

QUARTERLY STATEMENT

OF THE

Massachusetts Mutual Life Insurance Company

TO THE

Insurance Department

OF THE

STATE OF

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

LIFE AND ACCIDENT AND HEALTH

2017



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

QUARTERLY STATEMENT

AS OF JUNE 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 DeGraffenreidt, 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 JUNE 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	87,850,849,591		87,850,849,591	83,820,817,695
2. Stocks:				
2.1 Preferred stocks	479,367,488		479,367,488	464,925,273
2.2 Common stocks	15,410,357,899		15,410,357,899	15,363,384,808
3. Mortgage loans on real estate:				
3.1 First liens	22,067,839,625		22,067,839,625	20,961,091,565
3.2 Other than first liens.....				
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)	148,839,978		148,839,978	158,135,975
4.2 Properties held for the production of income (less \$718,900,537 encumbrances)	788,674,746		788,674,746	737,451,103
4.3 Properties held for sale (less \$ encumbrances)	3,999,303		3,999,303	81,092,879
5. Cash (\$103,261,666), cash equivalents (\$936,044,971) and short-term investments (\$615,210,046)	1,654,516,683		1,654,516,683	3,725,936,280
6. Contract loans (including \$ premium notes)	12,752,045,207	470,271	12,751,574,936	12,461,290,555
7. Derivatives	9,380,841,904		9,380,841,904	9,763,460,825
8. Other invested assets	7,520,978,056	42,661,815	7,478,316,241	7,186,889,062
9. Receivables for securities	185,790,433		185,790,433	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)	158,244,100,913	43,132,086	158,200,968,827	154,886,061,845
13. Title plants less \$ charged off (for Title insurers only)				
14. Investment income due and accrued	2,561,632,963	6,447,299	2,555,185,664	1,911,666,108
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	115,928,401	3,965,393	111,963,008	141,093,092
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	617,911,079		617,911,079	642,564,314
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)				
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	46,790,865		46,790,865	41,664,064
16.2 Funds held by or deposited with reinsured companies				
16.3 Other amounts receivable under reinsurance contracts	15,164,452		15,164,452	(8,316,304)
17. Amounts receivable relating to uninsured plans				
18.1 Current federal and foreign income tax recoverable and interest thereon	433,396,081		433,396,081	44,148,885
18.2 Net deferred tax asset	1,532,853,744	149,345,853	1,383,507,891	1,606,052,936
19. Guaranty funds receivable or on deposit	28,407,677		28,407,677	26,092,893
20. Electronic data processing equipment and software	166,842,263	156,218,116	10,624,147	9,280,689
21. Furniture and equipment, including health care delivery assets (\$)	39,047,143	39,047,143		
22. Net adjustment in assets and liabilities due to foreign exchange rates				
23. Receivables from parent, subsidiaries and affiliates	82,014,182		82,014,182	68,885,410
24. Health care (\$) and other amounts receivable				
25. Aggregate write-ins for other than invested assets	3,400,563,901	1,256,608,581	2,143,955,320	2,097,275,811
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	167,284,653,664	1,654,764,471	165,629,889,193	161,466,469,743
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	66,134,959,886		66,134,959,886	62,203,995,882
28. Total (Lines 26 and 27)	233,419,613,550	1,654,764,471	231,764,849,079	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	2,047,954,593		2,047,954,593	1,980,550,440
2502. Employee insurance plan advances	39,082,577	46,805	39,035,772	40,091,324
2503. Investment in trust	31,429,892		31,429,892	31,420,102
2598. Summary of remaining write-ins for Line 25 from overflow page	1,282,096,839	1,256,561,776	25,535,063	45,213,945
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	3,400,563,901	1,256,608,581	2,143,955,320	2,097,275,811

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

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$111,669,020,262 less \$ included in Line 6.3 (including \$124,636,010 Modco Reserve)	111,669,020,262	109,391,085,184
2. Aggregate reserve for accident and health contracts (including \$90,888,075 Modco Reserve)	2,829,173,344	2,794,862,457
3. Liability for deposit-type contracts (including \$ Modco Reserve)	12,318,766,262	11,574,147,866
4. Contract claims:		
4.1 Life	322,167,910	340,468,688
4.2 Accident and health	23,692,692	22,534,817
5. Policyholders' dividends \$10,133,960 and coupons \$ due and unpaid	10,133,960	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)	1,634,975,772	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 \$11,476,745 accident and health premiums	42,095,910	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	12,500,571	9,612,909
9.3 Other amounts payable on reinsurance, including \$8,077,328 assumed and \$10,572,352 ceded	18,649,680	34,416,893
9.4 Interest Maintenance Reserve		4,863,663
10. Commissions to agents due or accrued-life and annuity contracts \$39,344,867 , accident and health \$321,332 and deposit-type contract funds \$11,079,041	50,745,240	33,289,525
11. Commissions and expense allowances payable on reinsurance assumed	4,912,201	5,176,675
12. General expenses due or accrued	986,081,229	1,120,711,796
13. Transfers to Separate Accounts due or accrued (net) (including \$(174,251,659) accrued for expense allowances recognized in reserves, net of reinsured allowances)	(187,150,516)	(188,589,116)
14. Taxes, licenses and fees due or accrued, excluding federal income taxes	50,150,765	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	308,562,399	147,178,617
17. Amounts withheld or retained by company as agent or trustee	36,321,770	31,994,760
18. Amounts held for agents' account, including \$ agents' credit balances	316,154,825	301,711,951
19. Remittances and items not allocated	500,399,672	(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	182,497,593	183,613,798
22. Borrowed money \$249,906,507 and interest thereon \$	249,906,507	249,940,070
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	3,314,283,623	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	(13,749,505)	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	6,062,959,447	6,014,042,701
24.09 Payable for securities	533,920,169	168,191,017
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	8,952,081,350	9,281,690,021
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	150,229,253,132	146,052,119,164
27. From Separate Accounts Statement	66,135,953,924	62,194,856,505
28. Total liabilities (Lines 26 and 27)	216,365,207,056	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	2,267,384,585	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)	13,129,007,438	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 \$6,020 in Separate Accounts Statement)	15,399,642,023	15,423,489,956
38. Totals of Lines 29, 30 and 37	15,399,642,023	15,423,489,956
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	231,764,849,079	223,670,465,625
DETAILS OF WRITE-INS		
2501. Repurchase agreements	4,241,437,615	4,735,731,002
2502. Derivative collateral	2,908,673,904	2,839,407,087
2503. Derivative accrued interest	1,693,714,307	1,626,497,813
2598. Summary of remaining write-ins for Line 25 from overflow page	108,255,524	80,054,119
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	8,952,081,350	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	9,652,377,715	10,011,649,198	21,408,422,772
2. Considerations for supplementary contracts with life contingencies	10,076,768	14,472,415	23,549,023
3. Net investment income	3,400,187,792	3,005,232,993	6,198,498,167
4. Amortization of Interest Maintenance Reserve (IMR)	58,183,765	65,475,127	135,288,595
5. Separate Accounts net gain from operations excluding unrealized gains or losses	1,003,286	1,997	3,135
6. Commissions and expense allowances on reinsurance ceded	57,797,932	48,975,529	398,451,052
7. Reserve adjustments on reinsurance ceded	11,230,105	9,052,436	82,715,440
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts	183,278,455	175,999,697	355,790,536
8.2 Charges and fees for deposit-type contracts			
8.3 Aggregate write-ins for miscellaneous income	305,988,356	199,274,221	446,735,033
9. Totals (Lines 1 to 8.3)	13,680,124,174	13,530,133,613	29,049,453,753
10. Death benefits	894,204,494	855,270,099	1,691,839,821
11. Matured endowments (excluding guaranteed annual pure endowments)	8,592,927	9,168,791	22,098,524
12. Annuity benefits	979,256,722	835,934,274	1,716,610,953
13. Disability benefits and benefits under accident and health contracts	188,116,817	179,692,486	364,195,418
14. Coupons, guaranteed annual pure endowments and similar benefits			
15. Surrender benefits and withdrawals for life contracts	7,854,597,146	6,235,698,120	14,003,404,091
16. Group conversions			
17. Interest and adjustments on contract or deposit-type contract funds	156,044,115	154,035,189	313,262,892
18. Payments on supplementary contracts with life contingencies	6,095,322	5,579,814	11,491,950
19. Increase in aggregate reserves for life and accident and health contracts	2,326,957,309	4,175,532,226	9,611,871,345
20. Totals (Lines 10 to 19)	12,413,864,852	12,450,910,999	27,734,774,994
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	446,459,656	390,587,387	835,574,160
22. Commissions and expense allowances on reinsurance assumed	50,399,584	51,386,765	102,861,238
23. General insurance expenses	1,389,923,415	952,777,732	2,242,669,265
24. Insurance taxes, licenses and fees, excluding federal income taxes	121,218,131	113,317,228	237,373,881
25. Increase in loading on deferred and uncollected premiums	(11,922,752)	(10,156,232)	43,039,144
26. Net transfers to or (from) Separate Accounts net of reinsurance	(1,190,576,173)	(8,907,080)	(2,224,883,854)
27. Aggregate write-ins for deductions	(392,486,981)	(792,737,069)	(1,355,695,597)
28. Totals (Lines 20 to 27)	12,826,879,732	13,147,179,730	27,615,713,231
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	853,244,442	382,953,883	1,433,740,522
30. Dividends to policyholders	760,534,077	796,392,495	1,565,630,560
31. Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)	92,710,365	(413,438,612)	(131,890,038)
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	(127,469,714)	(187,194,581)	(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)	220,180,079	(226,244,031)	194,528,862
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ (143,395,193) (excluding taxes of \$ (11,526,516) transferred to the IMR)	(315,362,475)	71,351,147	(208,411,773)
35. Net income (Line 33 plus Line 34)	(95,182,396)	(154,892,884)	(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)	(95,182,396)	(154,892,884)	(13,882,911)
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (95,092,071)	(197,708,438)	1,903,054,791	1,104,826,359
39. Change in net unrealized foreign exchange capital gain (loss)	410,926,113	(158,031,857)	(440,578,518)
40. Change in net deferred income tax	2,439,356	59,523,566	247,381,944
41. Change in nonadmitted assets	(23,928,599)	(129,357,152)	(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	(136,275,254)	(516,680,499)	(360,870,009)
45. Change in treasury stock			
46. Surplus (contributed to) withdrawn from Separate Accounts during period	10,136,548	80,460	137,379
47. Other changes in surplus in Separate Accounts Statement	(11,136,701)	156,435	22,620
48. Change in surplus notes	35,453,985	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	(18,572,547)	(21,833,860)	230,615,792
54. Net change in capital and surplus for the year (Lines 37 through 53)	(23,847,933)	982,312,417	440,957,819
55. Capital and surplus, as of statement date (Lines 36 + 54)	15,399,642,023	15,964,844,554	15,423,489,956
DETAILS OF WRITE-INS			
08.301. Management and administrative fees	153,105,726	76,812,851	212,191,043
08.302. Change in corporate owned life insurance	74,537,048	37,927,067	58,457,767
08.303. Revenue sharing	72,390,699	73,525,948	151,195,772
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	5,954,883	11,008,355	24,890,451
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	305,988,356	199,274,221	446,735,033
2701. Change in reserves due to reinsurance agreement	(393,600,425)	(796,521,254)	(1,509,796,199)
2702. Reinsurance ceded adjustment	(10,007,151)		189,419,444
2703. Market value adjustment transfer	(7,969,300)	(7,386,222)	(64,542,484)
2798. Summary of remaining write-ins for Line 27 from overflow page	19,089,895	11,170,407	29,223,642
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	(392,486,981)	(792,737,069)	(1,355,695,597)
5301. Reinsurance ceded adjustment	(10,007,151)		189,419,444
5302. Other changes in surplus	(8,565,396)	(21,833,860)	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)	(18,572,547)	(21,833,860)	230,615,792

STATEMENT AS OF JUNE 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	9,529,247,824	10,040,063,440	20,433,595,404
2. Net investment income	3,084,148,883	2,932,928,114	6,393,738,365
3. Miscellaneous income	456,631,218	413,253,910	1,251,485,821
4. Total (Lines 1 to 3)	13,070,027,925	13,386,245,464	28,078,819,590
5. Benefit and loss related payments	10,071,884,956	8,197,344,557	17,832,334,133
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(1,861,783,831)	(21,975,775)	(2,282,031,154)
7. Commissions, expenses paid and aggregate write-ins for deductions	1,587,448,148	808,647,449	1,844,829,215
8. Dividends paid to policyholders	724,618,689	764,491,155	1,697,939,764
9. Federal and foreign income taxes paid (recovered) net of \$ (54,095,468) tax on capital gains (losses)	107,180,367	(226,543,390)	(352,810,012)
10. Total (Lines 5 through 9)	10,629,348,329	9,521,963,996	18,740,261,946
11. Net cash from operations (Line 4 minus Line 10)	2,440,679,596	3,864,281,468	9,338,557,644
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	11,554,365,885	6,435,369,782	14,659,729,714
12.2 Stocks	427,096,162	216,544,888	651,548,869
12.3 Mortgage loans	1,067,467,235	1,633,776,165	3,846,629,207
12.4 Real estate	109,344,565	3,986,096	59,477,126
12.5 Other invested assets	586,622,467	367,546,777	907,794,485
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	6,392,181	(18,252,807)	(38,360,762)
12.7 Miscellaneous proceeds	(333,587,901)	395,948,025	460,436,688
12.8 Total investment proceeds (Lines 12.1 to 12.7)	13,417,700,594	9,034,918,926	20,547,255,327
13. Cost of investments acquired (long-term only):			
13.1 Bonds	14,723,611,602	11,644,318,071	21,393,094,405
13.2 Stocks	469,372,249	900,512,955	1,877,459,425
13.3 Mortgage loans	2,089,081,299	1,419,914,159	3,504,567,522
13.4 Real estate	97,457,462	87,825,639	200,908,436
13.5 Other invested assets	641,783,806	827,102,826	1,568,129,204
13.6 Miscellaneous applications	(57,793,192)	(18,456,264)	511,793,079
13.7 Total investments acquired (Lines 13.1 to 13.6)	17,963,513,226	14,861,217,386	29,055,952,071
14. Net increase (or decrease) in contract loans and premium notes	291,407,486	207,527,275	647,665,084
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(4,837,220,118)	(6,033,825,735)	(9,156,361,828)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	35,453,985	293,417	293,417
16.2 Capital and paid in surplus, less treasury stock			
16.3 Borrowed funds	(71,563)	10,577,024	(26,916,744)
16.4 Net deposits on deposit-type contracts and other insurance liabilities	668,332,727	277,743,191	755,330,761
16.5 Dividends to stockholders			
16.6 Other cash provided (applied)	(378,594,224)	1,749,948,121	(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)	325,120,925	2,038,561,753	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)	(2,071,419,597)	(130,982,514)	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)	1,654,516,683	2,917,662,596	3,725,936,280

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

20.0001. Bond conversions and refinancing	398,684,983	157,105,141	419,261,516
20.0002. Bonds received as consideration for a group annuity contract	270,503,724		905,045,062
20.0003. Transfer of affiliated common stock	102,800,714		
20.0004. Other invested assets to bonds	94,448,349	2,582,572	79,797,836
20.0005. Change in market value of COLI	74,755,442		58,874,190
20.0006. Stock conversions	2,774,147	1,362,817	22,066,669
20.0007. Dividend reinvestment	286,843	1,471,112	28,860,653
20.0008. Other invested assets to stock	179,934	100,262,083	105,936,231
20.0009. Other invested assets contributed to subsidiary		682,102,736	682,102,736
20.0010. Transfer of mortgage loan to other than invested assets		26,550,000	98,392,208

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

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

20.0011. Bank loan rollovers .....	.....	4,591,260	4,591,260
20.0012. Net investment income payment in-kind bonds .....	.....	1,622,899	3,999,576
20.0013. Interest capitalization for long-term debt .....	.....	1,062,428	1,844,174
20.0014. Acquisition of affiliated common stock for bonds and mortgage loans .....	.....		3,286,679,337
20.0015. Premium recognized for a group annuity contract .....	.....		905,045,062
20.0016. 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	3,109,529,564	2,827,817,993	6,406,227,881
3. Ordinary individual annuities	1,070,502,913	1,114,301,130	2,428,270,878
4. Credit life (group and individual)			
5. Group life insurance	592,107,433	798,656,319	1,485,245,423
6. Group annuities	4,251,815,706	4,543,681,056	10,266,489,470
7. A & H - group	39,293	79,305	160,081
8. A & H - credit (group and individual)			
9. A & H - other	360,526,846	349,646,622	709,494,930
10. Aggregate of all other lines of business			
11. Subtotal	9,384,521,755	9,634,182,425	21,295,888,663
12. Deposit-type contracts	2,850,763,509	1,870,223,236	3,890,495,490
13. Total	12,235,285,264	11,504,405,661	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	\$ (95,182,396)	\$ (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>(95,182,396)</u>	\$ <u>(13,882,911)</u>
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 15,399,642,023	\$ 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>15,399,642,023</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 six months ended June 30, 2017, corrections of prior year errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		Correction of Asset or Liability Balances
	Prior Years Net Income	Current Year Surplus	
Partnerships and limited liability companies	\$ -	\$ (1,477,867)	\$ (1,477,867)
Cash, cash equivalents and short-term investments	(8,909,401)	(8,909,401)	(8,909,401)
Other than invested assets	(958,378)	(958,378)	(958,378)
Policyholders' reserves	5,280,979	5,280,979	(5,280,979)
Total	\$ (4,586,800)	\$ (6,064,667)	\$ (16,626,625)

Of the \$6,064,667 decrease to surplus for prior year errors, \$4,586,800 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 six months ended June 30, 2016, corrections of prior year errors were recorded in surplus, net of tax:

	Increase (Decrease) to:		Correction of Asset or Liability Balances
	Prior Years Net Income	Current Year Surplus	
Federal income tax receivable	\$ (19,361,709)	\$ (19,361,709)	\$ 19,361,709
Partnerships and limited liability companies	-	(5,286,659)	5,286,659
Fees and other income	(2,472,150)	(2,472,150)	2,472,150
Total	\$ (21,833,859)	\$ (27,120,518)	\$ 27,120,518

Of the \$27,120,518 decrease to surplus for prior year errors, \$21,833,859 was recorded as prior period adjustments and \$5,286,659 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. 51, *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. 51, *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 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.

Note 3 – Business Combinations and Goodwill - No change

Note 4 – Discontinued Operations - No change

Note 5 – Investments

- Mortgage loans, including mezzanine real estate loans - No change
- Debt restructuring - No change
- Reverse mortgages - No change

NOTES TO FINANCIAL STATEMENTS

d. Loan-backed and structured securities:

(1) Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.

(2) The following contains loan-backed and structured securities that recognized OTTI classified on the following bases for recognizing OTTI:

	(1) Amortized Cost Basis Before OTTI	(2) OTTI Recognized in Loss		(3) Fair Value 1-(2a+2b)
		(2a) Interest	(2b) Non-interest	
OTTI recognized in the first quarter				
a. Intent to sell	\$ -	\$ -	\$ -	\$ -
b. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	42,292,770	-	429,458	41,863,312
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	40,538,551	-	729,596	39,808,955
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	-	-	-	-
i. Total third quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
OTTI recognized in the fourth quarter				
j. Intent to sell	\$ -	\$ -	\$ -	\$ -
k. Inability or lack of intent to retain the investment in the security for a period of time sufficient to recover the amortized cost basis	-	-	-	-
l. Total fourth quarter	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
m. Annual aggregate total		<u>\$ -</u>	<u>\$ 1,159,054</u>	

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

NOTES TO FINANCIAL STATEMENTS

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

CUSIP	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
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
Totals	\$ 82,831,321.00	\$ 81,672,267.39	\$ (1,159,053.61)	\$ 81,672,267.39	\$ 117,604,832.08	

- (4) As of June 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	\$ (24,664,917)
2. 12 months or longer	\$ (65,907,247)
b. The aggregate related fair value of securities with unrealized losses:	
1. Less than 12 months	\$ 3,377,263,271
2. 12 months or longer	\$ 2,474,785,484

- (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.

NOTES TO FINANCIAL STATEMENTS

k. Structured notes:

A structured note is a direct debt issuance by a corporation, municipality, or government entity, ranking pari-passu with the issuer's other debt issuance of equal seniority where either: (a) the coupon and/or principal payments are linked, in whole or in part, to prices or payment streams from index or indices, or assets deriving their value from other than the issuer's credit quality, or (b) the coupon and/or principal payments are leveraged by a formula that is different from either a fixed coupon, or a non-leveraged floating rate coupon linked to an interest rate index, including but not limited to the London Interbank Offered Rate (LIBOR) or the prime rate. As structured notes are issuer obligations without a trust, they are within the scope of SSAP No. 26, "Bonds, Excluding Loan-backed and Structured Securities" (SSAP No. 26). Structured notes are different than the asset backed structured securities, which are accounted for under SSAP No. 43R, "Revised - Loan-Backed and Structured Securities" (SSAP No. 43R), as they lack either a trust or assets backing them. The disclosure below allows regulators to assess the volume of activity in structured notes and to determine whether additional accounting or reporting revisions, such as valuation and risk-based capital, are needed. To satisfy this request, the Company is required to separately identify structured notes, on a CUSIP basis and provide information by CUSIP for actual cost, fair value, book/adjusted carrying value, and whether the structured note is a mortgage-referenced security. The following sets forth the actual cost, fair value and carrying value of structured notes as of June 30, 2017:

CUSIP Identification	Actual Cost	Fair Value	Book / Adjusted Carrying Value	Mortgage-Referenced Security (YES/NO)
30711XBE3	\$ 1,312,631	\$ 1,315,289	\$ 1,312,631	YES
3137G0EQ8	2,055,131	2,057,856	2,055,131	YES
3137G0HQ5	3,457,344	3,472,847	3,457,344	YES
391164AF7	8,467,560	8,342,597	8,302,430	NO
912810FR4	4,944,283	6,236,510	4,867,399	NO
912810PS1	1,874,118	2,674,642	1,886,050	NO
912810RF7	67,974,258	79,890,667	68,157,696	NO
912828GX2	1,982,647	2,066,199	1,807,755	NO
G5284FAA3	77,879,089	72,937,700	78,568,738	NO
P7794GAH5	1,262,834	1,264,746	1,269,831	NO
Total	\$ 171,209,895	\$ 180,259,053	\$ 171,685,005	XXX

l. 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	33	33	267,223,296	295,630,424	271,835,781	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	14,070,118	13,678,407
(6) Preferred Stock - FV	-	-	-	-	-	-
(7) Total (1+2+3+4+5+6)	35	35	\$279,865,296	308,272,424	\$285,905,899	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 \$403,220,611 through the six months ended June 30, 2017 and \$200,000,000 through the six months ended June 30, 2016.

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.

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 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.

The Company contributed additional capital of \$20,495,920 to MMHLLC through the six months ended June 30, 2017 and \$668,853,106 through the six months ended June 30, 2016.

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 \$896,147,824 as of June 30, 2017.

(2) FHLB Boston capital stock

a. Aggregate totals:

		June 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	52,500,000	52,500,000	-
	(d) Excess Stock	-	-	-
	(e) Aggregate Total	\$ 77,500,000	\$ 77,500,000	\$ -
	(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:

		Six Months Ended June 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 June 30, 2017:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,513,451,039	\$ 1,226,477,110	\$ 1,103,721,463

2. Current year general account:

	Fair Value	Carrying Value	Aggregate Total Borrowing
Total collateral pledged	\$ 1,513,451,039	\$ 1,226,477,110	\$ 1,103,721,463

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	\$ 1,224,828,740	\$ 1,126,084,090	\$ 1,103,883,820

b. Maximum amount pledged for the six months ended June 30, 2017:

1. Current year total general and separate accounts:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,546,806,705	\$ 1,252,604,514	\$ 1,107,351,703

2. Current year general account:

	Fair Value	Carrying Value	Amount Borrowed at Time of Maximum Collateral
Maximum collateral pledged	\$ 1,546,806,705	\$ 1,252,604,514	\$ 1,107,351,703

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	\$ 1,224,686,104	\$ 1,126,965,711	\$ 1,107,803,111

NOTES TO FINANCIAL STATEMENTS

(4) Borrowing from FHLB:

a. Amount:

1. Current year:

June 30, 2017

	1 Total 2+3	2 General Account	3 Separate Account	4 Funding Agreements Reserves Established
(a) Debt	\$ -	\$ -	\$ -	\$ -
(b) Funding agreements	1,103,721,463	1,103,721,463	-	1,103,721,463
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,103,721,463</u>	<u>\$ 1,103,721,463</u>	<u>\$ -</u>	<u>\$ 1,103,721,463</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	1,103,753,115	1,103,753,115	-	1,103,753,115
(c) Other	-	-	-	-
(d) Aggregate total	<u>\$ 1,103,753,115</u>	<u>\$ 1,103,753,115</u>	<u>\$ -</u>	<u>\$ 1,103,753,115</u>

b. Maximum Amount:

Six Months Ended June 30, 2017

	1 Total 2+3	2 General Account	3 Separate Account
1. Debt	\$ -	\$ -	\$ -
2. Funding	1,107,351,703	1,107,351,703	-
3. Other	-	-	-
4. Aggregate	<u>\$ 1,107,351,703</u>	<u>\$ 1,107,351,703</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

Six Months Ended June 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	\$ 62,974,535	\$ 42,587,519	\$ 6,100,000	\$ 5,100,000	\$ -	\$ -
b. Interest cost	56,158,831	56,554,892	6,350,000	5,850,000	-	-
c. Expected return on plan assets	(73,714,751)	(71,991,256)	(50,000)	(50,000)	-	-
d. Transition asset or obligation	-	-	-	-	-	-
e. Gains and losses	32,599,023	35,142,700	900,000	1,600,000	-	-
f. Prior service cost or (credit) settlement or curtailment	1,561,342	1,561,342	(2,750,000)	(2,750,000)	-	-
h. Total net periodic benefit cost	<u>\$ 79,578,980</u>	<u>\$ 63,855,197</u>	<u>\$ 10,550,000</u>	<u>\$ 9,750,000</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

(1-3) No change

(4) The Company recorded dividends, recorded in net investment income, from MMHLLC of \$403,000,000 through the six months ended June 30, 2017 and \$200,000,000 through the six months ended June 30, 2016.

(5-10) 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	\$ 2,382,813	\$ 447,968,750	11/15/2023
03/01/1994	7.500%	100,000,000	100,000,000	3,750,000	2,500,000	172,500,000	03/01/2024
05/12/2003	5.625%	250,000,000	249,391,458	7,031,250	1,757,813	196,992,188	05/15/2033
06/01/2009	8.875%	310,000,000	307,078,508	26,013,611	2,292,708	525,232,361	06/01/2039
01/17/2012	5.375%	400,000,000	398,911,364	10,750,000	1,791,667	115,502,778	12/01/2041
04/15/2015	4.500%	500,000,000	491,321,035	11,250,000	4,687,500	45,000,000	04/15/2065
03/20/2017	4.500%	475,000,000	470,740,375	-	6,594,583	-	04/01/2077
Total		\$ 2,285,000,000	\$ 2,267,442,740	\$ 68,326,111	\$ 22,007,083	\$ 1,503,196,076	

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 June 30, 2017, the unapproved interest was \$22,007,083. Through June 30, 2017, the Company paid cumulative interest of \$1,503,196,076 on surplus notes. Interest of \$68,326,111 was approved and paid during the six months ended June 30, 2017. Interest of \$151,187,500 was approved and paid during the year ended December 31, 2016.

Note 14 – Liabilities, Contingencies and Assessments

a. Contingent commitments - No change

b. Assessments - No change

c. Gain contingencies - No change

d. Claims related to extra contractual obligations - No change

e. All other contingencies:

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

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 March 2015, the district court granted the plaintiffs' motion to certify a class and to appoint class representatives and class counsel. In December 2015, the appeals court denied defendants' petition to appeal the district court's class certification order. Motions for summary judgment are pending. Mediation occurred in January 2017, which did not result in a settlement. The expected settlement does not have a significant financial impact on the Company.

NOTES TO FINANCIAL STATEMENTS

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 May 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.

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 July 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 first quarter ended June 30, 2017 that were reacquired within 30 days of the sale date.

NOTES TO FINANCIAL STATEMENTS

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

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

Note 20 – Fair Value Measurements

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

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

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

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

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

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

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

The fair value of 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:

	June 30, 2017			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Bonds:				
States, territories and possessions	\$ -	\$ 4,740,000	\$ -	\$ 4,740,000
Special revenue	-	610,000	-	610,000
Industrial and miscellaneous	-	7,391,739	46,820,196	54,211,935
Parent, subsidiaries and affiliates	-	37,010,706	57,416,790	94,427,496
Preferred stocks	2,891,239	-	2,829,455	5,720,694
Common stock - subsidiaries and affiliates	494,634,520	-	104,800,371	599,434,891
Common stock - unaffiliated	914,093,769	-	283,946,783	1,198,040,552
Derivatives:				
Interest rate swaps	-	7,951,624,861	-	7,951,624,861
Options	-	699,000,581	-	699,000,581
Currency swaps	-	683,490,284	-	683,490,284
Forward contracts	-	8,166,813	-	8,166,813
Credit default swaps	-	1,251,712	-	1,251,712
Separate account assets	42,692,770,500	22,689,590,851	752,598,535	66,134,959,886
Total financial assets carried at fair value	\$ 44,104,390,028	\$ 32,082,877,547	\$ 1,248,412,130	\$ 77,435,679,705
Financial liabilities:				
Derivatives:				
Interest rate swaps	\$ -	\$ 5,832,044,099	\$ -	\$ 5,832,044,099
Options	-	7,782,198	-	7,782,198
Currency swaps	-	146,231,955	-	146,231,955
Forward contracts	-	74,651,056	-	74,651,056
Credit default swaps	-	464,201	-	464,201
Total financial liabilities carried at fair value	\$ -	\$ 6,061,173,509	\$ -	\$ 6,061,173,509

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 June 30, 2017, \$298,342,115 of equity securities 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		Transfers ⁽¹⁾						Balance	
	as of	as of	Gains		Gains in		Gains in		as of	
	01/01/2017	12/31/2016	(Losses) in	Surplus	Purchases	Issuances	Sales	Settlements	06/30/2017	
Financial assets:										
Bonds:										
Industrial and miscellaneous	\$ 56,833,539	\$ 8,864,289	\$ (20,501,242)	\$ 934,974	\$ 4,342,172	\$ 206,229	\$ -	\$ (1,178,610)	\$ (2,681,155)	\$ 46,820,196
Parent, subsidiaries and affiliates	51,963,109	-	-	-	5,453,681	-	-	-	-	57,416,790
Preferred stock	2,734,341	95,114	-	-	-	-	-	-	-	2,829,455
Common stock - subsidiaries and affiliates	63,196,191	11,795,670	-	-	29,808,510	-	-	-	-	104,800,371
Common stock - unaffiliated	188,576,330	182,751,946	(125,869,636)	(154,419)	46,015,465	29,675,444	-	(2,286,332)	(34,762,015)	283,946,783
Separate account assets	737,948,300	-	-	31,531,120	-	38,125,785	-	(53,708,961)	(1,297,709)	752,598,535
Total financial assets	\$ 1,101,251,810	\$ 203,507,019	\$ (146,370,878)	\$ 32,311,675	\$ 85,619,828	\$ 68,007,458	\$ -	\$ (57,173,903)	\$ (38,740,879)	\$ 1,248,412,130

⁽¹⁾Level 3 transfers in are assets that are consistently carried at fair value but have had a level change. The common stock unaffiliated assets were transferred from Level 2 to Level 3 due to a change in the observability of pricing inputs.

NOTES TO FINANCIAL STATEMENTS

	Balance		Gains		(Losses)		Balance			
	as of		(Losses) in		Gains in		as of			
	01/01/2016	Transfers ⁽¹⁾	Net Income	Surplus	Purchases	Issuances	Sales	Settlements	12/31/2016	
	In	Out								
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)	\$ 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)	(19,939,048)	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 in are 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.

- 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.
- 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.

- 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.
- 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:

		June 30, 2017					Not Practicable
		Aggregate	Admitted				(Carrying Value)
		Fair Value	Assets	Level 1	Level 2	Level 3	
Financial assets:							
Bonds:							
U. S. government and agencies	\$	7,535,044,977	\$ 6,943,874,085	\$ -	\$ 7,531,534,484	\$ 3,510,493	\$ -
All other governments		1,131,496,360	1,072,635,369	-	1,060,430,561	71,065,799	-
States, territories and possessions		691,170,038	638,901,766	-	691,170,038	-	-
Political subdivisions		526,645,665	487,234,451	-	526,645,665	-	-
Special revenue		6,314,485,688	5,646,541,744	-	6,304,023,436	10,462,252	-
Industrial and miscellaneous		69,945,975,717	67,274,056,683	-	41,861,406,754	28,084,568,963	-
Parent, subsidiaries and affiliates		5,910,837,375	5,787,605,493	-	478,922,190	5,431,915,185	-
Preferred stocks		499,327,833	479,367,488	42,801,534	-	456,526,299	-
Common stocks - subsidiaries and affiliates ⁽¹⁾							
		599,434,891	599,434,891	494,634,520	-	104,800,371	-
Common stocks - unaffiliated		1,198,040,552	1,198,040,552	914,093,769	-	283,946,783	-
Mortgage loans - commercial		20,823,990,120	20,251,235,845	-	-	20,823,990,120	-
Mortgage loans - residential		1,782,649,548	1,816,603,780	-	-	1,782,649,548	-
Cash, cash equivalents and short-term investments							
		1,654,516,683	1,654,516,683	103,261,665	1,551,255,018	-	-
Derivatives:							
Interest rate swaps		8,566,412,371	7,951,624,860	-	8,566,412,371	-	-
Options		699,000,581	699,000,581	-	699,000,581	-	-
Currency swaps		683,490,284	683,490,284	-	683,490,284	-	-
Forward contracts		15,052,375	8,166,813	-	15,052,375	-	-
Credit default swaps		44,927,921	38,559,366	-	44,927,921	-	-
Separate account assets		66,134,959,886	66,134,959,886	42,692,770,500	22,689,590,851	752,598,535	-
Financial liabilities:							
Repurchase agreements		4,233,997,723	4,233,997,723	-	4,233,997,723	-	-
Commercial paper		249,906,507	249,906,507	-	249,906,507	-	-
Guaranteed interest contracts		8,042,548,810	8,037,267,240	-	-	8,042,548,810	-
Group annuity contracts and other deposits							
		18,611,043,663	18,056,501,642	-	-	18,611,043,663	-
Individual annuity contracts		7,982,780,969	6,556,921,926	-	-	7,982,780,969	-
Supplementary contracts		1,164,907,828	1,163,742,451	-	-	1,164,907,828	-
Derivatives:							
Interest rate swaps		5,861,499,141	5,832,044,099	-	5,861,499,141	-	-
Options		7,782,198	7,782,198	-	7,782,198	-	-
Currency swaps		146,231,955	146,231,955	-	146,231,955	-	-
Forward contracts		74,423,566	74,651,056	-	74,423,566	-	-
Credit default swaps		2,986,413	2,250,139	-	2,986,413	-	-

⁽¹⁾Common stocks - subsidiaries and affiliates do not include unconsolidated subsidiaries, which had a statutory carrying value of \$13,612,882,456.

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 June 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 \$2,582,348,916 as of June 30, 2017 and \$2,675,250,656 as of December 31, 2016. Operating results, less dividend distributions, 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 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.

NOTES TO FINANCIAL STATEMENTS

Insurance and underwriting risks

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

	June 30, 2017			Six Months Ended June 30, 2017
	Actual Cost	Carrying Value	Fair Value	OTTI
Alt-A:				
a. Residential mortgage-backed securities	\$ 301,467,384	\$ 324,741,705	\$ 393,505,110	\$ 46,177
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	22,054,826	23,415,702	27,951,551	19,015
f. Other assets	-	-	-	-
g. Total	<u>\$ 323,522,210</u>	<u>\$ 348,157,407</u>	<u>\$ 421,456,661</u>	<u>\$ 65,192</u>

	June 30, 2017			Six Months Ended June 30, 2017
	Actual Cost	Carrying Value	Fair Value	OTTI
Subprime:				
a. Residential mortgage-backed securities	\$ 261,368,824	\$ 301,100,093	\$ 361,617,717	\$ 106,957
b. Commercial mortgage-backed securities	-	-	-	-
c. Collateralized debt obligations	-	-	-	-
d. Structured securities	-	-	-	-
e. Equity investments in SCAs *	11,898,871	13,016,882	14,454,317	9,778
f. Other assets	-	-	-	-
g. Total	<u>\$ 273,267,695</u>	<u>\$ 314,116,975</u>	<u>\$ 376,072,034</u>	<u>\$ 116,735</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.

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

g. Retained asset accounts - No change

NOTES TO FINANCIAL STATEMENTS

Note 22 – Events Subsequent

Management of the Company has evaluated subsequent events through August 10, 2017, the date the financial statements were available to be issued.

In July 2017, the Company contributed its ownership in certain partnerships and LLCs with a carrying value of approximately \$676,660,751 to IRLLC, a wholly-owned subsidiary of the Company, 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 the Company of \$700,000,000.

No other 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: \$ 1,338,159,724
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 | \$ 5,660,285,718 |
| 14.22 Preferred Stock | \$ | \$ |
| 14.23 Common Stock | \$ 13,670,494,513 | \$ 13,647,481,481 |
| 14.24 Short-Term Investments | \$ | \$ |
| 14.25 Mortgage Loans on Real Estate | \$ | \$ |
| 14.26 All Other | \$ 3,484,857,931 | \$ 3,569,595,692 |
| 14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | \$ 23,663,608,040 | \$ 22,877,362,891 |
| 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 JUNE 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 06/30/2017, 81 issues for 63 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 \$578,811,539 or 0.56% 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	\$ 1,704,953
1.12	Residential Mortgages	\$ 1,816,603,779
1.13	Commercial Mortgages	\$ 20,249,530,893
1.14	Total Mortgages in Good Standing	<u>\$ 22,067,839,625</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>\$ 22,067,839,625</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	69.391 %
2.2	A&H cost containment percent	1.200 %
2.3	A&H expense percent excluding cost containment expenses	68.191 %
3.1	Do you act as a custodian for health savings accounts?	Yes [] No [X]
3.2	If yes, please provide the amount of custodial funds held as of the reporting date	\$
3.3	Do you act as an administrator for health savings accounts?	Yes [] No [X]
3.4	If yes, please provide the balance of the funds administered as of the reporting date	\$

SCHEDULE S - CEDED REINSURANCE

Showing All New Reinsurance Treaties - Current Year to Date

1 NAIC Company Code	2 ID Number	3 Effective Date	4 Name of Reinsurer	5 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
.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		

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
JFIN Fund V 2017 LLC	None		Delaware
JFIN Fund III LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
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
JFIN CLO 2015-II Ltd.*	None		Cayman Islands
JFIN Revolver CLO Ltd.	None		Cayman Islands
JFIN Revolver CLO 2014 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2015 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2015-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN CLO 2016 Ltd.	None		Cayman Islands
JFIN CLO 2017 Ltd	None		Cayman Islands
MassMutual Retirement Services, LLC	04-1590850		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Mezzanine Investor, LLC	04-1590850		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MMC Equipment Finance LLC	04-1590850		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2009-A	27-1379258		Delaware
MMAF Equipment Finance LLC 2011-A	45-2589019		Delaware
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MSC Holding Company, LLC	45-4376777		Delaware
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
First Mercantile Trust Company	62-0951563		Tennessee
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures LLC	47-1296410		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware

*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>
Society of Grownups, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
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 GPC GP S.à. r.l.	None		Luxembourg
Almack Mezzanine GP III Limited	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Almack Mezzanine Fund II Limited	None		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Babson European Direct Lending 1 GP LLP	None		United Kingdom
Barings Advisers (Japan) KK	None		Japan
Barings Multifamily Capital Holdings LLC	None		Delaware
Barings Multifamily Capital LLC	None		Michigan
Barings Multifamily Capital Corporation	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
Barings Real Estate Advisers Japan KK	None		Japan
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate Advisers GmbH	98-1194368		Germany
MassMutual Baring Holding LLC	04-1590850		Delaware
Baring North America LLC	98-0241935		Massachusetts
MassMutual Holdings (Bermuda) Limited	None		Bermuda
Baring Asset Management Limited	98-0241935		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Asset Management GmbH	98-0465031		Germany
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda

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

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Baring 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
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
Barings Investment Advisers (Hong Kong) Limited	None		Hong Kong, Special Administrative Region of China
Alchemy Copyrights, LLC.*	47-2642354		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
Solar Acquisition Holding, LLC	None		Delaware
Sweet Tree Holdings 1, LLC	46-3123110		Delaware
Tamiami Citrus, LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
U.S. Buyer Broadcasting, LLC	47-1855920		Delaware
U.S. WIG Holdings, LP	46-1500495		Delaware
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
VGS Acquisition Holding, LLC	None		Delaware
WC Aircraft Holdings US II, LLC	46-3378584		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
Lake Jackson LLC	None		Delaware
Loan Strategies Management LLC	04-1590850		Delaware

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

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
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
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

*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>
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
Cornerstone Global REIT Corporation	20-8730751		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	04-1590850		Delaware
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		Delaware
Alexandria Towers Investors LLC	16-1720387		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Almack Mezzanine Fund III LP*	None		United Kingdom
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Barings Emerging Markets Local Debt Fund	None		Ireland
Barings Global Special Situations Credit Fund 1	None		Ireland
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2013-II	98-1128827		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2014-II	None		Cayman Islands
Babson CLO Ltd. 2014-III	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson CLO Ltd. 2016-II	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Babson Euro CLO 2016-I BV	None		Netherlands
Baring Focused EAFE Equity Fund	11-3789446		Delaware
Baring Global Dynamic Asset Allocation Fund	30-0607379		Delaware
Barings Global Energy Infrastructure Fund 1 LP	98-1332384		Cayman Islands
Barings Global Private Loan Fund	None		Luxembourg
Barings North American Private Loan Fund LP	38-4010344		Delaware
Barings RE Credit Strategies VII LP	98-1332384		Delaware

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

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

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Baring International Small Cap Equity Fund	26-4142796		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Benton Street Partners I, L.P.*	98-0536233		Cayman Islands
Benton Street Partners II, L.P.*	98-0536199		Cayman Islands
Braemar Energy Ventures I, L.P. *	None		Delaware
Cambridge Hotel, LLC	06-1614196		Delaware
Cheyenne Mountain Resort LLC	04-1590850		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Cornerstone Core Mortgage Venture I LP	27-1701622		Delaware
Cornerstone Enhanced Mortgage Fund I LP	45-3751572		Delaware
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Duchess VI CLO B.V.	None		United Kingdom
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I, L.P.*	80-0691253		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Kazwell Realty Partners LLC	20-3887968		Delaware
Marco Hotel LLC	46-4255307		Delaware
MM Debt Participations LLC	81-3000420		Delaware
MML O'Hare Hotel LLC	26-3799762		Delaware
Oakley Grove Development LLC	20-3887968		Delaware
Old Pasco Properties LLC	20-3887968		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Riva Portland LLC	30-0713071		Delaware
Rockall CLO B.V.	None		United Kingdom
Rockville Town Center LLC	54-2055778		Virginia
Seattle 1415 Hotel Owner LLC	46-5491311		Delaware
Sedona TFMP Land LLC	04-1590850		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Myrtle Monrovia MM LLC	04-1590850		Delaware
South Pasco Properties LLC	20-3887968		Delaware
Tower Square Capital Partners, L.P.*	04-3722906		Delaware
Tower Square Capital Partners II, L.P.*	30-0336246		Delaware

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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 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
Gateway Mezzanine Partners I Trust	None		Australia
Great Lakes II LLC*	71-1018134		Delaware
Great Lakes LLC*	56-2505390		Delaware
Intermodal Holding II LLC*	46-2344300		Delaware
Somerset Special Opportunities Master Fund LP	None		Cayman Islands
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
12-18 West 55th Street Predevelopment, LLC*	20-2548283		Delaware
50 Liberty LLC*	36-4823011		Delaware
One Harbor Shore LLC*	80-0948028		Delaware
Budapester Strasse LLC	81-4382111		Delaware
CHC/RFP VI Core LLC	04-1590850		Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II LLC	95-4207717		California
Cornerstone Fort Pierce Development LLC*	56-2630592		Delaware
Cornerstone Permanent Mortgage Fund	45-2632610		Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735		Massachusetts
CREA 330 Third LLC*	46-5001122		Delaware
CREA FMF Nashville LLC	46-4367364		Delaware
CREA/LYON West Gateway, LLC*	26-2399532		Delaware
CREA Madison Member LLC	81-0890084		Delaware

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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/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
Ten Fan Pier Boulevard LLC*	None		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Twenty Two Liberty LLC*	35-2484550		Massachusetts
UK LIW Manager LLC	45-4606547		Delaware
UK LIW Member LLC	45-4606547		Delaware
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterford Development Associates	20-2970495		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
WeHo Domain LLC*	46-3122029		Delaware
Willowood Lakeside Master LLC	81-1552222		Delaware
Ygnatio Valley Funding	20-5481477		Delaware
MassMutual Premier Funds:			
MassMutual Barings Dynamic Allocation Fund	45-3168892		Massachusetts
MassMutual Premier Focused International Fund	02-0754273		Massachusetts
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Premier Value Fund	04-3277550		Massachusetts
MassMutual Select Funds:			
MassMutual Select Diversified International Fund	14-1980900		Massachusetts
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Large Cap Value Fund	04-3513019		Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts

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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 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 ESG Revenue ETF	81-3492794		Delaware
Oppenheimer Global ESG Revenue ETF	81-3480754		Delaware
Oppenheimer Global Equity UCITS	None		Ireland
Oppenheimer Global Multi-Asset Growth Fund	47-3676235		Delaware
Oppenheimer Global Multi-Asset Income Fund	47-1714929		Delaware
Oppenheimer Global Value Equity UCITS	None		Ireland
Oppenhemier International Growth & Income Fund	81-3136071		Delaware
Oppenheimer Macquarie Global Infrastructure Fund	81-1080638		Delaware

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STATEMENT AS OF JUNE 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	Massachusetts Mutual 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	100.000	MMLIC		
.0000			04-1590850				MassMutual Trad Private Equity LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Intellectual Property LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
.0000			27-0105644				Jefferies Finance LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		.1
.0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund V 2017 LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							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 JUNE 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)	*
.0000							JFIN CLO 2007 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2012 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2013 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2014 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	70.000	MMLIC		
.0000							JFIN CLO 2014 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	30.000	MMLIC		
.0000							JFIN CLO 2014-11 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN MM CLO 2014 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	44.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	56.000	MMLIC		
.0000							JFIN CLO 2015-11 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	33.000	MMLIC		
.0000							JFIN CLO 2015-11 Ltd.	.CYM	NIA	Apex Credit Partners LLC	Ownership	53.000	MMLIC		
.0000							JFIN Revolver CLO Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2014 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2015 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2015-11 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2016 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017 Ltd.	.CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				MassMutual Retirement Services, LLC	DE	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			45-2569019				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	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	DE	DS	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	Y	
.0000			06-1597528				MassMutual Assignment Company	NC	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		
.0000			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		
.0000			04-1590850		0001399869		MassMutual Capital Partners LLC	DE	DS	MassMutual Holding LLC	Ownership	100.000	MMLIC		

STATEMENT AS OF JUNE 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)	*
.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 Grownups, 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				MM 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			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.a. 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	WI	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							BREAE AIFM LLP	GBR	DS	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate Advisers (Continental Europe) Limited	GBR	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654401				Barings Real Estate Advisers Europe LLP	GBR	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654388				Barings Real Estate Advisers Europe Finance LLP	GBR	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0654412				Barings Real Estate Advisers GmbH	DEU	DS	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-1194368				MassMutual Baring Holding LLC	DE	DS	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Baring North America LLC	MA	DS	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000			98-0241935	2363071	0000932463		MassMutual Holdings (Bermuda) Limited	BMU	DS	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
.0000							Baring Asset Management Limited	GBR	DS	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
.0000			98-0241935				Baring International Investment Limited	GBR	DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457328		0001568131		Baring International Investment Management Holdings	GBR	DS	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457587				Baring International Investment Management Holdings	GBR	DS	Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	GBR	DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0465031				Baring Asset Management GmbH	DEU	DS	Baring Asset Management UK Holdings Limited	Ownership	100.000	MMLIC		
.0000			98-0524271				Baring Asset Management (Asia) Holdings Limited	HKG	DS	Baring Asset Management UK Holdings Limited	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		

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Y/N)	*
.0000			98-0457463				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			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							Barings Australia Holding Company Pty Ltd	.AUS	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0457456				Barings Australia Pty Ltd	.AUS	.DS	Baring Australia Holding Company Pty Ltd.	Ownership	100.000	MMLIC		
.0000							Barings Investment Advisors (Hong Kong) Limited	.HKG	.DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	.NIA	MassMutual Holding LLC	Ownership/Influence	15.100	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.100	MMLIC		
.0000			47-2642354				Alchemy Copyrights, LLC.	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	30.000	MMLIC		
.0000			81-2244465				Chassis Acquisition Holding LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-4258759				CRA Aircraft Holding LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	40.900	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	15.750	MMLIC		
.0000			46-5460309				Red Lake Ventures, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	66.300	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			46-3123110				Sweet Tree Holdings 1, LLC	.DE	.NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	25.600	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		
.0000							U.S. Buyer Broadcasting, LLC	.DE	.NIA	Barings LLC	Influence		MMLIC		
.0000			46-1500495				U.S. WIG Holdings, LP	.DE	.NIA	MassMutual Holding LLC	Ownership/Influence	11.700	MMLIC		
.0000			46-1500495				U.S. WIG Holdings, LP	.DE	.NIA	Barings LLC	Influence		MMLIC		

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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			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.600	MMLIC		
.0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Solar Acquisition Holding, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	39.200	MMLIC		
.0000							Solar Acquisition Holding, LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	33.300	MMLIC		
.0000							VGS Acquisition Holding, LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	18.000	MMLIC		
.0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Wood Creek Capital Management LLC	Management		MMLIC		
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.100	MMLIC		
.0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Wood Creek Capital Management LLC	Management		MMLIC		
.0000							Baring Asset-Based Income Fund (US) GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Babson Capital Floating Rate Income Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850		0001501011		Babson Global Loan Feeder Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CLO Investment Partners GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Energy Infrastructure Advisors, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings TERO Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			98-0536233				Benton Street Advisors, Inc.	CYM	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Great Lakes III GP, LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Lake Jackson LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Loan Strategies Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Mezzco LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			02-0767001				Mezzco II LLC	DE	DS	Barings LLC	Ownership	98.400	MMLIC		
.0000			41-2280126				Mezzco III LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000			80-0920285				Mezzco IV LLC	DE	DS	Barings LLC	Ownership	99.300	MMLIC		
.0000			90-0666326				Mezzco Australia LLC	DE	DS	Barings LLC	Ownership	72.000	MMLIC		
.0000							Mezzco Australia II LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000							Somerset Special Opportunities Management LLC	DE	DS	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Oppenheimer Acquisition Corp.	DE	DS	MassMutual Asset Management Holding LLC	Ownership	97.000	MMLIC		
.0000			84-1149206	2897101			OppenheimerFunds, Inc.	CO	DS	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		
.0000			13-2527171	2679183	0000820031		OppenheimerFunds Distributor, Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			13-2953455		0000276541		Oppenheimer Real Asset Management, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-1106295				OFI Global Institutional, Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			13-4160541	3458125	0001179479		HarbourView Asset Management Corporation	NY	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			22-2697140				OFI Global Trust Company	NY	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			13-3459790	2914875			OFI International, Ltd.	GBR	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000							SNW Asset Management Corporation	DE	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			60-2233720				Seattle Northwest Asset Management LLC	WA	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			25-1951632		0000099782		Trinity Investment Management Corporation	PA	DS	OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
.0000			84-1128397		0000857468		OFI SteelPath, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-1066811		0000276398		Shareholder Services, Inc.	CO	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							VTL Associates, LLC	PA	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000							Index Management Solutions, LLC	PA	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			84-0765063		0001041674		OFI Global Asset Management, Inc.	DE	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			91-2036414		0001179480		OFI Private Investments Inc.	NY	DS	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
.0000			62-1210532				Tremont Group Holdings, LLC	NY	DS	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC		

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.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		Y
.0000							MassMutual Asia Limited	HKG	DS	MassMutual International LLC	Ownership	100.000	MMLIC		
.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	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			04-1590850				300 South Tryon Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				300 South Tryon LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				54 West Capital LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			16-1720387				Alexandria Towers Investors LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Almack Mezzanine Fund I LP	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	41.800	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	73.100	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	34.300	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	C.M. Life Insurance Company	Ownership	3.800	MMLIC		
.0000							Almack Mezzanine Fund III LP	GBR	NIA	Barings (U.K.) Limited	Management		MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	97.000	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	24.400	MMLIC		
.0000							Barings Emerging Markets Local Debt Fund	IRL	NIA	Barings LLC	Management		MMLIC		

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.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	23.900	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	79.100	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	43.000	MLLIC		
.0000							Barings US High Yield Bond Fund	.IRL	NIA	C.M. Life Insurance Company	Ownership	5.700	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			98-1128827				Babson CLO Ltd. 2013-I	.CYM	NIA	Barings LLC	Influence		MLLIC		4
.0000							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 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	Massachusetts Mutual Life Insurance Company	Ownership/Influence	99.400	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	Barings LLC	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	99.200	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	18.600	MLLIC		
.0000							Barings Global Private Loan Fund	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	82.000	MLLIC		

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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			38-4010344				Barings North American Private Loan Fund LP	DE	NIA	Baring Asset Management Limited Massachusetts Mutual Life Insurance Company	Management				
.0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.800	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited Massachusetts Mutual Life Insurance Company	Management				
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Baring Asset Management Limited	Ownership/Influence	64.300	MMLIC		
.0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Baring Asset Management Limited	Management				
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership/Influence	99.100	MMLIC		
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Barings LLC	Management				
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance Company	Ownership	0.100	MMLIC		
.0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Company	Ownership	0.400	MMLIC		
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.600	MMLIC		3
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership	10.400	MMLIC		
.0000			98-0536199				Benton Street Partners II, L.P.	CYM	NIA	Barings LLC	Management				
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	91.300	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.400	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	DE	NIA	Barings LLC	Management				
.0000			06-1614196				Cambridge Hotel, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Cheyenne Mountain Resort LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	45.300	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	C.M. Life Insurance Company	Ownership	2.900	MMLIC		
.0000							Barings European Core Property Fund SCSCp	LUX	NIA	Barings Real Estate Advisers LLC	Management				
.0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	50.000	MMLIC		
.0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management				
.0000			45-3751572		0001534877		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Company	Ownership/Influence	15.500	MMLIC		
.0000			45-3751572		0001534877		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management				
.0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	Company	Ownership/Influence	92.300	MMLIC		
.0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	C.M. Life Insurance Company	Ownership	7.600	MMLIC		
.0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	50.000	MMLIC		
.0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000			20-5578089				Barings Core Property Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	10.400	MMLIC		
.0000			20-5578089				Barings Core Property Fund LP	DE	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management				
.0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Company	Ownership/Influence	6.800	MMLIC		
.0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance Company	Management				
.0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	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 Massachusetts Mutual Life Insurance Company	Management				
.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Company	Ownership/Influence	99.100	MMLIC		
.0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management				
.0000				3981641			Duchess VI CLO B.V.	GBR	NIA	Barings LLC	Influence				
.0000				4007502			Duchess VII CLO B.V.	GBR	NIA	Barings LLC	Influence				

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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			20-3887968				E-Wise Land Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	72.500	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	7.700	MMLIC		
.0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	43.600	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership	5.400	MMLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Barings LLC	Management		MMLIC		
.0000			37-1708623		0001565779		Great Lakes III, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	35.700	MMLIC		
.0000			37-1708623		0001565779		Great Lakes III, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			38-4032059				JPMDB Commercial Mortgage Securities Trust 2017-C5	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			46-4255307				Marco Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC		
.0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	Management		MMLIC		
.0000			26-3799762				MML O'Hare Hotel LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				Oakley Grove Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				Old Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			75-2901061				Reston Arboretum LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0713071				Riva Portland LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Rockall CLO B.V.	GBR	NIA	Barings LLC	Influence		MMLIC		
.0000			54-2055778				Rockville Town Center LLC	VA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-5491311				Seattle 1415 Hotel Owner LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				Sedona TFMP Land LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	64.800	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	3.000	MMLIC		
.0000			20-8856877		0001409910		Somerset Special Opportunities Fund L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				South Myrtle Monrovia MM LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			20-3887968				South Pasco Properties LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	28.300	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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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	4.900	MMLIC		
.0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence	15.300	MMLIC		
.0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	95.600	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	21.300	MMLIC		
.0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
.0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	35.800	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							Gateway Mezzanine Partners I Trust	AUS	NIA	Barings LLC	Management		MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	11.200	MMLIC		
.0000			71-1018134				Great Lakes II LLC	DE	NIA	C.M. Life Insurance Company	Ownership	1.000	MMLIC		
.0000			56-2505390				Great Lakes LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.400	MMLIC		
.0000			56-2505390				Great Lakes LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.500	MMLIC		
.0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Barings LLC	Influence		MMLIC		
.0000							Somerset Special Opportunities Master Fund LP	CYM	NIA	Barings LLC	Management		MMLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.000	MMLIC		
.0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	89.200	MMLIC		
.0000			20-2548283				12-18 West 55th Street Predevelopment, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.800	MMLIC		
.0000			36-4823011				50 Liberty LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	46.100	MMLIC		

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.0000			36-4823011				50 Liberty LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.600	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	32.300	MMLIC		
.0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Ownership	3.200	MMLIC		
.0000			81-4382111				Budapester Strasse LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				CHC/RFP VI Core LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund I LLC	CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund II LLC	CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	84.400	MMLIC		
.0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.600	MMLIC		
.0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			35-2531693				Cornerstone Permanent Mortgage Fund III	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.900	MMLIC		
.0000			46-5001122				CREA 330 Third LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.100	MMLIC		
.0000			46-4367364				CREA FMF Nashville LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-2399532				CREA/LYON West Gateway, LLC	DE	NIA	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	67.100	MMLIC		
.0000			26-1611591	3956836			Fallon Cornerstone One MPD LLC	DE	NIA	C.M. Life Insurance Company	Ownership	6.600	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	58.500	MMLIC		
.0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.800	MMLIC		
.0000			46-3880526				Farrington London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.500	MMLIC		
.0000			46-3880526				Farrington London Holdings LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.500	MMLIC		
.0000							Infinity SCD Ltd	GBR	NIA	Massachusetts Mutual Life Insurance Company	Ownership	4.200	MMLIC		
.0000			20-4819358				Johnston Groves LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	57.200	MMLIC		
.0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		

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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			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	83.400	MMLIC		
.0000			81-2871333				MM Chatham Office LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16.600	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	84.200	MMLIC		
.0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	C.M. Life Insurance Company	Ownership	15.800	MMLIC		
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	91.000	MMLIC		
.0000							Ten Fan Pier Boulevard LLC	DE	NIA	C.M. Life Insurance Company	Ownership	9.000	MMLIC		
.0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.000	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	59.200	MMLIC		
.0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		
.0000			45-4606547				UK LIW Manager LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	1.000	MMLIC		
.0000			45-4606547				UK LIW Member LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.000	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	92.000	MMLIC		
.0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC		
.0000			20-2970495				Waterford Development Associates	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			47-1993493				Waterloo London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			46-3122029				WeHo Domain LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	77.400	MMLIC		
.0000			46-3122029				WeHo Domain LLC	DE	NIA	C.M. Life Insurance Company	Ownership	12.600	MMLIC		
.0000			81-1552222				Willowood Lakeside Master LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	50.000	MMLIC		
.0000			20-5481477				Ygnatio Valley Funding	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC		
.0000			45-3168892				MassMutual Barings Dynamic Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			51-0529328		0000927972		MassMutual Premier Main Street Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			26-3229251		0000927972		MassMutual Premier Strategic Emerging Markets Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3277550		0000927972		MassMutual Premier Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	96.400	MMLIC		
.0000			14-1980900		0000916053		MassMutual Select Diversified International Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			01-0821120		0000916053		MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3512593		0000916053		MassMutual Select Fundamental Growth Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	0.000	MMLIC		
.0000			04-3513019		0000916053		MassMutual Select Large Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.000	MMLIC		
.0000			42-1710935		0000916053		MassMutual Select Mid-Cap Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	79.700	MMLIC		

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STATEMENT AS OF JUNE 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)	*
.0000			02-0769954		0000916053	QQ	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	12.400	MMLIC		
.0000			04-3584140		0000916053	QQ	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	97.400	MMLIC		
.0000			47-3559064		0001317146		MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	98.200	MMLIC		
.0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.700	MMLIC		
.0000			47-5326235		0000916053		MassMutual RetireSMART 2060 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	95.400	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	32.700	MMLIC		
.0000							Oppenheimer Developing Markets Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Emerging Markets Innovators UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3492794				Oppenheimer ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Global Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3480754				Oppenheimer Global ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			47-3676235				Oppenheimer Global Multi-Asset Growth Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			47-1714929				Oppenheimer Global Multi-Asset Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000							Oppenheimer Global Value Equity UCITS	IRL	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-3136071				Oppenheimer International Growth & Income Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
.0000			81-1080638				Oppenheimer Macquarie Global Infrastructure Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns .52% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 3.6% and includes only Great Lakes III, L.P.
3	Partnership investors own 99% and include Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own 8.7% and includes only Babson Capital Loan Strategies Fund, L.P.
5	Debt investors own 4.3% and includes only Great Lakes III, L.P.

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

Asterisk	Explanation
6	Debt investors own 5.8% and includes only Great Lakes III, L.P.
7	Debt investors own 2.0% and includes only Great Lakes III, L.P.
8	Debt investors own 4.3% and includes only Great Lakes III, L.P.

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]



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

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. Fully refundable deposits, prepayments and miscellaneous assets	128,495,838	102,960,775	25,535,063	45,213,945
2505. Pension plan asset	655,608,889	655,608,889		
2506. Cash advances to agents	248,142,012	248,142,012		
2507. Intangible assets	119,177,484	119,177,484		
2508. Disallowed interest maintenance reserve	80,586,020	80,586,020		
2509. Commissions and expenses on long-term lease	49,575,721	49,575,721		
2510. Bills receivable	510,875	510,875		
2597. Summary of remaining write-ins for Line 25 from overflow page	1,282,096,839	1,256,561,776	25,535,063	45,213,945

Additional Write-ins for Liabilities Line 25

	1 Current Statement Date	2 December 31 Prior Year
2504. Funds awaiting escheat and other miscellaneous	68,785,348	60,133,964
2505. Deferred income	39,470,176	19,920,155
2597. Summary of remaining write-ins for Line 25 from overflow page	108,255,524	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	5,954,883	11,008,355	24,890,451
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	5,954,883	11,008,355	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	13,282,168	7,235,131	18,694,135
2705. Miscellaneous charges to operations	5,807,727	3,935,276	10,529,507
2797. Summary of remaining write-ins for Line 27 from overflow page	19,089,895	11,170,407	29,223,642

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

SCHEDULE A - VERIFICATION

Real Estate

	1 Year to Date	2 Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	976,679,957	928,176,765
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	869,158	5,118,335
2.2 Additional investment made after acquisition	144,289,153	293,276,410
3. Current year change in encumbrances	(47,700,849)	(97,486,309)
4. Total gain (loss) on disposals	27,595,544	14,852,798
5. Deduct amounts received on disposals	109,344,565	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	50,874,371	106,662,695
9. Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	941,514,027	976,679,957
10. Deduct total nonadmitted amounts		
11. Statement value at end of current period (Line 9 minus Line 10)	941,514,027	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	2,000,444,137	3,204,413,320
2.2 Additional investment made after acquisition	89,604,286	300,154,202
3. Capitalized deferred interest and other	14,678,108	42,853,290
4. Accrual of discount	1,023,661	2,678,459
5. Unrealized valuation increase (decrease)		
6. Total gain (loss) on disposals	(10,262,831)	(7,048,196)
7. Deduct amounts received on disposals	1,067,467,235	4,422,106,220
8. Deduct amortization of premium and mortgage interest points and commitment fees	(44,082)	(652,780)
9. Total foreign exchange change in book value/recorded investment excluding accrued interest	76,433,852	(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)	22,067,839,625	20,963,341,565
12. Total valuation allowance		(2,250,000)
13. Subtotal (Line 11 plus Line 12)	22,067,839,625	20,961,091,565
14. Deduct total nonadmitted amounts		
15. Statement value at end of current period (Line 13 minus Line 14)	22,067,839,625	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	132,805,395	551,830,195
2.2 Additional investment made after acquisition	508,978,411	1,114,188,548
3. Capitalized deferred interest and other		
4. Accrual of discount		
5. Unrealized valuation increase (decrease)	586,087,172	449,015,490
6. Total gain (loss) on disposals	(12,657,962)	2,647,530
7. Deduct amounts received on disposals	977,143,509	2,366,873,704
8. Deduct amortization of premium and depreciation	221,219	1,542,812
9. Total foreign exchange change in book/adjusted carrying value	58,698,745	(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)	7,520,978,056	7,233,113,042
12. Deduct total nonadmitted amounts	42,661,815	46,223,980
13. Statement value at end of current period (Line 11 minus Line 12)	7,478,316,241	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	16,063,621,595	28,841,807,585
3. Accrual of discount	142,358,823	333,689,372
4. Unrealized valuation increase (decrease)	1,212,887	1,056,408,233
5. Total gain (loss) on disposals	(1,344,313)	(196,627,884)
6. Deduct consideration for bonds and stocks disposed of	12,483,675,988	18,821,905,883
7. Deduct amortization of premium	82,450,630	170,788,494
8. Total foreign exchange change in book/adjusted carrying value	507,599,027	(481,759,150)
9. Deduct current year's other than temporary impairment recognized	55,874,199	91,203,739
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	103,740,574,978	99,649,127,776
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	103,740,574,978	99,649,127,776

STATEMENT AS OF JUNE 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)	48,532,942,244	4,261,060,381	7,380,121,519	2,983,264,438	48,532,942,244	48,397,145,544		48,353,781,399
2. NAIC 2 (a)	33,277,158,464	10,422,258,011	8,221,009,746	(2,282,239,337)	33,277,158,464	33,196,167,392		31,810,151,289
3. NAIC 3 (a)	4,194,558,569	8,206,740,173	7,932,533,309	(387,162,135)	4,194,558,569	4,081,603,298		3,678,759,881
4. NAIC 4 (a)	2,357,218,363	1,108,894,582	972,546,379	(76,058,297)	2,357,218,363	2,417,508,269		2,390,149,329
5. NAIC 5 (a)	939,000,699	21,551,370	43,192,907	113,953,921	939,000,699	1,031,313,083		1,048,929,782
6. NAIC 6 (a)	316,091,981		67,053,232	29,328,274	316,091,981	278,367,023		360,223,856
7. Total Bonds	89,616,970,319	24,020,504,517	24,616,457,092	381,086,864	89,616,970,319	89,402,104,608		87,641,995,535
PREFERRED STOCK								
8. NAIC 1	166,700,000				166,700,000	166,700,000		144,700,000
9. NAIC 2	155,140,145			4,100,800	155,140,145	159,240,945		165,906,546
10. NAIC 3	135,500,002		12,500,002		135,500,002	123,000,000		123,000,000
11. NAIC 4	2,471,066			(86,029)	2,471,066	2,385,037		2,797,430
12. NAIC 5	13,096,601			60,402	13,096,601	13,157,003		13,131,970
13. NAIC 6	15,357,915			(473,412)	15,357,915	14,884,503		15,389,326
14. Total Preferred Stock	488,265,729		12,500,002	3,601,761	488,265,729	479,367,488		464,925,272
15. Total Bonds and Preferred Stock	90,105,236,048	24,020,504,517	24,628,957,094	384,688,625	90,105,236,048	89,881,472,096		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 \$ 131,905,147 ; NAIC 2 \$ 1,161,834,643 ; NAIC 3 \$ 257,515,227 ; 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	615,210,046	xxx	613,928,165		

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	2,099,826,989	2,154,741,437
3. Accrual of discount	2,843,927	10,354,668
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	34,449	39,287
6. Deduct consideration received on disposals	2,195,487,546	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)	615,210,046	707,992,227
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	615,210,046	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	307,935,959
3. Unrealized Valuation increase/(decrease)	(553,757,711)
4. Total gain (loss) on termination recognized	(183,415,061)
5. Considerations received/(paid) on terminations	2,001,200
6. Amortization	(297,654)
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)	3,317,882,457
10. Deduct nonadmitted assets	
11. Statement value at end of current period (Line 9 minus Line 10)	3,317,882,457

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	50,129,088
3.14 Section 1, Column 18, prior year	(30,561,317)
	80,690,405
	80,690,405
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	50,129,088
3.24 Section 1, Column 19, prior year	(30,561,317)
	80,690,405
	80,690,405
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year	25,234,697
4.2 Less:	
4.21 Amount used to adjust basis of hedged item	
4.22 Amount recognized	55,796,014
	55,796,014
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 JUNE 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*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2	50,000,000	45,000,000	45,218,632	10/01/2012	10/01/2042	Interest Rate Swaps		216,247	85815X-AQ-6	STEELE CREEK CLO LTD-STCR 2014-1A A1R	1	45,000,000	45,002,385
57629*AA9	Evergreen Basket of Long Fixed Rate Corp Inv Grade Equiv Bonds	2		11,195,844	12,285,000	10/01/2012	10/01/2042	Interest Rate Swaps			320808-AD-0	FIRST MARYLAND CAP I-LIMITED GUARANTEE NOTE	2	11,195,844	12,285,000
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2	50,000,000	5,600,000	5,783,618	10/01/2012	10/01/2042	Interest Rate Swaps		158,060	87246M-AA-0	TICP CLO LTD-SERIES 2016-6A CLASS A	1	5,600,000	5,625,558
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		27,716,958	27,805,340	10/01/2012	10/01/2042	Interest Rate Swaps			67818N-ZZ-5	SASOL CHEMICALS (USA) LLC	2	27,716,958	27,805,340
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		5,505,407	5,505,407	10/01/2012	10/01/2042	Interest Rate Swaps			77277L-A7-2	ROCKALL CLO BV Variable Funding Note- USD	1	5,505,407	5,505,407
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		4,949,861	4,949,490	10/01/2012	10/01/2042	Interest Rate Swaps			U8270Y-ZZ-4	SILVER STATE SOLAR SOUTH	2	4,949,861	4,949,490
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		1,728,150	1,729,446	10/01/2012	10/01/2042	Interest Rate Swaps			81683U-AF-4	SEMINOLE TRIBE OF FLORIDA	2	1,728,150	1,729,446
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		2,968,493	2,969,128	10/01/2012	10/01/2042	Interest Rate Swaps			14889K-AC-6	CATAMARAN CLO 2015-1 LTD NT CL B OAK HILL CREDIT PARTNERS-SERIES 2013 - 8A CLASS B OHA Credit Partners VIII, Ltd.	1	2,968,493	2,969,128
57629*AB7	Evergreen Basket of Long Fixed Rate Bank Loans B- or Above	2		6,966,150	6,875,220	10/01/2012	10/01/2042	Interest Rate Swaps			67104C-AB-3	THL CR WIND RIV 2013-1 CLO-SR SECD NT CL A-2 144A	1	6,966,150	6,875,220
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	264,000,000	16,492,409	15,999,658	11/29/2012	11/29/2042	Interest Rate Swaps		(1,766)	87244D-AC-8	THL CR WIND RIV 2013-1 CLO-SR SECD NT CL A-1 144A	1	16,492,409	16,001,424
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,292,915	13,071,164	11/29/2012	11/29/2042	Interest Rate Swaps			87244D-AA-2	THL CR WIND RIV 2013-1 CLO-SR SECD NT CL A-1 144A	1	13,292,915	13,071,164
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,604,579	4,451,411	11/29/2012	11/29/2042	Interest Rate Swaps			08625Y-AG-6	BLUEMOUNTAIN CLO 2012-1 LTD SR SECD DEF NT CL C	1	4,604,579	4,451,411
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,458,545	45,756,962	11/29/2012	11/29/2042	Interest Rate Swaps			14955A-AA-1	CAVALRY CLO IV LTD-SR SEC NT CL A GREYVOLF CLO III LTD-SR SEC NT CL A-2 144A	1	46,458,545	45,756,962
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,271,632	15,752,599	11/29/2012	11/29/2042	Interest Rate Swaps			39808F-AC-2	CVP CASCADE CLO LTD-CVPC 2014-2A A1R	1	15,271,632	15,752,599
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		154,000,000	153,999,846	11/29/2012	11/29/2042	Interest Rate Swaps			126611-AL-6	WELLFLEET CLO LTD-WELF 2017-1A B	1	154,000,000	153,999,846
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,200,000	6,199,566	11/29/2012	11/29/2042	Interest Rate Swaps			94950G-AE-7	DRYDEN XXIV SENIOR LOAN F	1	6,200,000	6,199,566
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,928,571	8,928,955	11/29/2012	11/29/2042	Interest Rate Swaps			26251B-AC-0	APIDOS CLO	1	8,928,571	8,928,955
57629*AC5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,750,000	5,750,058	11/29/2012	11/29/2042	Interest Rate Swaps			03764Q-AU-6	WASHINGTON MILL CLO LTD-WAMI 2014-1A A1R	1	5,750,000	5,750,058
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	25,000,000	28,591,635	12/27/2012	12/27/2042	Interest Rate Swaps		3,591,560	939218-AU-7	SOUND POINT CLO LTD-SNDPT 2017-1A C	1	25,000,000	25,000,075
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,003,312	12/27/2012	12/27/2042	Interest Rate Swaps			83609R-AE-1	CENT COO 12 LTD-SR NT SER 2006-12A CL A 144A	1	4,000,000	4,003,312
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,991,928	2,953,588	12/27/2012	12/27/2042	Interest Rate Swaps			15135A-AA-1	BABSON CLO LTD-SERIES 15-1A CLASS B	1	2,991,928	2,953,588
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,112,451	4,112,817	12/27/2012	12/27/2042	Interest Rate Swaps			056162-AC-4	SEVEN STICKS CLO LTD-SR SEC NT CL A-1 144A	1	4,112,451	4,112,817
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,400,000	17,480,110	12/27/2012	12/27/2042	Interest Rate Swaps			81789G-AA-9	JFIN CLO2015 LTD-MEZZ SECD DEF NT CL C1	1	17,400,000	17,480,110
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,890,000	6,896,614	12/27/2012	12/27/2042	Interest Rate Swaps			46617Y-AD-5	Statoil ASA-SENIOR UNSECURED NOTE	1	6,890,000	6,896,614
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,910,217	17,217,072	12/27/2012	12/27/2042	Interest Rate Swaps			24820R-AA-6	ALM XVI LTD SR SECD DEF NT CL B ATRIUM XII LLC-NOTE SERIES 12A CLASS B 144A	1	13,910,217	17,217,072
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,149,392	4,350,000	12/27/2012	12/27/2042	Interest Rate Swaps			00162L-AW-7	WELLFLEET CLO LTD-WELF 2016-2A A1 CLASS BR	1	4,149,392	4,350,000
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,146,573	11,996,471	12/27/2012	12/27/2042	Interest Rate Swaps			04965C-AC-2	WELLFLEET CLO LTD-WELF 2016-2A A1	1	12,146,573	11,996,471
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,544,510	12/27/2012	12/27/2042	Interest Rate Swaps			94949L-AA-8	MAGNETITE CLO LTD-SERIES 2015-12A CLASS BR	1	10,500,000	10,544,510
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,010,600	12/27/2012	12/27/2042	Interest Rate Swaps			55853H-AL-7	COA SUMMIT CLO LTD-SR SECD SER 2014-1A CL A2 COA SUMMIT CLO LTD	1	10,000,000	10,010,600
57629*AE1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,248,143	13,001,157	12/27/2012	12/27/2042	Interest Rate Swaps			12627U-AB-7	WACHOVIA STUDENT LOAN TR-WSLT 2005-1 B WACHOVIA STUDENT LOAN TRUST	1	13,248,143	13,001,157
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	18,124,608	21,693,891	12/27/2012	12/27/2042	Interest Rate Swaps		3,591,560	92977H-AG-3		1	18,124,608	18,102,331

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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*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,990,000	18,989,753	12/27/2012	12/27/2042	Interest Rate Swaps			04964K-AN-1	ATRIUM CDO CORP-SERIES 9A CLASS BR	1	18,990,000	18,989,753
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,810,000	18,813,179	12/27/2012	12/27/2042	Interest Rate Swaps			92912V-AQ-8	VOYA CLO LTD-VOYA 2014-2A A2AR VOYA CLO LTD	1	18,810,000	18,813,179
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,800,000	6,820,026	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 SEC2 NT CL	1	6,800,000	6,820,026
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		35,072,136	35,051,695	12/27/2012	12/27/2042	Interest Rate Swaps			26250U-AC-9	OCTAGON INV PARTNERS XVI LTD-SR SEC2 NT CL C1	1	35,072,136	35,051,695
57629*AD3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,900,000	4,900,402	12/27/2012	12/27/2042	Interest Rate Swaps			67590B-AE-0	MADISON PARK FDG IV LTD-NT CL A-1B	1	4,900,000	4,900,402
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	15,215,338	19,726,549	12/28/2012	12/28/2042	Interest Rate Swaps		4,484,769	55817U-AB-6	144A EOP CLO 2012-4 LTD-SR SEC2 NT CL A-2 144A	1	15,215,338	15,241,780
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,562,704	8,506,078	12/28/2012	12/28/2042	Interest Rate Swaps			26828C-AC-2	SYMPHONY CLO V LTD-SR SEC2 NT CL A-2 144A	1	8,562,704	8,506,078
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,191,002	9,158,976	12/28/2012	12/28/2042	Interest Rate Swaps			87155M-AC-5	MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS BR	1	9,191,002	9,158,976
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,015,288	12/28/2012	12/28/2042	Interest Rate Swaps			55818X-BA-0	WIND RIVER CLO LTD-WINDR 2017-1A B	1	7,000,000	7,015,288
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,050,000	11,069,260	12/28/2012	12/28/2042	Interest Rate Swaps			88432M-AC-8	WELLFLEET CLO 2015-1 LTD-SR SEC2 NT CL A-1 144A	1	11,050,000	11,069,260
57629*AF8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	50,458,400	12/28/2012	12/28/2042	Interest Rate Swaps			949496-AC-7	CHA LN FDG 2013-2 LTD-SR SEC2 NT CL A	1	50,000,000	50,458,400
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	34,669,720	38,388,498	12/28/2012	12/28/2042	Interest Rate Swaps		4,484,769	67104L-AA-5	GOLDENTREE LOAN OPP VII LTD-SR SEC NT CL B-1	1	34,669,720	33,903,729
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,150,888	12/28/2012	12/28/2042	Interest Rate Swaps			38137D-AC-1	JFIN CLO 2014 LTD-SR SEC2 NOTE CLASS B-1 JFIN CLO LTD	1	9,150,000	9,150,888
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,376,188	16,201,442	12/28/2012	12/28/2042	Interest Rate Swaps			46617E-AC-1	1828 CLO LTD-SR SEC2 NT CL A-1-S	1	16,376,188	16,201,442
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,040,000	16,177,014	12/28/2012	12/28/2042	Interest Rate Swaps			282523-AB-5	144A GUGGENHEIM 1828 CLO LLC MADISON PARK FUNDING LTD-SERIES 15-17A CLASS B1R MADISON PARK FUNDING	1	16,040,000	16,177,014
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,699,632	12/28/2012	12/28/2042	Interest Rate Swaps			55818Y-BE-0	TRYON PARK CLO LTD-SR SEC2 NT CL A-2 144A	1	12,700,000	12,699,632
57629*AH4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,900,000	17,833,985	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	17,833,985
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	5,400,000	9,886,114	12/28/2012	12/28/2042	Interest Rate Swaps		4,484,769	38137D-AG-2	BLUEMOUNTAIN CLO 2013-2 LTD-SR SEC NOTE CL B1	1	5,400,000	5,401,345
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,100,000	10,100,414	12/28/2012	12/28/2042	Interest Rate Swaps			09626Y-AC-4	PALMER SQUARE CLO LTD-SERIES 2014-14 CLASS A2R PALMER SQUARE CLO LTD	1	10,100,000	10,100,414
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,600,000	10,614,119	12/28/2012	12/28/2042	Interest Rate Swaps			69688X-AL-5	BLUEMOUNTAIN CLO 2014-2 LTD SR SEC2 DEF NT CL C BlueMountain CLO 2014-2 Ltd	1	10,600,000	10,614,119
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,270,509	9,151,418	12/28/2012	12/28/2042	Interest Rate Swaps			09626Q-AE-7	WELLFLEET CLO LTD-WELF 2016-2A A2	1	9,270,509	9,151,418
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,875,000	6,923,455	12/28/2012	12/28/2042	Interest Rate Swaps			94949L-AC-4	LOM XIV LTD PARTNERSHIP-DEF MEZZ NT CL C	1	6,875,000	6,923,455
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,057,555	5,003,500	12/28/2012	12/28/2042	Interest Rate Swaps			50184V-AG-9	JFIN CLO 2014-11 LTD SR SEC2 DEF NT CL B-1	1	5,057,555	5,003,500
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,975,214	5,000,055	12/28/2012	12/28/2042	Interest Rate Swaps			46617N-AE-7	ALM VI LTD-SR SECURED NOTE CLASS A2R	1	4,975,214	5,000,055
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,240,158	14,241,911	12/28/2012	12/28/2042	Interest Rate Swaps			00163E-AM-4	LOM LTD PARTNERSHIP-SERIES 22A CLASS A2	1	14,240,158	14,241,911
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,825,000	6,842,472	12/28/2012	12/28/2042	Interest Rate Swaps			50189G-AC-6	BLUEMOUNTAIN CLO LTD-BLUEM 2013-1A BR	1	6,825,000	6,842,472
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,271,879	12/28/2012	12/28/2042	Interest Rate Swaps			09626U-AQ-1	DRYDEN SENIOR LOAN FUND-SERIES 2014-36A CLASS CR	1	4,250,000	4,271,879
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,350,000	6,410,300	12/28/2012	12/28/2042	Interest Rate Swaps			26249K-AM-3	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	6,350,000	6,410,300
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,717,030	12,689,436	12/28/2012	12/28/2042	Interest Rate Swaps			78447M-AD-0	CARLYLE GLOBAL MARKET ST-SERIES 2014-2A CLASS CR	1	12,717,030	12,689,436
57629*AG6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	7,999,840	12/28/2012	12/28/2042	Interest Rate Swaps			14310V-AN-7		1	8,000,000	7,999,840

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STATEMENT AS OF JUNE 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*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	13,560,000	15,802,317	12/28/2012	12/28/2042	Interest Rate Swaps		2,242,385	09627D-AQ-8	BLUEMOUNTAIN CLO LTD-BLUEM 2013-4A B1R	1	13,560,000	13,559,932
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,006,325	19,755,293	12/28/2012	12/28/2042	Interest Rate Swaps			09625J-AA-2	BLUEMOUNTAIN CLO 2013-3 LTD SR SECD NT CL A	1	20,006,325	19,755,293
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,576,857	9,589,293	12/28/2012	12/28/2042	Interest Rate Swaps			568416-BD-2	MARINE PARK CLO LTD-SR SECD DEF NT CL B-R 144A	1	9,576,857	9,589,293
57629*AJ0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,573,380	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	7,573,380
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	7,392,666	9,889,886	12/28/2012	12/28/2042	Interest Rate Swaps		2,242,385	15135D-AC-1	CENT CDO 14 LTD-SR TERM NT SER 2007-14A CL B	1	7,392,666	7,647,501
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,000,000	12,053,916	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	12,053,916
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,725,000	11,777,692	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	11,777,692
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,569,919	12/28/2012	12/28/2042	Interest Rate Swaps			48249V-AQ-4	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A2R KKR Financial CLO 2013-1 Ltd	1	13,570,000	13,569,919
57629*AK7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,195,000	11,209,979	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	11,209,979
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	12,265,633	14,073,666	12/28/2012	12/28/2042	Interest Rate Swaps		2,242,385	14310D-AG-2	CARLYLE GLOBAL MKT CLO 2013-2 MEZZ SEC DEF NT CL C	1	12,265,633	11,831,281
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,888,748	12,129,967	12/28/2012	12/28/2042	Interest Rate Swaps			78442G-PL-4	SLM STUDENT LOAN TRUST-SERIES 2005-4 CLASS B	1	11,888,748	12,129,967
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,920,000	8,932,961	12/28/2012	12/28/2042	Interest Rate Swaps			10302V-BC-8	BOWMAN PARK CLO LTD-BOWPK 2014-1A B1R	1	8,920,000	8,932,961
57629*AL5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,368,883	17,401,027	12/28/2012	12/28/2042	Interest Rate Swaps			05363X-AC-1	AVERY POINT V CLO LTD-SR SECD NT CL A	1	17,368,883	17,401,027
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	13,523,011	15,645,547	12/28/2012	12/28/2042	Interest Rate Swaps		2,242,385	398080-AC-5	GREYWOLF CLO IV LTD SR SECD NT CL A-2 GREYWOLF CLO LTD	1	13,523,011	13,403,162
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,847,781	10,728,614	12/28/2012	12/28/2042	Interest Rate Swaps			62953G-AC-5	NZCG FUNDING LTD-SERIES 2015-2A CLASS A2	1	10,847,781	10,728,614
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,050,000	3,069,761	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	3,069,761
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,520,417	12/28/2012	12/28/2042	Interest Rate Swaps			50184K-AW-8	LOM LTD PARTNERSHIP-SERIES 13A CLASS CR	1	4,500,000	4,520,417
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,014,345	12/28/2012	12/28/2042	Interest Rate Swaps			08181L-AA-5	BENEFIT STREET PARTNERS -BSP 2016-10A A1	1	5,000,000	5,014,345
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,002,640	12/28/2012	12/28/2042	Interest Rate Swaps			43132W-AC-4	HILDENE CLO IV LTD-SR SECD NT SER 2015-4A CL A-2	1	10,000,000	10,002,640
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,750,000	8,750,061	12/28/2012	12/28/2042	Interest Rate Swaps			05618L-AH-9	BABSON CLO LTD-BABSN 2014-11A CR	1	8,750,000	8,750,061
57629*AM3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,914,762	12/28/2012	12/28/2042	Interest Rate Swaps			05875F-AC-1	BALLYROCK LTD-SERIES 16-1A CLASS B1	1	3,900,000	3,914,762
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	15,383,930	16,450,807	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	09625Y-AD-3	BLUEMOUNTAIN CLO 2012-1 LTD-SR SEC NOTE CL B	1	15,383,930	15,005,400
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,891,888	1,860,165	12/31/2012	12/31/2042	Interest Rate Swaps			04014J-AA-2	ARES XXVI CLO LTD SR NT CL A	1	1,891,888	1,860,165
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,475,000	9,547,730	12/31/2012	12/31/2042	Interest Rate Swaps			26249Q-AG-3	DRYDEN 38 SR LN FD SR SECD NT CL B	1	9,475,000	9,547,730
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,721,455	8,627,631	12/31/2012	12/31/2042	Interest Rate Swaps			39808P-AC-0	GREYWOLF CLO V LTD-SR SECD NT CL A-2 144A	1	8,721,455	8,627,631
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,550,000	7,561,854	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	7,561,854
57629*AN1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,625,000	8,626,432	12/31/2012	12/31/2042	Interest Rate Swaps			26829C-AC-1	ECP CLO 2015-7 LTD SR SECD NT CL A-2 144A	1	8,625,000	8,626,432
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2	50,000,000	13,560,000	15,005,326	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	09627R-AL-8	BLUEMOUNTAIN CLO LTD-BLUEM 2014-3A A2AR BLUEMOUNTAIN CLO LTD	1	13,560,000	13,559,919
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		4,030,633	3,900,679	12/31/2012	12/31/2042	Interest Rate Swaps			67108F-AG-1	OZLM FUNDING IV LTD-SR SECD NT CL B 144A	1	4,030,633	3,900,679
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		15,000,000	15,000,195	12/31/2012	12/31/2042	Interest Rate Swaps			87247U-AU-7	TICP CLO LTD-TICP 2014-3A B1R	1	15,000,000	15,000,195
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		12,800,000	12,800,307	12/31/2012	12/31/2042	Interest Rate Swaps			36319G-AP-9	GALAXY CLO LTD-GALXY 2014-18A AR	1	12,800,000	12,800,307

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STATEMENT AS OF JUNE 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*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		9,600,000	9,610,608	12/31/2012	12/31/2042	Interest Rate Swaps			14308L-AS-2	CARLYLE GLOBAL MARKET ST-CGMS 2014-3A A2R	1	9,600,000	9,610,608
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		1,537,805	1,500,135	12/31/2012	12/31/2042	Interest Rate Swaps			15015P-AB-1	CEDAR CREEK CLO LTD-SR SEC0 NT SER 2013-1A CL B	1	1,537,805	1,500,135
57629*AP6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		2,000,000	2,024,366	12/31/2012	12/31/2042	Interest Rate Swaps			941848-D8-9	WATERS CORPORATION	2	2,000,000	2,024,366
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	14,300,000	15,797,616	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	55820J-AC-4	MADISON PARK FUNDING LTD-SERIES 2016-21A CLASS A2	1	14,300,000	14,352,209
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,847,072	13,798,964	12/31/2012	12/31/2042	Interest Rate Swaps			948214-AC-5	WEBSTER PK CLO SR SEC0 NT CL A-2	1	13,847,072	13,798,964
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,757,292	6,607,709	12/31/2012	12/31/2042	Interest Rate Swaps			67104L-AC-1	OHM LN FDG 2013-2 LTD-MEZZ SEC0 DEF NT CL C	1	6,757,292	6,607,709
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,350,000	4,392,891	12/31/2012	12/31/2042	Interest Rate Swaps			020053-AS-3	ALM LOAN FUNDING-SERIES 13-8A CLASS A1R	1	4,350,000	4,392,891
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,700,000	2,700,019	12/31/2012	12/31/2042	Interest Rate Swaps			87154E-AN-0	SYMPHONY CLO LTD-SERIES 14-15A CLASS CR	1	2,700,000	2,700,019
57629*A04	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,659,133	8,758,168	12/31/2012	12/31/2042	Interest Rate Swaps			59883H-AB-5	MILL CREEK CLO II LTD-SR SEC0 NT CL B-1 144A	1	8,659,133	8,758,168
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	12,080,237	12,145,689	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	BCC0XF-V8-9	RESOURCE EUROPE CLO I BV-SR SEC0 REG NT CL A	1	12,080,237	10,700,282
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,400,000	7,406,098	12/31/2012	12/31/2042	Interest Rate Swaps			92916M-AC-5	VOYA CLO LTD-VOYA 2017-1A B	1	7,400,000	7,406,098
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,821,516	9,099,342	12/31/2012	12/31/2042	Interest Rate Swaps			39808F-AC-2	GREYWOLF CLO III LTD-SR SEC0 NT CL A-2 144A	1	8,821,516	9,099,342
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,519,278	12/31/2012	12/31/2042	Interest Rate Swaps			26244M-AC-6	DRYDEN SENIOR LOAN FUND-DRSLF 2016-45A B	1	4,500,000	4,519,278
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,150,000	7,186,544	12/31/2012	12/31/2042	Interest Rate Swaps			09628Q-AC-9	BLUEMOUNTAIN CLO 2016-1 LTD -SR SEC0 NT CL B	1	7,150,000	7,186,544
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,700,000	3,700,585	12/31/2012	12/31/2042	Interest Rate Swaps			24823B-AC-4	DENALI CAPITAL CLO X LTD-SR SEC0 CL A2L 144A	1	3,700,000	3,700,585
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,025,000	8,079,578	12/31/2012	12/31/2042	Interest Rate Swaps			05618P-AJ-6	BARSON CLO LTD 2016-I SEC0 DEF MEZZ CL C	1	8,025,000	8,079,578
57629*AR2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,740,000	12,778,768	12/31/2012	12/31/2042	Interest Rate Swaps			09626U-AN-8	BLUEMOUNTAIN CLO LTD A2R BLUEMOUNTAIN CLO LTD	1	12,740,000	12,778,768
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	9,251,953	10,544,916	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	46616K-AE-4	JFIN CLO 2013 LTD SR SEC0 DEF NT CL B	1	9,251,953	9,099,509
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,683,421	11,302,497	12/31/2012	12/31/2042	Interest Rate Swaps			03764D-AD-3	APIDOS CLO XII MEZZ DEF NT CL C	1	11,683,421	11,302,497
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,868,658	14,501,958	12/31/2012	12/31/2042	Interest Rate Swaps			50184V-AE-4	LOM XV LTD PARTNERSHIP-SR SEC0 NT SER 15A CL C LOM LTD PARTNERSHIP	1	14,868,658	14,501,958
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,029,390	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	10,029,390
57629*AS0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,675,000	10,677,466	12/31/2012	12/31/2042	Interest Rate Swaps			38137Q-AC-2	GOLDENTREE LOAN OPPORTUN-GOLD9 2014-9A B1R	1	10,675,000	10,677,466
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	5,077,925	6,345,510	12/31/2012	12/31/2042	Interest Rate Swaps		1,445,407	15136R-AJ-4	CENT CLO 18 LP-DEF NT SER 2013-18A CL C-1 144A	1	5,077,925	4,900,103
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,325,000	12,325,715	12/31/2012	12/31/2042	Interest Rate Swaps			38137L-AQ-2	GOLDENTREE LOAN OPPORTUN-SERIES 2014-8A CLASS B1R	1	12,325,000	12,325,715
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,900,000	5,904,797	12/31/2012	12/31/2042	Interest Rate Swaps			48251F-AB-7	KKR FINANCIAL CLO LTD-SERIES 17 CLASS B	1	5,900,000	5,904,797
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,850,000	5,850,070	12/31/2012	12/31/2042	Interest Rate Swaps			55818M-AQ-0	MADISON PARK FUNDING LTD-HDPK 2014-13A B1	1	5,850,000	5,850,070
57629*AT8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,750,000	21,755,590	12/31/2012	12/31/2042	Interest Rate Swaps			39808P-AA-4	GREYWOLF CLO V LTD SR SEC0 NT CL A-1	1	21,750,000	21,755,590
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	28,171,132	30,513,295	04/09/2013	04/09/2043	Interest Rate Swaps		2,811,605	04014J-AA-2	ARES XXVI CLO LTD SR NT CL A	1	28,171,132	27,701,690
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,815,468	4,809,598	04/09/2013	04/09/2043	Interest Rate Swaps			36248M-AB-3	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS B	1	4,815,468	4,809,598
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,595,430	12,478,169	04/09/2013	04/09/2043	Interest Rate Swaps			14954W-AC-0	CAVALRY CLO III LTD-SR SEC0 NT CL B	1	12,595,430	12,478,169
57629*AI1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,330,000	4,329,848	04/09/2013	04/09/2043	Interest Rate Swaps			64130H-AE-1	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A C	1	4,330,000	4,329,848

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STATEMENT AS OF JUNE 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		13,560,000	13,559,905	04/09/2013	04/09/2043	Interest Rate Swaps			64129J-AQ-3	NEUBERGER BERMAN CLO LTD-NEUB 2013-14A 1TR Neuberger Berman CLO XIV Ltd	1	13,560,000	13,559,905
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	22,400,000	25,469,512	04/09/2013	04/09/2043	Interest Rate Swaps	3,067,205		04941G-AQ-2	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS B	1	22,400,000	22,402,307
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,150,888	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	9,150,888
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,776,789	3,651,157	04/09/2013	04/09/2043	Interest Rate Swaps			09625Y-AG-6	BLUEMOUNTAIN CLO 2012-1 LTD SR SEC DEF NT CL C	1	3,776,789	3,651,157
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,023,940	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	10,023,940
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,750,000	12,817,142	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	12,817,142
57629*AV3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,800,000	12,834,637	04/09/2013	04/09/2043	Interest Rate Swaps			67102Q-AK-4	OHA CREDIT PARTNERS LTD-SERIES 2012-7A CLASS B1R OHA CREDIT PARTNERS LTD	1	12,800,000	12,834,637
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	7,889,786	10,460,522	04/09/2013	04/09/2043	Interest Rate Swaps	2,655,062		50184V-AG-9	LOM XIV LTD PARTNERSHIP-DEF MEZZ NT CL C	1	7,889,786	7,805,460
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,500,000	12,503,300	04/09/2013	04/09/2043	Interest Rate Swaps			50188G-AE-3	LOM XVIII LTD PARTNERSHIP-SR NT SER 18A CL B-1	1	12,500,000	12,503,300
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,135,290	3,028,888	04/09/2013	04/09/2043	Interest Rate Swaps			67104L-AB-3	OHA LN FDG 2013-2 LTD-SR SEC NT CL B	1	3,135,290	3,028,888
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,033,184	9,227,502	04/09/2013	04/09/2043	Interest Rate Swaps			78442G-OA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	9,033,184	9,227,502
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,775,000	10,774,849	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	10,774,849
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,066,313	04/09/2013	04/09/2043	Interest Rate Swaps			26244Y-AC-0	DRYDEN 42 SR LN FD-SR SEC NT CL B EATON VANCE CDO LTD-SERIES 2007-10A CLASS B2	1	13,000,000	13,066,313
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	20,815,400	23,601,743	04/09/2013	04/09/2043	Interest Rate Swaps	2,655,062		27829K-AE-7	LOM XIV LTD PARTNERSHIP-SR NT SER 14A CL A 144A	1	20,815,400	20,946,681
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,115,515	3,063,012	04/09/2013	04/09/2043	Interest Rate Swaps			50184V-AC-8	Stewart Park CLO Ltd -SR SECURED	1	3,115,515	3,063,012
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,610,000	8,619,635	04/09/2013	04/09/2043	Interest Rate Swaps			860444-AC-2	NOTE CLASS B 144A	1	8,610,000	8,619,635
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,652,905	8,573,146	04/09/2013	04/09/2043	Interest Rate Swaps			26829C-AJ-6	EOP CLO 2015-7 LTD SR SEC DEF NT CL B-1	1	8,652,905	8,573,146
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,502,130	04/09/2013	04/09/2043	Interest Rate Swaps			568416-BB-6	MARINE PARK CLO LTD-SR SEC NT CL A-2-R 144A	1	7,500,000	7,502,130
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,024,983	04/09/2013	04/09/2043	Interest Rate Swaps			50188Q-AC-5	LOM XIX LTD PARTNERSHIP SR NT CL B	1	7,000,000	7,024,983
57629*AY7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,825,000	4,826,274	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	4,826,274
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	28,726,600	31,367,499	04/09/2013	04/09/2043	Interest Rate Swaps	2,299,054		67110H-AA-6	OZLM XIV LTD SR SEC NT CL A-1A BENEFIT STREET PARTNERS -BSP 2017-11A A2A	1	28,726,600	29,068,445
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,999,280	04/09/2013	04/09/2043	Interest Rate Swaps			08179C-AE-1	LOM XXI LTD PARTNERSHIP-SR NT SER 21A CL B-1	1	15,000,000	14,999,280
57629*AU5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,076,674	04/09/2013	04/09/2043	Interest Rate Swaps			50189C-AE-1	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS A	1	13,000,000	13,076,674
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	38,038,780	40,507,527	04/09/2013	04/09/2043	Interest Rate Swaps	2,508,059		04941G-AA-6	CARLYLE GLOBAL MKT CLO 2013-3 SR SEC NT CL A1	1	38,038,780	37,999,468
57629*BA8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,248,269	24,955,190	04/09/2013	04/09/2043	Interest Rate Swaps			14310G-AA-8	TICP CLO LTD-TICP 2014-3A AR	1	25,248,269	24,955,190
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	40,000,000	42,099,948	04/09/2013	04/09/2043	Interest Rate Swaps	2,098,908		87247U-AS-2	GOLDENTREE LOAN OPP X LTD	1	40,000,000	40,001,040
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,122,919	04/09/2013	04/09/2043	Interest Rate Swaps			38137P-AE-0	WATERS CORPORATION	2	5,100,000	5,122,919
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,048,732	04/09/2013	04/09/2043	Interest Rate Swaps			941848-D8-9	KINGSLAND LTD	1	4,000,000	4,048,732
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		950,172	921,586	04/09/2013	04/09/2043	Interest Rate Swaps			49638W-AD-8	GREYWOLF CLO I LTD	1	950,172	921,586
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		874,758	902,308	04/09/2013	04/09/2043	Interest Rate Swaps			38808F-AC-2		1	874,758	902,308

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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*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		695,939	671,294	04/09/2013	04/09/2043	Interest Rate Swaps			14310D-AG-2	CARLYLE GLOBAL MARKET STR	1	695,939	671,294
57629*BB6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		500,000	500,041	04/09/2013	04/09/2043	Interest Rate Swaps			67590B-AE-0	OCTAGON INV PRARTNERS XV CVP CASCADE CLO LTD-CVPC 2013-CLO1	1	500,000	500,041
57629*AZ4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	60,500,000	62,600,360	04/09/2013	04/09/2043	Interest Rate Swaps		2,098,908	126612-AJ-9	A1R Fletcher Building Intern Gtd Senior Note	1	60,500,000	60,501,452
92553PA*3	Viacom, Inc. Senior Note	2	20,000,000	23,699,181	25,558,039	12/20/2013	03/20/2019	5 Yr Credit Default Swap	199,181	257,046	Q3915#-AB-2	HALCYON LN ADVISORS FDG 2014-1 LTD SR SEC ND CL A-1 HALCYON LOAN ADVISORS FUNDING	2	23,500,000	25,300,993
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	21,698,071	34,343,379	03/05/2014	03/05/2034	Interest Rate Swaps		13,042,207	40538C-AC-4	MADISON PARK FUNDING LTD-SERIES 15-17A CLASS AR MADISON PARK FUNDING LTD	1	21,698,071	21,301,172
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,100,000	21,099,409	03/05/2014	03/05/2034	Interest Rate Swaps			55818Y-BA-8	KKR FINANCIAL CLO LTD-SERIES 13-1A CLASS A1R KKR Financial CLO 2013-1 Ltd	1	21,100,000	21,099,409
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,015,000	21,014,895	03/05/2014	03/05/2034	Interest Rate Swaps			48249V-AN-1	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS A Crestline Denali CLO XV Ltd	1	21,015,000	21,014,895
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,800,000	20,806,760	03/05/2014	03/05/2034	Interest Rate Swaps			22616C-AA-1	RACE POINT X CLO LTD SR SEC ND CL B-1 RACE POINT CLO LTD	1	20,800,000	20,806,760
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,060,000	8,123,158	03/05/2014	03/05/2034	Interest Rate Swaps			74983D-AC-1	MADISON PARK FUNDING LTD-MDPK 2014-12A CR	1	8,060,000	8,123,158
57629*BD2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,200,000	12,207,466	03/05/2014	03/05/2034	Interest Rate Swaps			55818P-AS-9	FORT BENNING FAM	1	12,200,000	12,207,466
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	20,019,855	33,311,388	03/05/2014	03/05/2034	Interest Rate Swaps		13,070,388	346845-AC-4	DELTA AIR LINES INC DEL	1	20,019,855	20,241,000
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,885,583	17,982,422	03/05/2014	03/05/2034	Interest Rate Swaps			247361-PP-9	DELTA AIR LINES INC DEL	1	17,885,583	17,982,422
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,554,091	12,622,063	03/05/2014	03/05/2034	Interest Rate Swaps			247361-SS-7	AUTODATA PUBLISHING GROUP	1	12,554,091	12,622,063
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,913,977	10,973,052	03/05/2014	03/05/2034	Interest Rate Swaps			247361-MM-7	AUTODATA PUBLISHING GROUP	1	10,913,977	10,973,052
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,458,083	10,514,690	03/05/2014	03/05/2034	Interest Rate Swaps			247361-KK-3	REGAL-BELOIT CORPORATION ROCKALL CLO BV EURO CL VF-1 SR SEC ND VAR FDG NT	1	10,458,083	10,514,690
57629*BC4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		29,040,587	29,064,498	03/05/2014	03/05/2034	Interest Rate Swaps			758750-AB-2	HIGHBRIDGE LOAN MANAGEM-HLM 9A-2016 A2 HIGHBRIDGE LOAN MANAGEMENT LTD	2	29,040,587	29,064,498
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	157,046,102	171,341,742	05/19/2014	05/19/2044	Interest Rate Swaps		22,220,078	77277L-GO-1	CARLYLE GLOBAL MKT CLO 2016-2 SR SEC NT CL A2A CARLYLE GLOBAL MARKET STRATEGI	1	157,046,102	149,121,664
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,100,000	12,168,401	05/19/2014	05/19/2044	Interest Rate Swaps			40436Q-AC-6	OHA CREDIT PARTNERS LTD-OAKC 2013-9A B1R OHA CREDIT PARTNERS LTD KINGSLAND VI LTD-SEC DEF MEZZ NT CL C 144A	1	12,100,000	12,168,401
57629*BE0	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,070,000	12,125,365	05/19/2014	05/19/2044	Interest Rate Swaps			14312L-AC-1	TICP CLO LTD-TICP 2014-1A A2BR TICP CLO LTD	1	12,070,000	12,125,365
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	32,227,835	05/19/2014	05/19/2034	Interest Rate Swaps		12,227,875	67105V-AW-4	SYMPHONY CLO LTD-SERIES 13-12A CLASS B1R SYMPHONY CLO LTD	1	20,000,000	19,999,960
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		40,832,850	39,604,396	05/19/2014	05/19/2034	Interest Rate Swaps			49638W-AD-8	ALM LOAN FUNDING-SERIES 14-14A CLASS A1R ALM LOAN FUNDING	1	40,832,850	39,604,396
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,820	05/19/2014	05/19/2034	Interest Rate Swaps			872455-AS-9	OAK HILL CREDIT PARTNERS-SERIES 2013-8A CLASS C OHA Credit Partners VIII, Ltd.	1	20,000,000	19,999,820
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,900	05/19/2014	05/19/2034	Interest Rate Swaps			13080B-AB-7	HILDENE CLO LTD-SERIES 13-1A CLASS AR HILDENE CLO LTD	1	20,000,000	19,999,900
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,052,000	05/19/2014	05/19/2034	Interest Rate Swaps			00164K-AJ-6	APIDOS CLO-APID 2014-18A A2AR APIDOS CLO	1	20,000,000	20,052,000
57629*BF7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,000,000	9,000,414	05/19/2014	05/19/2034	Interest Rate Swaps			67104C-AC-1	BIRCHWOOD PARK CLO LTD-BRCHW 2014-1A B1R	1	9,000,000	9,000,414
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	95,000,000	117,517,088	05/19/2014	05/19/2044	Interest Rate Swaps		22,517,183	43132R-AQ-4	HILDENE CLO LTD-SERIES 13-1A CLASS AR HILDENE CLO LTD	1	95,000,000	94,999,905
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		34,000,000	33,999,728	05/19/2014	05/19/2044	Interest Rate Swaps			03765D-AN-0	APIDOS CLO	1	34,000,000	33,999,728
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,350,000	11,351,532	05/19/2014	05/19/2044	Interest Rate Swaps			09073V-AS-3	BIRCHWOOD PARK CLO LTD-BRCHW 2014-1A B1R	1	11,350,000	11,351,532

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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*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,583,843	7,676,212	05/19/2014	05/19/2044	Interest Rate Swaps			38021B-AG-5	GOAL CAPITAL FUNDING TRU-SERIES 2006-1 CLASS B	1	7,583,843	7,676,212
57629*BG5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,091,315	4,367,166	05/19/2014	05/19/2044	Interest Rate Swaps			429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	4,091,315	4,367,166
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	15,000,000	37,558,701	05/19/2014	05/19/2044	Interest Rate Swaps		22,463,856	00164B-AS-6	ALM LOAN FUNDING-SERIES 2013-7R2A CLASS A2R	1	15,000,000	15,094,845
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,011,925	05/19/2014	05/19/2044	Interest Rate Swaps			09627V-AS-4	BLUEMOUNTAIN CLO LTD-SERIES 2014-4A CLASS B1R	1	15,000,000	15,011,925
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,001,650	05/19/2014	05/19/2044	Interest Rate Swaps			38137F-AE-2	GOLDENTREE LOAN OPPORTUN-GLD11 2015-11A BR	1	15,000,000	15,001,650
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,045,735	05/19/2014	05/19/2044	Interest Rate Swaps			67091H-AK-7	CHA LOAN FUNDING LTD-OHALF 2012-1A B1R	1	15,000,000	15,045,735
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,600,000	14,694,185	05/19/2014	05/19/2044	Interest Rate Swaps			09628W-AC-6	BLUEMOUNTAIN CLO LTD-SERIES 16-2A CLASS A2	1	14,600,000	14,694,185
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,901,293	05/19/2014	05/19/2044	Interest Rate Swaps			92915P-AB-1	VOYA CLO LTD-INGIM 2014-1A A2AR	1	13,900,000	13,901,293
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,887,464	05/19/2014	05/19/2044	Interest Rate Swaps			09626R-AQ-8	BLUEMOUNTAIN CLO LTD-BLUEM 2012-2A BR	1	13,850,000	13,887,464
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,850,000	13,918,488	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	13,918,488
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,625,000	12,728,159	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	12,728,159
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,150,000	12,204,906	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	12,204,906
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,651,328	7,792,438	05/19/2014	05/19/2044	Interest Rate Swaps			23340L-AA-2	DRB PRIME STUDENT LOAN T-SERIES 2015-B CLASS A1	2	7,651,328	7,792,438
57629*BH3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,175,000	11,190,645	05/19/2014	05/19/2044	Interest Rate Swaps			04941M-AF-2	ATLAS SENIOR LOAN FUND L-ATCLO 2014-1A BR	1	11,175,000	11,190,645
57629*BJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	142,554,539	162,100,568	05/19/2014	05/19/2044	Interest Rate Swaps		22,098,188	49638W-AB-2	KINGSLAND VI LTD-SR SECD NT CL A1 144A	1	142,554,539	140,002,380
57629*BJJ	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,259,084	11,432,008	05/19/2014	05/19/2044	Interest Rate Swaps			05617W-AA-1	BABSON CLO LTD 2013-1-SR SECD NT CL A 144A	1	11,259,084	11,432,008
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	145,507,204	165,833,494	05/19/2014	05/19/2044	Interest Rate Swaps		22,098,188	49638Y-AA-0	KINGSLAND VII LTD-SR SECD NT CL A 144A	1	145,507,204	143,735,306
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,387,549	15,388,918	05/19/2014	05/19/2044	Interest Rate Swaps			056162-AC-4	BABSON CLO LTD-SERIES 15-1A CLASS B	1	15,387,549	15,388,918
57629*BK6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,150,000	9,185,337	05/19/2014	05/19/2044	Interest Rate Swaps			79410U-AC-5	SALEM FIELDS CLO LTD-SBF 2016-2A A2	1	9,150,000	9,185,337
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	40,739,371	62,161,533	05/19/2014	05/19/2044	Interest Rate Swaps		22,159,133	36248M-AA-5	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS A	1	40,739,371	40,002,400
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		77,000,000	77,001,925	05/19/2014	05/19/2044	Interest Rate Swaps			46617N-AA-5	JFIN CLO 2014-II LTD-SR SECD NOTE CLASS A-1 144A	1	77,000,000	77,001,925
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,514,407	31,966,464	05/19/2014	05/19/2044	Interest Rate Swaps			50184V-AC-8	LCM XIV LTD PARTNERSHIP-SR NT SER 14A CL A 144A	1	32,514,407	31,966,464
57629*BL4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,800,000	12,864,896	05/19/2014	05/19/2044	Interest Rate Swaps			87159Q-BG-2	SYMPHONY CLO LTD-SYMP 2014-14A B1R SYMPHONY CLO LTD	1	12,800,000	12,864,896
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	45,000,000	67,176,754	05/19/2014	05/19/2044	Interest Rate Swaps		22,174,369	85815X-AQ-6	STEELE CREEK CLO LTD-STCR 2014-1A A1R	1	45,000,000	45,002,385
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,622,910	22,309,946	05/19/2014	05/19/2044	Interest Rate Swaps			92914R-AA-0	VOYA CLO 2014-4 LTD CL A-1 NT VOYA CLO LTD	1	22,622,910	22,309,946
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,344,268	22,049,912	05/19/2014	05/19/2044	Interest Rate Swaps			36319Q-AA-0	GALAXY XIX CLO LTD-SENIOR NOTE CL A-1A GALAXY CLO LTD	1	22,344,268	22,049,912
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,550,000	21,554,590	05/19/2014	05/19/2044	Interest Rate Swaps			04964W-AQ-8	ATRIUM CDO CORP-ATRM 11A BR ATRIUM CDO CORP	1	21,550,000	21,554,590
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,559,973	05/19/2014	05/19/2044	Interest Rate Swaps			64130H-AA-9	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A A	1	13,560,000	13,559,973
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,600,000	13,599,864	05/19/2014	05/19/2044	Interest Rate Swaps			64130H-AC-5	NEUBERGER BERMAN CLO LTD-NEUB 2017-24A B1	1	13,600,000	13,599,864
57629*BM2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,000,150	05/19/2014	05/19/2044	Interest Rate Swaps			81717E-AN-0	SENECA PARK CLO LTD-SPARK 2014-1A B1R	1	15,000,000	15,000,150
57629*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	135,000,000	151,000,000	171,381,870	05/19/2014	05/19/2044	Interest Rate Swaps		20,382,021	05363U-AS-2	EVERY POINT CLO LTD-SERIES 14-1A CLASS AR	1	151,000,000	150,999,949

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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*BNO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,200,000	7,204,990	05/19/2014	05/19/2044	Interest Rate Swaps			55952Y-AL-1	MAGNETITE CLO LTD-MAGNE 2014-8A CLASS CR	1	7,200,000	7,204,990
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	85,000,000	75,757,568	74,379,215	05/09/2014	05/09/2034	Interest Rate Swaps		9,626,795	77277L-B8-9	ROCKALL CLO BV Variable Funding Note - GBP	1	75,757,568	64,752,420
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,900,000	13,907,742	05/09/2014	05/09/2034	Interest Rate Swaps			55952Y-AK-3	MAGNETITE CLO LTD-SERIES 14-8A CLASS BR	1	13,900,000	13,907,742
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,569,403	05/09/2014	05/09/2034	Interest Rate Swaps			04016P-AC-2	ARES CLO LTD-SERIES 17-43A CLASS B Ares XLIII CLO Ltd	1	13,570,000	13,569,403
57629*BP5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,581,467	05/09/2014	05/09/2034	Interest Rate Swaps			22616C-AC-7	CRESTLINE DENALI CLO XV -SERIES 17-1A CLASS B Crestline Denali CLO XV Ltd	1	13,570,000	13,581,467
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	60,000,000	36,775,000	46,884,411	06/05/2014	06/05/2044	Interest Rate Swaps		10,109,595	43132V-AN-2	HILDENE CLO LTD-HLDN 2014-3A AR	1	36,775,000	36,774,816
57629*BQ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		35,000,000	36,317,610	06/05/2014	06/05/2044	Interest Rate Swaps			375916-BF-9	GILDAN ACTIVEWEAR, INC	3	35,000,000	36,317,610
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	22,000,000	40,006,634	07/22/2014	07/22/2044	Interest Rate Swaps		17,896,568	455130-ZZ-0	STELLA EWL TERM LOAN	2	22,000,000	22,110,066
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,085,740	07/22/2014	07/22/2044	Interest Rate Swaps			38137M-AC-1	Goldentree Loan Opportun-Series 16-12A CLASS A2 GOLDENTREE LOAN OPPORTUNITIES	1	15,000,000	15,085,740
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,811,718	14,041,555	07/22/2014	07/22/2044	Interest Rate Swaps			66776M-ZZ-9	COPPER MOUNTAIN SOLAR 3 LLC	2	14,811,718	14,041,555
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,400,000	14,400,158	07/22/2014	07/22/2044	Interest Rate Swaps			05617Y-AS-8	BABSON CLO LTD-BABSN 2013-11A A2R BABSON CLO LTD	1	14,400,000	14,400,158
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,173,363	14,002,338	07/22/2014	07/22/2044	Interest Rate Swaps			88390A-AF-7	THL CR WIND RIV 2014-2 CLO SR SECD NT CL B-1 WIND RIVER CLO LTD	1	14,173,363	14,002,338
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,247,689	13,979,193	07/22/2014	07/22/2044	Interest Rate Swaps			14955A-AC-7	CAVALRY CLO IV LTD SR SECD NT CL B-1 CAVALRY CLO LTD	1	14,247,689	13,979,193
57629*BR1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		34,806,345	34,999,685	07/22/2014	07/22/2044	Interest Rate Swaps			14315J-AL-3	CARLYLE GLOBAL MARKET ST-SERIES 17-2A CLASS A1B Carlyle US Clo 2017-2 Ltd	1	34,806,345	34,999,685
57629*B7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	20,000,000	37,909,224	07/22/2014	07/22/2044	Interest Rate Swaps		17,909,324	00191L-AQ-5	ARES CLO LTD-SERIES 13-3A CLASS B1R ARES CLO LTD	1	20,000,000	19,999,900
57629*B7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,400,000	11,398,997	07/22/2014	07/22/2044	Interest Rate Swaps			88432D-AS-3	WIND RIVER CLO LTD-SERIES 14-3A CLASS BR WIND RIVER CLO LTD	1	11,400,000	11,398,997
57629*B7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,590,000	19,589,589	07/22/2014	07/22/2044	Interest Rate Swaps			88433R-AC-6	WIND RIVER CLO LTD-SERIES 17-2A CLASS A THL Credit Wind River 2017-2 Clo Ltd	1	19,590,000	19,589,589
57629*B7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,500,000	19,499,415	07/22/2014	07/22/2044	Interest Rate Swaps			04016P-AA-6	ARES CLO LTD-ARES 2017-43A A Ares XLIII CLO Ltd	1	19,500,000	19,499,415
57629*B7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		25,428,765	25,002,850	07/22/2014	07/22/2044	Interest Rate Swaps			14954W-AA-4	CAVALRY CLO III LTD-SR SEC NT CL A	1	25,428,765	25,002,850
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,756,862	7,600,327	04/09/2013	04/09/2043	Interest Rate Swaps			26249B-AA-9	DRYDEN 30 SR LN FD-SR SEC NT CL A OHA CREDIT PARTNERS LTD-SERIES 2012-7A CLASS CR	1	7,756,862	7,600,327
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,975,000	2,984,984	04/09/2013	04/09/2043	Interest Rate Swaps			67102Q-AP-3	TCI-CENT CLO 2016-1 LTD.-TCENT 2016-1A A2	1	2,975,000	2,984,984
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,540,000	6,610,632	04/09/2013	04/09/2043	Interest Rate Swaps			87231L-AC-5	WELLFLEET CLO LTD-WELF 2017-1A A1	1	6,540,000	6,610,632
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,250,000	9,256,244	04/09/2013	04/09/2043	Interest Rate Swaps			94950G-AA-5	WIND RIVER CLO LTD-SERIES 16-2A CLASS B	1	9,250,000	9,256,244
57629*AX9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,750,000	5,768,757	04/09/2013	04/09/2043	Interest Rate Swaps			88433B-AC-1	ARES CLO LTD-ARES 2014-1A A2R	1	5,750,000	5,768,757
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	17,000,000	34,909,494	07/22/2014	07/22/2044	Interest Rate Swaps		17,909,324	04014W-AL-9	OCTAGON INV PARTNERS XVI LTD-SR SECD NT CL A	1	17,000,000	17,000,170
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,033,960	8,959,165	07/22/2014	07/22/2044	Interest Rate Swaps			67590B-AA-8	KKR CLO 14 LTD-SR SECD NT SER 14 CL A-1A KKR FINANCIAL CLO LTD	1	9,033,960	8,959,165
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	13,035,854	07/22/2014	07/22/2044	Interest Rate Swaps			48250W-AA-3	DENALI CAPITAL CLO X LTD-SR SECD DEF NT CL A3L DENALI CAPITAL CLO X LTD	1	13,000,000	13,035,854
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,515,879	8,302,864	07/22/2014	07/22/2044	Interest Rate Swaps			24823B-AE-0	MADISON PARK FDG XI LTD NT CL B-1	1	8,515,879	8,302,864
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,320,932	10,001,920	07/22/2014	07/22/2044	Interest Rate Swaps			55818K-AG-6		1	10,320,932	10,001,920

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STATEMENT AS OF JUNE 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*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,483,843	4,563,757	07/22/2014	07/22/2044	Interest Rate Swaps			03765L-AG-7	APIDOS CLO XX-MEZZ DEF NT CL C	2	4,483,843	4,563,757
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	17,000,544	07/22/2014	07/22/2044	Interest Rate Swaps			55818P-AN-0	MADISON PARK FUNDING LTD-HDPK 2014-12A B1R	1	17,000,000	17,000,544
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,295,123	8,260,599	07/22/2014	07/22/2044	Interest Rate Swaps			75887N-AC-3	REGATTA VI FUNDING LTD-SER 2016-1A CL A	1	8,295,123	8,260,599
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,900,000	6,900,124	07/22/2014	07/22/2044	Interest Rate Swaps			38136F-AL-7	GoldenTree Loan Managem-GLM 2017-1A C	1	6,900,000	6,900,124
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,546,163	1,500,134	07/22/2014	07/22/2044	Interest Rate Swaps			87244D-AC-8	THL CR WIND RIV 2013-1 CLO-SR SECD NT CL A-2 144A	1	1,546,163	1,500,134
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,950,000	9,919,200	07/22/2014	07/22/2044	Interest Rate Swaps			011659-ZZ-5	ALASKA AIR GROUP INC.	2	9,950,000	9,919,200
57629*BU4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,000,000	21,214,671	07/22/2014	07/22/2044	Interest Rate Swaps			67332F-AG-8	RRPF ENGINE LEASING LIMIT	2	23,000,000	21,214,671
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	25,026,240	42,490,332	07/22/2014	07/22/2044	Interest Rate Swaps		17,858,301	82842B-AA-0	SILVERMORE CLO LTD-SR SECD NT CL A-1 144A	1	25,026,240	24,632,031
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,703,296	24,406,856	07/22/2014	07/22/2044	Interest Rate Swaps			03764D-AB-7	APIDOS CLO XII SR SECD NT CL B-1	1	24,703,296	24,406,856
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,753,272	22,012,980	07/22/2014	07/22/2044	Interest Rate Swaps			49638W-AE-6	KINGSLAND LTD-SERIES 2013-6A CLASS C	1	22,753,272	22,012,980
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,707,796	20,005,040	07/22/2014	07/22/2044	Interest Rate Swaps			67104L-AB-3	OHA LN FDG 2013-2 LTD-SR SECD NT CL B	1	20,707,796	20,005,040
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,999,910	07/22/2014	07/22/2044	Interest Rate Swaps			26249E-AQ-8	DRYDEN SENIOR LOAN FUND-SERIES 14-31A CLASS BR DRYDEN SENIOR LOAN FUND	1	15,000,000	14,999,910
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,053,565	07/22/2014	07/22/2044	Interest Rate Swaps			46619T-AA-0	JFIN CLO 2016 LTD - Sr Secd Nt CIA-1 JFIN CLO LTD	1	15,000,000	15,053,565
57629*BV2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,423,458	8,202,058	07/22/2014	07/22/2044	Interest Rate Swaps			09626Y-AE-0	DEF NT CL C BlueMountain CLO 2013-2 Ltd.	1	8,423,458	8,202,058
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	16,438,421	34,239,744	07/22/2014	07/22/2044	Interest Rate Swaps		17,871,057	62886X-AA-4	NCF DEALER FLOORPLAN-SERIES 2014-1A CLASS A NCF DEALER FLOORPLAN MASTER TR	1	16,438,421	16,368,687
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,300,000	16,299,315	07/22/2014	07/22/2044	Interest Rate Swaps			33882G-AA-6	FLATIRON CLO LTD-FLAT 2017-1A A	1	16,300,000	16,299,315
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,280,000	16,279,870	07/22/2014	07/22/2044	Interest Rate Swaps			150323-AQ-6	FLATIRON CLO LTD	1	16,280,000	16,279,870
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,501,755	23,224,861	07/22/2014	07/22/2044	Interest Rate Swaps			38137D-AA-5	CEDAR FUNDING LTD-SERIES 14-4A CLASS BR Cedar Funding IV CLO Ltd	1	23,501,755	23,224,861
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,816,603	22,385,686	07/22/2014	07/22/2044	Interest Rate Swaps			67108F-AA-4	GOLDENTREE LOAN OPP VII LTD-SR SECD NT CL A	1	22,816,603	22,385,686
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,400,000	22,275,165	07/22/2014	07/22/2044	Interest Rate Swap			053635-AC-2	OZLM FUNDING IV LTD-SR SECD NT CL A1 144A	1	22,400,000	22,275,165
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,250,000	4,288,382	07/22/2014	07/22/2044	Interest Rate Swap			76761R-AE-9	AVERY POINT II CLO LTD SR SECD NT CL B-1	1	4,250,000	4,288,382
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,500,000	8,579,569	07/22/2014	07/22/2044	Interest Rate Swap			87231L-AA-9	Reserva CLO Ltd-SERIES 2016-3A CLASS C1	1	8,500,000	8,579,569
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	18,922,442	08/18/2014	08/18/2044	Interest Rate Swap		3,922,247	88322U-AM-1	TC1-CENT CLO 2016-1 LTD.-TCENT 2016-1A A1	1	15,000,000	15,000,195
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,400,000	9,400,094	08/18/2014	08/18/2044	Interest Rate Swap			87154E-AJ-9	THACHER PARK CLO-THPK 2014-1A BR SYMPHONY CLO LTD-SERIES 14-15A CLASS B1R	1	9,400,000	9,400,094
57629*B10	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,998,559	13,252,719	08/18/2014	08/18/2044	Interest Rate Swap			87155F-AL-0	SYMPHONY CLO II LTD-SR NT CL A-3 144A	1	12,998,559	13,252,719
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	10,500,000	16,762,932	08/27/2014	08/27/2044	Interest Rate Swap		6,169,618	67092R-AA-6	OPC CLO LTD-SERIES 16-12A CLASS A1	1	10,500,000	10,593,314
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,659,552	9,555,981	08/27/2014	08/27/2044	Interest Rate Swap			46617Y-AB-9	JFIN CLO 2015 LTD SR SECD NT CL B-1	1	9,659,552	9,555,981
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,012,450	08/27/2014	08/27/2044	Interest Rate Swap			14314B-AC-1	CARLYLE GLOBAL MARKET ST-CGMS 2017-1A A2 CARLYLE GLOBAL MARKET STRATEGI	1	15,000,000	15,012,450
57629*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,560,000	8,559,872	08/27/2014	08/27/2044	Interest Rate Swap			85816B-CQ-1	STEELE CREEK CLO LTD-SERIES 15-1A CLASS BR Steele Creek CLO 2015-1 Ltd	1	8,560,000	8,559,872

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STATEMENT AS OF JUNE 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*BZ3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,050,000	9,051,548	08/27/2014	08/27/2044	Interest Rate Swap			92912V-AN-5	VOYA CLO LTD-VOYA 2014-2A A1R	1	9,050,000	9,051,548
57629*CA7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	60,500,000	66,691,535	08/27/2014	08/27/2044	Interest Rate Swap		6,190,083	126612-AJ-9	CVP CASCADE CLO LTD-CVPC 2013-CLO1 A1R	1	60,500,000	60,501,452
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	18,650,000	24,792,221	08/27/2014	08/27/2044	Interest Rate Swap		6,138,920	05363X-AE-7	AVERY POINT V CLO LTD SR SECD NT CL B	1	18,650,000	18,653,301
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	14,999,910	08/27/2014	08/27/2044	Interest Rate Swap			88432C-AS-5	WIND RIVER CLO LTD-WINDR 2014-1A B1R WIND RIVER CLO LTD	1	15,000,000	14,999,910
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,600,000	3,600,004	08/27/2014	08/27/2044	Interest Rate Swap			87154E-AQ-3	SYMPHONY CLO LTD-SYMP 2014-15A DR	2	3,600,000	3,600,004
57629*CB5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,100,000	14,138,338	08/27/2014	08/27/2044	Interest Rate Swap			06759Y-AA-3	BARINGS CLO LTD-BABSN 2016-3A A1	1	14,100,000	14,138,338
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	50,000,000	21,300,000	27,405,108	08/27/2014	08/27/2044	Interest Rate Swap		6,103,106	09627L-AN-7	BLUEMOUNTAIN CLO LTD-BLUEM 2014-1A B1R	1	21,300,000	21,302,002
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,899,580	18,503,497	08/27/2014	08/27/2044	Interest Rate Swap			49638Y-AC-6	KINGSLAND VII LTD-SR SECD NT CL B 144A	1	18,899,580	18,503,497
57629*CC3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		19,200,000	19,199,885	08/27/2014	08/27/2044	Interest Rate Swap			04941R-AL-8	ATLAS SENIOR LOAN FUND L-ATCLO 2014-6A BR	1	19,200,000	19,199,885
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	30,000,000	18,647,309	21,857,129	09/04/2014	09/04/2044	Interest Rate Swap		3,579,790	09626Q-AC-1	BLUEMOUNTAIN CLO 2014-2 LTD-SR SEC NOTE CL B1	1	18,647,309	18,277,339
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,992,736	4,977,708	09/04/2014	09/04/2044	Interest Rate Swap			05617W-AC-7	BARSON CLO LTD 2013-I-SR SECD NT CL B 144A	1	4,992,736	4,977,708
57629*CD1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,570,000	13,569,905	09/04/2014	09/04/2044	Interest Rate Swap			55818R-AS-5	MADISON PARK FUNDING LTD-SERIES 14-14A CLASS BR MADISON PARK FUNDING LTD	1	13,570,000	13,569,905
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	110,000,000	128,383,296	09/08/2014	09/08/2044	Interest Rate Swap		18,379,116	872455-AN-0	TICP CLO LTD-TICP 2014-1A A1R TICP CLO LTD	1	110,000,000	110,004,180
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,465,000	31,569,912	09/08/2014	09/08/2044	Interest Rate Swap			Z22066-38-8	AUST & NZ BANKING GROUP-SUBORDINATED NOTE AUST & NZ BANKING GROUP	2	21,465,000	31,569,912
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,380,000	11,379,898	09/08/2014	09/08/2044	Interest Rate Swap			55818R-AT-3	MADISON PARK FUNDING LTD-SERIES 14-14A CLASS C1R MADISON PARK FUNDING LTD	1	11,380,000	11,379,898
57629*CE9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,000,000	9,001,287	09/08/2014	09/08/2044	Interest Rate Swap			053635-AG-3	AVERY POINT II CLO LTD-SR SECD DEF NT CL C AVERY POINT CLO LTD	1	9,000,000	9,001,287
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	30,000,000	14,000,000	18,763,811	09/17/2014	09/17/2044	Interest Rate Swap		4,764,819	39862E-AB-0	GRIPPEN PARK CLO LTD-SERIES 17-1A CLASS B	1	14,000,000	13,998,992
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,600,000	6,607,352	09/17/2014	09/17/2044	Interest Rate Swap			05618M-AY-0	BABSON CLO LTD-BABSN 2014-3A C1R CARLYLE GLOBAL MKT CLO 2013-4 SR	1	6,600,000	6,607,352
57629*CF6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,000,000	18,076,950	09/17/2014	09/17/2044	Interest Rate Swap			14310K-AC-5	SEC NT CL A1	1	18,000,000	18,076,950
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	55,000,000	10,850,000	15,083,288	10/06/2014	10/06/2034	Interest Rate Swap		4,198,926	03763Y-AQ-9	APIDOS CLO-APID 2012-11A BR	1	10,850,000	10,884,362
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,000,000	15,000,330	10/06/2014	10/06/2034	Interest Rate Swap			00164K-AL-1	ALM LOAN FUNDING-SERIES 14-14A CLASS A2R ALM LOAN FUNDING	1	15,000,000	15,000,330
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,378,200	9,349,972	10/06/2014	10/06/2034	Interest Rate Swap			05617W-AC-7	BABSON CLO LTD 2013-I-SR SECD NT CL B 144A	1	9,378,200	9,349,972
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,411,435	9,222,558	10/06/2014	10/06/2034	Interest Rate Swap			04941G-AE-8	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS C	1	9,411,435	9,222,558
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,797,179	3,762,716	10/06/2014	10/06/2034	Interest Rate Swap			50188G-AN-3	LOM XVIII LTD PARTNERSHIP-DEF MEZZ NT CL D 144A	3	3,797,179	3,762,716
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,729,766	3,770,038	10/06/2014	10/06/2034	Interest Rate Swap			056162-AG-5	BARSON CLO LTD 2015-I-SR SECD DEF NT CL D-1	2	3,729,766	3,770,038
57629*CG4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,000,035	10/06/2014	10/06/2034	Interest Rate Swap			817176-AS-9	SENECA PARK CLO LTD-SPARK 2014-1A CR	1	5,000,000	5,000,035
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	100,000,000	45,000,000	56,651,761	10/06/2014	10/06/2044	Interest Rate Swap		11,649,376	85815X-AQ-6	STEELE CREEK CLO LTD-STCR 2014-1A A1R	1	45,000,000	45,002,385
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	9,816,280	10/06/2014	10/06/2044	Interest Rate Swap			61744C-NB-8	MORGAN STANLEY CAPITAL I-SERIES 2005-HE2 CLASS M1 MORGAN STANLEY CAPITAL INC	1	10,000,000	9,816,280
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,850,000	9,849,990	10/06/2014	10/06/2044	Interest Rate Swap			36319Q-AC-6	GALAXY X1X CLO LTD-SENIOR NOTE CL A-1A GALAXY CLO LTD	1	9,850,000	9,849,990

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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*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,140	10/06/2014	10/06/2044	Interest Rate Swap			94950G-AC-1	WELLFLEET CLO LTD-WELF 2017-1A A2	1	20,000,000	19,999,140
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		15,375,000	15,374,892	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	15,374,892
57629*CH2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,176,344	5,111,798	10/06/2014	10/06/2044	Interest Rate Swap			93677P-AB-7	A1B RPPF Engine Leasing Ltd Senior Secured	1	5,176,344	5,111,798
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	175,000,000	60,000,000	76,645,850	10/10/2014	10/10/2044	Interest Rate Swap		17,665,130	G7332#-AD-5		2	60,000,000	58,980,720
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		26,949,407	28,406,250	10/10/2014	10/10/2044	Interest Rate Swap			629394-AA-5	NTC CAPITAL I-UNSECURED BOND CULLEN/FROST CAP TR II-SUBORDINATED	2	26,949,407	28,406,250
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,779,206	21,992,214	10/10/2014	10/10/2044	Interest Rate Swap			230000-AB-7	NOTE BLUEMOUNTAIN CLO LTD-SERIES 2015-1A CLASS A2R	2	20,779,206	21,992,214
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,500,000	20,538,151	10/10/2014	10/10/2044	Interest Rate Swap			09627X-AH-1	PINNAACLE PARK CLO LTD-SERIES 2014-1A CLASS BR	1	20,500,000	20,538,151
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,700,000	18,715,671	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	18,715,671
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,100,000	16,166,252	10/10/2014	10/10/2044	Interest Rate Swap			873549-AC-3	BLUEMOUNTAIN CLO 2014-1 LTD SR SEC	1	16,100,000	16,166,252
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,852,833	1,885,277	10/10/2014	10/10/2044	Interest Rate Swap			09627L-AJ-6	DEF NT CL D BLUEMOUNTAIN CLO 2014-4 LTD-SR SEC	1	1,852,833	1,885,277
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,516,085	4,588,675	10/10/2014	10/10/2044	Interest Rate Swap			09627V-AG-0	DEF NT CL D BABSON CLO LTD 2013-11-SR SEC DEF NT CL C 144A	2	4,516,085	4,588,675
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,174,825	3,240,465	10/10/2014	10/10/2044	Interest Rate Swap			05617Y-AG-4	SLMA 2005-9 STUDENT LN-BKD NT CL B	1	3,174,825	3,240,465
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,457,593	7,157,533	10/10/2014	10/10/2044	Interest Rate Swap			78442G-RC-2	BLUEMOUNTAIN CLO 2013-3 LTD SR SEC DEF NT CL D	1	6,457,593	7,157,533
57629*CJ8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,771,748	6,862,202	10/10/2014	10/10/2044	Interest Rate Swap			09625J-AF-1	CARLYLE GLOBAL MARKET ST-SERIES 14-5A CLASS A1R CARLYLE GLOBAL MARKET STRATEGI	2	6,771,748	6,862,202
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	75,000,000	87,615,931	11/04/2014	11/04/2044	Interest Rate Swap		12,612,031	14311A-AJ-1	ATRIUM CDO CORP-ATRM 11A A1R ATRIUM CDO CORP	1	75,000,000	75,003,900
57629*CK5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		50,000,000	50,185,950	11/04/2014	11/04/2044	Interest Rate Swap			04964W-AL-9	WELLFLEET CLO 2015-1 LTD-SR SEC DEF NT CL A-1 144A WELLFLEET CLO LTD	1	50,000,000	50,185,950
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	65,000,000	78,233,652	11/04/2014	11/04/2044	Interest Rate Swap		12,637,732	949496-AC-7	OHA CREDIT PARTNERS LTD-OAKC 2014-10A BR OHA CREDIT PARTNERS LTD	1	65,000,000	65,595,920
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		38,750,000	38,752,015	11/04/2014	11/04/2044	Interest Rate Swap			67106J-AQ-3	KINGSLAND VI LTD-SR SEC DEF NT CL A1 144A KINGSLAND LTD	1	38,750,000	38,752,015
57629*CL3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,892,304	21,500,366	11/04/2014	11/04/2044	Interest Rate Swap			49638W-AB-2	OHA CREDIT PARTNERS LTD-OAKC 2014-10A AR OHA CREDIT PARTNERS LTD	1	21,892,304	21,500,366
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	50,000,000	62,935,641	11/04/2014	11/04/2044	Interest Rate Swap		12,843,341	67106J-AN-0	VENTURE CDO LTD-VENTR 2014-16A A1R	1	50,000,000	50,092,300
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,000,000	45,999,816	11/04/2014	11/04/2044	Interest Rate Swap			92329X-AK-4	GOLUB CAPITAL PARTNERS C-SERIES 13-16A CLASS A1R GOLUB CAPITAL PARTNERS CLO LTD	1	46,000,000	45,999,816
57629*CM1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,000,000	11/04/2014	11/04/2044	Interest Rate Swap			38172X-AG-4	ASTORIA ENERGY II LLC TERM LOAN Arpad Solar Borrower LLC Term Loan	1	30,000,000	30,000,000
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	51,960,314	64,906,015	11/04/2014	11/04/2044	Interest Rate Swap		12,869,043	924WKD-II-5	EMERSON PARK CLO LTD-SERIES 13-1A	2	51,960,314	52,036,972
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		48,000,000	46,453,200	11/04/2014	11/04/2044	Interest Rate Swap			83416T-RR-3	EMERSON PARK CLO LTD	2	48,000,000	46,453,200
57629*CN9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		26,700,000	26,699,867	11/04/2014	11/04/2044	Interest Rate Swap			291080-AY-8	ATRIUM CDO CORP-SERIES 9A CLASS AR	1	26,700,000	26,699,867
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	48,000,000	61,154,562	11/04/2014	11/04/2044	Interest Rate Swap		12,946,146	04964K-AL-5	TICP CLO LTD-TICP 2014-2A A1AR TICP CLO LTD	1	48,000,000	48,208,416
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		38,550,000	38,611,564	11/04/2014	11/04/2044	Interest Rate Swap			87247C-AN-3	CAMERON LNG CONSTRUCTION FA Cameron LNG LLC	1	38,550,000	38,611,564
57629*CP4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		40,745,949	41,067,623	11/04/2014	11/04/2044	Interest Rate Swap			13345*-AA-5	JFIN CLO LTD-SERIES 14-2A CLASS A1AR JFIN CLO LTD	1	40,745,949	41,067,623
57629*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	72,000,000	85,100,353	11/04/2014	11/04/2044	Interest Rate Swap		13,100,353	46617N-AQ-0	RXR Realty, LLC Senior Secured RXR Realty LLC	1	72,000,000	72,000,000
57629*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		37,400,000	40,228,936	11/04/2014	11/04/2044	Interest Rate Swap			74992*-AB-1		2	37,400,000	40,228,936

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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*CO2	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,685,861	16,569,960	11/04/2014	11/04/2044	Interest Rate Swap			03329K-AA-1	ANCHORAGE CAPITAL CLO LT-SERIES 2016-BA CLASS A1 ANCHORAGE CAPITAL CLO LTD	1	16,685,861	16,569,960
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	13,760,000	26,834,583	11/04/2014	11/04/2044	Interest Rate Swap	13,074,652		14310U-AQ-2	CARLYLE GLOBAL MARKET ST-CGMS 2014-4A BR CARLYLE GLOBAL MARKET STRATEGI	1	13,760,000	13,759,931
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,660,000	13,661,626	11/04/2014	11/04/2044	Interest Rate Swap			05363U-AW-3	EVERY POINT CLO LTD-SERIES 14-1A CLASS OR EVERY POINT CLO LTD	1	13,660,000	13,661,626
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,660,000	13,697,456	11/04/2014	11/04/2044	Interest Rate Swap			04964K-AS-0	ATRIUM CDO CORP-SERIES 9A CLASS CR ATRIUM CDO CORP	1	13,660,000	13,697,456
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,244,958	11/04/2014	11/04/2044	Interest Rate Swap			47032B-AK-7	JAMES CAMPBELL COMPANY RPPF Engine Leasing Ltd Senior Secured Rrpf Engine Leasing Ltd	2	13,500,000	13,244,958
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,000,000	11,614,486	11/04/2014	11/04/2044	Interest Rate Swap			67332F-AH-6	CARLYLE GLOBAL MARKET ST-SERIES 2014-1A CLASS BR CARLYLE GLOBAL MARKET STRATEGI	1	13,000,000	11,614,486
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,000,000	10,013,330	11/04/2014	11/04/2044	Interest Rate Swap			14310M-AQ-0	TCI-CENT CLO 2016-1 LTD-SERIES 17-1A CLASS A1 TCI-CENT CLO 2016-1 LTD	1	10,000,000	10,013,330
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		30,000,000	30,000,000	11/04/2014	11/04/2044	Interest Rate Swap			87806L-AC-0	CIFC FUNDING LTD-CIFC 2017-2A A CIFC Funding 2017-11 Ltd	1	30,000,000	30,000,000
57629*CRO	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	19,999,920	11/04/2014	11/04/2044	Interest Rate Swap			12550Y-AC-8	MADISON PARK FUNDING LTD-SERIES 2015-16A CLASS A2R MADISON PARK FUNDING LTD	1	20,000,000	19,999,920
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	12,740,000	25,867,188	11/04/2014	11/04/2044	Interest Rate Swap	13,126,054		55818X-AY-9	MAGNETITE CLO LTD-SERIES 14-11A CLASS A1R Magnetite XI Ltd	1	12,740,000	12,741,134
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,675,000	12,680,095	11/04/2014	11/04/2044	Interest Rate Swap			55953E-AJ-9	APIDOS CLO-SERIES 17-26A CLASS A2	1	12,675,000	12,680,095
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,240,000	12,239,694	11/04/2014	11/04/2044	Interest Rate Swap			03766G-AE-2	Apidos CLO XXVI CATSKILL PARK CLO LTD-SERIES 17-1A CLASS A2 Catskill Park CLO Ltd	1	12,240,000	12,239,694
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,980,000	11,979,605	11/04/2014	11/04/2044	Interest Rate Swap			149420-AE-1	MADISON PARK FDG V LTD-NT CL A-2	1	11,980,000	11,979,605
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,992,530	4,937,940	11/04/2014	11/04/2044	Interest Rate Swap			55817X-AC-8	144A MADISON PARK FUNDING LTD	1	4,992,530	4,937,940
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,100,000	21,100,000	11/04/2014	11/04/2044	Interest Rate Swap			48250L-AL-3	KKR FINANCIAL CLO LTD-SERIES 9 CLASS AR KKR FINANCIAL CLO LTD	1	21,100,000	21,100,000
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,900,000	16,886,693	11/04/2014	11/04/2044	Interest Rate Swap			00164M-DG-5	ALM LOAN FUNDING-SERIES 15-12A CLASS A1R ALM LOAN FUNDING	1	16,900,000	16,886,693
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,100,000	18,101,629	11/04/2014	11/04/2044	Interest Rate Swap			05873L-AK-2	BALLYROCK LTD-BALLY 2014-1A A2R BALLYROCK LTD	1	18,100,000	18,101,629
57629*CS8	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,100,000	18,102,842	11/04/2014	11/04/2044	Interest Rate Swap			40436V-AA-9	HIGHBRIDGE LOAN MANAGEME-HLM 11A-17 A HPS Loan Management 11-2017 Ltd	1	18,100,000	18,102,842
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2	150,000,000	13,176,445	20,308,475	12/16/2014	12/16/2044	Interest Rate Swap	5,562,429		979JXH-11-5	AUTOSTRADA WIELKOPOLSKA SA	3	13,176,445	14,746,046
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		34,649,025	34,646,430	12/16/2014	12/16/2044	Interest Rate Swap			U8270Y-ZZ-4	SILVER STATE SOLAR SOUTH KINGSLAND V LTD-SR SECD NT CL A2B 144A	2	34,649,025	34,646,430
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		11,177,799	10,904,406	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	11,177,799	10,904,406
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		11,535,331	11,174,844	12/16/2014	12/16/2044	Interest Rate Swap			26249B-AC-5	BENEFIT STREET PRTRNS CLO VII SR SEC NT CL A-2 Benefit Street Partners CLO VII, Ltd.	1	11,535,331	11,174,844
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		11,497,499	11,203,315	12/16/2014	12/16/2044	Interest Rate Swap			05874P-AE-6	OCTAGON INV PARTNERS XVI LTD-SR SECD NT CL B1	1	11,497,499	11,203,315
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		15,126,972	15,001,890	12/16/2014	12/16/2044	Interest Rate Swap			08180R-AC-9	CARLYLE GLOBAL MARKET ST-CGMS 2014-2A BR	1	15,126,972	15,001,890
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		10,950,000	10,913,405	12/16/2014	12/16/2044	Interest Rate Swap			67590B-AC-4	JFIN CLO 2014-11 LTD-SR SECD NOTE CLASS A-2 144A	1	10,950,000	10,913,405
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		11,040,000	11,040,475	12/16/2014	12/16/2044	Interest Rate Swap			14310V-AM-9	JFIN CLO 2012 LTD-NOTE CLASS A2B 144A	1	11,040,000	11,040,475
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		11,292,652	11,200,773	12/16/2014	12/16/2044	Interest Rate Swap			46617N-AC-1	JFIN CLO 2012 LTD-NOTE CLASS A2B 144A	1	11,292,652	11,200,773
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		10,923,149	10,805,141	12/16/2014	12/16/2044	Interest Rate Swap			46616A-AJ-5	JFIN CLO 2012 LTD-NOTE CLASS A2B 144A	1	10,923,149	10,805,141

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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*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		10,054,989	10,026,190	12/16/2014	12/16/2044	Interest Rate Swap			381370-AA-6	GOLDENTREE LOAN OPPORTUN-SERIES 14-9A CLASS AR GOLDENTREE LOAN OPPORTUNITIES	1	10,054,989	10,026,190
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		7,460,332	7,201,433	12/16/2014	12/16/2044	Interest Rate Swap			14310G-AE-5	CARLYLE GLOBAL MKT CLO 2013-3 SR SEC DEF NT CL B	1	7,460,332	7,201,433
57629*CX7	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	2		8,100,000	8,185,552	12/16/2014	12/16/2044	Interest Rate Swap			001626-AC-4	ALM XIX Ltd SR SECDEF NT CL A-2	1	8,100,000	8,185,552
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	150,000,000	9,000,000	14,254,721	12/16/2014	12/16/2044	Interest Rate Swap		5,253,074	05617W-AE-3	BABSON CLO LTD 2013-1-SR SECDEF NT CL C 144A	1	9,000,000	9,001,647
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,223,755	7,101,427	12/16/2014	12/16/2044	Interest Rate Swap			46617E-AE-7	JFIN CLO 2014 LTD-MEZZ SECDEF NT CL C	1	7,223,755	7,101,427
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,470,000	14,469,407	12/16/2014	12/16/2044	Interest Rate Swap			55820R-AC-6	MADISON PARK FUNDING LTD-SERIES 17-25A CLASS A2 Madison Park Funding XXV Ltd	1	14,470,000	14,469,407
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,000,070	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	7,000,070
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,499,995	12/16/2014	12/16/2044	Interest Rate Swap			15132V-AG-5	CENT CDO 15 LTD-DEF NT SER 2007-15A CL C 144A	3	2,500,000	2,499,995
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,968,002	2,174,912	12/16/2014	12/16/2044	Interest Rate Swap			46615P-AG-9	JFIN CLO 2007 LTD-DEF MEZZ NOTE CLASS D	1	1,968,002	2,174,912
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,819,870	2,079,966	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	1,819,870	2,079,966
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,322,860	6,358,035	12/16/2014	12/16/2044	Interest Rate Swap			92557W-AE-3	VIBRANT CLO IV LTD-SR SECDEF NT CL B 144A	1	6,322,860	6,358,035
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		41,400,000	41,529,872	12/16/2014	12/16/2044	Interest Rate Swap			74983D-AA-5	RACE POINT X CLO LTD SR SECDEF NT CL A	1	41,400,000	41,529,872
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,717,350	17,810,102	12/16/2014	12/16/2044	Interest Rate Swap			94949R-AC-1	WELLFLEET CLO 2016-1 LTD-SR SECDEF NT CL A 144A	1	17,717,350	17,810,102
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,517,698	17,386,746	12/16/2014	12/16/2044	Interest Rate Swap			85810Z-AD-8	STEELE CREEK CLO 2016-1 LTD-SR SECDEF NT CL A-1 144A	1	17,517,698	17,386,746
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	7,000,070	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AN-4	BABSON CLO LTD-BABSN 2014-1A BR DRYDEN XXVII SR LN FD SR SECDEF NT CL	1	7,000,000	7,000,070
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,906,262	7,901,654	12/16/2014	12/16/2044	Interest Rate Swap			26250U-AC-9	ALM XVII LTD-SR SECURED NOTE CLASS A	1	7,906,262	7,901,654
57629*CT6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,750,000	13,869,419	12/16/2014	12/16/2044	Interest Rate Swap			02014P-AC-8	A2L	1	13,750,000	13,869,419
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	35,578,477	45,003,869	12/16/2014	12/16/2044	Interest Rate Swap		9,425,392	979JXQ-11-5	CONNECT PLUS M25 LTD	1	35,578,477	35,578,477
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		33,659,053	33,656,532	12/16/2014	12/16/2044	Interest Rate Swap			U8270Y-ZZ-4	SILVER STATE SOLAR SOUTH	2	33,659,053	33,656,532
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,000,000	14,005,362	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	14,005,362
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,500,000	23,500,306	12/16/2014	12/16/2044	Interest Rate Swap			05618D-AL-8	BABSON CLO LTD-BABSN 2014-1A A2R	1	23,500,000	23,500,306
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,085,563	23,100,000	12/16/2014	12/16/2044	Interest Rate Swap			83610K-AA-1	SOUND POINT CLO LTD-SERIES 2017-2A CLASS A Sound Point CLO XVI Ltd LOM LTD PARTNERSHIP-SERIES 13A	1	23,085,563	23,100,000
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,750,000	12,788,824	12/16/2014	12/16/2044	Interest Rate Swap			50184K-AU-2	CLASS BR 321 HENDERSON RECEIVABLE-SERIES 05-1A CLASS A1 321 Henderson	1	12,750,000	12,788,824
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,104,956	21,142,845	12/16/2014	12/16/2044	Interest Rate Swap			88576P-AE-3	Receivables I LLC	1	21,104,956	21,142,845
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,600,000	22,599,910	12/16/2014	12/16/2044	Interest Rate Swap			09627R-AJ-3	BLUEMOUNTAIN CLO LTD-BLUEM 2014-3A A1R BLUEMOUNTAIN CLO LTD	1	22,600,000	22,599,910
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		20,000,000	20,003,340	12/16/2014	12/16/2044	Interest Rate Swap			58806P-AC-2	MERCER FIELD CLO LP-MERCL 2017-1A A2 Mercer Field II CLO Ltd	1	20,000,000	20,003,340
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,500,000	10,499,885	12/16/2014	12/16/2044	Interest Rate Swap			03765D-AS-9	APIDOS CLO-APID 2014-18A BR APIDOS CLO	1	10,500,000	10,499,885
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,288,854	12,113,318	12/16/2014	12/16/2044	Interest Rate Swap			82817R-AB-7	SILVER SPRING CLO LTD-SR SECDEF NT CL B-1 144A	1	12,288,854	12,113,318
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,084,217	13,138,320	12/16/2014	12/16/2044	Interest Rate Swap			87230A-AA-4	TC1-FLATIRON CLO 2016-1 LTD SR SECDEF NT CL A	1	13,084,217	13,138,320
57629*CIW9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,690,000	14,696,919	12/16/2014	12/16/2044	Interest Rate Swap			817176-AL-4	SENECA PARK CLO LTD-SPARK 2014-1A AR	1	14,690,000	14,696,919

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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*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,500,027	12/16/2014	12/16/2044	Interest Rate Swap			38136F-AG-8	GoldenTree Loan Managem-GLM 2017-1A B1	1	13,500,000	13,500,027
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,800,000	10,800,140	12/16/2014	12/16/2044	Interest Rate Swap			037640-AQ-5	APIDOS CLO-SERIES 13-15A CLASS A2AR	1	10,800,000	10,800,140
57629*CI9	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,249,014	8,286,647	12/16/2014	12/16/2044	Interest Rate Swap			09628B-AA-6	BLUEMOUNTAIN CLO 2015-2 LTD SR SECD NT CL A-1	1	8,249,014	8,286,647
57629*CU3	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	250,000,000	328,073,426	335,037,772	12/16/2014	12/16/2044	Interest Rate Swap		8,445,770	57542Z-AA-7	MASSMUTUAL ASSET FIN LLC SR SECD REV NT	1	328,073,426	326,592,002
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	200,000,000	15,248,567	21,502,473	12/16/2014	12/16/2044	Interest Rate Swap		6,344,143	65531W-AA-8	NOMAD CLO LTD-SECD NT SER 2013-1A CL A-1 144A	1	15,248,567	15,158,330
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		23,602,398	23,306,244	12/16/2014	12/16/2044	Interest Rate Swap			09625J-AA-2	BLUEMOUNTAIN CLO 2013-3 LTD SR SECD NT CL A	1	23,602,398	23,306,244
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,011,226	10,999,846	12/16/2014	12/16/2044	Interest Rate Swap			04941G-AA-6	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS A	1	11,011,226	10,999,846
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,850,000	5,892,196	12/16/2014	12/16/2044	Interest Rate Swap			55819T-AG-6	MADISON PARK FDG XX LTD-SECD DEF NT CL C-1 144A	1	5,850,000	5,892,196
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,220,000	22,395,449	12/16/2014	12/16/2044	Interest Rate Swap			83609J-AA-7	SOUND POINT CLO XI LTD-SR SECD NT CL A 144A	1	22,220,000	22,395,449
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		21,675,000	21,676,691	12/16/2014	12/16/2044	Interest Rate Swap			08180R-AA-3	BENEFIT STR PARTNERS CLO VII LTD SR SECD NT CL A-1A	1	21,675,000	21,676,691
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,120,000	17,119,829	12/16/2014	12/16/2044	Interest Rate Swap			674000-AN-4	OAKTREE CLO LTD-SERIES 14-1A CLASS A1R Oaktree CLO 2014-1	1	17,120,000	17,119,829
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,000,000	16,999,898	12/16/2014	12/16/2044	Interest Rate Swap			033286-AN-5	ANCHORAGE CAPITAL CLO LT-ANCHC 2014-5A BR ANCHORAGE CAPITAL CLO LTD	1	17,000,000	16,999,898
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,600,000	16,604,017	12/16/2014	12/16/2044	Interest Rate Swap			05874P-AC-0	BALLYROCK LTD-SERIES 2013-1A CLASS B Ballyrock CLO 2013-1 Ltd.	1	16,600,000	16,604,017
57629*CV1	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		56,000,000	55,747,131	12/16/2014	12/16/2044	Interest Rate Swap			57542Z-AA-7	MASSMUTUAL ASSET FIN LLC SR SECD REV NT	1	56,000,000	55,747,131
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,100,000	3,093,623	02/05/2015	02/05/2045	Interest Rate Swap		(7,006,377)	50181G-AS-9	LOM LTD PARTNERSHIP	1	10,100,000	10,100,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,010,000	10,010,822	02/05/2015	02/05/2045	Interest Rate Swap			92912V-AS-4	VOYA CLO LTD	1	10,010,000	10,010,822
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,512,520	10,355,625	02/05/2015	02/05/2045	Interest Rate Swap			564759-OB-7	MANUFACTURERS AND TRADERS TRUST CO	1	10,512,520	10,355,625
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,500,000	02/05/2015	02/05/2045	Interest Rate Swap			87806L-AE-6	TC1-CENT CLO 2016-1 LTD -SERIES 17-1A CLASS A2 TC1-CENT CLO 2016-1 LTD	1	13,500,000	13,500,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,500,000	13,500,000	02/05/2015	02/05/2045	Interest Rate Swap			06760B-AE-2	BABSON CLO LTD-SERIES 17-1A CLASS B1 BABSON CLO LTD	1	13,500,000	13,500,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,700,000	02/05/2015	02/05/2045	Interest Rate Swap			398080-AL-5	GREYWOLF CLO LTD-SERIES 2014-2A CLASS A2R GREYWOLF CLO LTD	1	12,700,000	12,700,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,700,000	12,700,000	02/05/2015	02/05/2045	Interest Rate Swap			40436X-AE-7	HIGHBRIDGE LOAN MANAGEMEN-SERIES 2014 CLAS A2R HIGHBRIDGE LOAN MANAGEMENT LTD	1	12,700,000	12,700,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,400,000	11,400,000	02/05/2015	02/05/2045	Interest Rate Swap			14954W-AN-6	BAIN CAPITAL CREDIT CLO -SERIES 17-2A CLASS BR BAIN CAPITAL CREDIT CLO LIMIT	1	11,400,000	11,400,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,200,000	11,200,000	02/05/2015	02/05/2045	Interest Rate Swap			05682Q-AC-0	BAIN CAPITAL CREDIT CLO -SERIES 17-1A CLASS A1 BAIN CAPITAL CREDIT CLO LIMIT	1	11,200,000	11,200,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,200,000	10,200,000	02/05/2015	02/05/2045	Interest Rate Swap			00162L-CG-0	ALM LOAN FUNDING-SERIES 15-16A CLASS BR ALM LOAN FUNDING	1	10,200,000	10,200,000
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,300,000	11,303,187	02/05/2015	02/05/2045	Interest Rate Swap			053633-AH-6	EVERY POINT CLO LTD-SERIES 13-3A CLASS B1R EVERY POINT CLO LTD	1	11,300,000	11,303,187
57629*CY5	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,580,000	9,582,338	02/05/2015	02/05/2045	Interest Rate Swap			14311D-AE-6	CARLYSLE GLOBAL MARKET STRATEGIES	1	9,580,000	9,582,338
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	15,292,970	7,884,689	02/05/2015	02/05/2045	Interest Rate Swap		(7,216,866)	14311D-AC-0	CARLYLE GLOBAL MKT CLO 2015-1 SR SEC NT CL A	1	15,292,970	15,101,555
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,330,000	32,337,889	02/05/2015	02/05/2045	Interest Rate Swap			053633-AG-8	EVERY POINT CLO LTD-SERIES 13-3A CLASS AR EVERY POINT CLO LTD	1	32,330,000	32,337,889
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,100,000	32,099,904	02/05/2015	02/05/2045	Interest Rate Swap			05363U-AU-7	EVERY POINT CLO LTD-SERIES 14-1A CLASS BR EVERY POINT CLO LTD	1	32,100,000	32,099,904

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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*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		32,000,000	32,000,096	02/05/2015	02/05/2045	Interest Rate Swap			67706T-AS-1	OHA LOAN FUNDING LTD-OHALF 2014-1A A1R OHA LOAN FUNDING LTD	1	32,000,000	32,000,096
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,700,000	18,710,397	02/05/2015	02/05/2045	Interest Rate Swap			05618M-AU-8	BABSON CLO LTD-BABSN 2014-3A B1R BABSON CLO LTD	1	18,700,000	18,710,397
57629*C22	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,000,000	6,999,944	02/05/2015	02/05/2045	Interest Rate Swap			26249E-AS-4	DRYDEN SENIOR LOAN FUND-SERIES 14-31A CLASS CR DRYDEN SENIOR LOAN FUND	1	7,000,000	6,999,944
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	18,100,000	11,071,168	02/05/2015	02/05/2045	Interest Rate Swap		(7,028,723)	43132R-AS-0	HILDENE CLO LTD-SERIES 13-1A CLASS BR HILDENE CLO LTD	1	18,100,000	18,099,891
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		27,200,000	27,211,533	02/05/2015	02/05/2045	Interest Rate Swap			55818R-AQ-9	MADISON PARK FUNDING LTD-HDPK 2014-14A A1R MADISON PARK FUNDING LTD	1	27,200,000	27,211,533
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,750,000	24,749,975	02/05/2015	02/05/2045	Interest Rate Swap			26249E-AN-5	DRYDEN SENIOR LOAN FUND-SERIES 14-31A CLASS AR DRYDEN SENIOR LOAN FUND	1	24,750,000	24,749,975
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,023,592	17,999,224	02/05/2015	02/05/2045	Interest Rate Swap			77340E-AC-0	ROCKFORD TOWER CLO LTD-ROCKT 2017-1A B Rockford Tower CLO 2017-1 Ltd	1	18,023,592	17,999,224
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		18,411,474	17,899,982	02/05/2015	02/05/2045	Interest Rate Swap			40538C-AG-5	HALCYON LOAN ADVISORS FU-SERIES 2014-1A CLASS B1 HALCYON LOAN ADVISORS FUNDING	1	18,411,474	17,899,982
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		24,090,000	24,099,251	02/05/2015	02/05/2045	Interest Rate Swap			92916X-AA-5	VOYA CLO LTD-INGIM 2013-3A A1R Voya CLO 2013-3 Ltd	1	24,090,000	24,099,251
57629*DA6	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,300,000	4,300,000	02/05/2015	02/05/2045	Interest Rate Swap			87248T-AE-5	TICP CLO LTD	1	4,300,000	4,300,000
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	6,841,067	(523,893)	02/05/2015	02/05/2045	Interest Rate Swap		(7,368,565)	55951P-AR-8	MAGNETITE CLO LTD-MAGNE 2012-7A A2R	1	6,841,067	6,844,672
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,369,408	8,100,948	02/05/2015	02/05/2045	Interest Rate Swap			67108F-AC-0	OZJM FUNDING IV LTD-SR SEC2 NT CL A2 144A	1	8,369,408	8,100,948
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,140,629	8,002,112	02/05/2015	02/05/2045	Interest Rate Swap			39808F-AE-8	GREYWOLF CLO III LTD-SR SEC2 DEF NT CL B 144A	1	8,140,629	8,002,112
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,000,000	8,000,048	02/05/2015	02/05/2045	Interest Rate Swap			00900A-AJ-7	AIMCO-SERIES 14-AA CLASS B1R AIMCO	1	8,000,000	8,000,048
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		26,243,905	26,026,624	02/05/2015	02/05/2045	Interest Rate Swap			67590B-AA-8	OCTAGON INV PARTNERS XVI LTD-SR SEC2 NT CL A	1	26,243,905	26,026,624
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,850,000	7,851,452	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	7,851,452
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		46,150,000	47,140,794	02/05/2015	02/05/2045	Interest Rate Swap			589433-G8-4	Meredith Corp. Senior Note Ser	3	46,150,000	47,140,794
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,476,271	7,467,158	02/05/2015	02/05/2045	Interest Rate Swap			36248M-AB-3	GT LOAN FINANCING LTD-SERIES 2013-1A CLASS B	1	7,476,271	7,467,158
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,800,000	3,801,170	02/05/2015	02/05/2045	Interest Rate Swap			88432C-AW-6	WIND RIVER CLO LTD-WINDR 2014-1A CR	1	3,800,000	3,801,170
57629*DB4	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,014,555	12,395,300	02/05/2015	02/05/2045	Interest Rate Swap			24820R-AA-6	Statoil ASA-SENIOR UNSECURED NOTE	1	10,014,555	12,395,300
12518* NU0	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	625,000,000	406,573,531	433,492,095	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index	9,539,753	11,598,125	91282B-PX-2	US TREAS N/B-NOTE	1	397,033,778	421,893,970
12518* NU0	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2		234,830,641	263,640,390	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			76116F-AG-2	RFCSF PRINCIPAL STRIP	1	234,830,641	263,640,390
12518* NV8	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	590,000,000	310,755,022	331,374,430	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index	9,210,380	10,948,630	91282B-PX-2	US TREAS N/B-NOTE	1	301,544,642	320,425,800
12518* NV8	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2		299,783,797	336,562,200	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			76116F-AG-2	RFCSF PRINCIPAL STRIP	1	299,783,797	336,562,200
12518* NV6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1	500,000,000	27,908,518	29,022,882	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index	8,108,518	9,278,500	92927K-A*-3	WABCO Holdings Inc Senior Note Ser	2	19,800,000	19,744,382
12518* NV6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		36,353,712	36,830,709	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			184692-B8-9	Clearbridge Energy MLP F Senior Secured	1	36,353,712	36,830,709
12518* NV6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		36,450,000	36,452,989	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			48661E-B*-8	KAYNE ANDERSON MID/ENERGY-SR UNSEC SER D	1	36,450,000	36,452,989
12518* NV6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		36,000,000	36,720,864	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			Q3629#-AG-8	ETSA Utilities Finance P Gtd Senior Note	1	36,000,000	36,720,864
12518* NV6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		47,000,000	49,076,554	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			89148B-B*-1	Tortoise MLP Fund, Inc. Senior Note Ser	1	47,000,000	49,076,554

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STATEMENT AS OF JUNE 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
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		27,300,000	28,388,970	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			G98508-AB-9	Yorkshire Water Services Gtd Senior Secu	1	27,300,000	28,388,970
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		28,250,000	28,458,429	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			G8228*-AG-7	Smith & Nephew plc Senior Note Ser	1	28,250,000	28,458,429
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		28,000,000	29,100,064	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			Q91948-AF-4	Transpower New Zealand L Gtd Senior Note	1	28,000,000	29,100,064
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		10,850,000	10,849,653	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			883310-AC-8	THAYER PARK CLO LTD.-THAYR 2017-1A A2 Thayer Park CLO Ltd	1	10,850,000	10,849,653
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		5,100,000	5,100,000	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			06760B-AJ-1	BABSON CLO LTD-SERIES 17-1A CLASS C BABSON CLO LTD	1	5,100,000	5,100,000
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		25,000,000	28,396,400	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			085209-A#-1	BERMUDA GOVT USD SR NT	1	25,000,000	28,396,400
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		21,600,000	22,888,030	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			G20448-AY-1	Compass Group PLC Senior Note Ser	1	21,600,000	22,888,030
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		11,126,171	13,771,178	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			24820R-AA-6	Statoil ASA-SENIOR UNSECURED NOTE	1	11,126,171	13,771,178
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		20,000,000	21,361,740	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			731068-AA-1	Polaris Industries Inc. Senior Note Ser	1	20,000,000	21,361,740
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		17,550,000	18,490,575	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			12656*-AC-6	CSLB Holdings, Inc. Gtd Senior Note	1	17,550,000	18,490,575
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		15,800,000	16,485,720	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			12656*-AB-8	CSLB Holdings, Inc. Gtd Senior Note	1	15,800,000	16,485,720
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		9,464,993	9,757,158	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			184690-AA-7	Clearbridge Energy MLP TR Fd Inc-Senior Secured	1	9,464,993	9,757,158
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		12,015,385	12,208,580	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			48660P-D8-0	KAYNE ANDERSON ENERGY TR FD-SR UNSECD SER K	1	12,015,385	12,208,580
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		15,900,000	16,464,450	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			749868-AA-3	BREEEF America REIT II, I Senior Note Ser	1	15,900,000	16,464,450
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		5,355,000	5,542,189	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			48661E-AA-5	KAYNE ANDERSON MID/ENERGY-SR UNSECD SER C	1	5,355,000	5,542,189
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		12,700,000	12,883,045	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			486606-K8-4	KAYNE ANDERSON MLP INVT CO-SR UNSECD SER JJ	1	12,700,000	12,883,045
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		11,500,000	12,068,595	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			21867*-AA-6	Core Laboratories U.S. I Senior Note Ser	2	11,500,000	12,068,595
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		11,400,000	12,080,614	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			21867*-AB-4	Core Laboratories U.S. I Senior Note Ser	2	11,400,000	12,080,614
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		10,750,000	11,028,748	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			003009-AA-6	Aberdeen Asia-Pacific In Senior Secured	1	10,750,000	11,028,748
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		12,000,000	12,544,044	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			941848-C8-0	Waters Corporation Gtd Senior Note	2	12,000,000	12,544,044
12518* NIW6	Credit Default Indices (CDIG527/CDX.NA.IG.27)	1		8,900,000	9,265,950	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			56081#-AL-4	Major League Baseball Tr Senior Note Ser	1	8,900,000	9,265,950
12518* NX4	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	450,000,000	331,166,948	352,648,172	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index	7,157,231	8,350,650	912828-PX-2	US TREASURY N/B Note	1	324,009,717	344,297,522
12518* NX4	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2		73,280,484	82,270,760	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			76118F-AG-2	Resolution Funding Corp Principal Strip	1	73,280,484	82,270,760
12518* NX4	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2		87,062,672	113,046,295	09/20/2016	12/20/2021	5 Yr Credit Default Swap Index			912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	87,062,672	113,046,295
12518* NY2	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	100,000,000	129,906,972	168,450,240	12/20/2016	12/20/2021	5 Yr Credit Default Swap Index	1,604,087	1,855,700	912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	128,302,885	166,594,540
Filed with the SVO and awaiting RSAT	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	50,000,000	64,958,635	84,225,120	12/20/2016	12/20/2021	5 Yr Credit Default Swap Index	807,193	927,850	912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	64,151,442	83,297,270
Filed with the SVO and awaiting RSAT	Credit Default Indices (CDIG527/CDX.NA.IG.27)	2	50,000,000	64,957,464	84,225,120	12/20/2016	12/20/2021	5 Yr Credit Default Swap Index	806,022	927,850	912810-QK-7	US Treasury 3.875% DUE 8/15/2040	1	64,151,442	83,297,270
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	19,850,000	21,885,868	12/05/2016	12/05/2046	Interest Rate Swap		1,461,968	MXP001-TT-1	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	19,850,000	20,423,900
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		28,410,000	29,224,986	12/05/2016	12/05/2046	Interest Rate Swap			78449F-AC-5	SMB PRIVATE ED LN TR 2016-SMB PRIVATE ED LN TR 2016-A NT	1	28,410,000	29,224,986
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,420,000	23,107,985	12/05/2016	12/05/2046	Interest Rate Swap			63940F-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 16-2 CLASS A3	1	22,420,000	23,107,985
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,713,064	14,733,028	12/05/2016	12/05/2046	Interest Rate Swap			26827X-AA-1	EMIC GROUP STUDENT LOAN -SERIES 2016-1A CLASS A	1	14,713,064	14,733,028

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,250,000	13,250,133	12/05/2016	12/05/2046	Interest Rate Swap			05618L-AG-1	BABSON CLO LTD-BABSON 2014-11A BR	1	13,250,000	13,250,133
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,500,000	11,509,879	12/05/2016	12/05/2046	Interest Rate Swap			92916M-AB-7	VOYA CLO LTD-VOYA 2017-1A A2	1	11,500,000	11,509,879
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,000,000	11,000,022	12/05/2016	12/05/2046	Interest Rate Swap			05618L-AF-3	BABSON CLO LTD-BABSON 2014-11A AR ANCHORAGE CAPITAL CLO LT-ANCHC 2012-1A A2R	1	11,000,000	11,000,022
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,100,000	5,104,845	12/05/2016	12/05/2046	Interest Rate Swap			033290-AN-7	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	5,100,000	5,104,845
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,917,500	12,722,176	12/05/2016	12/05/2046	Interest Rate Swap		1,489,031	MXP001-TT-1	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS A4	1	10,917,500	11,233,145
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,192,057	14,575,076	12/05/2016	12/05/2046	Interest Rate Swap			78442G-PQ-3	KEYCORP STUDENT LOAN TRU-SERIES 2006-A CLASS 244	1	14,192,057	14,575,076
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,045,052	9,364,198	12/05/2016	12/05/2046	Interest Rate Swap			49327H-AG-0	NELNET STUDENT LOAN TRUS-SERIES 2005-1 CLASS A5	1	9,045,052	9,364,198
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,922,486	11,110,789	12/05/2016	12/05/2046	Interest Rate Swap			640310-BR-1	SMB PRIVATE EDUCATION LO-SMB 2015-B A3	1	10,922,486	11,110,789
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		11,897,703	12,303,833	12/05/2016	12/05/2046	Interest Rate Swap			784480-AD-0	SLM STUDENT LN TR 2006-2 LN BKD NT CL A-6	1	11,897,703	12,303,833
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,548,537	11,062,676	12/05/2016	12/05/2046	Interest Rate Swap			78442G-RX-6	SLM STUDENT LOAN TRUST-SERIES 2002-7CLASS A11	1	10,548,537	11,062,676
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,703,284	5,749,877	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EX-0	BRAZOS HIGHER EDUCATION -SER 2006-2 STUDENT LN REV NT	1	5,703,284	5,749,877
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		10,665,088	10,799,992	12/05/2016	12/05/2046	Interest Rate Swap			10620N-AX-6	NELNET STUDENT LOAN TRUS-SERIES 2005-2 CLASS A5	1	10,665,088	10,799,992
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,100,382	9,320,979	12/05/2016	12/05/2046	Interest Rate Swap			640310-BX-8	SOUTH CAROLINA STUDENT L-SERIES 14-1 CLASS A2	1	9,100,382	9,320,979
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,670,595	9,839,300	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AF-9	ACCESS GROUP INC-SERIES 2003-A CLASS A3	1	9,670,595	9,839,300
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,862,199	6,969,143	12/05/2016	12/05/2046	Interest Rate Swap			00432C-AV-3	THACHER PARK CLO-THRPK 2014-1A CR	1	6,862,199	6,969,143
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,000,145	12/05/2016	12/05/2046	Interest Rate Swap			88322U-AN-9	NELNET STUDENT LOAN TRUS-SERIES 2006-2 CLASS A6	1	5,000,000	5,000,145
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,620,552	7,742,568	12/05/2016	12/05/2046	Interest Rate Swap			640315-AF-4	ROCKALL CLO BV	1	7,620,552	7,742,568
Filed with the SVO and awaiting RSAT	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	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	4,626,289	4,626,289
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	3,970,000	5,219,278	12/05/2016	12/05/2046	Interest Rate Swap		1,134,498	MXP001-TT-1	NAVIENT STUDENT LOAN TRU-SERIES 2016-6A CLASS A3	1	3,970,000	4,084,780
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		65,300,000	66,702,605	12/05/2016	12/05/2046	Interest Rate Swap			63940L-AC-8	MONTANA HIGHER EDUCATION-SERIES 12-1 CLASS A3	1	65,300,000	66,702,605
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		22,776,635	23,103,029	12/05/2016	12/05/2046	Interest Rate Swap			61205P-AL-3	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS B	1	22,776,635	23,103,029
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		17,173,432	18,324,027	12/05/2016	12/05/2046	Interest Rate Swap			784419-AF-0	SLM STUDENT LOAN TRUST-SERIES 2002-7 CLASS A10	1	17,173,432	18,324,027
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,023,438	1,044,978	12/05/2016	12/05/2046	Interest Rate Swap			78442G-EW-2	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A10	1	1,023,438	1,044,978
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,776,959	1,758,551	12/05/2016	12/05/2046	Interest Rate Swap			429827-AK-4	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS A5	1	1,776,959	1,758,551
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,028,470	1,053,530	12/05/2016	12/05/2046	Interest Rate Swap			784419-AE-3	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A14	1	1,028,470	1,053,530
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,152,742	1,162,865	12/05/2016	12/05/2046	Interest Rate Swap			429827-AP-3	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS A2	1	1,152,742	1,162,865
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,058,839	1,119,059	12/05/2016	12/05/2046	Interest Rate Swap			429827-AB-4	SOUTH CAROLINA STUDENT L-SR UNSECURED	1	1,058,839	1,119,059
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,841,921	1,876,406	12/05/2016	12/05/2046	Interest Rate Swap			83715A-AJ-8	SLC STUDENT LN TR 2006-1 ASSET BK NT CL A-6	1	1,841,921	1,876,406
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,617,261	1,689,010	12/05/2016	12/05/2046	Interest Rate Swap			784427-AF-3	NELNET STUDENT LOAN TRUS-SERIES 2015-2A CLASS B	1	1,617,261	1,689,010
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,661,567	1,569,604	12/05/2016	12/05/2046	Interest Rate Swap			640330-AC-3		1	1,661,567	1,569,604

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,849,203	1,850,166	12/05/2016	12/05/2046	Interest Rate Swap			462590-JT-8	10WA STUDENT LOAN LIQUID-SERIES 2012-1 CLASS B	1	1,849,203	1,850,166
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,464,170	1,447,336	12/05/2016	12/05/2046	Interest Rate Swap			709163-GJ-2	PENNSYLVANIA ST HGR EDU -SERIES 2006 CL B	1	1,464,170	1,447,336
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,326,976	1,411,275	12/05/2016	12/05/2046	Interest Rate Swap			17284L-AB-0	CIT EDUCATION LOAN TRUST-SERIES 2007-1 CLASS B	1	1,326,976	1,411,275
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,325,673	1,306,077	12/05/2016	12/05/2046	Interest Rate Swap			78448C-AH-2	SLM STUDENT LOAN TRUST-SERIES 2013-6 CLASS B	1	1,325,673	1,306,077
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	14,887,500	16,455,130	12/05/2016	12/05/2046	Interest Rate Swap		1,137,205	MXP001-TT-1	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	14,887,500	15,317,925
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,212,818	6,624,361	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	6,212,818	6,624,361
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,415,714	5,738,907	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	5,415,714	5,738,907
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,146,911	4,025,280	12/05/2016	12/05/2046	Interest Rate Swap			69847R-AB-8	PANHANDLE-PLAINS TX STUD-SERIES 2001-1 CLASS A2	1	4,146,911	4,025,280
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,831,308	4,759,659	12/05/2016	12/05/2046	Interest Rate Swap			19458L-BH-2	COLLEGIATE FUNDING SERVI-SERIES 2005-B CLASS A4	1	4,831,308	4,759,659
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,684,174	4,806,539	12/05/2016	12/05/2046	Interest Rate Swap			78446D-AC-3	SLM STUDENT LOAN TRUST-SERIES 2011-A CLASS A3	1	4,684,174	4,806,539
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,756,502	3,785,129	12/05/2016	12/05/2046	Interest Rate Swap			63938E-AD-6	NAVIENT STUDENT LOAN TRU-SERIES 2014-1 CLASS A4	1	3,756,502	3,785,129
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,423,344	1,425,800	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	1,423,344	1,425,800
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		16,048,664	15,892,388	12/05/2016	12/05/2046	Interest Rate Swap			840555-DA-1	SOUTH TX HIGHER ED AUTH REV SER 1 CL A-3	1	16,048,664	15,892,388
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		12,512,136	12,576,997	12/05/2016	12/05/2046	Interest Rate Swap			00432C-CI-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3	1	12,512,136	12,576,997
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,760,215	10,643,928	12/05/2016	12/05/2046	Interest Rate Swap			28148W-AC-7	EDUCATIONAL FUNDING OF T-SERIES 2011-1 CLASS B	1	9,760,215	10,643,928
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,088,266	9,508,046	12/05/2016	12/05/2046	Interest Rate Swap			78444C-AE-3	SLM STUDENT LOAN TRUST-SERIES 07-6 CLASS A5	1	9,088,266	9,508,046
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,459,638	9,063,016	12/05/2016	12/05/2046	Interest Rate Swap			78443F-AF-4	SLM STUDENT LOAN TRUST-SERIES 2007-5 CLASS A6	1	8,459,638	9,063,016
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,076,797	8,287,101	12/05/2016	12/05/2046	Interest Rate Swap			00400V-AB-3	ACADEMIC LOAN FUNDING TR-ALFT 2012-1A A2	1	8,076,797	8,287,101
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		864,621	976,862	12/05/2016	12/05/2046	Interest Rate Swap			462592-AD-8	10WA STUDENT LOAN LIQUID-SERIES 2005-1 CLASS B	1	864,621	976,862
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,889,930	9,081,167	12/05/2016	12/05/2046	Interest Rate Swap			78442G-OA-7	SLM STUDENT LOAN TRUST-SERIES 2005-6 CLASS B	1	8,889,930	9,081,167
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,622	1,661	12/05/2016	12/05/2046	Interest Rate Swap			38021F-AB-7	GOAL CAPITAL FUNDING TRU-SERIES 2015-1 CLASS B	1	1,622	1,661
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,640,926	1,639,311	12/05/2016	12/05/2046	Interest Rate Swap			28138J-AB-0	EDUCATIONAL SERVICES OF -SERIES 15-2 CLASS B	1	1,640,926	1,639,311
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,442,332	1,453,078	12/05/2016	12/05/2046	Interest Rate Swap			78442G-GM-2	SLM STUDENT LOAN TRUST 2003-4 LN BKD CTF CL B	1	1,442,332	1,453,078
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,331,501	1,359,101	12/05/2016	12/05/2046	Interest Rate Swap			28090A-AB-5	EDUCATIONAL SERVICES OF -2014-4 SERIES B	1	1,331,501	1,359,101
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,014,617	1,029,980	12/05/2016	12/05/2046	Interest Rate Swap			83401L-AA-2	SOCIAL PROFESSIONAL LOAN-SERIES 2015-A CLASS A1	1	1,014,617	1,029,980
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,133,214	1,113,932	12/05/2016	12/05/2046	Interest Rate Swap			39808F-AE-8	'GREYWOLF CLO III LTD-SR SEC DEF NT CL B 144A	1	1,133,214	1,113,932
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,809,920	1,751,033	12/05/2016	12/05/2046	Interest Rate Swap			49638W-AE-6	KINGSLAND LTD-SERIES 2013-6A CLASS C	1	1,809,920	1,751,033
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,007,235	1,000,259	12/05/2016	12/05/2046	Interest Rate Swap			74981H-AE-0	RACE POINT CLO LTD-RACEP 2015-9A B	1	1,007,235	1,000,259
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	7,457,095	6,993,892	12/06/2016	12/06/2046	Interest Rate Swap		(216, 233)	28139P-AP-4	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A1	1	7,457,095	7,210,125
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,925,000	10,211,950	12/05/2016	12/05/2046	Interest Rate Swap			MXP001-TT-1	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	9,925,000	10,211,950

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,174,084	6,200,545	12/06/2016	12/06/2046	Interest Rate Swap			66705R-AA-7	NORTHSTAR EDUCATION FINA-NEF 2016-1	1	6,174,084	6,200,545
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,588,052	6,598,002	12/06/2016	12/06/2046	Interest Rate Swap			281397-AB-5	EDUCATION LOAN ASSET-BAC-SERIES 2003-1 CLASS A2	1	6,588,052	6,598,002
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,050,506	5,348,231	12/06/2016	12/06/2046	Interest Rate Swap			64031Q-CX-5	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R1	1	5,050,506	5,348,231
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,689,782	5,047,926	12/06/2016	12/06/2046	Interest Rate Swap			78443G-AG-0	SLM STUDENT LOAN TRUST-SERIES 2006-7 CLASS A6B	1	4,689,782	5,047,926
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,017,936	4,646,509	12/06/2016	12/06/2046	Interest Rate Swap			106238-LJ-5	BRAZOS TX HGR EDU AUTH REVENUE BOND	1	4,017,936	4,646,509
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,325,932	5,868,877	12/06/2016	12/06/2046	Interest Rate Swap			28108Q-AB-0	EDLINC STUDENT LOAN FUND-SERIES 2012-1 CLASS B	1	5,325,932	5,868,877
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,320,759	4,229,384	12/06/2016	12/06/2046	Interest Rate Swap			281397-AQ-2	EDUCATION LOAN ASSET-BAC-SERIES 2003-2 CLASS 2A2	1	4,320,759	4,229,384
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,614,796	3,745,893	12/06/2016	12/06/2046	Interest Rate Swap			38021E-AA-2	GOAL CAPITAL FUNDING TR 2010-1 STUDENT LN BKD NT	1	3,614,796	3,745,893
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,628,216	3,928,578	12/06/2016	12/06/2046	Interest Rate Swap			64031Q-CM-1	NELNET STUDENT LOAN TRUS-SERIES 2005-4 CLASS A4R2	1	3,628,216	3,928,578
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,692,921	3,787,536	12/06/2016	12/06/2046	Interest Rate Swap			658262-GD-6	NORTH CAROLINA STATE EDU-SERIES 2011-2 CLASS A3	1	3,692,921	3,787,536
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,864,517	1,924,069	12/06/2016	12/06/2046	Interest Rate Swap			78442G-KW-5	SLM STUDENT LOAN TRUST-SERIES 2004-1 CLASS A6	1	1,864,517	1,924,069
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,353,889	15,286,914	12/06/2016	12/06/2046	Interest Rate Swap			83149E-AG-2	SLC STUDENT LN TR 2006-5-NOTE CL B	1	14,353,889	15,286,914
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,646,624	9,766,652	12/06/2016	12/06/2046	Interest Rate Swap			784419-AG-8	SLC STUDENT LOAN TRUST-SERIES 2006-A CLASS C	1	9,646,624	9,766,652
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,978,591	8,312,217	12/06/2016	12/06/2046	Interest Rate Swap			23341K-AA-3	DRB PRIME STUDENT LOAN T-SERIES 2015-D CLASS A1	1	7,978,591	8,312,217
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,610,139	7,991,097	12/06/2016	12/06/2046	Interest Rate Swap			64031C-AB-8	NELNET STUDENT LOAN TRUS-SERIES 2012-2A CLASS B	1	8,610,139	7,991,097
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,775,347	15,130,380	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLASS B	1	14,775,347	15,130,380
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,900,000	3,911,735	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	3,911,735
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	10,917,500	11,314,631	12/06/2016	12/06/2046	Interest Rate Swap		81,486	MXP001-TT-1	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	10,917,500	11,233,145
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		9,245,205	9,595,740	12/05/2016	12/05/2046	Interest Rate Swap			83715R-AG-7	SOUTH CAROLINA STUDENT L-SERIES 2014-1 CLASS B	1	9,245,205	9,595,740
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,662,629	7,588,896	12/06/2016	12/06/2046	Interest Rate Swap			78442Q-AE-1	SLC STUDENT LOAN TRUST-SERIES 2005-1 CLASS B	1	6,662,629	7,588,896
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,265,073	6,524,555	12/06/2016	12/06/2046	Interest Rate Swap			78442G-OT-6	SLM STUDENT LOAN TRUST-SERIES 2005-8 CLASS B	1	6,265,073	6,524,555
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,072,250	6,389,478	12/06/2016	12/06/2046	Interest Rate Swap			78442G-PD-2	SLM STUDENT LOAN TRUST-SERIES 2005-3 CLASS B	1	6,072,250	6,389,478
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,300,592	6,096,847	12/06/2016	12/06/2046	Interest Rate Swap			493268-AU-0	KEYCORP STUDENT LOAN TRU-SERIES 1999-B CLASS CTFS	1	5,300,592	6,096,847
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,537,632	6,585,587	12/06/2016	12/06/2046	Interest Rate Swap			78446C-AB-7	SLM STUDENT LOAN TRUST-SERIES 2013-2 CLASS B	1	6,537,632	6,585,587
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,955,000	6,487,619	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	6,487,619
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,830,038	5,412,339	12/06/2016	12/06/2046	Interest Rate Swap			64031A-AJ-5	NELNET STUDENT LOAN TRUS-SERIES 2006-3 CLASS B	1	5,830,038	5,412,339
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,077,049	6,233,274	12/06/2016	12/06/2046	Interest Rate Swap			63939L-AC-1	NAVIENT STUDENT LOAN TRU-SERIES 2015-3 CLASS B	1	6,077,049	6,233,274
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,477,603	6,463,548	12/06/2016	12/06/2046	Interest Rate Swap			78447M-AD-0	SLM STUDENT LOAN TRUST-SERIES 2013-1 CLASS B	1	6,477,603	6,463,548
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,287,753	5,141,925	12/06/2016	12/06/2046	Interest Rate Swap			64033J-AB-1	NELNET STUDENT LOAN TRUS-SERIES 2014-1A CLASS B	1	5,287,753	5,141,925
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,283,720	4,399,034	12/06/2016	12/06/2046	Interest Rate Swap			194266-AE-2	COLLEGE LOAN CORPORATION-SERIES 2005-2 CLASS B	1	4,283,720	4,399,034
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,413,625	4,130,212	12/06/2016	12/06/2046	Interest Rate Swap			64033N-AB-2	NELNET STUDENT LOAN TRUS-SERIES 2014-5A CLASS B	1	4,413,625	4,130,212

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,579,853	3,704,211	12/06/2016	12/06/2046	Interest Rate Swap			194262-CF-6	COLLEGE LOAN CORPORATION-SERIES 2004-1 CLASS B	1	3,579,853	3,704,211
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,096,473	3,224,147	12/06/2016	12/06/2046	Interest Rate Swap			78442G-LJ-3	SLM STUDENT LOAN TRUST-SERIES 2004-3 CLASS B	1	3,096,473	3,224,147
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,650,000	3,160,655	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	3,160,655
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,967,856	3,246,142	12/06/2016	12/06/2046	Interest Rate Swap			64032F-AH-7	2007-2A CLASS AAA2	1	2,967,856	3,246,142
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,129,216	2,905,632	12/06/2016	12/06/2046	Interest Rate Swap			64033L-AD-2	NELNET STUDENT LOAN TRUS-SERIES 2014-2A CLASS B	1	3,129,216	2,905,632
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,240,000	2,836,525	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	2,836,525
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		14,400,000	14,399,827	12/06/2016	12/06/2046	Interest Rate Swap			04015B-AL-4	ARES CLO LTD-ARES 2014-31A A2R	1	14,400,000	14,399,827
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,500,000	2,515,900	12/06/2016	12/06/2046	Interest Rate Swap			94949L-AE-0	WELLFLEET CLO LTD-WELF 2016-2A B	1	2,500,000	2,515,900
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	8,900,000	8,634,784	12/06/2016	12/06/2046	Interest Rate Swap		(310,962)	04964H-AN-8	ATRIUM CDO CORP-SERIES 8A CLASS BR	1	8,900,000	8,945,746
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,970,000	4,084,780	12/05/2016	12/05/2046	Interest Rate Swap			MXP001-TT-1	Grupo Aeromexico, S.A.B. De C.V. Floating Rate Senior Secured Term Loan	1	3,970,000	4,084,780
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,900,000	8,948,469	12/06/2016	12/06/2046	Interest Rate Swap			87246M-AB-8	TICP CLO LTD-SERIES 2016-6A CLASS B	1	8,900,000	8,948,469
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,898,985	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	8,898,985
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,876,931	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	8,876,931
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,850,000	8,850,487	12/06/2016	12/06/2046	Interest Rate Swap			03764X-AJ-6	APIDOS CLO-SERIES 2014-17A CLASS A2R	1	8,850,000	8,850,487
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,500,000	7,522,560	12/06/2016	12/06/2046	Interest Rate Swap			06759Y-AC-9	BARINGS CLO LTD-BABSN 2016-3A A2	1	7,500,000	7,522,560
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,370,000	7,415,112	12/06/2016	12/06/2046	Interest Rate Swap			81789G-AC-5	SEVEN STICKS CLO LTD-SR SEC2 NT CL A-2 144A	1	7,370,000	7,415,112
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,621,115	13,302,221	12/06/2016	12/06/2046	Interest Rate Swap			64129X-AG-4	NEUBERGER BERMAN CLO XVI-SR SEC2 NT CL B-1 NEUBERGER BERMAN CLO LTD	1	13,621,115	13,302,221
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,001,428	2,001,674	12/06/2016	12/06/2046	Interest Rate Swap			00163E-AM-4	ALM VI LTD-SR SECURED NOTE CLASS A2R	1	2,001,428	2,001,674
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,513,540	2,500,923	12/06/2016	12/06/2046	Interest Rate Swap			04015G-AC-3	ARES CLO LTD-SERIES 15-2A CLASS B	1	2,513,540	2,500,923
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,200,000	3,040,477	12/06/2016	12/06/2046	Interest Rate Swap			78448A-AD-5	SLM STUDENT LOAN TRUST-SERIES 2013-4 CLASS B	2	3,200,000	3,040,477
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,001,433	2,004,032	12/06/2016	12/06/2046	Interest Rate Swap			568416-BD-2	MARINE PARK CLO LTD-SR SEC2 DEF NT CL B-R 144A	1	2,001,433	2,004,032
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,001,942	2,241,483	12/06/2016	12/06/2046	Interest Rate Swap			00432C-DE-8	ACCESS GROUP INC-SERIES 2006-1 CLASS B	1	2,001,942	2,241,483
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,446,700	2,466,593	12/06/2016	12/06/2046	Interest Rate Swap			78442G-KN-5	SLM STUDENT LOAN TRUST-SERIES 2003-14 CLASS A6	1	2,446,700	2,466,593
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,002,510	1,958,609	12/06/2016	12/06/2046	Interest Rate Swap			493268-BW-5	KEYCORP STUDENT LOAN TRU-SERIES 2004-A CLASS 1B	1	2,002,510	1,958,609
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,960,219	2,129,084	12/06/2016	12/06/2046	Interest Rate Swap			429827-AR-9	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B1	1	1,960,219	2,129,084
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,991,540	2,125,816	12/06/2016	12/06/2046	Interest Rate Swap			429827-AS-7	HIGHER EDUCATION FUNDING-SERIES 2004-1 CLASS B2	1	1,991,540	2,125,816
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,906,702	1,945,557	12/06/2016	12/06/2046	Interest Rate Swap			64033T-AB-9	NELNET STUDENT LOAN TRUS-SERIES 2015-3A CLASS B	1	1,906,702	1,945,557
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,798,497	1,772,463	12/06/2016	12/06/2046	Interest Rate Swap			19458L-BD-1	COLLEGIATE FUNDING SERVI-SERIES 2005-A CLASS B	1	1,798,497	1,772,463
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,848,478	1,946,779	12/06/2016	12/06/2046	Interest Rate Swap			00435T-AB-7	ACCESS GROUP INC-SERIES 2015-1 CLASS B	1	1,848,478	1,946,779
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,109,273	3,112,341	12/06/2016	12/06/2046	Interest Rate Swap			78442G-RY-4	SLM STUDENT LOAN TRUST-SERIES 2006-2 CLASS B	1	3,109,273	3,112,341
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,118,433	3,141,788	12/06/2016	12/06/2046	Interest Rate Swap			194267-AN-2	COLLEGE LOAN CORPORATION-SERIES 2007-1 CLASS B2	1	3,118,433	3,141,788

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,940,715	2,656,941	12/06/2016	12/06/2046	Interest Rate Swap			92978J-AH-6	WACHOVIA STUDENT LOAN TR-SERIES 2006-1 CLASS B	1	2,940,715	2,656,941
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,523,208	2,663,817	12/06/2016	12/06/2046	Interest Rate Swap			83715R-AH-5	SOUTH CAROLINA STUDENT L-SERIES 15-A CLASS A	1	2,523,208	2,663,817
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,449,494	2,408,993	12/06/2016	12/06/2046	Interest Rate Swap			28137T-AB-9	EDUCATIONAL SERVICES OF -SERIES 2014-2 CLASS B	1	2,449,494	2,408,993
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,149,285	2,245,057	12/06/2016	12/06/2046	Interest Rate Swap			78443B-AK-2	SLM STUDENT LOAN TRUST-SERIES 2006-10 CLASS B	1	2,149,285	2,245,057
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,361,239	2,277,889	12/06/2016	12/06/2046	Interest Rate Swap			69340Q-AB-2	PENNSYLVANIA HIGHER EDUC-SERIES 2015-1A CLASS B	1	2,361,239	2,277,889
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,128,594	2,231,838	12/06/2016	12/06/2046	Interest Rate Swap			28137B-AB-5	EDUCATIONAL SERVICES OF -SERIES 2015-1 CLASS B	1	2,128,594	2,231,838
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,990,349	2,122,441	12/06/2016	12/06/2046	Interest Rate Swap			00432C-AR-2	ACCESS GROUP-STUDENT LN REVENUE NT	1	1,990,349	2,122,441
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,211,858	2,204,906	12/06/2016	12/06/2046	Interest Rate Swap			63939D-AD-7	NAVIENT STUDENT LOAN TRUST 2014-8 CL B	1	2,211,858	2,204,906
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1	125,000,000	3,952,710	3,716,375	12/06/2016	12/06/2046	Interest Rate Swap		(305,549)	09627L-AJ-6	BLUEMOUNTAIN CLO 2014-1 LTD SR SEC DEF NT CL D	2	3,952,710	4,021,924
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		3,967,052	4,016,316	12/06/2016	12/06/2046	Interest Rate Swap			87165V-AE-9	SYMPHONY CLO LTD-SYMP 2015-16A D	2	3,967,052	4,016,316
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,750,000	2,759,980	12/06/2016	12/06/2046	Interest Rate Swap			55953M-AG-7	MAGNETITE CLO LTD-MAGNE 2015-15A D	2	2,750,000	2,759,980
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,784,598	2,759,325	12/06/2016	12/06/2046	Interest Rate Swap			50188G-AN-3	LCM XVIII LTD PARTNERSHIP-DEF MEZZ NT CL D 144A	3	2,784,598	2,759,325
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		1,184,943	2,105,216	12/06/2016	12/06/2046	Interest Rate Swap			33882B-AE-9	FLATIRON CLO 2007-1 LTD DEF MEZZ TERM NOTE CL D	1	1,184,943	2,105,216
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		13,560,000	13,559,566	12/06/2016	12/06/2046	Interest Rate Swap			40436V-AB-7	HIGHBRIDGE LOAN MANAGEM-HLM 11A-17 B HPS Loan Management 11-2017 Ltd	1	13,560,000	13,559,566
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,014,126	2,025,568	12/06/2016	12/06/2046	Interest Rate Swap			87230A-AD-8	TC1-FLATIRON CLO LTD-TFLAT 2016-1A D	3	2,014,126	2,025,568
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		8,200,000	8,220,869	12/06/2016	12/06/2046	Interest Rate Swap			04964H-AQ-1	ATRIUM VIII-DEF NT CL C-R	1	8,200,000	8,220,869
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,516,250	7,525,187	12/06/2016	12/06/2046	Interest Rate Swap			06759Y-AE-5	BARINGS CLO LTD-BABSN 2016-3A B	1	7,516,250	7,525,187
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		7,005,380	7,003,360	12/06/2016	12/06/2046	Interest Rate Swap			26251B-AD-8	DRYDEN SENIOR LOAN FUND-SERIES 13-28A CLASS A3L	1	7,005,380	7,003,360
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,750,136	6,780,373	12/06/2016	12/06/2046	Interest Rate Swap			87244A-BE-9	WIND RIVER CLO LTD-WINDR 2012-1A CR	1	6,750,136	6,780,373
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,700,000	6,730,425	12/06/2016	12/06/2046	Interest Rate Swap			14309Y-AY-0	CARLYLE GLOBAL MARKET ST-SERIES 2012-4A CLASS C1R	1	6,700,000	6,730,425
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,585,000	6,645,226	12/06/2016	12/06/2046	Interest Rate Swap			88433A-AE-9	THL CR WIND RIV 2016-1 CLO-SR SECD NT CL C 144A	1	6,585,000	6,645,226
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,050,220	12/06/2016	12/06/2046	Interest Rate Swap			00164B-AU-1	ALM LOAN FUNDING-SERIES ALM 2013-7R2A CLASS BR	1	5,000,000	5,050,220
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,029,830	12/06/2016	12/06/2046	Interest Rate Swap			03328W-AE-8	ANCHORAGE CAPITAL CLO LT-ANCHC 2016-9A C	1	5,000,000	5,029,830
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		5,000,000	5,004,945	12/06/2016	12/06/2046	Interest Rate Swap			09627V-AW-5	BLUEMOUNTAIN CLO LTD-SERIES 2014-4A CLASS CR	1	5,000,000	5,004,945
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,742,765	4,763,029	12/06/2016	12/06/2046	Interest Rate Swap			55820N-AE-1	MADISON PARK FUNDING LTD-MDPK 2016-24A C1	1	4,742,765	4,763,029
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		6,100,000	6,100,049	12/06/2016	12/06/2046	Interest Rate Swap			05617Y-AU-3	BARSON CLO LTD-BABSN 2013-11A BR	1	6,100,000	6,100,049
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,519,807	4,557,164	12/06/2016	12/06/2046	Interest Rate Swap			26244Y-AE-6	DRYDEN 42 SR LN FD-SR SEC DEF NT CL C	1	4,519,807	4,557,164
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,500,000	4,523,895	12/06/2016	12/06/2046	Interest Rate Swap			67091H-AP-6	CHA LOAN FUNDING LTD-SERIES 2012-1A CLASS CR	1	4,500,000	4,523,895
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,446,138	4,423,606	12/06/2016	12/06/2046	Interest Rate Swap			88432G-AE-7	WIND RIVER CLO LTD-WINDR 2015-2A C	1	4,446,138	4,423,606
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,375,000	4,407,576	12/06/2016	12/06/2046	Interest Rate Swap			48251B-AE-0	KKR FINANCIAL CLO LTD-KKR 16 B1	1	4,375,000	4,407,576
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,200,000	4,221,185	12/06/2016	12/06/2046	Interest Rate Swap			03763Y-AS-5	APIDOS CLO-SERIES 12-11A CLASS CR	1	4,200,000	4,221,185

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STATEMENT AS OF JUNE 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
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,003,896	12/06/2016	12/06/2046	Interest Rate Swap			03765L-AL-6	APIDOS CLO-SERIES 2015-20A CLASS BR	1	4,000,000	4,003,896
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		4,000,000	4,029,412	12/06/2016	12/06/2046	Interest Rate Swap			09626R-AS-4	BLUEMOUNTAIN CLO LTD-BLUEM 2012-2A CR	1	4,000,000	4,029,412
Filed with the SVO and awaiting RSAT	Evergreen Basket of Long Fixed Rate ABS Bank Loans and Corp Bonds	1		2,791,602	2,735,577	12/06/2016	12/06/2046	Interest Rate Swap			04941G-AE-8	ATLAS SENIOR LOAN FUND L-SERIES 2013-1A CLASS C	1	2,791,602	2,735,577
In Progress	Inverse JPY Long Term Bond	1	50,000,000	59,266,731	62,928,278	03/24/2017	03/28/2019	Currency Forward		992,318	912828-KQ-2	US TREASURY 3.125% TO 5/15/2019 UNITED STATES TREASURY 3.00% DUE 11/15/45	1	59,266,731	61,935,960
In Progress	Sovereign Bond of Peru	2	5,000,000	10,852,059	10,332,404	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(14,952)	32,794	912810-RP-5	US TREASURY 1.375% DUE 2/15/2044	1	10,867,011	10,299,610
In Progress	Sovereign Bond of Mexico	2	15,000,000	26,217,911	31,086,279	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(239,197)	(90,566)	912833-LL-2	US TREASURY 1.375% DUE 2/15/2044	1	26,457,108	31,176,845
In Progress	Sovereign Bond of Panama	2	10,000,000	13,810,715	16,332,877	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(109,758)	16,072	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	13,920,473	16,316,805
In Progress	Inverse JPY Long Term Bond	1	50,000,000	59,769,831	72,157,358	03/28/2017	04/01/2019	Currency Forward		1,333,518	912833-LN-8	US TREASURY 1.375% DUE 2/15/2044	1	59,769,831	70,823,840
In Progress	Sovereign Bond of India	3	10,000,000	13,789,074	16,236,414	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(131,399)	(80,391)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	13,920,473	16,316,805
In Progress	Sovereign Bond of Brazil	3	10,000,000	13,323,773	15,684,208	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(596,700)	(632,597)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	13,920,473	16,316,805
In Progress	Sovereign Bond of India	1	5,000,000	5,485,290	6,485,359	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(82,899)	(41,363)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	5,568,189	6,526,722
In Progress	Sovereign Bond of Columbia	1	5,000,000	5,492,169	6,443,555	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(76,020)	(83,167)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	5,568,189	6,526,722
In Progress	Sovereign Bond of Brazil	1	10,000,000	9,548,623	11,335,295	03/20/2017	06/20/2022	5 Yr Credit Default Swap	(659,724)	(630,362)	912810-RF-7	US TREASURY 1.375% DUE 2/15/2044	1	10,208,347	11,965,657
In Progress	Inverse JPY Long Term Bond	1	50,000,000	50,853,767	52,714,059	04/11/2017	04/15/2019	Currency Forward		1,484,967	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	50,853,767	51,229,092
In Progress	Inverse JPY Long Term Bond	1	50,000,000	50,853,767	51,847,813	05/01/2017	05/08/2019	Currency Forward		618,721	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	50,853,767	51,229,092
In Progress	Inverse JPY Long Term Bond	1	75,000,000	75,782,084	77,043,522	05/02/2017	05/09/2019	Currency Forward		702,130	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	75,782,084	76,341,392
In Progress	Inverse JPY Long Term Bond	1	90,000,000	90,739,074	91,992,492	05/03/2017	05/09/2019	Currency Forward		583,720	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	90,739,074	91,408,772
In Progress	Inverse JPY Long Term Bond	1	50,000,000	50,853,767	50,880,979	05/10/2017	05/13/2019	Currency Forward		(348,113)	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	50,853,767	51,229,092
In Progress	Inverse JPY Long Term Bond	1	50,000,000	50,853,767	50,872,362	05/11/2017	05/15/2019	Currency Forward		(356,730)	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	50,853,767	51,229,092
In Progress	Inverse JPY Long Term Bond	1	25,000,000	25,925,450	26,085,360	05/16/2017	05/20/2019	Currency Forward		(31,432)	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	25,925,450	26,116,792
In Progress	Inverse JPY Long Term Bond	1	25,000,000	25,925,450	26,369,485	05/17/2017	05/20/2019	Currency Forward		252,693	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	25,925,450	26,116,792
In Progress	Inverse JPY Long Term Bond	1	25,000,000	25,925,450	26,517,279	05/17/2017	05/20/2019	Currency Forward		400,487	912828-C6-5	US TREASURY 1.625% DUE 3/30/2019	1	25,925,450	26,116,792
9999999 - Totals				12,174,619,103	13,069,063,447	XXX	XXX	XXX	35,521,716	633,599,517	XXX	XXX	XXX	12,139,097,387	12,435,463,930

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STATEMENT AS OF JUNE 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					88	10,739,000,000
2. Add: Opened or Acquired Transactions.....	7	150,000,000	19	2,825,000,000					26	2,975,000,000
3. Add: Increases in Replication (Synthetic Asset) Transactions Statement Value.....	XXX		XXX		XXX		XXX		XXX	
4. Less: Closed or Disposed of Transactions.....										
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					107	11,349,000,000

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

SCHEDULE DB - VERIFICATION

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

		Book/Adjusted Carrying Value Check
1.	Part A, Section 1, Column 14.....	3,317,882,457
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance.....	.....
3.	Total (Line 1 plus Line 2).....	3,317,882,457
4.	Part D, Section 1, Column 5.....	9,380,841,904
5.	Part D, Section 1, Column 6.....	(6,062,959,447)
6.	Total (Line 3 minus Line 4 minus Line 5).....	.....
		Fair Value Check
7.	Part A, Section 1, Column 16.....	3,915,960,351
8.	Part B, Section 1, Column 13.....	.....
9.	Total (Line 7 plus Line 8).....	3,915,960,351
10.	Part D, Section 1, Column 8.....	10,008,758,914
11.	Part D, Section 1, Column 9.....	(6,092,798,563)
12.	Total (Line 9 minus Line 10 minus Line 11).....	.....
		Potential Exposure Check
13.	Part A, Section 1, Column 21.....	5,368,077,461
14.	Part B, Section 1, Column 20.....	101,456,900
15.	Part D, Section 1, Column 11.....	5,469,534,361
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	41,149,967,882	94,374,151,148
3. Accrual of discount	15,555,173	22,360,462
4. Unrealized valuation increase (decrease)		
5. Total gain (loss) on disposals	22,479	60,907
6. Deduct consideration received on disposals	43,342,686,174	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)	936,044,971	3,113,185,611
11. Deduct total nonadmitted amounts		
12. Statement value at end of current period (Line 10 minus Line 11)	936,044,971	3,113,185,611