate Swap			92916M-AB-7	BABSON CLO LTD-BABSON 2014-11A AR ANCHORAGE CAPITAL CLO LT-ANCHC	1	11,500,000	11,460,130
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,000,000	11,041,239	12/05/2016	12/05/2046	Interest Rate Swap			05618L-AF-3	2012-1A A2R	1	11,000,000	11,041,239
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,113,765	12/05/2016	12/05/2046	Interest Rate Swap			033290-AN-7	STEELE CREEK CLO LTD-SERIES 15-1A CLASS CR	1	5,100,000	5,113,765
57629*DK4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,359,106	12/05/2016	12/05/2046	Interest Rate Swap			85816B-CS-7	Grupo Aeromexico S.A.B. Floating Rate S	1	4,330,000	4,359,106
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,917,500	12,807,353	12/05/2016	12/05/2046	Interest Rate Swap		1,387,285	MXP001-TT-1	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS A4	1	10,917,500	11,420,068
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,248,683	14,671,568	12/05/2016	12/05/2046	Interest Rate Swap			78442G-PQ-3	KEYCORP STUDENT LOAN TRU-SERIES 2006-A CLASS 244	1	14,248,683	14,671,568
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,851,310	8,014,624	12/05/2016	12/05/2046	Interest Rate Swap			49327H-AG-0	MELNET STUDENT LOAN TRUS-SERIES 2005-1 CLASS A5	1	7,851,310	8,014,624
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,588,494	10,735,264	12/05/2016	12/05/2046	Interest Rate Swap			640310-BR-1	SMB PRIVATE EDUCATION LO-SMB 2015-B A3	1	10,588,494	10,735,264
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,914,611	12,220,879	12/05/2016	12/05/2046	Interest Rate Swap			78448Q-AD-0		1	11,914,611	12,220,879

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,601,009	11,139,220	12/05/2016	12/05/2046	Interest Rate Swap			78442G-RX-6	SLM STUDENT LN TR 2006-2 LN BKD NT CL A-6	1	10,601,009	11,139,220
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,704,340	5,749,572	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EX-0	SLM STUDENT LOAN TRUST-SERIES 2002-7CLASS A11	1	5,704,340	5,749,572
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,720,438	10,829,228	12/05/2016	12/05/2046	Interest Rate Swap			10620N-AX-6	BRAZOS HIGHER EDUCATION -SER 2006-2 STUDENT LN REV NT	1	10,720,438	10,829,228
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,858,803	9,039,108	12/05/2016	12/05/2046	Interest Rate Swap			64031Q-BX-8	NELNET STUDENT LOAN TRUS-SERIES 2005-2 CLASS A5	1	8,858,803	9,039,108
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,701,363	9,881,800	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AF-9	SOUTH CAROLINA STUDENT L-SERIES 14-1 CLASS A2	1	9,701,363	9,881,800
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,941,219	6,030,107	12/05/2016	12/05/2046	Interest Rate Swap			00432C-AV-3	ACCESS GROUP INC-SERIES 2003-A CLASS A3	1	5,941,219	6,030,107
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,021,030	12/05/2016	12/05/2046	Interest Rate Swap			88322U-AN-9	THACHER PARK CLO-THRPK 2014-1A CR	1	5,000,000	5,021,030
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,648,451	7,725,804	12/05/2016	12/05/2046	Interest Rate Swap			640315-AF-4	NELNET STUDENT LOAN TRUS-SERIES 2006-2 CLASS A6	1	7,648,451	7,725,804
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,626,289	4,626,289	12/05/2016	12/05/2046	Interest Rate Swap			77277L-A7-2	ROCKALL CLO BV Variable Funding Note- USD	1	4,626,289	4,626,289
57629*DJ7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,300,000	4,326,815	12/05/2016	12/05/2046	Interest Rate Swap			92558A-AA-8	VIBRANT CLO LTD-SERIES 2016-5A CLASS A	1	4,300,000	4,326,815
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	3,970,000	5,186,396	12/05/2016	12/05/2046	Interest Rate Swap		1,033,644	MXP001-TT-1	Grupo Aeromexico S.A.B. Floating Rate S	1	3,970,000	4,152,752
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		65,300,000	67,347,188	12/05/2016	12/05/2046	Interest Rate Swap			63940L-AC-8	NAVIENT STUDENT LOAN TRU-SERIES 2016-6A CLASS A3	1	65,300,000	67,347,188
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,846,075	23,499,981	12/05/2016	12/05/2046	Interest Rate Swap			61205P-AL-3	MONTANA HIGHER EDUCATION-SERIES 12-1 CLASS A3	1	22,846,075	23,499,981
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,223,619	18,362,702	12/05/2016	12/05/2046	Interest Rate Swap			784419-AF-0	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS B	1	17,223,619	18,362,702
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		979,860	994,926	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EW-2	SLM STUDENT LOAN TRUST-SERIES 2002-7 CLASS A10	1	979,860	994,926
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,781,575	1,764,082	12/05/2016	12/05/2046	Interest Rate Swap			429827-AK-4	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A10	1	1,781,575	1,764,082
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		705,663	705,792	12/05/2016	12/05/2046	Interest Rate Swap			784419-AE-3	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS A5	1	705,663	705,792
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,157,346	1,166,565	12/05/2016	12/05/2046	Interest Rate Swap			429827-AP-3	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A14	1	1,157,346	1,166,565
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,063,163	1,122,116	12/05/2016	12/05/2046	Interest Rate Swap			429827-AB-4	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A2	1	1,063,163	1,122,116
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,846,552	1,890,600	12/05/2016	12/05/2046	Interest Rate Swap			83715A-AJ-8	SOUTH CAROLINA STUDENT L-SR UNSECURED	1	1,846,552	1,890,600
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,625,955	1,719,622	12/05/2016	12/05/2046	Interest Rate Swap			784427-AF-3	SLC STUDENT LN TR 2006-1 ASSET BK NT CL A-6	1	1,625,955	1,719,622
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,668,573	1,573,156	12/05/2016	12/05/2046	Interest Rate Swap			64033Q-AC-3	NELNET STUDENT LOAN TRUS-SERIES 2015-2A CLASS B	1	1,668,573	1,573,156
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,852,733	1,889,478	12/05/2016	12/05/2046	Interest Rate Swap			46259Q-JT-8	10VA STUDENT LOAN LIQUID-SERIES 2012-1 CLASS B	1	1,852,733	1,889,478
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,415,801	1,410,050	12/05/2016	12/05/2046	Interest Rate Swap			709163-GJ-2	PENNSYLVANIA ST HGR EDU -SERIES 2006 CL B	1	1,415,801	1,410,050
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,212,727	1,288,379	12/05/2016	12/05/2046	Interest Rate Swap			17284L-AB-0	CIT EDUCATION LOAN TRUST-SERIES 2007-1 CLASS B	1	1,212,727	1,288,379
57629*DH1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,325,835	1,303,855	12/05/2016	12/05/2046	Interest Rate Swap			78448C-AH-2	SLM STUDENT LOAN TRUST-SERIES 2013-6 CLASS B	1	1,325,835	1,303,855
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	14,887,500	16,609,164	12/05/2016	12/05/2046	Interest Rate Swap		1,036,344	MXP001-TT-1	Grupo Aeromexico S.A.B. Floating Rate S	1	14,887,500	15,572,820
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,227,861	6,562,458	12/05/2016	12/05/2046	Interest Rate Swap			78448R-AD-8	SMB PRIVATE ED LN TR 2015-C LN BCK NT CL A-3	1	6,227,861	6,562,458
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,432,618	5,771,132	12/05/2016	12/05/2046	Interest Rate Swap			78448P-AD-2	SMB PRIVATE ED LOAN TR 2015-A LN BACKED NT A-3	1	5,432,618	5,771,132
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,556,261	3,472,560	12/05/2016	12/05/2046	Interest Rate Swap			69847R-AB-8	PANHANDLE-PLAINS TX STUD-SERIES 2001-1 CLASS A2	1	3,556,261	3,472,560
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,847,201	4,861,973	12/05/2016	12/05/2046	Interest Rate Swap			19458L-BH-2	COLLEGIATE FUNDING SERVI-SERIES 2005-B CLASS A4	1	4,847,201	4,861,973

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,685,072	4,789,276	12/05/2016	12/05/2046	Interest Rate Swap			78446D-AC-3	SLM STUDENT LOAN TRUST-SERIES 2011- A CLASS A3	1	4,685,072	4,789,276
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,770,553	3,858,451	12/05/2016	12/05/2046	Interest Rate Swap			63938E-AD-6	NAVIENT STUDENT LOAN TRU-SERIES 2014-1 CLASS A4	1	3,770,553	3,858,451
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,185,185	1,186,153	12/05/2016	12/05/2046	Interest Rate Swap			00432C-CF-6	ACCESS GROUP INC DEL 2005-1 ASSET BKD CTF CL A-3	1	1,185,185	1,186,153
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,086,751	15,949,035	12/05/2016	12/05/2046	Interest Rate Swap			840555-DA-1	SOUTH TX HIGHER ED AUTH REV SER 1 CL A-3	1	16,086,751	15,949,035
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,903,327	11,947,534	12/05/2016	12/05/2046	Interest Rate Swap			00432C-CI-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3	1	11,903,327	11,947,534
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,775,189	10,624,004	12/05/2016	12/05/2046	Interest Rate Swap			28148W-AC-7	EDUCATIONAL FUNDING OF T-SERIES 2011-1 CLASS B	1	9,775,189	10,624,004
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,130,285	9,539,163	12/05/2016	12/05/2046	Interest Rate Swap			78444C-AE-3	SLM STUDENT LOAN TRUST-SERIES 07-6 CLASS A5	1	9,130,285	9,539,163
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,510,891	9,101,678	12/05/2016	12/05/2046	Interest Rate Swap			78443F-AF-4	SLM STUDENT LOAN TRUST-SERIES 2007- 5 CLASS A6	1	8,510,891	9,101,678
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,104,215	8,294,295	12/05/2016	12/05/2046	Interest Rate Swap			00400V-AB-3	ACADEMIC LOAN FUNDING TR-ALFT 2012- 1A A2	1	8,104,215	8,294,295
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		845,257	950,504	12/05/2016	12/05/2046	Interest Rate Swap			462592-AD-8	IOWA STUDENT LOAN LIQUID-SERIES 2005-1 CLASS B	1	845,257	950,504
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,935,906	9,086,295	12/05/2016	12/05/2046	Interest Rate Swap			78442G-OA-7	SLM STUDENT LOAN TRUST-SERIES 2005- 6 CLASS B	1	8,935,906	9,086,295
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,628,972	1,679,025	12/05/2016	12/05/2046	Interest Rate Swap			38021F-AB-7	GOAL CAPITAL FUNDING TRU-SERIES 2015-1 CLASS B	1	1,628,972	1,679,025
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,647,978	1,641,287	12/05/2016	12/05/2046	Interest Rate Swap			28138J-AB-0	EDUCATIONAL SERVICES OF -SERIES 15- 2 CLASS B	1	1,647,978	1,641,287
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,403,900	1,420,321	12/05/2016	12/05/2046	Interest Rate Swap			78442G-GI-2	SLM STUDENT LOAN TRUST 2003-4 LN BKD CTF CL B	1	1,403,900	1,420,321
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,336,666	1,360,188	12/05/2016	12/05/2046	Interest Rate Swap			28090A-AB-5	EDUCATIONAL SERVICES OF -2014-4 SERIES B	1	1,336,666	1,360,188
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		899,823	913,770	12/05/2016	12/05/2046	Interest Rate Swap			83401L-AA-2	SOCIAL PROFESSIONAL LOAN-SERIES 2015-A CLASS A1	1	899,823	913,770
57629*DG3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,807,334	1,754,055	12/05/2016	12/05/2046	Interest Rate Swap			49638W-AE-6	KINGSLAND LTD-SERIES 2013-6A CLASS C	1	1,807,334	1,754,055
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	7,459,868	6,954,602	12/06/2016	12/06/2046	Interest Rate Swap		(312,898)	281397-AP-4	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A1	1	7,459,868	7,267,500
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,910,000	12,458,256	12/05/2016	12/05/2046	Interest Rate Swap			MXP001-TT-1	Grupo Aeromexico S.A.B. Floating Rate S	1	11,910,000	12,458,256
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,929,760	5,914,792	12/06/2016	12/06/2046	Interest Rate Swap			66705R-AA-7	NORTHSTAR EDUCATION FINA-NEF 2016-1 A	1	5,929,760	5,914,792
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,570,628	6,605,834	12/06/2016	12/06/2046	Interest Rate Swap			281397-AB-5	EDUCATION LOAN ASSET-BAC-SERIES 2003-1 CLASS A2	1	6,570,628	6,605,834
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,066,284	4,910,296	12/06/2016	12/06/2046	Interest Rate Swap			64031Q-CK-5	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R1	1	5,066,284	4,910,296
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,712,167	5,038,509	12/06/2016	12/06/2046	Interest Rate Swap			78443G-AG-0	SLM STUDENT LOAN TRUST-SERIES 2006- 7 CLASS A6B	1	4,712,167	5,038,509
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,050,145	4,650,730	12/06/2016	12/06/2046	Interest Rate Swap			106238-LJ-5	BRAZOS TX HGR EDU AUTH REVENUE BOND	1	4,050,145	4,650,730
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,369,700	5,884,393	12/06/2016	12/06/2046	Interest Rate Swap			28108Q-AB-0	EDLINC STUDENT LOAN FUND-SERIES 2012-1 CLASS B	1	5,369,700	5,884,393
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,323,049	4,236,186	12/06/2016	12/06/2046	Interest Rate Swap			281397-AQ-2	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A2	1	4,323,049	4,236,186
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,415,420	3,534,716	12/06/2016	12/06/2046	Interest Rate Swap			38021E-AA-2	GOAL CAPITAL FUNDING TR 2010-1 STUDENT LN BKD NT	1	3,415,420	3,534,716
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,653,222	3,618,113	12/06/2016	12/06/2046	Interest Rate Swap			64031Q-CM-1	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R2	1	3,653,222	3,618,113
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,703,660	3,793,046	12/06/2016	12/06/2046	Interest Rate Swap			658262-GD-6	NORTH CAROLINA STATE EDU-SERIES 2011-2 CLASS A3	1	3,703,660	3,793,046
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,871,660	1,924,966	12/06/2016	12/06/2046	Interest Rate Swap			78442G-KW-5	SLM STUDENT LOAN TRUST-SERIES 2004- 1 CLASS A6	1	1,871,660	1,924,966
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,996,810	14,893,787	12/06/2016	12/06/2046	Interest Rate Swap			83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B	1	13,996,810	14,893,787

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,708,358	9,595,558	12/06/2016	12/06/2046	Interest Rate Swap			784419-AG-8	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS C	1	9,708,358	9,595,558
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,222,406	7,561,077	12/06/2016	12/06/2046	Interest Rate Swap			23341K-AA-3	DRB PRIME STUDENT LOAN T-SERIES 2015-D CLASS A1	1	7,222,406	7,561,077
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,645,760	8,004,599	12/06/2016	12/06/2046	Interest Rate Swap			64031C-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2012-2A CLASS B	1	8,645,760	8,004,599
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,413,694	14,988,504	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS B	1	14,413,694	14,988,504
57629*DF5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,923,712	12/06/2016	12/06/2046	Interest Rate Swap			87244A-BC-3	WIND RIVER CLO LTD-SERIES 12-1A CLASS BR	1	3,900,000	3,923,712
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,917,500	11,404,141	12/06/2016	12/06/2046	Interest Rate Swap		(15,927)	MXP001-TT-1	Grupo Aeromexico S.A.B. Floating Rate S	1	10,917,500	11,420,068
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,276,286	9,629,524	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AG-7	SOUTH CAROLINA STUDENT L-SERIES 2014-1 CLASS B	1	9,276,286	9,629,524
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,501,724	7,389,503	12/06/2016	12/06/2046	Interest Rate Swap			784420-AE-1	SLC STUDENT LOAN TRUST-SERIES 2005-1 CLASS B	1	6,501,724	7,389,503
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,139,479	6,371,161	12/06/2016	12/06/2046	Interest Rate Swap			78442G-OT-6	SLM STUDENT LOAN TRUST-SERIES 2005-8 CLASS B	1	6,139,479	6,371,161
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,958,459	6,246,716	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PD-2	SLM STUDENT LOAN TRUST-SERIES 2005-3 CLASS B	1	5,958,459	6,246,716
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,881,005	5,599,815	12/06/2016	12/06/2046	Interest Rate Swap			493268-AU-0	KEYCORP STUDENT LOAN TRU-SERIES 1999-B CLASS CTFS	1	4,881,005	5,599,815
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,562,203	6,574,377	12/06/2016	12/06/2046	Interest Rate Swap			78446C-AB-7	SLM STUDENT LOAN TRUST-SERIES 2013-2 CLASS B	1	6,562,203	6,574,377
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,955,000	6,488,901	12/06/2016	12/06/2046	Interest Rate Swap			63938E-AE-4	NAVIENT STUDENT LOAN TRU-SERIES 2014-1 CLASS B	1	6,955,000	6,488,901
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,842,614	5,606,127	12/06/2016	12/06/2046	Interest Rate Swap			64031A-AJ-5	NELNET STUDENT LOAN TRUS-SERIES 2006-3 CLASS B	1	5,842,614	5,606,127
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,101,750	6,486,950	12/06/2016	12/06/2046	Interest Rate Swap			63939L-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 2015-3 CLASS B	1	6,101,750	6,486,950
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,500,000	6,524,727	12/06/2016	12/06/2046	Interest Rate Swap			78447M-AD-0	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	6,500,000	6,524,727
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,306,845	5,162,633	12/06/2016	12/06/2046	Interest Rate Swap			64033J-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2014-1A CLASS B	1	5,306,845	5,162,633
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,143,932	4,244,765	12/06/2016	12/06/2046	Interest Rate Swap			194266-AE-2	COLLEGE LOAN CORPORATION-SERIES 2005-2 CLASS B	1	4,143,932	4,244,765
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,416,694	4,135,708	12/06/2016	12/06/2046	Interest Rate Swap			64033N-AB-2	NELNET STUDENT LOAN TRUS-SERIES 2014-5A CLASS B	1	4,416,694	4,135,708
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,600,077	3,722,578	12/06/2016	12/06/2046	Interest Rate Swap			194262-CF-6	COLLEGE LOAN CORPORATION-SERIES 2004-1 CLASS B	1	3,600,077	3,722,578
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,034,639	3,149,602	12/06/2016	12/06/2046	Interest Rate Swap			78442G-LJ-3	SLM STUDENT LOAN TRUST-SERIES 2004-3 CLASS B	1	3,034,639	3,149,602
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,650,000	3,169,117	12/06/2016	12/06/2046	Interest Rate Swap			64032A-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2012-1A CLASS B	1	3,650,000	3,169,117
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,984,003	3,251,183	12/06/2016	12/06/2046	Interest Rate Swap			64032F-AH-7	NELNET STUDENT LOAN TRUS-SERIES 2007-2A CLASS A4A2	1	2,984,003	3,251,183
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,142,110	2,911,169	12/06/2016	12/06/2046	Interest Rate Swap			64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	3,142,110	2,911,169
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,240,000	2,841,503	12/06/2016	12/06/2046	Interest Rate Swap			64033K-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2014-3A CLASS B	1	3,240,000	2,841,503
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,400,000	14,412,917	12/06/2016	12/06/2046	Interest Rate Swap			04015B-AL-4	ARES CLO LTD-ARES 2014-31A A2R	1	14,400,000	14,412,917
57629*DE8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,517,033	12/06/2016	12/06/2046	Interest Rate Swap			94949L-AE-0	WELLFLEET CLO LTD-WELF 2016-2A B	1	2,500,000	2,517,033
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	8,900,000	8,544,427	12/06/2016	12/06/2046	Interest Rate Swap		(407,389)	04964H-AN-8	ATRIUM CDO CORP-SERIES 8A CLASS BR	1	8,900,000	8,951,816
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,970,000	4,152,752	12/05/2016	12/05/2046	Interest Rate Swap			MXP001-TT-1	Grupo Aeromexico S.A.B. Floating Rate S	1	3,970,000	4,152,752
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,900,000	8,940,967	12/06/2016	12/06/2046	Interest Rate Swap			87246M-AB-8	TICOP CLO LTD-SERIES 2016-6A CLASS B	1	8,900,000	8,940,967
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,890,949	12/06/2016	12/06/2046	Interest Rate Swap			04941T-AE-0	ATLAS SENIOR LOAN FUND L-ATCLO 2016-7A B1	1	8,850,000	8,890,949

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,915,375	12/06/2016	12/06/2046	Interest Rate Swap			14309Y-AQ-7	CARLYLE GLOBAL MARKET ST-SERIES 2012-4A CLASS BR	1	8,850,000	8,915,375
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,874,240	12/06/2016	12/06/2046	Interest Rate Swap			03764X-AJ-6	APIDOS CLO-SERIES 2014-17A CLASS A2R	1	8,850,000	8,874,240
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,528,785	12/06/2016	12/06/2046	Interest Rate Swap			06759Y-AC-9	BARINGS CLO LTD-BABSN 2016-3A A2 SEVEN STICKS CLO LTD-SR SEC2 NT CL A-2 144A	1	7,500,000	7,528,785
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,370,000	7,432,844	12/06/2016	12/06/2046	Interest Rate Swap			81789G-AC-5	NEUBERGER BERMAN CLO XVI-SR SEC2 NT CL B-1	1	7,370,000	7,432,844
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,608,254	13,349,968	12/06/2016	12/06/2046	Interest Rate Swap			64129X-AG-4	BALLYROCK LTD-SERIES 14-1A CLASS A1R	1	13,608,254	13,349,968
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,420,000	5,425,268	12/06/2016	12/06/2046	Interest Rate Swap			05873L-AJ-5	SLM STUDENT LOAN TRUST-SERIES 2013-4 CLASS B	1	5,420,000	5,425,268
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,039,249	12/06/2016	12/06/2046	Interest Rate Swap			78448A-AD-5	ACCESS GROUP INC-SERIES 2006-1 CLASS B	2	3,200,000	3,039,249
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,956,513	2,176,551	12/06/2016	12/06/2046	Interest Rate Swap			00432C-DE-8	SLM STUDENT LOAN TRUST-SERIES 2003-14 CLASS A6	1	1,956,513	2,176,551
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,453,539	2,486,834	12/06/2016	12/06/2046	Interest Rate Swap			78442G-KN-5	KEYCORP STUDENT LOAN TRU-SERIES 2004-A CLASS 1B	1	2,453,539	2,486,834
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,949,587	1,907,018	12/06/2016	12/06/2046	Interest Rate Swap			493268-BW-5	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B1	1	1,949,587	1,907,018
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,967,878	2,135,948	12/06/2016	12/06/2046	Interest Rate Swap			429827-AR-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	1,967,878	2,135,948
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,996,940	2,127,902	12/06/2016	12/06/2046	Interest Rate Swap			429827-AS-7	MELNET STUDENT LOAN TRUS-SERIES 2015-3A CLASS B	1	1,996,940	2,127,902
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,914,862	1,948,030	12/06/2016	12/06/2046	Interest Rate Swap			64033T-AB-9	COLLEGIATE FUNDING SERVI-SERIES 2005-A CLASS B	1	1,914,862	1,948,030
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,743,194	1,722,253	12/06/2016	12/06/2046	Interest Rate Swap			19458L-BD-1	ACCESS GROUP INC-SERIES 2015-1 CLASS B	1	1,743,194	1,722,253
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,856,183	1,951,709	12/06/2016	12/06/2046	Interest Rate Swap			00435T-AB-7	SLM STUDENT LOAN TRUST-SERIES 2006-2 CLASS B	1	1,856,183	1,951,709
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,048,420	3,049,290	12/06/2016	12/06/2046	Interest Rate Swap			78442G-RY-4	COLLEGE LOAN CORPORATION-SERIES 2007-1 CLASS B2	1	3,048,420	3,049,290
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,123,511	3,151,300	12/06/2016	12/06/2046	Interest Rate Swap			194267-AN-2	WACHOVIA STUDENT LOAN TR-SERIES 2006-1 CLASS B	1	3,123,511	3,151,300
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,890,305	2,583,370	12/06/2016	12/06/2046	Interest Rate Swap			92978J-AH-6	SOUTH CAROLINA STUDENT L-SERIES 15-A CLASS A	1	2,890,305	2,583,370
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,436,334	2,568,960	12/06/2016	12/06/2046	Interest Rate Swap			83715R-AH-5	EDUCATIONAL SERVICES OF -SERIES 2014-2 CLASS B	1	2,436,334	2,568,960
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,458,103	2,421,727	12/06/2016	12/06/2046	Interest Rate Swap			28137T-AB-9	SLM STUDENT LOAN TRUST-SERIES 2006-10 CLASS B	1	2,458,103	2,421,727
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,091,785	2,102,837	12/06/2016	12/06/2046	Interest Rate Swap			78443B-AK-2	PENNSYLVANIA HIGHER EDUC-SERIES 2015-1A CLASS B	1	2,091,785	2,102,837
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,368,145	2,281,524	12/06/2016	12/06/2046	Interest Rate Swap			69340Q-AB-2	EDUCATIONAL SERVICES OF -SERIES 2015-1 CLASS B	1	2,368,145	2,281,524
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,137,487	2,234,190	12/06/2016	12/06/2046	Interest Rate Swap			28137B-AB-5	ACCESS GROUP-STUDENT LN REVENUE NT	1	2,137,487	2,234,190
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,852,864	1,976,187	12/06/2016	12/06/2046	Interest Rate Swap			00432C-AR-2	NAVIENT STUDENT LOAN TRUST 2014-8 CL B	1	1,852,864	1,976,187
57629*DD0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,217,975	2,204,230	12/06/2016	12/06/2046	Interest Rate Swap			63939D-AD-7	BLUEMOUNTAIN CLO 2014-1 LTD SR SEC DEF NT CL D	2	2,217,975	2,204,230
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	3,957,141	3,603,563	12/06/2016	12/06/2046	Interest Rate Swap		(401,989)	09627L-AJ-6	SYMPHONY CLO LTD-SYMP 2015-16A D	2	3,957,141	4,005,552
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,969,789	4,028,712	12/06/2016	12/06/2046	Interest Rate Swap			87165V-AE-9	MAGNETITE CLO LTD-MAGNE 2015-15A D	2	3,969,789	4,028,712
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,750,000	2,765,840	12/06/2016	12/06/2046	Interest Rate Swap			55953M-AG-7	LGM XVII LTD PARTNERSHIP-DEF MEZZ NT CL D 144A	2	2,750,000	2,765,840
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,784,387	2,759,193	12/06/2016	12/06/2046	Interest Rate Swap			50188G-AN-3	FLATIRON CLO 2007-1 LTD DEF MEZZ TERM NOTE CL D	1	2,784,387	2,759,193
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,260,030	2,100,130	12/06/2016	12/06/2046	Interest Rate Swap			33882B-AE-9	HIGHBRIDGE LOAN MANAGEM-HLM 11A-17 B	1	1,260,030	2,100,130
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,559,593	12/06/2016	12/06/2046	Interest Rate Swap			40436V-AB-7		1	13,560,000	13,559,593

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,014,402	2,039,408	12/06/2016	12/06/2046	Interest Rate Swap			87230A-AD-8	TC1-FLATIRON CLO LTD-TFLAT 2016-1A	3	2,014,402	2,039,408
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,200,000	8,288,240	12/06/2016	12/06/2046	Interest Rate Swap			04964H-AQ-1	ATRIUM VIII-DEF NT CL C-R	1	8,200,000	8,288,240
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,516,250	7,559,386	12/06/2016	12/06/2046	Interest Rate Swap			06759Y-AE-5	BARINGS CLO LTD-BABSN 2016-3A B LOM LTD PARTNERSHIP-SERIES 25A	1	7,516,250	7,559,386
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,514,913	12/06/2016	12/06/2046	Interest Rate Swap			50189P-AN-2	CLASS C2 WIND RIVER CLO LTD-WINDR 2012-1A CR	1	2,500,000	2,514,913
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,744,714	6,816,560	12/06/2016	12/06/2046	Interest Rate Swap			87244A-BE-9	CARLYLE GLOBAL MARKET ST-SERIES 2012-4A CLASS C1R	1	6,744,714	6,816,560
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,777,050	12/06/2016	12/06/2046	Interest Rate Swap			14309Y-AY-0	THL CR WIND RIV 2016-1 CLO-SR SECD	1	6,700,000	6,777,050
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,585,000	6,644,805	12/06/2016	12/06/2046	Interest Rate Swap			88433A-AE-9	NT CL C 144A ALM LOAN FUNDING-SERIES ALM 2013-7R2A CLASS BR	1	6,585,000	6,644,805
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,057,540	12/06/2016	12/06/2046	Interest Rate Swap			00164B-AU-1	ANCHORAGE CAPITAL CLO LT-ANCHC 2016-9A C	1	5,000,000	5,057,540
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,044,645	12/06/2016	12/06/2046	Interest Rate Swap			03328W-AE-8	BLUEMOUNTAIN CLO LTD-SERIES 2014-4A CLASS CR	1	5,000,000	5,044,645
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,043,365	12/06/2016	12/06/2046	Interest Rate Swap			09627V-AW-5	MADISON PARK FUNDING LTD-MDPK 2016-24A C1	1	5,000,000	5,043,365
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,745,415	4,796,194	12/06/2016	12/06/2046	Interest Rate Swap			55820N-AE-1	BARSON CLO LTD-BABSN 2013-11A BR DRYDEN 42 SR LN FD-SR SEC DEF NT CL	1	4,745,415	4,796,194
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,100,000	6,126,315	12/06/2016	12/06/2046	Interest Rate Swap			05617Y-AU-3	CHA LOAN FUNDING LTD-SERIES 2012-1A CLASS CR	1	6,100,000	6,126,315
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,449,703	4,544,334	12/06/2016	12/06/2046	Interest Rate Swap			26244Y-AE-6	WIND RIVER CLO LTD-WINDR 2015-2A C	1	4,449,703	4,544,334
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,546,796	12/06/2016	12/06/2046	Interest Rate Swap			67091H-AP-6	KKR FINANCIAL CLO LTD-KKR 16 B1	1	4,500,000	4,546,796
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,446,821	4,426,999	12/06/2016	12/06/2046	Interest Rate Swap			88432G-AE-7	APIDOS CLO-SERIES 12-11A CLASS CR	1	4,446,821	4,426,999
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,375,000	4,402,615	12/06/2016	12/06/2046	Interest Rate Swap			48251B-AE-0	APIDOS CLO-SERIES 2015-20A CLASS BR	1	4,375,000	4,402,615
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,200,000	4,245,830	12/06/2016	12/06/2046	Interest Rate Swap			03763Y-AS-5	BLUEMOUNTAIN CLO LTD-BLUEM 2012-2A CR	1	4,200,000	4,245,830
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,009,560	12/06/2016	12/06/2046	Interest Rate Swap			03765L-AL-6	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS C	1	4,000,000	4,009,560
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,041,176	12/06/2016	12/06/2046	Interest Rate Swap			09626R-AS-4	US TREASURY 3.125% TO 5/15/2019	1	4,000,000	4,041,176
57629*DC2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,790,446	2,730,786	12/06/2016	12/06/2046	Interest Rate Swap			04941G-AE-8	UNITED STATES TREASURY 3.00% DUE 11/15/45	1	2,790,446	2,730,786
Filed with the SVO and awaiting RSAT	Inverse JPY Long Term Bond	1	50,000,000	59,361,489	62,727,377	03/24/2017	03/28/2019	Currency Forward		1,105,502	912828-K0-2	US TREASURY 1.375% DUE 2/15/2044	1	59,361,489	61,621,875
Filed with the SVO and awaiting RSAT	Sovereign Bond of Peru	2	5,000,000	10,900,752	10,330,277	09/08/2017	12/20/2022	5 Yr Credit Default Swap	38,959	43,949	912810-RP-5	US TREASURY 1.625% DUE 3/30/2019	1	10,861,793	10,286,328
Filed with the SVO and awaiting RSAT	Sovereign Bond of Mexico	2	15,000,000	15,195,971	17,817,211	09/08/2017	12/20/2022	5 Yr Credit Default Swap	(89,404)	(80,446)	912833-LL-2	US TREASURY 1.375% DUE 2/15/2044	1	15,285,375	17,897,657
Filed with the SVO and awaiting RSAT	Sovereign Bond of Panama	2	10,000,000	13,983,671	16,632,363	09/08/2017	12/20/2022	5 Yr Credit Default Swap	75,272	82,991	912810-RF-7	US TREASURY 1.625% DUE 3/30/2019	1	13,908,399	16,549,372
Filed with the SVO and awaiting RSAT	Inverse JPY Long Term Bond	1	50,000,000	60,425,513	72,551,068	03/28/2017	04/01/2019	Currency Forward		1,445,625	912833-LN-8	US TREASURY 1.375% DUE 2/15/2044	1	60,425,513	71,105,443
Filed with the SVO and awaiting RSAT	Sovereign Bond of India	3	15,000,000	16,638,184	19,786,485	09/14/2017	12/20/2022	5 Yr Credit Default Swap	(51,895)	(72,762)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	16,690,079	19,859,247
Filed with the SVO and awaiting RSAT	Sovereign Bond of Brazil	3	20,000,000	20,362,111	24,488,564	09/08/2017	12/20/2022	5 Yr Credit Default Swap	(964,100)	(887,140)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	21,326,211	25,375,704
Filed with the SVO and awaiting RSAT	Sovereign Bond of Columbia	1	15,000,000	15,543,399	18,596,054	09/08/2017	12/20/2022	5 Yr Credit Default Swap	(219,453)	(159,901)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	15,762,852	18,755,955
Filed with the SVO and awaiting RSAT	Inverse JPY Long Term Bond	1	50,000,000	54,865,084	56,740,938	04/11/2017	04/15/2019	Currency Forward		1,579,805	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	54,865,084	55,161,133
Filed with the SVO and awaiting RSAT	Inverse JPY Long Term Bond	1	50,000,000	50,874,896	51,895,788	05/01/2017	05/08/2019	Currency Forward		746,374	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	50,874,896	51,149,414
Filed with the SVO and awaiting RSAT	Inverse JPY Long Term Bond	1	75,000,000	75,813,570	77,078,989	05/02/2017	05/09/2019	Currency Forward		856,333	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	75,813,570	76,222,656

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions							
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held				
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	9	10	11	12	13	14	15	16
								Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	90,000,000	90,776,775	92,079,946	05/03/2017	05/09/2019	Currency Forward	813,344		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	90,776,775	91,266,602
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	50,000,000	50,874,896	50,897,601	05/10/2017	05/13/2019	Currency Forward	(251,813)		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	50,874,896	51,149,414
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	50,000,000	50,874,896	50,894,061	05/11/2017	05/15/2019	Currency Forward	(255,353)		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	50,874,896	51,149,414
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	25,000,000	25,936,221	26,089,273	05/16/2017	05/20/2019	Currency Forward	13,101		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	25,936,221	26,076,172
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	25,000,000	25,936,221	26,379,267	05/17/2017	05/20/2019	Currency Forward	303,095		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	25,936,221	26,076,172
Filed with the SVO and awaiting RSAT ..	Inverse JPY Long Term Bond	1	25,000,000	25,936,221	26,527,115	05/17/2017	05/20/2019	Currency Forward	450,943		912828-C6-5	US TREASURY 1.625% DUE 3/30/2019 ..	1	25,936,221	26,076,172
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1	250,000,000	21,249,231	14,765,407	09/15/2017	09/15/2047	Interest Rate Swap	(6,697,931)		03073E-AM-7	US TREASURY 1.625% DUE 3/30/2019 ..	1	21,249,231	21,463,338
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		28,687,295	34,656,441	09/15/2017	09/15/2047	Interest Rate Swap			055450-AH-3	BHP Billiton Finance USA-DEBENTURE	1	28,687,295	34,656,441
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		31,141,826	31,624,083	09/15/2017	09/15/2047	Interest Rate Swap			125720-AG-0	OME GROUP INC-SR UNSECURED	1	31,141,826	31,624,083
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		18,944,637	19,790,931	09/15/2017	09/15/2047	Interest Rate Swap			29364N-AS-7	ENERGY MISSISSIPPI INC-SECURED NOTE	1	18,944,637	19,790,931
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		20,732,744	21,914,552	09/15/2017	09/15/2047	Interest Rate Swap			29365T-AA-2	ENERGY TEXAS INC-NOTE	1	20,732,744	21,914,552
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		25,757,042	32,014,601	09/15/2017	09/15/2047	Interest Rate Swap			313747-AF-4	FEDERAL REALTY INVESTMENT NOTE REID	1	25,757,042	32,014,601
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		20,830,640	22,020,390	09/15/2017	09/15/2047	Interest Rate Swap			375558-AW-3	GILEAD SCIENCES INC-SENIOR UNSECURED NOTE	1	20,830,640	22,020,390
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		20,155,729	20,078,094	09/15/2017	09/15/2047	Interest Rate Swap			384780-AA-0	GRAIN SPECTRUM FUND II-SECURED NOTE	1	20,155,729	20,078,094
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		27,088,023	27,200,990	09/15/2017	09/15/2047	Interest Rate Swap			75972Y-AA-9	RENAISSANCE FINANCE-SR UNSECURED	1	27,088,023	27,200,990
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		25,164,378	27,859,243	09/15/2017	09/15/2047	Interest Rate Swap			884315-AG-7	THOMAS & BETTS CORP-NOTE	1	25,164,378	27,859,243
57629* DMO	Evergreen Basket of Inverse Floating Rate Corporate Bonds	1		19,078,553	19,926,654	09/15/2017	09/15/2047	Interest Rate Swap			958587-BJ-5	WEST MASS ELECTRIC CO-SENIOR UNSECURED NOTE	1	19,078,553	19,926,654
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	30,111,835	24,620,535	09/15/2017	09/15/2047	Interest Rate Swap	(6,285,456)		031162-CJ-7	AMGEN INC-SENIOR UNSECURED	2	30,111,835	30,905,991
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		34,997,716	36,881,210	09/15/2017	09/15/2047	Interest Rate Swap			44107T-AT-3	HOST HOTELS & RESORTS LP-SENIOR UNSECURED NOTE	2	34,997,716	36,881,210
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		33,142,329	34,111,763	09/15/2017	09/15/2047	Interest Rate Swap			445658-CD-7	JB HUNT TRANSPRT SVCS-SENIOR UNSECURED NOTE	2	33,142,329	34,111,763
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		35,540,032	38,049,857	09/15/2017	09/15/2047	Interest Rate Swap			456866-AM-4	INGERSOLL-RAND CO-DEBENTURE	2	35,540,032	38,049,857
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		42,879,702	43,268,005	09/15/2017	09/15/2047	Interest Rate Swap			664397-AK-2	EVERSOURCE ENERGY-UNSECURED NOTE	2	42,879,702	43,268,005
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		33,137,537	33,634,102	09/15/2017	09/15/2047	Interest Rate Swap			760759-AP-5	Republic Services Inc-SENIOR UNSECURED NOTE	2	33,137,537	33,634,102
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		37,878,654	38,423,432	09/15/2017	09/15/2047	Interest Rate Swap			94106L-BA-6	Waste Management Inc-SR UNSECURED	2	37,878,654	38,423,432
57629* DL2	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		39,352,572	40,387,078	09/15/2017	09/15/2047	Interest Rate Swap			A05830-A1-6	SPARC EM SPC PANAMA METR-SECURED	2	39,352,572	40,387,078
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	23,375,397	17,923,294	09/15/2017	09/15/2047	Interest Rate Swap	(6,065,470)		00287Y-AL-3	AbbVie Inc-SENIOR UNSECURED NOTE	2	23,375,397	23,988,764
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		26,446,989	27,500,757	09/15/2017	09/15/2047	Interest Rate Swap			00507U-AS-0	ACTAVIS FUNDING SCS-SENIOR UNSECURED NOTE	2	26,446,989	27,500,757
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		28,267,095	29,276,701	09/15/2017	09/15/2047	Interest Rate Swap			035242-AP-1	ANHEUSER-BUSCH INBEV F IN GTD NT	2	28,267,095	29,276,701
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,884,713	23,273,654	09/15/2017	09/15/2047	Interest Rate Swap			254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED	2	22,884,713	23,273,654
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		24,484,766	25,076,877	09/15/2017	09/15/2047	Interest Rate Swap			444859-BA-9	Humana Inc-SENIOR UNSECURED NOTE	2	24,484,766	25,076,877
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		23,717,539	24,042,166	09/15/2017	09/15/2047	Interest Rate Swap			61945C-AA-1	MOA1C CO/THE-SENIOR UNSECURED NOTE	2	23,717,539	24,042,166

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SCHEDULE DB - PART C - SECTION 1

Replication (Synthetic Asset) Transactions Open as of Current Statement Date

Replication (Synthetic Asset) Transactions								Components of the Replication (Synthetic Asset) Transactions								
1	2	3	4	5	6	7	8	Derivative Instrument(s) Open			Cash Instrument(s) Held					
Number	Description	NAIC Designation or Other Description	Notional Amount	Book/Adjusted Carrying Value	Fair Value	Effective Date	Maturity Date	Description	Book/Adjusted Carrying Value	Fair Value	CUSIP	Description	NAIC Designation or Other Description	Book/Adjusted Carrying Value	Fair Value	
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		24,576,479	24,458,410	09/15/2017	09/15/2047	Interest Rate Swap			718549-AB-4	PHILLIPS 66 PARTNERS LP-SENIOR UNSECURED	2	24,576,479	24,458,410	
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		26,405,717	27,096,232	09/15/2017	09/15/2047	Interest Rate Swap			756109-AN-4	REALTY INCOME CORP-SENIOR UNSECURED NOTE REID	2	26,405,717	27,096,232	
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		25,321,558	25,832,485	09/15/2017	09/15/2047	Interest Rate Swap			824348-BB-1	SHERWIN-WILLIAMS CO/THE-SENIOR UNSECURED	2	25,321,558	25,832,485	
57629* DP3	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		27,415,768	30,051,786	09/15/2017	09/15/2047	Interest Rate Swap			883203-B0-3	Textron Inc-NOTE	2	27,415,768	30,051,786	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2	250,000,000	22,489,929	16,085,566	09/15/2017	09/15/2047	Interest Rate Swap		(6,560,439)	032095-AC-5	AMPHENOL CORP-SENIOR UNSECURED NOTE	2	22,489,929	22,646,005	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,546,143	22,824,305	09/15/2017	09/15/2047	Interest Rate Swap			045487-AA-3	ASSOC BANC-CORP-SR UNSECURED	2	22,546,143	22,824,305	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,855,875	22,297,086	09/15/2017	09/15/2047	Interest Rate Swap			378272-AL-2	GLENCORE FUNDING LLC-SR UNSECURED	2	21,855,875	22,297,086	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,871,692	23,812,743	09/15/2017	09/15/2047	Interest Rate Swap			45167R-AF-1	IDEX Corp-SENIOR UNSECURED NOTE	2	22,871,692	23,812,743	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,093,455	20,996,568	09/15/2017	09/15/2047	Interest Rate Swap			49245P-AA-4	KERRY GROUP FIN SERVICES-SENIOR UNSECURED NOTE	2	21,093,455	20,996,568	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,130,845	21,151,232	09/15/2017	09/15/2047	Interest Rate Swap			67103H-AF-4	O'REILLY AUTOMOTIVE INC-SENIOR UNSECURED	2	21,130,845	21,151,232	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,012,113	21,481,004	09/15/2017	09/15/2047	Interest Rate Swap			72925P-AD-7	PLUM CREEK TIMBERLANDS-SENIOR UNSECURED NOTE	2	21,012,113	21,481,004	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		24,287,125	24,753,152	09/15/2017	09/15/2047	Interest Rate Swap			759351-AG-4	Reinsurance Group of Ame-SENIOR UNSECURED NOTE	2	24,287,125	24,753,152	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,348,659	23,433,953	09/15/2017	09/15/2047	Interest Rate Swap			806851-AG-6	SCHLUMBERGER HLDGS CORP-SR UNSECURED	2	22,348,659	23,433,953	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,767,377	23,767,592	09/15/2017	09/15/2047	Interest Rate Swap			92936M-AB-3	WPP FINANCE 2010-SENIOR UNSECURED NOTE	2	21,767,377	23,767,592	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		22,018,444	21,487,193	09/15/2017	09/15/2047	Interest Rate Swap			98310W-AL-2	WYNDHAM WORLDWIDE CORP-SENIOR UNSECURED NOTE	2	22,018,444	21,487,193	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,111,412	21,355,476	09/15/2017	09/15/2047	Interest Rate Swap			98956P-AF-9	Zimmer Biomet Holdings I-SR UNSECURED	2	21,111,412	21,355,476	
57629* DNB	Evergreen Basket of Inverse Floating Rate Corporate Bonds	2		21,062,888	22,753,500	09/15/2017	09/15/2047	Interest Rate Swap			EK5851-40-8	ISRAEL ELECTRIC CORP LTD-SECURED NOTE	2	21,062,888	22,753,500	
9999999 - Totals					12,552,580,295	13,459,657,901	XXX	XXX	XXX	28,353,816	591,832,388	XXX	XXX	XXX	12,524,226,479	12,867,825,513

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STATEMENT AS OF SEPTEMBER 30, 2017 OF THE Massachusetts Mutual Life Insurance Company

SCHEDULE DB - PART C - SECTION 2

Replication (Synthetic Asset) Transactions Open

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		Year To Date	
	1 Number of Positions	2 Total Replication (Synthetic Asset) Transactions Statement Value	3 Number of Positions	4 Total Replication (Synthetic Asset) Transactions Statement Value	5 Number of Positions	6 Total Replication (Synthetic Asset) Transactions Statement Value	7 Number of Positions	8 Total Replication (Synthetic Asset) Transactions Statement Value	9 Number of Positions	10 Total Replication (Synthetic Asset) Transactions Statement Value
1. Beginning Inventory	88	10,739,000,000	95	10,889,000,000	107	11,349,000,000			88	10,739,000,000
2. Add: Opened or Acquired Transactions.....	7	150,000,000	19	2,825,000,000	18	2,623,000,000			44	5,598,000,000
3. Add: Increases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
4. Less: Closed or Disposed of Transactions.....					17	2,545,000,000			17	2,545,000,000
5. Less: Positions Disposed of for Failing Effectiveness Criteria.....			7	2,365,000,000					7	2,365,000,000
6. Less: Decreases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
7. Ending Inventory	95	10,889,000,000	107	11,349,000,000	108	11,427,000,000			108	11,427,000,000

SCHEDULE DB - VERIFICATION

Verification of Book/Adjusted Carrying Value, Fair Value and Potential Exposure of all Open Derivative Contracts

		Book/Adjusted Carrying Value Check
1.	Part A, Section 1, Column 14.....	3,072,290,566
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance.....
3.	Total (Line 1 plus Line 2).....	3,072,290,566
4.	Part D, Section 1, Column 5.....	9,257,002,698
5.	Part D, Section 1, Column 6.....	(6,184,712,132)
6.	Total (Line 3 minus Line 4 minus Line 5).....
		Fair Value Check
7.	Part A, Section 1, Column 16.....	3,635,769,230
8.	Part B, Section 1, Column 13.....
9.	Total (Line 7 plus Line 8).....	3,635,769,230
10.	Part D, Section 1, Column 8.....	9,876,463,491
11.	Part D, Section 1, Column 9.....	(6,240,694,262)
12.	Total (Line 9 minus Line 10 minus Line 11).....
		Potential Exposure Check
13.	Part A, Section 1, Column 21.....	4,566,359,158
14.	Part B, Section 1, Column 20.....	116,119,400
15.	Part D, Section 1, Column 11.....	4,682,478,558
16.	Total (Line 13 plus Line 14 minus Line 15).....

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	3,113,185,611	2,706,693,131
2. Cost of cash equivalents acquired	61,069,381,126	94,374,151,148
3. Accrual of discount	22,255,442	22,360,462
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	74,343	60,907
6. Deduct consideration received on disposals	62,303,666,789	93,990,074,259
7. Deduct amortization of premium		5,778
8. Total foreign exchange change in book/adjusted carrying value		
9. Deduct current year's other than temporary impairment recognized		
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	1,901,229,733	3,113,185,611
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	1,901,229,733	3,113,185,611