

LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

ANNUAL STATEMENT

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

NAIC Grou			ife Insurance Co pany Code 70416 Employer's IE					
Organized under the Laws of	(Current)	(Prior)	, State of Domicile or Port of En					
Country of Domicile		Unite	ed States of America					
Incorporated/Organized	04/01/1935		Commenced Business	07/01/1894				
Statutory Home Office	100 Bright Meadov		,	Enfield, CT, US 06082				
	(Street and N	umber)	(City or	Town, State, Country and Zip Code)				
Main Administrative Office			295 State Street					
Sor	ingfield, MA, US 01111		treet and Number)	413-788-8411				
	n, State, Country and Zip (,(A	rea Code) (Telephone Number)				
	1005 04-4- 04							
Mail Address	1295 State Stree (Street and Number or P		,(City or	Springfield, MA, US 01111 Town, State, Country and Zip Code)				
				·····, ·····, ·····, ·····, ·····,				
Primary Location of Books and Rec	cords	(9:	1295 State Street treet and Number)					
Spr	ingfield, MA, US 01111	(3	,,	413-788-8411				
(City or Tow	n, State, Country and Zip (Code)	(A	rea Code) (Telephone Number)				
Internet Website Address		ww	w.massmutual.com					
Statutory Statement Contact	Yiii	i S. Starr		617-695-4651				
	,	(Name)	, ,	(Area Code) (Telephone Number)				
ysta	rr02@massmutual.com (E-mail Address)		,	413-226-4086 (FAX Number)				
	(E-mail Address)			(FAA NUITIDEI)				
			OFFICERS					
President and Chief Executive Officer	Roger Willian	n Crandall	Tracouror	Todd Garett Picken				
Secretary			Apointed Actuary					
		lanagan	Npointed Actually	Bodgido Wright Paylor				
Elizabeth Ward Chicarea, Even	tive Vice Dresident and		OTHER					
Elizabeth Ward Chicares, Execu Chief Financial		Michael Robert F	Fanning, Executive Vice President	Melvin Timothy Corbett, Executive Vice President				
		DIRECT	ORS OR TRUSTEES					
Roger William Cranda	all - Chairman		chael Robert Fanning	Elizabeth Ward Chicares				
Michael James C	D'Connor							
State of M	assachusetts							
	Hampden	—— SS:						

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 thereform for the period ended, and have been completed in accordance with the NAIC Annual Statement Instructions and Accounting Practices and Procedures manual except to the extent that: (1) state law may differ; or, (2) that state rules or regulations require differences in reporting not related to accounting practices and procedures, according to the best of their information, knowledge and belief, respectively. Furthermore, the scope of this attestation by the described officers also includes the related corresponding electronic filing with the NAIC, when required, that is an exact copy (except for formatting differences due to electronic filing) of the enclosed statement. The electronic filing may be requested by various regulators in lieu of or in addition to the enclosed statement.

Roger William Crandall	Pia Denise Flanagan	Todd Garett Picken
President and Chief Executive Officer	Secretary	Treasurer
Subscribed and sworn to before me this day of	 a. Is this an original filing? b. If no, 1. State the amendment number 2. Date filed 3. Number of pages attached 	9r

	AS	SETS			
	-		Current Year	<u>_</u>	Prior Year
		1	2	3 Net Admitted Assets	4 Net Admitted
		Assets	Nonadmitted Assets	(Cols. 1 - 2)	Assets
1.	Bonds (Schedule D)				
2.	Stocks (Schedule D):				
	2.1 Preferred stocks				
	2.2 Common stocks				
3.	Mortgage loans on real estate (Schedule B):				
	3.1 First liens	2,744,083		2,744,083	3, 187, 846
	3.2 Other than first liens				
4.	Real estate (Schedule A):				
	4.1 Properties occupied by the company (less \$				
	4.2 Properties held for the production of income (less				
	\$				
	4.3 Properties held for sale (less \$				
5.	Cash (\$				
	(\$				
	investments (\$6,954,698 , Schedule DA)	24.369.505		24,369,505	55,147,328
6.	Contract loans (including \$				
7.	Derivatives (Schedule DB)				
7. 8.	Other invested assets (Schedule BA)				
9.	Receivables for securities				
10.	Securities lending reinvested collateral assets (Schedule DL)				
	-				
11.	Aggregate write-ins for invested assets				
12.					
13.	Title plants less \$ charged off (for Title insurers				
	only)				
	Investment income due and accrued	5,385,974		5,283,942	4,805,870
15.	Premiums and considerations:				
	15.1 Uncollected premiums and agents' balances in the course of collection.	1,531	684		
	15.2 Deferred premiums and agents' balances and installments booked but				
	deferred and not yet due (including \$				
	earned but unbilled premiums)	(2,730,723)		(2,730,723)	(2,877,328)
	15.3 Accrued retrospective premiums (\$) and				
	contracts subject to redetermination (\$)				
16.	Reinsurance:				
	16.1 Amounts recoverable from reinsurers	4,130,048		4,130,048	4,374,621
	16.2 Funds held by or deposited with reinsured companies				
	16.3 Other amounts receivable under reinsurance contracts				
17.	Amounts receivable relating to uninsured plans				
18.1	Current federal and foreign income tax recoverable and interest thereon				2,872,829
18.2	Net deferred tax asset	2,880,184	2,859,786		
19.	Guaranty funds receivable or on deposit				
20.	Electronic data processing equipment and software				
21.	Furniture and equipment, including health care delivery assets				
00	(\$)				
22.	Net adjustment in assets and liabilities due to foreign exchange rates				1/6 22/
23.	Receivables from parent, subsidiaries and affiliates			142,525	
24. 05	Health care (\$				
25.	Aggregate write-ins for other than invested assets				14,347
26.	Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)		2,962,502		
	From Separate Accounts, Segregated Accounts and Protected Cell Accounts				
28.	Total (Lines 26 and 27)	4,862,652,977	2,962,502	4,859,690,475	4,960,548,191
	DETAILS OF WRITE-INS				
1101.					
1102.					
1103.					
1198.	Summary of remaining write-ins for Line 11 from overflow page				
1199.	Totals (Lines 1101 thru 1103 plus 1198)(Line 11 above)				
2501.	Miscellaneous other assets				
2502.				ļļ.	
2503.				 -	
2598.	Summary of remaining write-ins for Line 25 from overflow page				
2599.	Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)				14,347
			•		, -

ASSETS

LIABILITIES, SURPLUS AND OTHER FUNDS

2. 4 3. L 4. 0 5. F 6. F 6 6 7. 4	Aggregate reserve for life contracts 143,984,461 (Exh. 5, Line 9999999) less \$ included in Line 6.3 (including \$ 126,346,998 Modco Reserve) Aggregate reserve for accident and health contracts (including \$ Modco Reserve) Liability for deposit-type contracts (Exhibit 7, Line 14, Col. 1) (including \$ Modco Reserve) Contract claims: 4.1 Life (Exhibit 8, Part 1, Line 4.4, Col. 1 less sum of Cols. 9, 10 and 11) 4.2 Accident and health (Exhibit 8, Part 1, Line 4.4, sum of Cols. 9, 10 and 11)		
3. L 4. C 2. 5. F 6. F 6. F 6 6 7. A	Liability for deposit-type contracts (Exhibit 7, Line 14, Col. 1) (including \$	15,076,197	12.986.104
4. (2 5. F 6. F 6. F 6 7. A	Contract claims: 4.1 Life (Exhibit 8, Part 1, Line 4.4, Col. 1 less sum of Cols. 9, 10 and 11) 4.2 Accident and health (Exhibit 8, Part 1, Line 4.4, sum of Cols. 9, 10 and 11)		
5. F 6. F 6 6 7. A	4.2 Accident and health (Exhibit 8, Part 1, Line 4.4, sum of Cols. 9, 10 and 11)		
5. F 6. F 6 6 7. A		4,572,737	3,480,132
6. F 6 6 7. A	Policyholders' dividends \$ and coupons \$ due and unpaid (Exhibit 4,		
6 6 7. /	Line 10) Provision for policyholders' dividends and coupons payable in following calendar year - estimated amounts:		
6 6 7. /	6.1 Dividends apportioned for payment (including \$ Modco)		
7. A	6.2 Dividends not yet apportioned (including \$ Modco)		
	6.3 Coupons and similar benefits (including \$		
	Premiums and annuity considerations for life and accident and health contracts received in advance less		
	\$ discount; including \$ accident and health premiums (Exhibit 1, Part 1, Col. 1, sum of lines 4 and 14)	2 248	3 498
9. (Contract liabilities not included elsewhere:		
	9.1 Surrender values on canceled contracts		
5	9.2 Provision for experience rating refunds, including the liability of \$accident and health accident and health is for medical loss ratio rebate per the Public Health		
,	Service Act	16,219,972	
ç	9.3 Other amounts payable on reinsurance, including \$ assumed and \$2,700,187 ceded	2 700 187	9 083 537
ę	9.4 Interest maintenance reserve (IMR, Line 6)	(110,399)	
	Commissions to agents due or accrued-life and annuity contracts \$	44,005	050,000
	and deposit-type contract funds Commissions and expense allowances payable on reinsurance assumed		
12. (General expenses due or accrued (Exhibit 2, Line 12, Col. 6)		
13. T	Transfers to Separate Accounts due or accrued (net) (including \$	8 480 420	14 030 160
14. 7	Taxes, licenses and fees due or accrued, excluding federal income taxes (Exhibit 3, Line 9, Col. 5)		
15.1 (Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 r 16. l	Net deferred tax liability		
17. A	Amounts withheld or retained by company as agent or trustee		(18,048
18. A 19. F	Amounts held for agents' account, including \$ agents' credit balances Remittances and items not allocated	(5 726 600)	(3/5 03/
	Net adjustment in assets and liabilities due to foreign exchange rates		
	Liability for benefits for employees and agents if not included above		
	Borrowed money \$ and interest thereon \$ Dividends to stockholders declared and unpaid		
24. N	Miscellaneous liabilities:		
	24.01 Asset valuation reserve (AVR, Line 16, Col. 7)		
2	24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers		
	24.04 Payable to parent, subsidiaries and affiliates		618,012
	24.05 Drafts outstanding 24.06 Liability for amounts held under uninsured plans		
2	24.07 Funds held under coinsurance		
	24.08 Derivatives		
2	24.10 Payable for securities lending		
	24.11 Capital notes \$ and interest thereon \$		067 100
	Total liabilities excluding Separate Accounts business (Lines 1 to 25)	<u>24,163</u> 194,162,672	367,198 200,565,666
27. F	From Separate Accounts Statement		4,464,676,157
	Total liabilities (Lines 26 and 27) Common capital stock	4,549,758,619	4,665,241,824
	Preferred capital stock		2,500,200
31. A	Aggregate write-ins for other than special surplus funds		
	Surplus notes Gross paid in and contributed surplus (Page 3, Line 33, Col. 2 plus Page 4, Line 51.1, Col. 1)		
34. <i>A</i>	Aggregate write-ins for special surplus funds		
	Unassigned funds (surplus) Less treasury stock, at cost:	163,694,742	
	36.1		
3	36.2 shares preferred (value included in Line 30 \$)		
	Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) Totals of Lines 29, 30 and 37 (Page 4, Line 55)	307,431,656 309,931,856	292,806,167 295,306,367
	Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	4,859,690,475	4,960,548,191
	DETAILS OF WRITE-INS	440,070	10 117
2501. F 2502. M	Funds awaiting escheat	119,378 (95,215)	
2503.			
	Summary of remaining write-ins for Line 25 from overflow page Totals (Lines 2501 thru 2503 plus 2598)(Line 25 above)		067 100
		24,163	367,198
3102.			
	Summary of remaining write-ins for Line 31 from overflow page Totals (Lines 3101 thru 3103 plus 3198)(Line 31 above)		
3401.			
	Summary of remaining write-ins for Line 34 from overflow page		

SUMMARY OF OPERATIONS

		1 Current Year	2 Prior Year
1.	Premiums and annuity considerations for life and accident and health contracts (Exhibit 1, Part 1, Line 20.4, Col. 1, less Col. 11)		1,590,674
2. 3.	Considerations for supplementary contracts with life contingencies	17 075 474	17 590 030
4.	Amortization of Interest Maintenance Reserve (IMR, Line 5)		
5.	Separate Accounts net gain from operations excluding unrealized gains or losses		
6. 7	Commissions and expense allowances on reinsurance ceded (Exhibit 1, Part 2, Line 26.1, Col. 1) Reserve adjustments on reinsurance ceded		
7. 8.	Miscellaneous Income:	(/1,//0,0/1)	(10,290,124)
0.	8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts		
	8.2 Charges and fees for deposit-type contracts		
9.	8.3 Aggregate write-ins for miscellaneous income Total (Lines 1 to 8.3)	(459,034) 24,429,225	(733,810) 24,458,521
10.	Death benefits	, ,	
11.	Matured endowments (excluding guaranteed annual pure endowments)		
12.	Annuity benefits (Exhibit 8, Part 2, Line 6.4, Cols. 4 + 8)	1,792,311	1,346,506
13. 14.	Disability benefits and benefits under accident and health contracts Coupons, guaranteed annual pure endowments and similar benefits		
15.	Surrender benefits and withdrawals for life contracts		4,350,669
16.	Group conversions		
17.	Interest and adjustments on contract or deposit-type contract funds		
18. 19.	Payments on supplementary contracts with life contingencies Increase in aggregate reserves for life and accident and health contracts		2,248,073
20.	Totals (Lines 10 to 19)		47,523,242
21.	Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only) (Exhibit 1, Part 2, Line 31, Col. 1)	2,322,735	2,895,218
22.	Commissions and expense allowances on reinsurance assumed (Exhibit 1, Part 2, Line 26.2, Col. 1)		
23. 24.	General insurance expenses (Exhibit 2, Line 10, Cols. 1, 2, 3 and 4) Insurance taxes, licenses and fees, excluding federal income taxes (Exhibit 3, Line 7, Cols. 1 + 2 + 3)		
25.	Increase in loading on deferred and uncollected premiums		(523)
26.	Net transfers to or (from) Separate Accounts net of reinsurance	(58,908,475)	(44,052,055)
27.		(1,910,613)	(3,076,085)
28. 29.	Totals (Lines 20 to 27) Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)		12,224,787
29. 30.	Dividends to policyholders	21,000,000	
31.	Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 minus Line 30)		
32.	Federal and foreign income taxes incurred (excluding tax on capital gains)	2,857,783	(2,569,559)
33.	Net gain from operations after dividends to policyholders and federal income taxes and before realized capital gains or (losses) (Line 31 minus Line 32)	18 225 870	14 803 294
34.	Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of	10,220,070	14,000,204
	\$(55,422) (excluding taxes of \$	49,710	18,418
35.	Net income (Line 33 plus Line 34)		14,821,712
36.	CAPITAL AND SURPLUS ACCOUNT Capital and surplus, December 31, prior year (Page 3, Line 38, Col. 2)	295,306,367	288,294,439
37.	Net income (Line 35)		14,821,712
38.	Change in net unrealized capital gains (losses) less capital gains tax of \$		(41,250)
39.	Change in net unrealized foreign exchange capital gain (loss)	(7 440 704)	(0, 000, 004)
40. 41.	Change in net deferred income tax Change in nonadmitted assets		
42.	Change in liability for reinsurance in unauthorized and certified companies		
43.	Change in reserve on account of change in valuation basis, (increase) or decrease		
44.	Change in asset valuation reserve		
45. 46.	Change in treasury stock (Page 3, Lines 36.1 and 36.2, Col. 2 minus Col. 1) Surplus (contributed to) withdrawn from Separate Accounts during period		
47.	Other changes in surplus in Separate Accounts Statement		
48.	Change in surplus notes		
49. 50	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		
	51.1 Paid in		
	51.3 Transferred from capital		
50	51.4 Change in surplus as a result of reinsurance		
52. 53.	Dividends to stockholders	(1,300,092)	(3,113,071)
53. 54.	Net change in capital and surplus for the year (Lines 37 through 53)	14,625,489	7,011,928
55.	Capital and surplus, December 31, current year (Lines 36 + 54) (Page 3, Line 38)	309,931,856	295,306,367
	DETAILS OF WRITE-INS	(/ 000 /07)	(
	Management and administrative fees		
	Niscel laneous		
	Summary of remaining write-ins for Line 8.3 from overflow page		
	Totals (Lines 08.301 thru 08.303 plus 08.398)(Line 8.3 above)	(459,034)	(733,810)
	Reinsurance ceded adjustment		
	Miscellaneous charges to operations		
	Summary of remaining write-ins for Line 27 from overflow page		
2799.	Totals (Lines 2701 thru 2703 plus 2798)(Line 27 above)	(1,910,613)	(3,076,085)
	Reinsurance ceded adjustment		
5302. 5303.	Other changes to surplus		
	Summary of remaining write-ins for Line 53 from overflow page		
5399.	Totals (Lines 5301 thru 5303 plus 5398)(Line 53 above)	(1,300,092)	(3,113,071)

CASH FLOW

	1	2
	Current Year	Prior Year
Cash from Operations	4 000 000	1 040 70
1. Premiums collected net of reinsurance		
2. Net investment income		
3. Miscellaneous income		19,907,82
4. Total (Lines 1 through 3)		38,578,99
5. Benefit and loss related payments		
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts		
7. Commissions, expenses paid and aggregate write-ins for deductions		13,304,64
8. Dividends paid to policyholders		40.005.00
9. Federal and foreign income taxes paid (recovered) net of \$		18,995,86
10. Total (Lines 5 through 9)		47,077,36
11. Net cash from operations (Line 4 minus Line 10)		(8,498,36
Cash from Investments		
12. Proceeds from investments sold, matured or repaid:	07 700 601	00 506 01
12.1 Bonds		23,500,21
12.2 Stocks		000 75
12.3 Mortgage loans		822,75
12.4 Real estate		
12.5 Other invested assets		
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments		
12.7 Miscellaneous proceeds		98,49
12.8 Total investment proceeds (Lines 12.1 to 12.7)		
13. Cost of investments acquired (long-term only):		05,000,40
13.1 Bonds		
13.2 Stocks		4 70
13.3 Mortgage loans		4,70
13.4 Real estate		
13.5 Other invested assets		
13.6 Miscellaneous applications		
13.7 Total investments acquired (Lines 13.1 to 13.6)		25,612,83
14. Net increase (decrease) in contract loans and premium notes		(663,05
15. Net cash from investments (Line 12.8 minus Line 13.7 minus Line 14)		(522,28
Cash from Financing and Miscellaneous Sources		
16. Cash provided (applied):		
16.1 Surplus notes, capital notes		
16.2 Capital and paid in surplus, less treasury stock		
16.3 Borrowed funds		
16.4 Net deposits on deposit-type contracts and other insurance liabilities		1,162,50
16.5 Dividends to stockholders		
16.6 Other cash provided (applied)		313,84
17. Net cash from financing and miscellaneous sources (Lines 16.1 to 16.4 minus Line 16.5 plus Line 16.6)		1,476,35
RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS	(00 777 000)	(7.544.00
 Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17) 	(30,777,823)	(7,544,29
19. Cash, cash equivalents and short-term investments:	FF 447 000	00 001 0
19.1 Beginning of year		
19.2 End of year (Line 18 plus Line 19.1)	24,369,505	55,147,32
te: Supplemental disclosures of cash flow information for non-cash transactions:		
0.0001.Bond conversions and refinancing		2,109,583

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

	r	r											
		1	2		Ordinary		6	Gro			Accident and Health		12
				3	4	5	Credit Life (Cross	7	8	9	10	11	Aggregate of All
		Total	Industrial Life	Life Insurance	Individual Annuities	Supplementary Contracts	Credit Life (Group and Individual)	Life Insurance (a)	Annuities	Group	Credit (Group and Individual)	Other	Other Lines of Business
1.	Premiums and annuity considerations for life and accident and health contracts			1,475,281									
2.	Considerations for supplementary contracts with life contingencies							. , .					
	Net investment income							1,954,395					
4.	Amortization of Interest Maintenance Reserve (IMR)												
	Separate Accounts net gain from operations excluding unrealized gains or losses												
6.	Commissions and expense allowances on reinsurance ceded	10,345,001		4.352.812				5,992,189					
	Reserve adjustments on reinsurance ceded	(71,778,871)		(59,846,429)				(11,932,442)					
	Miscellaneous Income:												
	8.1 Fees associated with income from investment management, administration and contract guarantees from Separate Accounts			37,422,721									
	8.2 Charges and fees for deposit-type contracts												
	8.3 Aggregate write-ins for miscellaneous income	(459,037)		1,038,840	98,968			(1,596,845)					
	Totals (Lines 1 to 8.3)	24,429,221		(598,292)	766,917	126, 167		24,134,430					
	Death benefits			1,444,546									
11.	Matured endowments (excluding guaranteed annual pure endowments)												
12.	Annuity benefits	1,792,311			1,792,311								
13.	Disability benefits and benefits under accident and health contracts												
14.	Coupons, guaranteed annual pure endowments and similar benefits												
15.	Surrender benefits and withdrawals for life contracts	5,415,612			4,876,218								
16.	Group conversions												
17.	Interest and adjustments on contract or deposit-type contract funds												
	Payments on supplementary contracts with life contingencies												
19.	Increase in aggregate reserves for life and accident and health contracts	3, 198, 261		3,052,169	51,556			94,537					
-	Totals (Lines 10 to 19)	50,906,977		5,366,946		409,790		38,396,239					
	Commissions on premiums, annuity considerations and deposit-type contract funds (direct business only)					,							
22.	Commissions and expense allowances on reinsurance assumed												
23.	General insurance expenses			6, 424, 262									
24.	Insurance taxes, licenses and fees, excluding federal income taxes												
25.	Increase in loading on deferred and uncollected premiums	(531)		(531)									
26.	Net transfers to or (from) Separate Accounts net of reinsurance	(58,908,475)		(18,947,350)				(33,723,507)					
27.	Aggregate write-ins for deductions	(1,910,613)		(1,931,438)	6,574			14,251					
28.	Totals (Lines 20 to 27)	3,345,572		(7,333,729)	837,085	429, 157		9,413,060					
29.	Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)			6,735,437	(70, 168)								
	Dividends to policyholders												
31.	Net gain from operations after dividends to policyholders and before federal												
	income taxes (Line 29 minus Line 30)			6,735,437	(70, 168)	(302,990)		14,721,370					
	Federal income taxes incurred (excluding tax on capital gains)	2,857,783		223,561	(25,856)	(64,535)		2,724,613					ļ
33.	Net gain from operations after dividends to policyholders and federal income taxes and before realized capital gains or (losses) (Line 31 minus Line 32)	18,225,866		6,511,876	(44,312)	(238,455)		11,996,757					
	DETAILS OF WRITE-INS												
	Management and administrative fees	(1,603,488)						(1,603,488)					
	Revenue sharing												
	Miscellaneous							6,643					
08.398.	Summary of remaining write-ins for Line 8.3 from overflow page												
	Totals (Lines 08.301 thru 08.303 plus 08.398) (Line 8.3 above)	(459,037)		1,038,840	98,968			(1,596,845)					
	Reinsurance ceded adjustment	(1,987,125).		(1,987,125)									
	Miscellaneous charges to operations				6,574								
2703.													
2798.	Summary of remaining write-ins for Line 27 from overflow page												
2799.	Totals (Lines 2701 thru 2703 plus 2798) (Line 27 above)	(1,910,613)		(1,931,438)	6,574			14,251					
	(a) Includes the following amounts for EEGLI/SGLI: Line 1	Lino 10		Lino 16		Lino 22		Lino 24					

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

ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR

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

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company EXHIBIT OF NET INVESTMENT INCOME

		1	2
		Collected During Year	
1.	U.S. Government bonds	(a)602,492	
1.1	Bonds exempt from U.S. tax	(a)	
1.2	Other bonds (unaffiliated)	(a)11,527,170	
1.3	Bonds of affiliates	(a)249,106	
2.1	Preferred stocks (unaffiliated)	(b)	
2.11	Preferred stocks of affiliates	(b)	
2.2	Common stocks (unaffiliated)		
2.21	Common stocks of affiliates		
3.	Mortgage loans	(c)149,921	
4.	Real estate	(d)	
5	Contract loans	5,054,537	4,974,560
6	Cash, cash equivalents and short-term investments	(e)861,003	
7	Derivative instruments	(f)	
8.	Other invested assets		
9.	Aggregate write-ins for investment income	(825,100)	(790,618)
10.	Total gross investment income	17,619,128	18,088,637
11.	Investment expenses		(g)1,007,123
12.	Investment taxes, licenses and fees, excluding federal income taxes		
13.	Interest expense		(h)
14.	Depreciation on real estate and other invested assets		
15.	Aggregate write-ins for deductions from investment income		
16.	Total deductions (Lines 11 through 15)		
17.	Net investment income (Line 10 minus Line 16)		17,075,474
	DETAILS OF WRITE-INS		
0901.	Miscellaneous Income	(825,100)	(790.618)
0902.		, , ,	, , , ,
0903.			
0998.	Summary of remaining write-ins for Line 9 from overflow page		
0999.	Totals (Lines 0901 thru 0903 plus 0998) (Line 9, above)	(825,100)	
1501.			
1502.			
1503.			
1598.	Summary of remaining write-ins for Line 15 from overflow page		
1599.	Totals (Lines 1501 thru 1503 plus 1598) (Line 15, above)		
			1

(a) Includes \$	725,547	accrual of discount less \$		amortization of premium and less \$	619,351	paid for accrued interest on purchases.	
(b) Includes \$		accrual of discount less \$		amortization of premium and less \$		paid for accrued dividends on purchases.	
(c) Includes \$	583	accrual of discount less \$		amortization of premium and less \$		paid for accrued interest on purchases.	
(d) Includes \$		for company's occupancy	of its own building	s; and excludes \$ intere	est on encur	nbrances.	
(e) Includes \$		accrual of discount less \$		amortization of premium and less \$		paid for accrued interest on purchases.	
(f) Includes \$		accrual of discount less \$		amortization of premium.			
	and Separate Acco		\$	investment taxes, licenses and fees, exe	cluding fede	ral income taxes, attributable to	
(h) Includes \$		interest on surplus notes a	nd \$	interest on capital notes.			
(i) Includes \$		depreciation on real estate	e and \$	depreciation on other invested ass	ets.		

EXHIBIT OF CAPITAL GAINS (LOSSES)

r				-		
		1	2	3	4	5
				Tatal Daaliaad	Obarras in	Oberes in Users dised
		Realized Gain (Loss)	Other Realized	Total Realized	Change in Unrealized	Change in Unrealized Foreign Exchange
		On Sales or Maturity	Adjustments	Capital Gain (Loss) (Columns 1 + 2)	Capital Gain (Loss)	Capital Gain (Loss)
1.	LLC. Covernment hands				Capital Galli (LUSS)	Gapital Galli (LUSS)
	U.S. Government bonds Bonds exempt from U.S. tax					
1.1	Bonds exempt from U.S. tax	(040.055)	(17,000)	(057.000)		
1.2	Other bonds (unaffiliated)					
1.3	Bonds of affiliates				(20,586)	
2.1	Preferred stocks (unaffiliated)					
2.11	Preferred stocks of affiliates					
2.2	Common stocks (unaffiliated)					
2.21	Common stocks of affiliates					
3.	Mortgage loans					
4.	Real estate					
5.	Contract loans					
6.	Cash, cash equivalents and short-term investments	888				
7.	Derivative instruments					
8.	Other invested assets					
9.	Aggregate write-ins for capital gains (losses)	11 322		11 322		
10.	Total capital gains (losses)	(228,645)	(17,033)			
10.	DETAILS OF WRITE-INS	(220,010)	(11,000)	(210,010)	(20,000)	
0901.	Miscellaneous gain and loss	11 200				
0901.	miscerialeous gain and loss					
0903.						
0998.	Summary of remaining write-ins for Line 9 from overflow page					
0999.	Totals (Lines 0901 thru 0903 plus 0998) (Line 9,					
	above)	11,322		11,322		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company EXHIBIT - 1 PART 1 - PREMIUMS AND ANNUITY CONSIDERATIONS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

	1	2	Ordin		5	Gro			Accident and Health	•	11
			3	4 Individual	Credit Life (Group	6	7	8	9 Credit (Group and	10	Aggregate of All Other Lines of
	Total FIRST YEAR (other than single)	Industrial Life	Life Insurance	Annuities	and Individual)	Life Insurance	Annuities	Group	Individual)	Other	Business
1	Uncollected										
	Deferred and accrued										
3	Deferred , accrued and uncollected:										
	3.1 Direct										
	3.2 Reinsurance assumed										
	3.3 Reinsurance ceded										
	3.4 Net (Line 1 + Line 2)										
	Advance										
	Line 3.4 - Line 4										
	Collected during year:										
	6.1 Direct										
	6.2 Reinsurance assumed	60									
	6.3 Reinsurance ceded										
	Line 5 + Line 6.4	(60)	(60)								
8	Prior year (uncollected + deferred and accrued - advance)										
9.	First year premiums and considerations:										
	9.1 Direct										
	9.2 Reinsurance assumed										
	9.3 Reinsurance ceded	60									
	9.4 Net (Line 7 - Line 8)	(60)									
	SINGLE										
10.	Single premiums and considerations:										
	10.1 Direct										
	10.2 Reinsurance assumed										
	10.4 Net										
	RENEWAL										
11		1,738	1,738								
		704,808)	(2,548,907)			(13,155,900)					
	Deferred, accrued and uncollected:	, ,									
		140,498)				(16,219,971)					
	13.2 Reinsurance assumed										
	13.3 Reinsurance ceded	437, 429)				(3,064,071)					
		703,070)				(13,155,900)					
	Advance										
		705,317)				(13,155,900)					
16.	Collected during year: 16.1 Direct	026,875									
	16.2 Reinsurance assumed	020,875									
		799,879									
		226,996	1,330,442	.16,855							
		478,321)	(1,218,976)			(13,276,200)					
18.	Prior year (uncollected + deferred and accrued - advance) (15.	349,311)	(2,694,316)			(12,654,995)					
19.	Renewal premiums and considerations:										
	19.1 Direct	684,289				(3,292,135)					
	19.2 Reinsurance assumed										
		313,299				(2,670,929)					
		870,990	1,475,341	16,855		(621,206)					
00	TOTAL										
20.	Total premiums and annuity considerations: 20.1 Direct	684,289				(3,292,135)					
	20.1 Direct	004,209				(3,292,133)					
	20.3 Reinsurance ceded28.	313,359				(2,670,929)					

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

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

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

	-		Insu		5	6	
		1		and Health	4		
		Life	2 Cost Containment	3 All Other	All Other Lines of Business	Investment	Total
1.	Rent						
2.	Salaries and wages						4,040,417
	Contributions for benefit plans for employees					5,547	
	2 Contributions for benefit plans for agents					4,748	466, 168
	Payments to employees under non-funded benefit plans				-		,
	Payments to agents under non-funded benefit plans						
						380	37 294
					-		
					-		
	Medical examination fees				-		
	Inspection report fees						
	Fees of public accountants and consulting actuaries						23,894
	Expense of investigation and settlement of policy claims					171	16,748
						860	84.448
					-	2.971	
5.3	Postage, express, telegraph and telephone						
	Printing and stationery						
	Cost or depreciation of furniture and equipment						
						5,042	
6.1	Books and periodicals						
6.2	Bureau and association fees						
	Insurance, except on real estate						
6.4							
6.5							
6.6	Sundry general expenses						
6.7		1,075,762					1,086,831
6.8	Reimbursements by uninsured plans						
7.1	Agency expense allowance	1,015,792					1,026,244
	Agents' balances charged off (less \$						
	recovered)						
7.3	Agency conferences other than local meetings					1,054	
	Real estate expenses						
	Investment expenses not included elsewhere						
9.3	Aggregate write-ins for expenses	673,763				213	673,976
10.	General expenses incurred	10.066.014				1,007,123	(a)11,073,136
11.	General expenses unpaid December 31, prior year					49,421	
12.	General expenses unpaid December 31, current year	2 665 035				266.641	2,931,676
13.	Amounts receivable relating to uninsured plans, prior year				-		
14.	Amounts receivable relating to uninsured plans, current year				-		
15.	General expenses paid during year (Lines 10+11-12-13+14)	7,980,892				789.903	8,770,794
15.	DETAILS OF WRITE-INS	7,000,002		1		103,303	0,110,134
00 004	Management services income	652 000					
	Miscellaneous					010	
						^+^	
09.399.	Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)	673,763	1	1		213	673,976

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

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

EXHIBIT 4 - DIVIDENDS OR REFUNDS

		1 Life	2 Accident and Health
1.	Applied to pay renewal premiums	LIIE	Accident and Health
2.	Applied to shorten the endowment or premium-paying period		
3.	Applied to provide paid-up additions		
4.	Applied to provide paid-up annuities		
5.	Total Lines 1 through 4		
6.	Paid in cash		
7.	Left on deposit		
8.	Aggregate write-ins for dividend or refund options		
9.	Total Lines 5 through 8		
10.	Amount due and unpaid		
11.	Provision for dividends or refunds payable in the following calendar year		
12.	Terminal dividends		
13.	Provision for deferred dividend contracts		
14.	Amount provisionally held for deferred dividend contract when udden Line 3		
15.	Total Lines 10 through 14		
16.	Total from prior year		
17.	Total dividends or refunds (Lines 9 + 15 - 16)		
	DETAILS OF WRITE-INS		
0801.			
0802.			
0803.			
0898.	Summary of remaining write-ins for Line 8 from overflow page		
0899.	Totals (Lines 0801 thru 0803 plus 0898) (Line 8 above)		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company **FXHIBIT 5 - AGGREGATE RESERVE FOR LIFE CONTRACTS**

1 Voluation Chandard	2 Total	3 Industrial	4 Ordinary	5 Credit (Group and Individual)	6 Group
Valuation Standard 0100001. 58 CET 4.00% NLP			,		
0100002. 58 CSO 4.00% MOD CRVM 0100003. 58 CSO 4.50% CRVM					
0100004. 80 CS0 3.00%					, ,
0100005. 80 CSO 4.00% 0100006. 80 CSO 4.50% CRVM					
0100007. 80 CS0 5.50% CRVM 0199997. Totals (Gross)			149,299,753		1.606.093
	150,905,846				1 1 1 1
0199998. Reinsurance ceded	21,437,820		21,405,042		32,778
0199999. Life Insurance: Totals (Net)	129,468,026		127,894,711		1,573,315
0200001. 1994 MGDB Table IY/FIG			, ,		
0200002. a-2000 4.25%				XXX	
0200003. a-2000 4.50%					
0200004. a-2000 5.50%					
0200005. a-2012 3.75%					
0200006. a-2012 4.00%		XXX			
0299997. Totals (Gross)	3,123,920	XXX	3,123,920	XXX	
0299998. Reinsurance ceded		XXX		XXX	
0299999. Annuities: Totals (Net)	3,123,920	XXX	3,123,920	XXX	
0399998. Reinsurance ceded					
0399999. SCWLC: Totals (Net)					
0400001. 59 ADB + 58 CSO 4.50%					
0400002. 59 ADB + 58 CSO 5.50%			278		
0499997. Totals (Gross)	1,940		1.940		
0499998. Reinsurance ceded	,-				
0499999. Accidental Death Benefits: Totals (Net)	1,940		1.940		
0500001. 120% 52 INTERCO DISA 4.50%					
0500002. 120% 52 INTERCO DISA 5.50%	7,652		7.652		
0500003. 35-39 INTERCO + 58 CS0 3.50%	5,787		5,787		
0599997. Totals (Gross)	48,431		48,431		
0599998. Reinsurance ceded	40,401		40,401		
0599999. Disability-Active Lives: Totals (Net)	48,431		48,431		
0600001. 52 DISAB TABLE BEN 5 3.50%			17.000		
0600002. 52 DISAB TABLE BEN 5 3.30%					
0600003. 52 DISAB TABLE BEN 5 4.50%					
0600004. 52 DISAB TABLE BEN 5 5.50%			2,276,754		
0699997. Totals (Gross)	8,528,540		8,528,540		
0699998. Reinsurance ceded					
0699999. Disability-Disabled Lives: Totals (Net)	8,528,540		8,528,540		
0700001. AG43 Reserve					
0700002. MIN. DEATH BENEFIT					
0700003. POLICY LOANS			1,930,067		
0700004. TERM COST RESERVE					
0799997. Totals (Gross)	2,813,604		2,813,604		
0799998. Reinsurance ceded					
0799999. Miscellaneous Reserves: Totals (Net)	2,813,604		2,813,604		
9999999. Totals (Net) - Page 3, Line 1	143,984,461		142,411,146		1,573,315

EXHIBIT 5 - INTERROGATORIES

1.1 Has the reporting entity ever issued both participating and non-participating contracts? Yes [] No [X] 2.1 If not, state which kind is issued. Yes [] No [X] 2.2 If not, state which kind is issued. Yes [] No [X] 3.1 Does the reporting entity at present issue both participating and non-participating contracts? Yes [] No [X] 4.7 Does the reporting entity at present issue or have in force contracts that contain the determination procedures, answers to the interogatories and an actuarial opinion as described in the instructions. Yes [] No [X] 4.1 Hous that contains the determination procedures, answers to the interogatories and an actuarial opinion as described in the instructions. Yes [] No [X] 4.1 Has the reporting entity any assessments: 4.4 4.2 Amount of insurance? \$ 4.3 Basis of reserve? \$ 5.1 If the contract loan interest rate guaranteed in any one or more of its currently issued contracts is less than 5%, not in advance, state the contract loan interest rate guaranteed in any one or opproxing basis using the actual gas of the annulating basis state base mount of reserves on such contracts. \$ 6.1 If so, state the amount of reserves on such contracts in the same annulation basis actually hold: \$ 6.2 That would have beenh field on an exact or approximet basis using the act	1.1	Use the repetition entity every issued both participation and per participation contracts?	V [,	м. г у	1
Non-part licipating Yes [] No [X] I Does the reporting entity at present issue on have in force contracts that contain non-guaranteed elements? Yes [] No [X] It not, state which kind is issued. Yes [] No [X] I not, state which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not, attate which kind is issued. Yes [] No [X] I not issue the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] I attate issue of reporter end year assessments: 4.4 Basis of regorital assessments: 4.5 Basis of special assessments: 4.5 Basis of special assessments: 4.6 The asse is a table issued on the year \$ 5.1 If the contract issue on any such contracts. Yes [] No [X] 6.2 That would have been held (on an exact or approximate basis) suitigh the annulation the instruction interest as a suble induced premise whether the valuation on comparable annuly benefits: such do istandard lives. If the reporting entity hear on comparabl			res [1	NOIX	1
2.1 Does the reporting entity at present issue both participating and non-participating contracts? Yes Yes No X 2.1 Into, state which kind is issued. Yes X No Yes X No X X No X X X No X X X X No X	1.2					
 22. If not, state which kind is issued. Non-part licipating 33. Does the reporting entity at present issue or have in force contracts that contain non-guaranteed elements? 34. Has the reporting entity at present issue or have in force contracts in force? 35. Yes [] No [X] 36. Has the reporting entity any assessment or stipulated premium contracts in force? 36. Yes [] No [X] 37. A Basis of reserve? 38. A Basis of reserve? 39. A Basis of reserve? 30. A Basis of reserve? 30. A Basis of reserve? 30. A Basis of reserve? 31. A Basis of reserve? 32. A Basis of reserve? 33. A Basis of reserve? 34. B Basis of reserve? 34. B Basis of reserve? 35. A Basis of reserve? 36. A Sacessments collected during the year	2 1	Non-ball (10) pathing	Veo [1		1
Non-part leipating Yes [X] No [] 3. Does the reporting entity at present issue or have in force contracts that contains non-guaranteed elements? Yes [X] No [] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] 4.3 Basis of reserve? \$ 4.4 Basis of regular assessments: \$ 4.5 Basis of special assessments: \$ 4.6 Assessments collected during the year. \$ 5. If the contract loan interest rate guaranteed in any one or more of its currently issued contracts is less than 5%, not in advance, stale the contract loan rate guarantees on any such contracts. 6. Does the reporting entity hold reserves on such contracts on the basis actually held. \$ 6.1 If as, state the amount of reserve on such contracts on the valuation of comparable annuity benefits issued to thandard basis? Yes [] No [X] 7.1 Hyes, state the total during individual annuity pentities \$ 7.2 Specify entity has no comparable annuity benefits for standard lives to be valuadion of comparable annuity benefits issued to thereofits entity beasis shall b			ies [1	NO [A	1
3. Does the reporting entity at present issue or have in force contracts that contain non-guaranteed elements? Yes [X] No [] If so, attach a statement that contains the determination procedures, answers to the interrogatories and an actuarial opinion as described in the instructions. Yes [] No [X] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] If so, attac: \$ 4.1 Amount of insurace? \$ 4.2 Amount of reserve? \$ 4.3 Basis of regular assessments: \$ 4.5 Basis of special assessments: \$ 4.6 Assessments collected during the year \$ 5. \$ 6.1 If so, state: \$ 6.2 That would have been held (on an exact or approximate basis) using the actual ages of the annutants; the interest rate(s) used in 6.1; and the sont of meetros or stating individual individual annuly beenfits: which weak any the the aduation of comparable annuly beenfits: when the reserves that would be held on a standard basis? Yes [] No [X] 6.2 That would have been held (on an exact or approximate basis) using the actual ages of the annutants; the interest rate(s) used in 6.1; and the seamontally basis used by the reporting entity have any Synthetic GIC contracts or agreements. \$ 7.2 Specify the basis (fair value, amortized cost, etc.) for determining the annulty contracts or agreements. \$ 7.2 Specif	2.2					
If so, attach a statement that contains the determination procedures, answers to the interrogatories and an actuarial opinion as described in the instructions. Yes [] No [X] 4. Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] 11 so, state: \$ 4.1 Amount of insurance? \$ 4.2 Amount of reserve? \$ 4.3 Basis of reserve: \$ 4.4 Basis of pecial assessments: \$ 4.5 Basis of special assessments: \$ 4.6 Assessments collected during the year \$ 5. If the contract loan interest rate guaranteed in any one or more of its currently issued contracts is less than 5%, not in advance, state the contract loan rate guarantees on any such contracts on the basis actually held: \$ 6. Does the reporting entity had reserves for any annulty contracts that are less than the reserves that would be held on a standard basis? Yes [] No [X] 6.2 That would have been held (on an exact or approximate basis) using the actual ages of the annultants; the interest rate(s) used in 6.1; and the same mortality basis used by the reporting entity has no comparable annuity benefits issued to standard lives. If the reporting entity has no comparable annuity benefits. \$ 7.1 If yes, state the total dollar amount of assets covered by these contracts or agreements. \$ \$ 7.2 Specify the basis (iffar yeak any Symite GGC contracts or agreements.	2	Non-bar (10) pating		V 1	No I	1
Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] Has the reporting entity any assessment or stipulated premium contracts in force? Yes [] No [X] 41 Amount of insurance? \$ 4.3 Basis of reserve: \$ 4.4 Basis of requirer \$ 4.5 Basis of special assessments: \$ 4.5 Basis of special assessments: \$ 4.6 Assessments collected during the year \$ 5. If the contract loan interest rate guaranteed in any one or more of its currently issued contracts is less than 5%, not in advance, state the contract loan rate guaranteed on any annuity contracts that are less than the reserves that would be held on a standard basis? Yes [] No [X] 6.1 If so, state the amount of reserves on such contracts on the basis actually held: \$ \$ 6.2 That would have been held (on an exact or approximate basis) using the actual ages of the annuitants; the interest rate(s) used in 6.1; and the same mortality basis used by the reporting entity has no comparable annuity benefits: issued to standard lives. If the reporting entity have any Synthetic GIC contracts or agreements in effect as of December 31 of the current year? Yes [] No [X] 7.1 If yes, state the total dolar amount of assets overed by these contracts or agreements. \$ \$ 7.2 Specify the basis (fair value, amortized cost, etc.) for determining the amount: \$ \$ \$ <td>5.</td> <td></td> <td>ies [</td> <td>v]</td> <td>NO [</td> <td>1</td>	5.		ies [v]	NO [1
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 8. Does the reporting entity have any Contingent Deferred Annuity contracts or agreements in effect as of December 31 of the current year?						
 8.1 If yes, state the total dollar amount of account value covered by these contracts or agreements:\$	8.	Does the reporting entity have any Contingent Deferred Annuity contracts or agreements in effect as of December 31 of the current year?	Yes []	No [X]
 8.3 Identify where the reserves are reported in the blank: 9. Does the reporting entity have any Guaranteed Lifetime Income Benefit contracts, agreements or riders in effect as of December 31 of the current year? 9.1 If yes, state the total dollar amount of any account value associated with these contracts, agreements or riders: 9.2 State the amount of reserves established for this business: 		8.1 If yes, state the total dollar amount of account value covered by these contracts or agreements:\$			-	-
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9.1 If yes, state the total dollar amount of any account value associated with these contracts, agreements or riders:\$	9.	Does the reporting entity have any Guaranteed Lifetime Income Benefit contracts, agreements or riders in effect as of December 31 of the	Yes (1	No [X	1
9.2 State the amount of reserves established for this business:		9.1 If yes, state the total dollar amount of any account value associated with these contracts, agreements or riders:		1		

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

1	Valuation I	Basis	4
	2	3	Increase in Actuarial
Description of Valuation Class	ingecom	Changed To	Reserve Due to Change
9999999 - Total (Column 4, only)			
		_	

Exhibit 6 - Aggregate Reserves for Accident and Health Contracts

ΝΟΝΕ

EXHIBIT 7 - DEPOSIT TYPE CONTRACTS

	1	2 Guaranteed	3	4 Supplemental	5 Dividend Accumulations or	6 Premium and Other
	Total	Interest Contracts	Annuities Certain	Contracts	Refunds	Deposit Funds
1. Balance at the beginning of the year before reinsurance						
2. Deposits received during the year	3,059,105					
3. Investment earnings credited to the account						
4. Other net change in reserves			(24,329)			
5. Fees and other charges assessed						
6. Surrender charges						
7. Net surrender or withdrawal payments	1,378,802			1,378,802		
8. Other net transfers to or (from) Separate Accounts						
9. Balance at the end of current year before reinsurance (Lines 1+2+3+4-5-6-7-8)	15,076,197			14,992,714		
10. Reinsurance balance at the beginning of the year						
11. Net change in reinsurance assumed						
12. Net change in reinsurance ceded						
13. Reinsurance balance at the end of the year (Lines 10+11-12)						
14. Net balance at the end of current year after reinsurance (Lines 9 + 13)	15,076,197		83,483	14,992,714		

EXHIBIT 8 - CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

PART 1	- Liability	VEnd of	Current	Year
			ouncill	i cui

		1	2		Ordinary		6	Grou	qu		Accident and Health	
				3	4	5 Supplementary	Credit Life (Group	7	8	9	10 Credit (Group and	11
		Total	Industrial Life	Life Insurance	Individual Annuities	Contracts	and Individual)	Life Insurance	Annuities	Group	Individual)	Other
1. Due and unpaid:												
	1.1 Direct											
	1.2 Reinsurance assumed											
	1.3 Reinsurance ceded											
	1.4 Net											
2. In course of settlement:												
2.1 Resisted	2.11 Direct											
	2.12 Reinsurance assumed											
	2.13 Reinsurance ceded											
	2.14 Net			(b)	(b)		(b)	(b)				
2.2 Other	2.21 Direct			4 , 184 , 193				6,341,570				
	2.22 Reinsurance assumed											
	2.23 Reinsurance ceded	6,684,552		4,096,719				2,587,833				
	2.24 Net	3,841,211		(b)	(b)		(b)	(b)3,753,737		(b)	(b)	(b)
3. Incurred but unreported:		, ,		(-)	(-)		(-)			(-)	(-)	(-)
	3.1 Direct	1, 128, 426		1.128.426								
	3.2 Beinsurance assumed			,,								
	3.3 Reinsurance ceded	396.900		396.900								
	3.4 Net			, , , , , , , , , , , , , , , , , , , ,	(b)			(b)		(b)	(b)	(b)
4. TOTALS	4.1 Direct											
	4.2 Reinsurance assumed											
	4.3 Reinsurance ceded	7.081.452		4,493,619				2.587.833				
	4.4 Net	4,572,737	(2)	(a) 819,000				(a) 3,753,737				
	(but not guaranteed annual pure ei	, ,	()	(a) 819,000			1	(4) 1, 11, 1		1	1	

EXHIBIT 8 - CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

PART 2 - Incurred During the Year

	1	2		Ordinary		6	Grou	p		Accident and Health	
			3	4	5		7	8	9	10	11
		Industrial Life	Life Insurance		Supplementary	Credit Life (Group	Life Insurance		_	Credit (Group	
	Total	(a)	(b)	Individual Annuities	Contracts	and Individual)	(c)	Annuities	Group	and Individual)	Other
1. Settlements During the Year:											
1.1 Direct				1,792,311							
1.2 Reinsurance assumed											
1.3 Reinsurance ceded											
1.4 Net	(d)		2,811,329	1,792,311							
2. Liability December 31, current year from Part 1:											
2.1 Direct	11,654,189		5,312,619				6,341,570				
2.2 Reinsurance assumed											
2.3 Reinsurance ceded	7,081,452		4,493,619								
2.4 Net	4,572,737						3,753,737				
 Amounts recoverable from reinsurers December 31, current year 	4.130.048		2.470.062				1.659.987				
4. Liability December 31, prior year:										-	
4.1 Direct							12,401,110				
4.2 Reinsurance assumed											
4.3 Reinsurance ceded			4.516.613								
4.3 Net							2.595.011				
 Amounts recoverable from reinsurers December 31, prior 	., , .		.,				,,				
year	4,374,621		1,506,960				2,867,661				
6. Incurred Benefits											
6.1 Direct				1,792,311							
6.2 Reinsurance assumed											
6.3 Reinsurance ceded											
6.4 Net	41, 195, 854		1,782,107	1,792,311			37,621,436				
ncluding matured endowments (but not a	uaranteed annual pure	e endowments) amountir	na to \$	in Line 1.1,	\$	in Line 1.4.	· · · ·		1	1	
is a set of the set of	aalantood annadi pure			,	and \$	-					
actuding matured endowments (but not o	warantaad annual nur	andournanto) omountiu	*	in Line 1.1		in Line 1.4					

	\$ In Line 6.1, and \$	in Line 6.4.
(b) Including matured endowments (but not guaranteed annual pure endowments) amounting to \$	 in Line 1.1, \$	in Line 1.4.
	\$ in Line 6.1, and \$	in Line 6.4.
(c) Including matured endowments (but not guaranteed annual pure endowments) amounting to \$	 in Line 1.1, \$	in Line 1.4.
	\$ in Line 6.1, and \$	in Line 6.4.

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company EXHIBIT OF NON-ADMITTED ASSETS

r		DASSEIS	0	3
		Current Year Total	2 Prior Year Total Nonadmitted Assets	Change in Total Nonadmitted Assets (Col. 2 - Col. 1)
1.	Bonds (Schedule D)		Nonadmitted Assets	(001. 2 - 001. 1)
	Stocks (Schedule D):			
۷.	2.1 Preferred stocks			
	2.2 Common stocks			
2				
3.	Mortgage loans on real estate (Schedule B):			
	3.1 First liens			
4	3.2 Other than first liens			
4.	Real estate (Schedule A):			
	4.1 Properties occupied by the company			
	4.2 Properties held for the production of income			
_	4.3 Properties held for sale			
5.	Cash (Schedule E - Part 1), cash equivalents (Schedule E - Part 2) and short-term investments (Schedule DA)			
6.	Contract loans			
7.	Derivatives (Schedule DB)			
8.	Other invested assets (Schedule BA)			
9.	Receivables for securities			
10.	Securities lending reinvested collateral assets (Schedule DL)			
11.	Aggregate write-ins for invested assets			
12.	Subtotals, cash and invested assets (Lines 1 to 11)			
13.	Title plants (for Title insurers only)			
14.	Investment income due and accrued	102,032		(63,638)
15.	Premiums and considerations:			
	15.1 Uncollected premiums and agents' balances in the course of collection	684		
	15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due $_{\cdot\cdot}$			
	15.3 Accrued retrospective premiums and contracts subject to redetermination			
16.	Reinsurance:			
	16.1 Amounts recoverable from reinsurers			
	16.2 Funds held by or deposited with reinsured companies			
	16.3 Other amounts receivable under reinsurance contracts			
17.	Amounts receivable relating to uninsured plans			
18.1	Current federal and foreign income tax recoverable and interest thereon			
18.2	Net deferred tax asset	2,859,786		5,812,085
19.	Guaranty funds receivable or on deposit			
20.	Electronic data processing equipment and software			
21.	Furniture and equipment, including health care delivery assets			
22.	Net adjustment in assets and liabilities due to foreign exchange rates			
23.	Receivables from parent, subsidiaries and affiliates			
24.	Health care and other amounts receivable			
25.	Aggregate write-ins for other than invested assets			
26.	Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts			
	(Lines 12 to 25)	2,962,502	8,711,491	5,748,989
27.	From Separate Accounts, Segregated Accounts and Protected Cell Accounts			
28.	Total (Lines 26 and 27)	2,962,502	8,711,491	5,748,989
	DETAILS OF WRITE-INS			
1101.				
1102.				
1103.				
1198.	Summary of remaining write-ins for Line 11 from overflow page			
1199.	Totals (Lines 1101 thru 1103 plus 1198)(Line 11 above)			
2501.				
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2503.				
2598.	Summary of remaining write-ins for Line 25 from overflow page			
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2000.	1000 (Linos 2001 tina 2000 pius 2030)(Line 20 above)	1	1	1

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Note 1 – Summary of Significant Accounting Policies and Going Concern a. Accounting practices:

Accounting practices: The accompanying financial statements of MML Bay State Life Insurance Company (the Company) have been prepared in conformity with the Statutory Accounting Practices (SAP) of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the State of Connecticut Insurance Department.

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

		F/S	F/S				
	SSAP #	Page	Line		2018		2017
NET INCOME				_		-	
(1) State basis (Page 4, Line 35, Columns 1 & 2)	XXX	XXX	XXX	\$	18,275,580	\$	14,821,712
(2) State prescribed practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A		-		-
(3) State permitted practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A		-	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$	18,275,580	\$	14,821,712
SURPLUS							
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$	309,931,856	\$	295,306,367
(6) State prescribed practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A		-		-
(7) State permitted practices that increase/(decrease) NAIC SAP:	N/A	N/A	N/A		-	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$	309,931,856	\$	295,306,367

b. Use of estimates in the preparation of the financial statements:

The preparation of financial statements requires management to make estimates and assumptions that impact the reported amounts of assets and liabilities, the disclosure of assets and liabilities as of the date of the statutory financial statements and the reported amounts of revenues and expenses during the reporting periods. The most significant estimates include those used in determining the carrying values of investments including the amount of mortgage loan investment valuation reserves, other-than-temporary impairment(s) (OTTI), the liabilities for policyholders' reserves, the determination of admissible deferred tax assets (DTAs), the liability for taxes and litigation contingencies. Future events including, but not limited to, changes in the level of mortality, morbidity, interest rates, persistency, asset valuations and defaults could cause results to differ from the estimates used in the statutory financial statements. Although some variability is inherent in these estimates, management believes the amounts presented are appropriate.

c. Accounting policy:

Life insurance premium revenue is generally recognized annually on the anniversary date of the policy. However, premium for flexible products, primarily universal life and variable universal life contracts, is recognized as revenue when received. Annuity premium is recognized as revenue when received. Expenses incurred in connection with acquiring new insurance business, including certain acquisition costs, such as commissions, are charged to current operations as incurred. Policy loans are carried at the outstanding loan balance less amounts unsecured by the cash surrender value of the policy. Unsecured amounts can occur when subsequent charges are incurred on the underlying policy without the receipt of additional premium. Where applicable, the values of invested assets have been adjusted for impairments considered OTTI.

In addition, the Company uses the following accounting policies:

- (1) Short-term investments, which are carried at amortized cost, consist of all highly liquid investments purchased with maturities of greater than three months and less than or equal to 12 months. Investments in short-term bonds are classified as shortterm investments.
- (2) Bonds are generally valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds, which are in or near default, and certain residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers, which are carried at the lower of amortized cost or fair value. NAIC ratings are applied to bonds and other securities. Categories 1 and 2 are considered investment grade, while Categories 3 through 6 are considered below investment grade. Bond transactions are recorded on a trade date basis, except for private placement bonds, which are recorded on the funding date.

The fair value of bonds is based on quoted market prices when available. If quoted market prices are not available, values provided by other third-party organizations are used. If values provided by other third-party organizations are unavailable, fair value is estimated using internal models by discounting expected future cash flows using observable current market rates applicable to yield, credit quality and maturity of the investment or using quoted market values for comparable investments. Internal inputs used in the determination of fair value include estimated prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and cash flow priority are also considered. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants.

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (3) As of December 31, 2018 and 2017, the Company did not hold any common stocks.
- (4) As of December 31, 2018 and 2017, the Company did not hold any preferred stocks.
- (5) Mortgage loans are valued at the unpaid principal balance of the loan, net of unamortized premium, discount, mortgage origination fees and valuation allowances. Mortgage loans comprised primarily seasoned pools of homogeneous residential mortgage loans substantially backed by Federal Housing Administration (FHA) and Veterans Administration (VA) guarantees.
- (6) For loan-backed and structured securities, such as asset-backed securities (ABS), mortgage-backed securities (MBS), including RMBS and CMBS, and structured securities, including collateralized debt obligations (CDOs), amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies.

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

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

Refer to Note 1c. "Accounting policy" (14) for information on the Company's policy for determining OTTI.

- (7) The Company did not own any subsidiaries and did not hold any investments in controlled or affiliated companies.
- (8) The Company did not have any investments in joint ventures, partnerships or limited liability companies (LLCs).
- (9) The Company did not have any derivative financial instruments.
- (10) The Company does not utilize anticipated investment income as a factor in the premium deficiency calculation in accordance with Statutory Accounting Principles (SSAP) No. 54 "Individual and Group Accident and Health Contracts."
- (11) The Company does not have disability or long-term care contracts therefore it does not have any unpaid claim or claim expense reserves related to these products.
- (12) The Company has not modified its capitalization policy from the prior period.
- (13) The Company did not issue any business that would give rise to pharmaceutical rebates or risk sharing receivables.
- (14) The book values of investments are written down when declines in values are considered to be other than temporary.

Bonds - general

The Company employs a systematic methodology to evaluate OTTI by conducting a quarterly analysis of bonds. OTTI is evaluated in a manner consistent with market participant assumptions. The Company considers the following factors, where applicable depending on the type of securities, in the evaluation of whether a decline in value is other than temporary: (a) the likelihood that the Company will be able to collect all amounts due according to the contractual terms of the debt security; (b) the present value of the expected future cash flows of the security; (c) the characteristics, quality and value of the underlying collateral or issuer securing the position; (d) collateral structure; (e) the length of time and extent to which the fair value has been below amortized cost; (f) the financial condition and near-term prospects of the issuer; (g) adverse conditions related to the security or industry; (h) the rating of the security; (i) the Company's ability and intent to hold the investment for a period of time sufficient to allow for an anticipated recovery to amortized cost; and (j) other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes in value.

In addition, if the Company has the intent to sell, or the inability, or lack of intent to retain the investment for a period sufficient to recover the amortized cost basis, an OTTI is recognized as a realized loss equal to the entire difference between the investment's amortized cost basis and its fair value at the balance sheet date.

When a bond is other-than-temporarily impaired, a new cost basis is established.

Bonds - corporate

For corporate securities, if it is determined that a decline in the fair value of a bond is other than temporary, OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and, generally, its fair value at the balance sheet date.

Bonds - loan-backed and structured securities

For loan-backed and structured securities, if the present value of cash flows expected to be collected is less than the amortized cost basis of the security, an OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and the present value of cash flows expected to be collected. The expected cash flows are discounted at the security's effective interest rate. Internal inputs used in determining the amount of the OTTI on structured securities include collateral performance, prepayment speeds, default rates, and loss severity based on borrower and loan characteristics, as well as deal structure including subordination, over-collateralization and cash flow priority.

ABS and MBS are evaluated for OTTI using scenarios and assumptions based on the specifics of each security including collateral type, loan type, vintage and subordination level in the structure. Cash flow estimates are based on these assumptions and inputs obtained from external industry sources along with internal analysis and actual experience. Where applicable, assumptions include prepayment speeds, default rates and loss severity, weighted average maturity and changes in the underlying collateral values.

The Company has a review process for determining if CDOs are at risk for OTTI. For the senior, mezzanine and junior debt tranches, cash flows are modeled using multiple scenarios based on the current ratings and values of the underlying corporate credit risks and incorporating prepayment and default assumptions that vary according to collateral attributes of each CDO. The prepayment and default assumptions are varied within each model based upon rating (base case), historical expectations (default), rating change improvement (optimistic), rating change downgrade (pessimistic) and fair value (market). The default rates produced by these multiple scenarios are assigned an expectation weight according to current market and economic conditions and fed into a final scenario. OTTI is recorded if this final scenario results in the loss of any principal or interest payments due.

For the most subordinated junior CDO tranches, the present value of the projected cash flows in the final scenario is measured using an effective yield. If the current book value of the security is greater than the present value measured using an effective yield, an OTTI is taken in an amount sufficient to produce its effective yield. Certain CDOs cannot be modeled using all of the scenarios because of limitations on the data needed for all scenarios. The cash flows for these CDOs, including foreign currency denominated CDOs, are projected using a customized scenario management believes is reasonable for the applicable collateral pool.

For loan-backed and structured securities, any difference between the new amortized cost basis and any increased present value of future cash flows expected to be collected is accreted into net investment income over the expected remaining life of the bond.

d. Going concern:

There is not substantial doubt regarding the Company's ability to continue as a going concern.

Note 2 – Accounting Changes and Corrections of Errors

a. For the year ended December 31, 2018, corrections of prior years' errors were recorded in capital and surplus, net of tax:

			Increa	se (Decrease) to	
	Pr	ior		Current	Asset
	Ye	ars'		Year	or Liability
	Net Ir	ncome		Surplus	Balances
Deferred income tax	\$	-	\$	(6,624,718)	\$ (6,624,718)
Federal income taxes receivable		-		687,034	 687,034
Total	\$	-	\$	(5,937,684)	

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

For the year ended December 31, 2017, corrections of prior years' errors were recorded in capital and surplus, net of tax:

		Increase (Decrease) to:						
		Prior	(Current		Asset		
		Years'		Year	or	Liability		
	Ne	et Income	ę	Surplus	Ba	alances		
General expenses due and accrued	\$	(7,956)	\$	(7,956)	\$	7,956		
Total	\$	(7,956)	\$	(7,956)				

b. Adoption of new accounting standards

In June 2016, the NAIC adopted substantive revisions to Statements of Statutory Accounting Principles (SSAP) No. 51R, Life Contracts, to incorporate references to the Valuation Manual and to facilitate the implementation of principles-based reserving (PBR), which were effective on January 1, 2017. The adoption of PBR only applies to new life insurance policies issued after January 1, 2017, however the Company plans to adopt these revisions to SSAP No. 51R using the 3-year phased in approach by no later than January 1, 2020. The Company currently uses formulas and assumptions to determine reserves as prescribed by state laws and regulations. Under PBR, the Company will be required to hold the higher of (a) the reserve using prescribed factors and (b) the PBR reserve which considers a wide range of future economic conditions, computed using justified company experience factors, such as mortality, policyholder behavior and expenses. The modifications are not expected to have a material effect on the Company's total life reserves and surplus in the financial statements.

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

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

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

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

Note 3 – Business Combinations and Goodwill

a. The Company did not have any business combinations accounted for using the statutory purchase method.

b. There were no business combinations taking the form of a statutory merger.

- c. The Company did not enter into any assumption reinsurance agreements.
- d. The Company did not recognize an impairment loss on the transactions described above.

Note 4 – Discontinued Operations

The Company did not have any discontinued operations.

Note 5 – Investments

a. Mortgage loans:

- (1) During 2018 and 2017, the Company did not purchase residential mortgage loans.
- (2) During 2018 and 2017, the Company did not own any commercial mortgage loans or mezzanine real estate loans.
- (3) As of December 31, 2018 and 2017, the Company did not have any taxes, assessments and amounts advanced and not included in the mortgage loan total.
- (4) Age analysis of mortgage loans and identification of mortgage loans in which the insurer is a participant or co-lender in a mortgage loan agreement:

			Residential		al	Commercial					
			Fa	rm	Insured	All Other	Insured	All Other	Mezzanir	ne	Total
a.	20	18									
	1.	Recorded investment (all)									
		(a) Current	\$	- \$	2,588,322 \$	155,761 \$	- \$	-	\$	- \$	2,744,083
		(b) 30-59 days past due		-	-	-	-	-		-	-
		(c) 60-89 days past due		-	-	-	-	-		-	-
		(d) 90-179 days past due		-	-	-	-	-		-	-
		(e) 180+ days past due		-	-	-	-	-		-	-
	2.	Accruing interest 90-179									
		days past due									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Interest accrued		-	-	-	-	-		-	-
	3.	Accruing interest 180+									
		days past due									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Interest accrued		-	-	-	-	-		-	-
	4.	Interest reduced									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Number of loans		-	-	-	-	-		-	-
		(c) Percent reduced		-	-	-	-	-		-	-
	5.	Participant or co-lender in a									
		mortgage loan agreement									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
b.	20										
	1.										
		(a) Current	\$	- \$	3,023,708 \$	164,138 \$	- \$	-	\$	- \$	3,187,846
		(b) 30-59 days past due		-	-	-	-	-		-	-
		(c) 60-89 days past due		-	-	-	-	-		-	-
		(d) 90-179 days past due		-	-	-	-	-		-	-
		(e) 180+ days past due		-	-	-	-	-		-	-
	2.	Accruing interest 90-179									
		days past due									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Interest accrued		-	-	-	-	-		-	-
	3.	Accruing interest 180+									
		days past due									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Interest accrued		-	-	-	-	-		-	-
	4.	Interest reduced									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-
		(b) Number of loans		-	-	-	-	-		-	-
		(c) Percent reduced		-	-	-	-	-		-	-
	5.	Participant or co-lender in a									
		mortgage loan agreement									
		(a) Recorded investment	\$	- \$	- \$	- \$	- \$	-	\$	- \$	-

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

- (9) Interest income earned on impaired loans is accrued on the outstanding principal balance of the loan based on the loan's contractual coupon rate. Interest is not accrued for (a) impaired loans more than 60 days past due, (b) delinquent loans more than 90 days past due, or (c) loans that have interest that is not expected to be collected. The Company continually monitors mortgage loans where the accrual of interest has been discontinued, and will resume the accrual of interest on a mortgage loan when the facts and circumstances of the borrower and property indicate that the payments will continue to be received according to the terms of the original or modified mortgage loan agreement.
- b. Debt restructuring:

As of December 31, 2018 and 2017, the Company did not have any restructured debt.

c. Reverse mortgages:

As of December 31, 2018 and 2017, the Company did not have any reverse mortgages.

d. Loan-backed securities:

b.

- (1) Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.
- (2) The Company did not recognize other-than-temporary impairments on loan-backed and structured securities.
- (3) The Company did not recognize impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis.
- (4) As of December 31, 2018, the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:
 - a. The aggregate amount of unrealized losses:

•	The uggregate amount of unrealized lobbes.		
	1. Less than 12 months	\$	(288,783)
	2. 12 months or longer	\$	(2,828,952)
	The aggregate related fair value of securities with unrealized lo	sses:	
	1. Less than 12 months	\$	30,500,278
	2. 12 months or longer	\$	66,393,259

- (5) No additional information.
- e. Dollar repurchase agreements and/or securities lending transactions:
 - (1) The Company did not have any dollar repurchase agreements and/or securities lending transactions as of December 31, 2018.
- f. Repurchase agreements transactions accounted for as secured borrowing:

 The Company did not have any repurchase agreements as of December 31, 2018.
- g. Reverse repurchase agreements transactions accounted for as secured borrowing:

 (1) The Company did not have any reverse repurchase agreements transactions accounted for as secured borrowing as of December 31, 2018.
- h. Repurchase agreements transactions accounted for as a sale:
 (1) The Company did not have any repurchase agreements transactions accounted for as a sale as of December 31, 2018.
- Reverse repurchase agreements transactions accounted for as a sale:
 (1) The Company did not have any reverse repurchase agreements transactions accounted for as a sale as of December 31,
- j. Real estate:
 - (1) The Company did not have any investments in real estate for the years ended December 31, 2018 and 2017.
- k. Low income housing tax credit properties:
 - (1) The Company did not have any these properties for the years ended December 31, 2018 or 2017.

I. Restricted assets:

(1) Restricted assets (including pledged):

				Gross (Admit	ted & Nonadmitt	ed) Restricted		
				Current Year			6	7
		1	2	3	4	5] 	
	Restricted Asset Category	Total General Account (G/A)	G/A Supporting S/A Activity (a)	Total Separate Account (S/A) Restricted Assets	S/A Assets Supporting G/A Activity (b)	Total (1 plus 3)	Total from Prior Year	Increase/ (Decrease) (5 minus 6)
a.	Subject to contractual obligation for which	\$ -	¢	s -	\$ -	\$	\$ -	c
b.	liability is not shown Collateral held under	ə -	¢ -	ə -	ъ -	ə -	ъ -	ə -
	security lending agreements	-	-	-	-	-	-	-
C.	Subject to repurchase agreements	-	-	-	-	-	-	-
d.	Subject to reverse							
	repurchase agreements	-	-	-	-	-	-	-
e.	Subject to dollar							
	repurchase agreements	-	-	-	-	-	-	-
f.	Subject to dollar reverse							
g.	repurchase agreements Placed under option	-	-	-	-	-	-	-
y.	contracts	-	-	-	-	-	-	-
h.	Letter stock or securities							
	restricted as to sale -							
1	excluding FHLB capital stock	-	-	-	-	-	-	-
i.	FHLB capital stock	-	-	-	-	-	-	-
j.	On deposit with states	4,460,010	-	-	-	4,460,010	4,466,341	(6,331)
k.	On deposit with other							
L	regulatory bodies	-	-	-	-	-	-	-
1.	Pledged collateral to FHLB (including assets backing							
	funding agreements)	-	-	-	-		-	-
m.	Pledged as collateral not							
	captured in other categories	-	-	-	-	-	-	-
n.	Other restricted assets	-	-	-	-	-	-	-
0.	Total restricted assets	\$ 4,460,010	\$ -	\$-	\$ -	\$ 4,460,010	\$ 4,466,341	\$ (6,331)

(a) Subset of column 1 (b) Subset of column 3

(b) Subset of column 3

		Current Year									
		8	9	Perce	ntage						
			-	10	11						
				Gross (Admitted &	Admitted						
			Total Admitted	Nonadmitted)	Restricted to						
		Total Nonadmitted	Restricted	Restricted to Total	Total Admitted						
	Restricted Asset Category	Restricted	(5 minus 8)	Assets (c)	Assets (d)						
a.	Subject to contractual										
	obligation for which										
	liability is not shown	\$ -	\$-	- %	- %						
b.	Collateral held under										
	security lending										
	agreements										
c.	Subject to repurchase	1									
	agreements	-	-	-	-						
d.	Subject to reverse	-									
	repurchase agreements										
e.	Subject to dollar	-									
с.	repurchase agreements		_	-	-						
	Subject to dollar reverse	_									
۱.											
	repurchase agreements	-	-	-	-						
g.	Placed under option										
	contracts	-	-	-	-						
h.	Letter stock or securities										
	restricted as to sale -										
	excluding FHLB capital										
	stock	-	-	-	-						
i.	FHLB capital stock	-									
j.	On deposit with states		4,460,010	0.090	0.090						
k.	On deposit with other	1									
	regulatory bodies	-	-	-	-						
Ι.	Pledged collateral to	1									
	FHLB (including assets										
	backing funding										
	agreements)	-	-	_	-						
m.	Pledged as collateral not	-									
[```	captured in other categories	-	_	_	_						
n.	Other restricted assets	-	-	_	-						
0.	Total Restricted Assets	\$ -	\$ 4,460,010	0.090 %	0.090 %						
С.		·	.,	0.000 //	0.000 //						

(c) Column 5 divided by Asset Page, Column 1, Line 28

(d) Column 9 divided by Asset Page, Column 3, Line 28

(2) Detail of Assets Pledged as Collateral Not Captured in Other Categories (Contracts that Share Similar Characteristics, Such as Reinsurance and Derivatives Are Reported in the Aggregate)

		Gross	(Admitted		8 Perc		entage			
		С	urrent Yea	ar		6	7			
	1	2	3	4	5				9	10
			Total Separate Account						Gross (Admitted &	Admitted Restricted Total
		G/A	(S/A)	S/A Assets Supporting			Increase/	Total Current	Nonadmitted)	Total
	Total General	Supporting S/A Activity	Restricted	G/A	Total	Total from	(Decrease)	Year Admitted	Restricted to	Admitted
Description of Assets	Account (G/A)	(a)	Assets	Activity (b)	(1 plus 3)	Prior Year	(5 minus 6)	Restricted	Total Assets	Assets
	\$ - -	\$-	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	-	-
Total (c)	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$ -	-	-

(a)Subset of column 1

(b)Subset of column 3

(c)Total Line for Column 1 through 7 should equal 5H (1) in Columns 1 through 7 respectively and Total Line for Columns 8 through 10 should equal 5H (1) Columns 9 through 11 respectively

(3) Detail of Other Restricted Assets (Contracts that Share Similar Characteristics, Such as Reinsurance and Derivatives, Are Reported in the Aggregate)

		Gross	(Admitted	& Nonad	mitted) Res	stricted		8	Percentage	
		С	urrent Yea	ar	-	6	7			
	1	2	3	4	5				9	10
			Total Separate						Gross (Admitted &	Admitted Restricted Total
		G/A	Account (S/A)	S/A Assets Supporting			Increase/	Total Current Year	Nonadmitted)	Total
	Total General Account	S/A Activity	Restricted	G/A	Total	Total from	(Decrease)	Admitted	Restricted to	Admitted
Description of Assets	(G/A)	(a)	Assets	Activity (b)	(1 plus 3)	Prior Year	(5 minus 6)	Restricted	Total Assets	Assets
	\$ - -	\$- -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	-	-
*Total(c)	\$-	\$-	\$-	\$ -	\$ -	\$-	\$-	\$ -	-	-

(a) Subset of column 1

(b) Subset of column 3

C) Total Line for Columns 1 through 7 should equal 5L(1) in Columns 1 through 7 respectively and Total Line for Columns 8 through 10 should equal 5L(1) in Columns 9 through 11 respectively

m. Working capital finance investments: The Company did not invest in working capital finance investments.

n. Offsetting and netting of assets and liabilities - The Company does not currently hold derivatives, repurchase agreements, reverse repurchase agreements or securities lending assets and liabilities.

o. Structured notes:

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

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

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

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

Note 6 - Joint Ventures, Partnerships and Limited Liability Companies

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

Note 7 – Investment Income

- a. Accrued investment income consists primarily of interest and dividends. Interest is recognized on an accrual basis and dividends are recorded as earned on the ex-dividend date.
- b. The total amount of due and accrued investment income excluded from surplus was \$102,032 for the year ended December 31, 2018 and \$38,394 for the year ended December 31, 2017.

Note 8 – Derivative Instruments

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

- Note 9 Income Taxes A. The Company provides for deferred income taxes based on an admissibility limitation of 15% of surplus and a three year reversal/realization period.
 - 1. The net DTA or net deferred tax liability (DTL) recognized in the Company's assets, liabilities and surplus is as follows:

				Dece	ember 31, 2018	
			Ordinary		Capital	Total
(a) (b)	Gross DTAs Statutory valuation allowance adjustment	\$	5,081,403	\$	20,398	\$ 5,101,801
(C)	Adjusted gross DTAs		5,081,403		20,398	5,101,801
(d)	DTAs nonadmitted		2,859,787		- 20,000	2,859,787
(e)	Subtotal net admitted DTA		2,221,616		20,398	2,242,014
(f)	Total gross DTLs		525,095		1,696,521	2,221,616
(g)	Net admitted DTA(L)	\$	1,696,521	\$	(1,676,123)	\$ 20,398
				Dece	ember 31, 2017	
		_	Ordinary		Capital	Total
(a) (b)	Gross DTAs Statutory valuation allowance adjustment	\$	12,120,980	\$	16,075	\$ 12,137,055
(c) (c)	Adjusted gross DTAs		12.120.980		16,075	12,137,055
(d)	DTAs nonadmitted		8,671,871		-	8,671,871
(e)	Subtotal net admitted DTA		3,449,109		16,075	3,465,184
(f)	Total gross DTLs		657,608		1,162,801	1,820,409
(g)	Net admitted DTA(L)	\$	2,791,501	\$	(1,146,726)	\$ 1,644,775
					Change	
			Ordinary		Capital	Total
(a) (b)	Gross DTAs Statutory valuation allowance adjustment	\$	(7,039,577)	\$	4,323	\$ (7,035,254)
(c)	Adjusted gross DTAs		(7,039,577)		4,323	(7,035,254)
(d)	DTAs nonadmitted		(5,812,084)		-	(5,812,084)
(e)	Subtotal net admitted DTA		(1,227,493)		4,323	(1,223,170)
(f)	Total gross DTLs		(132,513)		533,720	401,207
(g)	Net admitted DTA(L)	\$	(1,094,980)	\$	(529,397)	\$ (1,624,377)

2. The amount of adjusted gross DTA admitted under each component of the guidance and the resulting change by tax character are as follows:

				Decen	nber 31, 2018	
			Ordinary		Capital	Total
(a) (b)	Federal income taxes paid in prior years recoverable through loss carrybacks Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the throchold limitation (the loss of 2(b))	\$	-	\$	20,398	\$ 20,398
	 threshold limitation (the lesser of 2(b)1 and 2(b)2 below) 1. Adjusted gross DTAs expected to be realized following the balance sheet date 		-		-	-
(C)	 Adjusted gross DTAs allowed per limitation threshold Adjusted gross DTAs (excluding the 		45,920,674		-	45,920,674
(d)	amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs		2,221,616		-	2,221,616
(d)	DTAs admitted as the result of application of SSAP no. 101 Total (2(a) + 2(b) + 2(c))	\$	2,221,616	\$	20,398	\$ 2,242,014
				Decen	ober 31 2017	
			Ordinary		nber 31, 2017 Capital	 Total
(a) (b)	Federal income taxes paid in prior years recoverable through loss carrybacks Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the	\$	-	\$	7,228	\$ 7,228
	threshold limitation (the lesser of 2(b)1 and 2(b)2 below)		1,637,547		-	1,637,547
	 Adjusted gross DTAs expected to be realized following the balance sheet date Adjusted gross DTAs allowed per 		1,637,547		-	1,637,547
(c)	limitation threshold Adjusted gross DTAs (excluding the		42,648,658		-	42,648,658
(d)	amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs DTAs admitted as the result of application		1,811,562		8,847	 1,820,409
(4)	of SSAP no. 101 Total (2(a) + 2(b) + 2(c))	\$	3,449,109	\$	16,075	\$ 3,465,184
					Change	
			Ordinary		Capital	Total
(a) (b)	Federal income taxes paid in prior years recoverable through loss carrybacks Adjusted gross DTAs expected to be realized (excluding the amount of DTAs from 2(a) above) after application of the	\$	-	\$	13,170	\$ 13,170
	 threshold limitation (the lesser of 2(b)1 and 2(b)2 below) Adjusted gross DTAs expected to be 		(1,637,547)		-	(1,637,547)
	realized following the balance sheet date		(1,637,547)		-	(1,637,547)
(C)	 Adjusted gross DTAs allowed per limitation threshold Adjusted gross DTAs (excluding the 		3,272,016		-	3,272,016
	amount of DTAs from 2(a) and 2(b) above) offset by gross DTLs		410,054		(8,847)	401,207
(d)	DTAs admitted as the result of application of SSAP no. 101 Total $(2(a) + 2(b) + 2(c))$	\$	(1,227,493)	\$	4,323	\$ (1,223,170)
		<u> </u>	, . , /	•	, -	, . , -,

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

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

4. The ultimate realization of DTAs depends on the generation of future taxable income during the periods in which the temporary differences are deductible. Management considers the scheduled reversal of DTLs (including the impact of available carryback and carryforward periods), projected taxable income and tax-planning strategies in making this assessment. The impact of tax-planning strategies is as follows:

			December 31, 2018				
			Ordinary		Capital		
(a)	Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.	d					
	 Adjusted Gross DTAs amount from Note 9A1(c) Descentaria of adjusted areas DTAs 	\$	5,081,403	\$	20,398		
	Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies		-%		-%		
	 Net admitted DTAs amount from Not 9A1(g) 	e \$	1,696,521	\$	(1,676,123)		
	 Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies 		100%		-%		
			Decemb	ber 31	I, 2017		
			Ordinary		Capital		
(a)	Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.	b					
	 Adjusted Gross DTAs amount from Note 9A1(c) 	\$	12,120,980	\$	16,075		
	 Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies 		-%		-%		
	 Net admitted DTAs amount from Not 9A1(g) 	e \$	2,791,501	\$	(1,146,726)		
	 Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies 		22%		-%		
			C	hong	2		
			Ordinary	hang	Capital		
(a)	Determination of adjusted gross DTAs and net admitted DTAs, by tax character as a percentage.	d	<u>Crainaly</u>				
	 Adjusted Gross DTAs amount from Note 9A1(c) 	\$	(7,039,577)	\$	4,323		
	 Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies 		-%		-%		
	 Net admitted DTAs amount from Not 9A1(g) 	e \$	(1,094,980)	\$	(529,397)		
	 Percentage of net admitted DTAs by tax character attributable to the impact of tax planning strategies 		78%		-%		
(b)	Does the Company's tax planning strategies include the use of reinsurance?		Yes_		No <u>X</u>		
^	and the second base of the second state of the						

B. The Company does not have any deferred tax liabilities not recognized.

C. The provision for current tax expense on earnings is as follows:

1.

		Years Ended December 31, 2018 2017 Change					
	-		2010		2017		onunge
(a)	Federal	\$	2,857,783	\$	(2,569,559)	\$	5,427,342
(b)	Foreign		-		-		-
(C)	Subtotal		2,857,783		(2,569,559)		5,427,342
(d)	Federal income tax on net capital gains		(105,815)		(1,017)		(104,798)
(e)	Utilization of capital loss carry-forwards		-		-		-
(f)	Other		-		-		-
(g)	Federal and foreign income taxes incurred	\$	2,751,968	\$	(2,570,576)	\$	5,322,544

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

			2018		mber 31, 017	Change
2.	Defe	erred Tax Assets:				
	(a)	Ordinary				
		 Discounting of unpaid losses Unearned premium reserve Policyholder reserves Investments Deferred acquisition costs Policyholder dividends accrual Fixed assets Compensation and benefits accrual Pension accrual Receivables - nonadmitted Net operating loss carry-forward Tax credit carry-forward Other (14) Subtotal 	\$ - 1,166,048 - 3,689,861 - - - - - - 225,494 5,081,403	4,	- 256,309 - 026,287 - - - - - - 838,384 120,980	\$ - (90,261) - (336,426) - - - - - - - - - - - - - - - - - - -
	(b) (c)	Statutory valuation allowance adjustment Nonadmitted	 2,859,787	8,	- 671,871	
	(d)	Admitted ordinary DTAs (2a14 - 2b - 2c)	 2,221,616	3,	449,109	 (1,227,493)
	(e)	Capital (1) Investments (2) Net capital loss carry-forward (3) Real estate (4) Other (5) Subtotal	 20,398 - - 20,398		16,075 - - 16,075	 4,323
	(f) (g)	Statutory valuation allowance adjustment Nonadmitted	 <u>-</u>		-	
	(h)	Admitted capital DTAs (2e5 - 2f - 2g)	 20,398		16,075	 4,323
	(i)	Admitted DTAs (2d + 2h)	 2,242,014	3,	465,184	 (1,223,170)

3. Deferred Tax Liabilities:

(a)	Ordinary
(~)	or annar y

4.

	 Investments Fixed Assets Deferred and uncollected premium Policyholder reserves Other (6) Subtotal 	- 243,072 277,463 4,560 525,095	- 245,260 410,550 1,798 657,608	- (2,188) (133,087) <u>2,762</u> (132,513)
(b)	Capital			
	 Investments Real estate Other (4) Subtotal 	1,696,521 - - 1,696,521	1,162,801 - - 1,162,801	533,720
(C)	Total DTLs (3a6 + 3b4)	2,221,616	1,820,409	401,207
Net	DTA(L) (2i - 3c)	<u>\$ 20,398</u>	<u>\$ 1,644,775</u>	<u>\$ (1,624,377)</u>

The change in net deferred income taxes is comprised of the following:

	Years Ended December 31,					
		2018		2017		
(1) Net DTA(L)	\$	(7,436,461)	\$	(9,601,259)		
Less: Items not recorded in the change in net deferred income taxes:		-		-		
 (2) Tax-effect of unrealized gains/(losses) (3) Tax-effect of change in accounting method for pensions 		(4,323) -		(5,724) -		
(4) Change in net deferred income taxes	\$	(7,440,784)	\$	(9,606,983)		

D. The components of federal and foreign income tax on operating items are recorded on the Summary of Operations and Capital and Surplus Account and are different from that which would be obtained by applying the prevailing federal income tax rate to operating income before taxes. The significant items causing this difference are as follows:

	Years Ended December 31,				
		2018		2017	
 Provision computed at statutory rate Nonadmitted assets 	\$	4,375,974 (13,250)	\$	4,270,855 (13,084)	
(3) Foreign governmental income taxes(4) Expense items		- 475,149		- 27	
(5) Investment items(6) Tax credits		(1,159,821) -		(4,232,745) -	
(7) Change in reserve valuation basis(8) Corporate rate reduction		-		- 6,867,047	
(9) Other		6,514,700		144,307	
Total statutory income tax expense (benefit)	<u>\$</u> _1	10,192,752	\$	7,036,407	
(10) Federal and foreign income tax benefit(11) Change in net deferred income taxes	\$	2,751,968 7,440,784	\$	(2,570,576) 9,606,983	
Total statutory income tax expense (benefit)	\$ 1	10,192,752	\$	7,036,407	

E. (1) As of December 31, 2018, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has no total tax credit carryforwards included in deferred taxes.

(2) The Company paid federal income taxes of \$2,802,185 in 2018 and \$18,995,860 in 2017.

(3) As of December 31, 2018 and 2017, the Company had no protective deposits recognized as admitted assets.

- F. (1) The Company is included in a consolidated United States (U.S.) federal income tax return with its parent, Massachusetts Mutual Life Insurance Company (MassMutual), a mutual life insurance company domiciled in the Commonwealth of Massachusetts, and MassMutual's eligible U.S. subsidiaries. The Company also files income tax returns in various states and foreign jurisdictions.
 - (2) The Company, MassMutual, and MassMutual's eligible subsidiaries and certain affiliates (the Parties) have executed and are subject to a written tax allocation agreement (the Agreement). The Agreement sets forth the manner in which the total combined federal income tax is allocated among the Parties. The Agreement provides the Company with the enforceable right to recoup federal income taxes paid in prior years in the event of future capital net losses, which it may incur. Further, the Agreement provides

the Company with the enforceable right to utilize its net losses carried forward as an offset to future net income subject to federal income taxes.

- G. (1) Companies are generally required to disclose unrecognized tax benefits, which are the tax effect of positions taken on their tax returns that may be challenged by the various taxing authorities, in order to provide users of financial statements more information regarding potential liabilities. The Company recognizes tax benefits and related reserves in accordance with existing SAP for liabilities, contingencies and impairments of assets.
 - (2) On December 22, 2017, the president signed into law H.R. I/Public Law 115-97 commonly known as the Tax Cuts and Jobs Act (the "Act"). The Act contains several key provisions that have significant financial statement effects in both the current and prior reporting periods. Effective January 1, 2018, the Act reduces the corporate tax rate to 21 percent, eliminates the corporate alternative tax, increases the capitalization rates for determining deferred acquisition costs and extends the amortization period, modifies the life company proration rules, reduces the dividends received deduction applicable to corporate shareholders, and modifies the net operating loss deduction applicable to corporate taxpayers. The Act also changed the method for computing deductions for life insurance reserves in 2017.
 - (3) As a result of the reduction of the corporate tax rate to 21 percent, the Company remeasured its net admitted deferred taxes as of the enactment date and recognized a decrease in surplus of \$1,096,517 in 2017. Of the \$1,096,517 net decrease, \$6,867,047 was reflected in the change in other deferred income taxes, \$10,717 was reflected in the change in net unrealized capital gains (losses), offset by increases of \$5,781,247 reflected in change in non-admitted assets.
 - (4) Effective January 1, 2018, the Act increases the capitalization rates for determining specified policy acquisition expenses. The provision increases the capitalization rate for annuity contracts from 1.75 percent to 2.09 percent, the rate for group life insurance contracts from 2.05 percent to 2.45 percent, and the rate for all other specified contracts from 7.7 percent to 9.2 percent. This provision extends the amortization period for capitalized deferred acquisition costs (DAC) to 180 months from 120 months. A transition rule allows capitalized DAC as of December 31, 2017 to continue to be amortized over 10-years.
 - (5) Effective January 1, 2018, the Act modifies the life company proration rules by defining the company's share as 70 percent and the policyholders' share as 30 percent for purposes of the dividends received deduction and tax-exempt interest income.
 - (6) Effective January 1, 2018, the Act reduces the dividends received deduction applicable to corporate shareholders for the 70 percent deductions to 50 percent, and for the 80 percent deduction to 65 percent. The 100 percent dividends received deduction remains in effect for dividends from affiliated group members.
 - (7) The Act modifies the deduction for NOLs and imposes the general corporate regime on life insurers. Under prior law, NOLs generally had a carry back period of two years (three years in the case of a life insurance company) and a carryforward period of 20 years (15 years in the case of a life insurance company). The Act eliminates the carry back period and makes the carryforward period indefinite. The amount of the NOL deduction allowed is limited to 80 percent of taxable income computed without regard to the NOL deduction. This provision applies to NOLs arising in taxable years beginning after December 31, 2017.
 - (8) The Act revised the computation of life insurance tax reserves to be the greater of the net surrender value of a contract and 92.81 percent of statutory reserves. The revised reserve computation is effective for taxable years beginning after December 31, 2017. A transition rule requires life insurers to spread the difference between the prior year end reserves computed on the old basis and those computed on the new basis over eight years as either income or a deduction. For the year ended December 31, 2017, the Company recorded an estimated provision for this change by recognizing a net \$410,550 decrease in its DTA associated with the increase in tax reserves, offset by a corresponding increase to a new DTA which represents future tax deductions that will be amortized over the eight year transition period. The Company adjusted this provisional amount for year ended December 31, 2018 by recognizing an increase in its DTA of \$26,595, offset by a corresponding decrease in the new DTA. This new DTA of \$383,955 will be amortized over eight years. In addition, the Company recognized a tax benefit of \$47,994 included in the tax expense reported on the Summary of Operations to reflect the first year's amortization of the eight-year transition rule.
 - (9) The Internal Revenue Service (IRS) has completed its examination of the tax returns filed for years 2013 and prior. The IRS commenced its exam of years 2014-2016 in September 2017. The adjustments resulting from the examinations are not expected to materially affect the position or liquidity of the Company.
 - (10) With respect to the admitted DTAs calculation, effective January 1, 2018, the Act eliminates the ability to carryback net operating losses, therefore the amount of adjusted gross DTA admitted based on recoverable federal taxes is limited only to capital DTAs.

Note 10 - Information Concerning Parent, Subsidiaries and Affiliates

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

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

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

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

The following summarizes reinsurance transactions between the Company and MassMutual:

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

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

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

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

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

g. All outstanding shares of the Company were owned by its parent.

- h. The Company does not have an investment in its parent.
- i. As of December 31, 2018, the Company did not have an investment in SCAs exceeding 10% of admitted assets.
- j. In 2018, the Company did not have impairment write-downs on its investments in affiliated bonds.

In 2017, the Company recognized \$6,452 in impairment write-downs on its investments in affiliated bonds.

The Company does not have an impairment write-down of any SCA entities during the statement periods.

- k. The Company has no foreign insurance subsidiary whose value is calculated by adjusting annuity GAAP account value reserves using the Commissioners' Annuity Reserve Valuation Method and the related Actuarial Guidelines.
- I. The Company does not hold an investment in a downstream noninsurance holding company.
- m. The Company does not have investments in foreign or noninsurance SCAs.
- n. The Company does not have any insurance SCAs for which the audited statutory equity reflects a departure from NAIC statutory accounting practices.

Note 11 - Debt

a. The Company did not have any capital notes or liability for borrowed money as of December 31, 2018 or 2017.

The Company did not have any debt that was considered to be extinguished by in-substance defeasance.

The Company did not set aside assets after the effective date of this statement solely for satisfying debt obligations.

b. The Company is not a member of the Federal Home Loan Bank (FHLB) therefore it has no FHLB funding agreements.

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

 Benefit Plans

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

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

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

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

Note 14 – Liabilities, Contingencies and Assessments

- Contingent commitments: In the normal course of business, the Company enters into commitments to purchase certain investments. The majority of these commitments have funding periods that extend between one and five years. The Company is not required to fund commitments once the commitment period expires. As of December 31, 2018 or 2017, the Company had no commitments.
- b. Assessments:

The Company is subject to insurance guaranty fund laws in the states in which it does business. These laws assess insurance companies' amounts to be used to pay benefits to policyholders and policy claimants of insolvent insurance companies. Many states allow these assessments to be credited against future premium taxes. The Company believes such assessments in excess of amounts accrued will not materially impact its financial position, results of operations or liquidity.

c. Gain contingencies:

No material gain contingencies were realized subsequent to December 31, 2018 through the filing date.

- d. The Company did not have any claims related to extra contractual obligations in 2018.
- e. The Company has no joint and several liabilities
- f. All other contingencies:

In the normal course of business, the Company is involved in disputes, litigation and governmental or regulatory inquiries, administrative proceedings, examinations and investigations, both pending and threatened. These matters, if resolved adversely against the Company or settled, may result in monetary damages, fines and penalties or require changes in the Company's business practices. The resolution or settlement of these matters is inherently difficult to predict. Based upon the Company's assessment of these pending matters, the Company does not believe that the amount of any judgment, settlement or other action arising from any pending matter is likely to have a material adverse effect on the statement of financial position. However, an adverse outcome in certain matters could have a material adverse effect on the results of operations for the period in which such matter is resolved, or an accrual is determined to be required, on the financial position, or on our reputation.

The Company evaluates the need for accruals of loss contingencies for each matter. When a liability for a matter is probable and can be estimated, the Company accrues an estimate of the loss and any related insurance recoveries, if any. An accrual is subject to subsequent adjustment as a result of additional information and other developments. The resolution of matters are inherently difficult to predict, especially in the early stages of matter. Even if a loss is probable, due to many complex factors, such as speed of discovery and the timing of court decisions or rulings, a loss or range of loss may not be reasonably estimated until the later stages of the matter. For matters where a loss is material and it is either probable or reasonably possible then it is disclosed. For matters where a loss may be reasonably possible, but not probable, or is probable but not reasonably estimated, no accrual is established, but the matter, if material, is disclosed.

<u>Note 15 –</u> Leases

The Company did not have any lease obligations.

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

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

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

During 2018 and 2017, the Company did not transfer any receivables that were reported as sales. а.

- Transfer and Servicing of Financial Assets: b.
 - The Company did not participate in securities lending as of December 31, 2018 or 2017. (1)
 - (2)The Company did not have any servicing assets or liabilities in 2018 or 2017.
 - (3)The Company did not have any servicing assets or liabilities in 2018 or 2017.
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2018 or 2017.
 - The Company did not have any transfers of financial assets accounted for as secured borrowing in 2018 or 2017. (5)
 - The Company did not have any transfers of receivables with recourse in 2018 or 2017. (6)
 - (7) See Note 5e1 "Repurchase Agreements".

Wash sales: C.

- In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days of (1) the sale date to enhance the Company's yield on its investment portfolio.
- (2)The Company did not sell any securities with the NAIC Designation 3 or below, or unrated, for the year ended December 31, 2018 or 2017, that were reacquired within 30 days of the sale date.

Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans The Company did not write any accident and health plans. Therefore, the Company did not have any uninsured accident and health plans.

Note 19 – Direct Premium Written/Produced By Managing General Agents/Third Party Administrators

The Company did not have any premium written through managing general agents or third party administrators.

Note 20 – Fair Value Measurements

а.

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

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

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

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

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

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

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

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

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

		[Dec	ember 31, 20)1	8		
						Net Asset Valu	е	
	 Level 1	Level 2		Level 3		(NAV)		Total
Financial assets:								
Bonds:								
Parent, subsidiaries and affiliates	\$ -	\$ 431,866	\$	-		\$	-	\$ 431,866
Separate account assets ⁽¹⁾	912,506,896	2,321,309,243		-			-	3,233,816,139
Total financial assets carried at fair value	\$ 912,506,896	\$ 5 2,321,741,109	\$	-		\$	-	\$ 3,234,248,005

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

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

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

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

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

- (2) The Company does not have any Level 3 financial instruments that are carried at fair value.
- (3) The Company reviews the fair value hierarchy classifications at each reporting period. Overall, reclassifications between levels occur when there are changes in the observability of inputs and market activity used in the valuation of a financial asset or liability. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. Given the types of assets classified as Level 1 (primarily equity securities and mutual fund investments), transfers between Level 1 and Level 2 measurement categories are expected to be infrequent. Transfers into and out of Level 3 are summarized in the schedule of changes in Level 3 assets and liabilities.
- (4) Valuation Techniques and Inputs

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

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

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

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

that cannot be derived principally from, or corroborated by, observable market data, including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit–related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

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

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

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

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

			Dee	CIIID	2011			
	 Aggregate	Admitted					Net Asset Value	Not Practicable
	Fair Value	Assets	Level 1		Level 2	Level 3	(NAV)	(Carrying Value)
Financial assets: Bonds:		/ 65015					(1447)	value)
U. S. government and agencies	\$ 39,143,523	\$ 39,541,458	\$;	\$	39,143,523	\$ -	\$ -	\$ -
Special revenue	61,823	55,923		-	61,823	-	-	-
Industrial and miscellaneous	269,796,515	265,755,184		-	268,378,485	1,418,030	-	-
Parent, subsidiaries and affiliates	7,184,666	7,099,665		-	7,184,666	-	-	-
Mortgage loans - residential Cash, cash equivalents and	3,087,102	3,187,846		-	-	3,087,102	-	-
short-term investments	55,147,328	55,147,328	(3,042,971)	58,190,299	-	-	-
Separate account assets Financial liabilities:	4,476,743,352	4,464,676,157	1,043,779,636	5	3,418,899,196	14,064,520	-	-
Individual annuity contracts	2,266,510	2,940,410		-	-	2,266,510	-	-
Supplementary contracts	13,007,075	12,878,292			-	13,007,075	-	-

December 31 2017

d. As of December 31, 2018 and December 31, 2017, the Company had no investments where it was not practicable to estimate fair value.

Note 21 - Other Items

a. There were no unusual or infrequent items requiring disclosure.

b. There were no troubled debt restructurings that occurred during the period for which the financial statements are presented.

c. Other disclosures:

The Company had assets on deposit with government authorities or trustees, as required by law, in the amount of \$4,460,010 as of December 31, 2018 and \$4,466,341 as of December 31, 2017.

Business risks

The Company operates in a business environment subject to various risks and uncertainties. The principal risks include insurance and underwriting risks, investment and interest rate risks and credit risk.

Insurance and underwriting risks

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

Investment and interest rate risks

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

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

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

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

Credit and other market risks

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

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

The CMBS, RMBS and leveraged loan sectors are sensitive to evolving conditions that can impair the cash flows realized by investors and is subject to uncertainty. Management's judgment regarding OTTI and estimated fair value depends upon the evolving investment sector and economic conditions. It can also be affected by the market liquidity, a lack of which can make it difficult to obtain accurate market prices for RMBS and other investments, including CMBS and leveraged loans. Any deterioration in economic fundamentals, especially related to the housing sector could affect management's judgment regarding OTTI.

The Company has investments in structured products exposed primarily to the credit risk of corporate bank loans, corporate bonds or credit default swap contracts referencing corporate credit risk. Most of these structured investments are backed by corporate loans and are commonly known as collateralized loan obligations that are classified as CDOs. The portfolios backing these investments are actively managed and diversified by industry and individual issuer concentrations. Due to the complex nature of CDOs and the reduced level of transparency to the underlying collateral pools for many market participants, the recovery in CDO valuations generally lags the overall recovery in the underlying assets. Management believes its scenario analysis approach, based primarily on actual collateral data and forward looking assumptions, does capture the credit and most other risks in each pool. However, in a rapidly changing economic environment, the credit and other risks in each collateral pool will be more volatile and actual credit performance of CDOs may differ from the Company's assumptions.

The Company continuously monitors its investments and assesses their liquidity and financial viability; however, the existence of the factors described above, as well as other market factors, could negatively impact the market value of the Company's investments. If the Company sells its investments prior to maturity or market recovery, these investments may yield a return that is less than the Company otherwise would have been able to realize.

Asset-based fees calculated as a percentage of the separate account assets are a source of revenue to the Company. Gains and losses in the investment markets may result in corresponding increases and decreases in the Company's separate account assets and related revenue.

Political Uncertainties

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

- d. The Company did not receive any business interruption recoveries in 2018.
- e. The Company did not have unused transferable or non-transferable state tax credits as of December 31, 2018.
- f. Subprime mortgage related risk exposure:

As of December 31, 2018 and 2017, the Company did not have any direct exposure through investments in subprime mortgage loans.

(1) Direct exposure through other investments

RMBS risk exposure:

Portfolios of ABS, including RMBS and CMBS, are evaluated on a periodic basis using scenarios customized by collateral type. The Company performs sensitivity analysis on defaults as loan-to-values change, and on defaults as prepayments change using default curves under various scenarios. The Company combines scenario analysis with a monthly surveillance process in which it compares actual delinquencies and defaults to expectations established at the time securities are acquired as well as expectations considering current market conditions, and performs a statistical review to determine potential losses relative to credit support of troubled loan exposures on a transaction-by-transaction basis.

Management used a combination of external vendor prices, broker quotations and internal models for purposes of deriving fair value. Internal inputs used in the determination of fair value included estimates of prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and results of cash flow priority are also considered. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants at the financial statement date.

The Company holds certain investments backed by pools of residential mortgages. The majority of these investments are included in bonds. The mortgages in these pools have varying risk characteristics and are commonly categorized as being of U.S. government agency, non-agency prime, Alt-A and subprime borrower quality. The Alt-A category includes option adjustable rate mortgages and the subprime category includes 'scratch and dent' or reperforming pools, high loan-to-value pools, and pools where the borrowers have very impaired credit but the average loan-to-value is low, typically 70% or below at origination. In identifying Alt-A and subprime exposure, management used a combination of qualitative and quantitative factors, including FICO scores and loan-to-value ratios.

Residential mortgage loan pools are homogeneous residential mortgage loans substantially backed by FHA and VA guarantees. The Company purchases seasoned loan pools, most of which are FHA insured or VA guaranteed. The Company does not originate any residential mortgages but invests in residential mortgage loan pools which may contain mortgages of subprime credit quality. As of December 31, 2018 and 2017, the Company did not have any direct subprime exposure through purchases of unsecuritized whole-loan pools.

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

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

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

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

g. Retained asset accounts:

(1) The Company offers the use of retained asset accounts as one of the options available to beneficiaries. This option must be affirmatively elected and is not treated as a default. An unaffiliated third party provider services certain aspects of the retained asset accounts. Beneficiaries draw funds from retained asset accounts utilizing drafts. The Company funds those drafts through an unaffiliated bank. During the reporting year, the interest earned by beneficiaries ranged from 0.95% to 1.70%. There is no fee charged to the beneficiary to establish this account. There are no maintenance or service fees. A \$12 stop payment fee, a \$10 insufficient funds fee and a \$2 duplicate draft fee will apply. Assets and liabilities relating to retained asset accounts remain with the Company and are reported within the Company's financial statements as assets and supplemental contracts without life contingencies.

Retained Asset Accounts In Force

(2)

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

(3)

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

h. Insurance-linked securities:

The Company has not received any proceeds as the issuer, ceding insurer or counterparty of insurance-linked securities.

Note 22 – Events Subsequent

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

Note 23 – Reinsurance

а.

Ceded Reinsurance Report:

- Section 1 General Interrogatories:
 - (1) The Company and its officers and directors do not own any portion of a nonaffiliated reinsurer.
 - (2) The Company did not reinsure any policies with a company chartered in a country other than the U.S., excluding U.S. branches of these companies, which was owned in excess of 10% or controlled directly or indirectly by an insured, a beneficiary, a creditor or any other person not primarily engaged in the insurance business.

Section 2 - Ceded Reinsurance Report - Part A:

- (1) There are no reinsurance agreements in effect under which the reinsurer may unilaterally cancel any reinsurance for reasons other than for nonpayment of premium or other similar credits.
- (2) The Company has no reinsurance agreements in effect such that the amount of losses paid or accrued through the statement date may result in a payment to the reinsurer of amounts which, in aggregate and allowing for offset of mutual credits from other reinsurance agreements with the same reinsurer, exceed the total direct premium collected under the reinsured policies.

Section 3 - Ceded Reinsurance Report - Part B:

- (1) If all reinsurance agreements were terminated by either party as of December 31, 2018, the resulting reduction in surplus due to loss of reinsurance reserve credits net of unearned premium would be \$11,247,764, assuming no return of the assets (excluding assets in trust) backing these reserves from the reinsurer to the Company.
- (2) No new agreements have been executed or existing agreements amended, since January 1, 2018, to include policies or contracts that were in force or had existing reserves established by the Company as of the effective date of the agreement.
- b. The Company did not write off any reinsurance balances.
- c. The Company did not commute any ceded reinsurance.
- d. The Company did not reinsure any policies with a certified reinsurer whose rating was downgraded or status subject to revocation.
- e. The Company does not have reinsurance of variable annuity contracts with an affiliated captive reinsurer.
- f. The Company does not have reinsurance of variable annuity contracts with an affiliated captive reinsurer.

g. Ceding entities that utilize captive reinsurers to assume reserves subject to the XXX/AXXX captive framework. (1) Ceding reinsurers in which a risk-based capital shortfall exists per the risk-based capital XXX/AXXX captive reinsurance consolidated exhibit:

a. Captives with risk-based capital shortfall

Cession ID	NAIC Company Code	ID Number	Name of Captive Insurer	risk	ount of -based apital ortfall
			None	\$	-
			None	\$	-
			None	\$	-
Total				<u> </u>	-
b. Effect of ris	k-based capita	I shortfall on to	otal adjusted capital (TAC)		
1. Total adjus	sted capital (T	AC) (Five-Yea	ar Historical Line 30)	\$	-
2. Risk-base	d capital shortf	all (Sum of g	(1)a1 Column 5)	\$	-

3. Total adjusted capital (TAC) before risk-based capital shortfall (g(1)b1 + g(1)b2)) \$

(2) Captive reinsurers for which a non-zero primary security shortfall is shown on the risk-based capital XXX/AXXX reinsurance primary security shortfall by cession exhibit:

Cession ID	NAIC Company Code	ID Number	Name of Captive Insurer	Amount of primary security shortfall
			None	\$ _
			None	\$ -
			None	\$ -
Total				 -

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

The Company does not issue group health insurance and therefore did not issue retrospectively rated contracts or contracts subject to redetermination.

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2018 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which considered corrections of prior year errors.

Note 26 – Intercompany Pooling Arrangements

The Company did not have any intercompany pooling arrangements.

Note 27 – Structured Settlements

The Company did not enter into structured settlement agreements with other life insurers to resolve claims.

Note 28 – Health Care Receivables

The Company did not issue any business that would give rise to pharmaceutical rebates or risk sharing receivables.

Note 29 – Participating Policies

The Company did not issue participating policies.

Note 30 – Premium Deficiency Reserves

The Company did not have any liability for premium deficiency on accident and health contracts or property/casualty contracts.

Note 31 – Reserves for Life Contracts and Annuity Contracts

- (1) The Company waives deduction of deferred fractional premium at death and returns any portion of the final premium beyond the date of death. Reserves are computed using continuous functions to reflect these practices. Surrender values were not promised in excess of the legally computed reserves.
- (2) The Company charges a higher premium on certain contracts that cover substandard mortality risk. For these policies, the reserve calculations are based on a substandard mortality rate, which is a multiple of the standard mortality tables.
- (3) The Company did not have any insurance in force as of December 31, 2018, for which the gross premium was less than the net premium according to the standard valuation set by the Department.
- (4) Tabular interest was determined for Variable life general account reserves using a formula that applies a weighted average credited rate to the mean account value.
- (5) Liabilities for investment-type contracts such as supplementary contracts not involving life contingencies are based on account value or accepted actuarial methods using applicable interest rates. Refer to Note 20 a. "Fair Value Measurements" for information on the Company's policy for determining fair value.

(6) The details for other changes:

				Ordir	nary			Group
						Credit Life		
		Industrial	Life	Individual	Supplementary	Group and	Life	
ITEM	Total	Life	Ins.	Annuities	Contracts	Individual	Ins.	Annuities
None	\$ -	\$ -	\$ -	\$-	\$ -	\$ -	\$-	\$ ·

Note 32 – Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics

			Dee	cerr	nber 31, 2018		
		General Account	Separate Account w/ Guarantees	No	Separate Account onguaranteed	Total	% of Total
a.	Subject to discretionary withdrawal:						
	(1) With market value adjustment	\$ 2,354,735	\$ -	\$	- \$	2,354,735	4 %
	 (2) At book value less current surrender charge of 5% or more 	-	-		-	-	-
	(3) At fair value	 -	-		32,933,698	32,933,698	65
	(4) Total with market value adjustment or at fair value	2,354,735	-		32,933,698	35,288,433	69 %
	(5) At book value without adjustment	14,976,259	-		-	14,976,259	30
b.	Not subject to discretionary withdrawal provision	869,124	-		-	869,124	1
C.	Total (gross)	 18,200,118	-		32,933,698	51,133,816	100 %
d.	Reinsurance ceded	 -			-	-	
e.	Total (net)* (gross less reinsurance ceded)	\$ 18,200,118	\$ -	\$	32,933,698 \$	51,133,816	

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

Life and Accident and Health Annual Statement:	
(1) Exhibit 5, annuities section, total (net)	\$ 3,123,921
(2) Exhibit 5, supplementary contracts with life contingencies section, total (net)	-
(3) Exhibit 7, deposit-type contracts Column 1, Line 14	 15,076,197
(4) Subtotal	 18,200,118
Separate Accounts Annual Statement:	
(5) Exhibit 3, annuities section, total (net)	32,933,698
(6) Exhibit 3, supplementary contracts section, total (net)	-
(7) Policyholders dividend and coupon accumulations	-
(8) Policyholder premiums	-
(9) Guaranteed interest contracts	-
(10) Other contract deposit funds	 -
(11) Subtotal	 32,933,698
(12) Combined total	\$ 51,133,816

The Company is not a member of the FHLB therefore it has no FHLB funding agreements. g.

Note 33 Premium and Annuity Considerations Deferred and Uncollected

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

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

Note 34 – Separate Accounts a.

f.

Separate account activity:

The separate account classification of all separate account products for the Company is supported by state statute Connecticut Laws Title 38a, Chapter 700b, Sections 38a-433 & 459.

⁽¹⁾ Separate accounts and sub-accounts are segregated funds administered and invested by the Company, the performance of which primarily benefits the policyholders/contract holders with an interest in the separate accounts. Group and individual variable annuity, variable life and other insurance policyholders/contract holders select from among the separate accounts and sub-accounts made available by the Company. The separate accounts and sub-accounts are offered as investment options under certain insurance contracts or policies. The returns produced by separate account assets increase or decrease separate account reserves. Separate account assets consist principally of marketable securities reported at fair value. Separate account assets can only be used to satisfy separate account liabilities and are not available to satisfy the general obligations of the Company. Separate account administrative and investment advisory fees are included in miscellaneous income.

(2) In accordance with the products recorded within the separate accounts, some are considered legally insulated whereas others are not legally insulated from the general account. The legal insulation of the separate account products prevents assets other than seed money or amounts in a supplemental account from being generally available to satisfy claims resulting from the general account.

As of December 31, 2018 and 2017, the Company's NAIC Separate Account Annual Statement included Separate Accounts with legally insulated products of \$ 4,355,595,947 and \$4,451,883,060, respectively. Assets backing products which are not legally insulated are available to satisfy general obligations of the Company. The assets backing legally insulated products from the general account as of December 31, 2018 are attributed to the following:

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

(3) In accordance with the products/transactions recorded within the separate accounts, some separate account liabilities are guaranteed by the general account. Reserves for guarantees covering death benefits or minimum rates of return are held in the general account. If the investment proceeds are insufficient to cover the rate of return guaranteed for the product or the guaranteed death benefit, the policyholder proceeds will be remitted by the general account.

To compensate the general account for the risk taken, the separate accounts have paid risk charges as follows for the past five years:

 2018
 \$

 2017

 2016

 2015

 2014

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

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

Condition That Requires GAAP General Account Reporting

Product Identifier: Stable Value Bank-Owned Life Insurance GAAP general account classification/Investment performance Bank-Owned Life Insurance - Guaranteed GAAP general account classification/Investment performance

(4) The Company does not engage in securities lending transactions within the separate accounts.

b. General nature and characteristics of separate account business:

The Company has guaranteed separate accounts classified as nonindexed to fund a long-term interest guarantee in excess of a year that does not exceed 4%. The Company has nonguaranteed separate accounts that are variable accounts where the benefit is determined by the performance and/or market value of the investments held in the separate account with incidental risk, notional expense and minimum death benefit guarantees.

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

		Index		Nonindexed Guarantee Less than/ Equal to 4%	Nonindexed Guarantee More than 4%	Nonguaranteed Separate Accounts	Total
(1)	Premiums, considerations or deposits for the year ended December 31, 2018						
		\$	- \$	- \$	- \$	30,815,940 \$	30,815,940
Reserv	ves at December 31, 2018:						
(2)	For accounts with assets at:						
a.	Fair value	\$	- \$	- \$	- \$	3,213,438,417 \$	3,213,438,417
b.	Amortized cost		-	1,129,340,963	-	-	1,129,340,963
С.	Total Reserves*	\$	- \$	1,129,340,963 \$	- \$	3,213,438,417 \$	4,342,779,380
(3) a.	By withdrawal characteristics: Subject to discretionary						
	withdrawal:	\$	- \$	- \$	- \$	- \$	-
	 With market value adjustment At book value without market value adjustment and with current surrender charge of 5% 	6	-	-	-	-	-
	or more		-	-	-	-	-
	 At fair value At book value, without market value adjustment and with current surrender charge of 		-	-	-	3,213,438,417	3,213,438,417
	less than 5%	•	-	1,129,340,963	-	-	1,129,340,963
b.	5. Subtotal Not subject to discretionary withdrawal	\$	- \$ -	1,129,340,963 \$ -	- \$ -	3,213,438,417 \$ -	4,342,779,380
С.	Total	\$	- \$	1,129,340,963 \$	- \$	3,213,438,417 \$	4,342,779,380
(4)	Reserves for Assets Default Risk in Lieu of AVR	\$	- \$	- \$	- \$	- \$	_
		Ψ	Ψ	ψ	ψ	- Ψ	
	2(c) should equal Line 3(h) ciliation of net transfers (from) to s	separate accou	nts is				
(1) Transfers as reported in the Su Separate Account Statement:	ummary of Ope	ration		cember 31, 2018		
	(a) Transfers to separate accord(b) Transfers from separate accord(c) Net transfers to (from) separate	counts (Page	4, Line	. 10)	30,815,940 (89,724,415) (58,908,475)		
(2	(a) Net deposits on deposit-typ	oe liabilities					
(3	Life, Accident & Health Annual		ration	s of the <u>\$</u>	(58,908,475)		
	(1c) + (2) = (Page 4, Line 26)						

C.

Note 35 – Loss/Claim Adjustment Expenses The Company did not have any loss/claim adjustment expenses.

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

1.1	Is the reporting entity a member of an Insurance Holding Company Sys is an insurer?					Yes [X] No []		
	If yes, complete Schedule Y, Parts 1, 1A and 2								
1.2	If yes, did the reporting entity register and file with its domiciliary State I such regulatory official of the state of domicile of the principal insurer in providing disclosure substantially similar to the standards adopted by the its Model Insurance Holding Company System Regulatory Act and more subject to standards and disclosure requirements substantially similar to the standards and disclosure requirements substantially similar to the standards adopted by the standards and disclosure requirements substantially similar to the standards and standards and the standards and stand	the Holding Co National Assided regulations p	mpany System, a regis ociation of Insurance Co ertaining thereto, or is t	stration statement ommissioners (NAIC) in the reporting entity					
1.3	State Regulating?					Connect	ticut		
1.4	Is the reporting entity publicly traded or a member of a publicly traded g	Jroup?				Yes [] No [X]		
1.5	If the response to 1.4 is yes, provide the CIK (Central Index Key) code is	issued by the S	EC for the entity/group.						
2.1	Has any change been made during the year of this statement in the chareporting entity?					Yes [] No [X]		
2.2	If yes, date of change:								
3.1	State as of what date the latest financial examination of the reporting en	ntity was made	or is being made		12/31/2014				
3.2	3.2 State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released.						2014		
3.3	State as of what date the latest financial examination report became aw domicile or the reporting entity. This is the release date or completion d examination (balance sheet date).	late of the exam	ination report and not t	he date of the		05/31/	2016		
3.4	By what department or departments? State of Connecticut Insurance Department								
3.5	Have all financial statement adjustments within the latest financial exar statement filed with Departments?				Yes [] No [] N/A [X]		
3.6	6 Have all of the recommendations within the latest financial examination report been complied with?				Yes [X] No [] N/A []		
4.1 4.2	4.12 rene During the period covered by this statement, did any sales/service orga	vees of the repo measured on dir s of new busine wals? anization owned	rting entity), receive cre ect premiums) of: ss? in whole or in part by th	edit or commissions for or	control] No [X]] No [X]		
	receive credit or commissions for or control a substantial part (more that premiums) of:	•		ness measured on direct		Voc [
] No [X]		
5.1	Has the reporting entity been a party to a merger or consolidation durin If yes, complete and file the merger history data file with the NAIC.	g the period cov	vered by this statement	?		Yes [] No [X]		
5.2	If yes, provide the name of the entity, NAIC Company Code, and state ceased to exist as a result of the merger or consolidation.	of domicile (use	two letter state abbrev	iation) for any entity that	has				
	1 Name of Entity		2 NAIC Company Code	3 State of Domicile					
6.1	Has the reporting entity had any Certificates of Authority, licenses or re- revoked by any governmental entity during the reporting period?					Yes [] No [X]		
6.2	If yes, give full information:								
7.1	Does any foreign (non-United States) person or entity directly or indirect	otly control 10%	or more of the reporting	g entity?		Yes [] No [X]		
7.2	If yes, 7.21 State the percentage of foreign control;						%		
	7.22 State the nationality(s) of the foreign person(s) or entity(s) or if the attorney-in-fact; and identify the type of entity(s) (e.g., individual, c				. —				
	1 Nationality		2 Type of Er	ntity					

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

Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board? 8.1 If response to 8.1 is yes, please identify the name of the bank holding company. 8.2

9. 10 1

10.2 10.3

10.4 10.5

10.6

8.3 Is the company affiliated with one or more banks, thrifts or securities firms? Yes [X] No [] 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 8.4 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.

Yes [] No [X]

1 Affiliate Name	2 Location (City, State)	3 FRB	4 OCC	5 FDIC	6 SEC	
aring International Investment Limited	Location (City, State)				YES	
arings Global Advisers Limited					VE0	
arings Securities. LLC						
arbourView Asset Management Corporation						
L Distributors, LLC					YES	
L Investment Advisers, LLC					YES	
L Investors Services, LLC					YES	
L Strategic Distributors, LLC					YES	
ILISI Financial Alliances, LLC					YES	
Private Capital, LLC	New York, NY				YES	
I Advisors, Inc.	New York, NY				YES	
I Global Asset Management, Inc	New York, NY				YES	
I Global Institutional, Inc.					YES	
I Private Investments, Inc					YES	
I SteelPath, Inc.					YES	
openheimerFunds Distributor, Inc	New York, NY				YES	
penheimerFunds Inc.					YES	
ne MassMutual Trust Company, FSB	Enfield, CT		YES			
hat is the name and address of the independent certified PMG, LLP, One Financial Plaza, Hartford, CT 06103						
as the insurer been granted any exemptions to the prohib quirements as allowed in Section 7H of the Annual Finar w or regulation?	ncial Reporting Model Regulation (Model Audit Rule), or	· substantially s	imilar sta	ite	Yes [] No
he response to 10.1 is yes, provide information related to						
Has the insurer been granted any exemptions related to the other requirements of the Annual Financial Reporting Model Regulation as allowed for in Section 18A of the Model Regulation, or substantially similar state law or regulation? If the response to 10.3 is yes, provide information related to this exemption:] No
he response to 10.3 is yes, provide information related to	I					
he response to 10.3 is yes, provide information related to as the reporting entity established an Audit Committee in				/es [X] No [] N

What is the name, address and affiliation (officer/employee of the reporting entity or actuary/consultant associated with an actuarial consulting 11. firm) of the individual providing the statement of actuarial opinion/certification? Douglas W Taylor, FSA, MAAA, Vice President and Appointed Actuary, 1295 State Street, Springfield, MA 01111

Does the reporting entity own any securities of a real estate holding company or otherwise hold real estate indirectly? Yes [X] No [] 12.1 12.11 Name of real estate holding company See 12.2 ...25 12.12 Number of parcels involved.

...18,577,777 12.13 Total book/adjusted carrying value \$... 12.2 If, yes provide explanation: The company has investments in debt securities in 25 parcels which own or hold real estate indirectly. The statement value at December 31,

2018 of debt is \$18,577,777. FOR UNITED STATES BRANCHES OF ALIEN REPORTING ENTITIES ONLY:

13. What changes have been made during the year in the United States manager or the United States trustees of the reporting entity? 13.1

13.2	Does this statement contain all business transacted for the reporting entity through its United States Branch on risks wherever located?	Yes [] No []
13.3	Have there been any changes made to any of the trust indentures during the year?	Yes [] No []
13.4	If answer to (13.3) is yes, has the domiciliary or entry state approved the changes?] No [] N/A []
14.1	Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards?	Yes [X] No []
	(b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity;	
	(c) Compliance with applicable governmental laws, rules and regulations;	
	(d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and	
	(e) Accountability for adherence to the code.	
14.11	If the response to 14.1 is No, please explain:	
14.2	Has the code of ethics for senior managers been amended?	Yes [X] No []
14.21	If the response to 14.2 is yes, provide information related to amendment(s).	
	The revision to the Code includes incorporating the new MassMutual logo and brand; clarity in how following the Code helps employees avoid unwanted business risk; heightens risk awareness and enhances ethical decision-making; and identifies multiple resources for raising	
	CONCERNS.	

14.3 Have any provisions of the code of ethics been waived for any of the specified officers? Yes [] No [X] 14.31 If the response to 14.3 is yes, provide the nature of any waiver(s).

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

	 15.1 Is the reporting entity the beneficiary of a Letter of Credit that is unrelated to reinsurance where the issuing or confirming bank is not on SVO Bank List? 15.2 If the response to 15.1 is yes, indicate the American Bankers Association (ABA) Routing Number and the name of the issuing or confirm bank of the Letter of Credit and describe the circumstances in which the Letter of Credit is triggered. 				Yes [] No [X]	
	1 American Bankers	2		3		4	ŀ
	Association (ABA) Routing Number Issuir	ig or Confirming Bank Name	Circumstances	That Can Trigger the Letter of Credit		Amc	ount
		BOAR	D OF DIRECTOR	S			
16.		estments of the reporting entity passed u				Yes [X] No []
17.	Does the reporting entity keep a	complete permanent record of the proc	eedings of its board of dir	rectors and all subordinate committees	3	Yes [X	
18.	thereof?					Yes [X	
			FINANCIAL				
19.	Has this statement been prepare	ed using a basis of accounting other that	n Statutory Accounting Pi	rinciples (e.g., Generally Accepted		Voc [
20.1	Total amount loaned during the	vear (inclusive of Separate Accounts, ex	clusive of policy loans):	20.11 To directors or other officers	\$		
				20.12 To stockholders not officers	\$		
				20.13 Trustees, supreme or grand (Fraternal Only)	\$		
20.2		ng at the end of year (inclusive of Separa	ate Accounts, exclusive o	of			
	policy loans):			20.21 To directors or other officers 20.22 To stockholders not officers			
				20.23 Trustees, supreme or grand			
21.1	Were any assets reported in this	statement subject to a contractual oblig	nation to transfer to anoth	(Fraternal Only)	\$		
	obligation being reported in the s	statement?					
21.2	If yes, state the amount thereof a	at December 31 of the current year:		21.21 Rented from others			
				21.22 Borrowed from others 21.23 Leased from others			
				21.24 Other	\$		
22.1	Does this statement include pay guaranty association assessment	ments for assessments as described in ts?	the Annual Statement Ins	structions other than guaranty fund or		Yes [] No [X]
22.2	If answer is yes:	-	2	2.21 Amount paid as losses or risk ad	justment \$		
				2.22 Amount paid as expenses			
23.1	Does the reporting entity report a	any amounts due from parent, subsidiari		2.23 Other amounts paid			
		evable from parent included in the Page					
		I	NVESIMENI				
24.01		other securities owned December 31 of orting entity on said date? (other than se				Yes [X] No []
24.02	If no, give full and complete info	mation relating thereto					
24.03	For security lending programs, p whether collateral is carried on c	rovide a description of the program incl r off-balance sheet. (an alternative is to	uding value for collateral reference Note 17 where	and amount of loaned securities, and this information is also provided)			
24.04	Does the Company's security leader instructions?	nding program meet the requirements fo	or a conforming program a	as outlined in the Risk-Based Capital	Yes []	No [] N/A [X]
24.05	If answer to 24.04 is yes, report	amount of collateral for conforming prog	Irams.		\$		
24.06	If answer to 24.04 is no, report a	mount of collateral for other programs.			\$		
24.07	Does your securities lending pro outset of the contract?	gram require 102% (domestic securities	s) and 105% (foreign secu	urities) from the counterparty at the	Yes []	No [] N/A [X]
24.08	Does the reporting entity non-ad	mit when the collateral received from th	e counterparty falls below	v 100%?	Yes []	No [] N/A [X]
24.09	Does the reporting entity or the r conduct securities lending?	eporting entity 's securities lending age	nt utilize the Master Secu	rities lending Agreement (MSLA) to	Yes []	No [] N/A [X]

GENERAL INTERROGATORIES

24.10 For the reporting entity's security lending program state the amount of the following as December 31 of the current year:

	24.102	Total book adjusted/carrying value of reinvested coll	ed on Schedule DL, Parts 1 and 2 lateral assets reported on Schedule DL, Parts 1 and 2 liability page.	\$	
25.1	control of the reporting	entity, or has the reporting entity sold or transferred	at December 31 of the current year not exclusively under the any assets subject to a put option contract that is currently in	Yes [X] No []
25.2	If ves, state the amoun	t thereof at December 31 of the current year:	25.21 Subject to repurchase agreements	\$	
-	, ,	······································	25.22 Subject to reverse repurchase agreements	s	
			25.23 Subject to dollar repurchase agreements	\$	
			25.24 Subject to reverse dollar repurchase agreements	\$	
			25.25 Placed under option agreements	\$	
			25.26 Letter stock or securities restricted as to sale - excluding FHLB Capital Stock		
			25.27 FHLB Capital Stock	\$	
			25.27 FHLB Capital Stock 25.28 On deposit with states	\$	4,460,010
			25.29 On deposit with other regulatory bodies	\$	
			25.30 Pledged as collateral - excluding collateral pledged an FHLB	to	
			25.31 Pledged as collateral to FHLB - including assets backing funding agreements		
			25.32 Other	\$	

25.3 For category (25.26) provide the following:

	1 Nature of Restriction	2 Description		3 punt
26.1	Does the reporting entity have any hedging transactions reported on So	hedule DB?	Yes [] No [X]
26.2	If yes, has a comprehensive description of the hedging program been n If no, attach a description with this statement.	nade available to the domiciliary state? Yes [] No [] N/A [X
27.1	Were any preferred stocks or bonds owned as of December 31 of the c issuer, convertible into equity?		Yes [] No [X]
27.2	If yes, state the amount thereof at December 31 of the current year		\$	
28.	Excluding items in Schedule E - Part 3 - Special Deposits, real estate, mortgage loans and investments held physically in the reporting entity's offices, vaults or safety deposit boxes, were all stocks, bonds and other securities, owned throughout the current year held pursuant to a custodial agreement with a qualified bank or trust company in accordance with Section 1, III - General Examination Considerations, F. Outsourcing of Critical Functions, Custodial or Safekeeping Agreements of the NAIC Financial Condition Examiners Handbook?			[] No []
28.01	For agreements that comply with the requirements of the NAIC Financia	al Condition Examiners Handbook, complete the following:		

28.01 For agreements that comply with the requirements of the NAIC Financial Condition Examiners Handbook, complete the following:

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

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

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

28.03 Have there been any changes, including name changes, in the custodian(s) identified in 28.01 during the current year?..... Yes [] No [X] 28.04 If yes, give full and complete information relating thereto:

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

GENERAL INTERROGATORIES

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

1	2
Name of Firm or Individual	Affiliation
Barings LLC	Α

28.06 For those firms or individuals listed in the table for 28.05 with an affiliation code of "A" (affiliated) or "U" (unaffiliated), provide the information for the table below.

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

29.1 Does the reporting entity have any diversified mutual funds reported in Schedule D, Part 2 (diversified according to the Securities and Exchange Commission (SEC) in the Investment Company Act of 1940 [Section 5(b)(1)])?

29.2 If yes, complete the following schedule:

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

Yes [] No [X]

29.3 For each mutual fund listed in the table above, complete the following schedule:

1	2	3	4
		Amount of Mutual	
		Fund's Book/Adjusted	
		Carrying Value	
	Name of Significant Holding of the	Attributable to the	Date of
Name of Mutual Fund (from above table)	Mutual Fund	Holding	Valuation

30. Provide the following information for all short-term and long-term bonds and all preferred stocks. Do not substitute amortized value or statement value for fair value.

	1	2	3
			Excess of Statement
			over Fair Value (-), or
	Statement (Admitted)		Fair Value over
	Value	Fair Value	Statement (+)
30.1 Bonds			(4,712,972)
30.2 Preferred stocks			
30.3 Totals	381,533,737	376,820,765	(4,712,972)

30.4 Describe the sources or methods utilized in determining the fair values:

GENERAL INTERROGATORIES

33.	 By self-designating 5GI securities, the reporting entity is certifying the following elements of each self-designated 5GI security: a. Documentation necessary to permit a full credit analysis of the security does not exist or an NAIC CRP credit rating for an FE or PL security is not available. b. Issuer or obligor is current on all contracted interest and principal payments. c. The insurer has an actual expectation of ultimate payment of all contracted interest and principal. Has the reporting entity self-designated 5GI securities? 	Yes [] No [X]	
34.	 By self-designating PLGI securities, the reporting entity is certifying the following elements of each self-designated PLGI security: a. The security was purchased prior to January 1, 2018. b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security. c. The NAIC Designation was derived from the credit rating assigned by an NAIC CRP in its legal capacity as a NRSRO which is shown on a current private letter rating held by the insurer and available for examination by state insurance regulators. d. The reporting entity is not permitted to share this credit rating of the PL security with the SVO. Has the reporting entity self-designated PLGI securities? 	Yes [] No [X]	
	OTHER		
35.1	Amount of payments to trade associations, service organizations and statistical or rating bureaus, if any?	\$	
35.2	List the name of the organization and the amount paid if any such payment represented 25% or more of the total payments to trade association service organizations and statistical or rating bureaus during the period covered by this statement.	ions,	
	Name Amount Paid American Council of Life Insurers (ACLI)		
36.1	Amount of payments for legal expenses, if any?	\$	
36.2	List the name of the firm and the amount paid if any such payment represented 25% or more of the total payments for legal expenses during the period covered by this statement.		
	1 2 Name Amount Paid		
	Suther land Asbill & Brennan LLP		
37.1	Amount of payments for expenditures in connection with matters before legislative bodies, officers or departments of government, if any?	\$	
37.2	List the name of the firm and the amount paid if any such payment represented 25% or more of the total payment expenditures in connection with matters before legislative bodies, officers or departments of government during the period covered by this statement.		
	1 2 Nama		
	Name Amount Paid		

F

GENERAL INTERROGATORIES

PART 2 - LIFE INTERROGATORIES

1.1			
	Does the reporting entity have any direct Medicare Supplement Insurance in force?		Yes [] No [X]
.2	If yes, indicate premium earned on U.S. business only		\$
.3	What portion of Item (1.2) is not reported on the Medicare Supplement Insurance Experimentary 1.31 Reason for excluding:	erience Exhibit?	\$
.4	Indicate amount of earned premium attributable to Canadian and/or Other Alien not inc	cluded in Item (1.2) above.	\$
.5	Indicate total incurred claims on all Medicare Supplement insurance.		\$
.6	Individual policies:	Most current three years:	•
		1.61 Total premium earned 1.62 Total incurred claims	
		1.63 Number of covered lives	
		All years prior to most current three year	rs
		1.64 Total premium earned	\$
		1.65 Total incurred claims 1.66 Number of covered lives	•
.7	Group policies:	Most current three years: 1.71 Total premium earned	¢
		1.72 Total incurred claims	
		1.73 Number of covered lives	
		All years prior to most current three yea	<i>r</i> s
		1.74 Total premium earned	\$
		1.75 Total incurred claims 1.76 Number of covered lives	•
2.	Health Test:	1 2	
		Current Year Prior Year	
	2.1 Premium Numerator 2.2 Premium Denominator		
	2.3 Premium Ratio (2.1/2.2)	0.000	
	2.4 Reserve Numerator 2.5 Reserve Denominator		
	2.6 Reserve Ratio (2.4/2.5)		
1	Does this reporting entity have Separate Accounts?		Yes [X] No []
.2	Does this reporting entity have Separate Accounts? If yes, has a Separate Accounts Statement been filed with this Department?	Yes	[X] No [] N/A [
.2	Does this reporting entity have Separate Accounts?	Yes	[X] No [] N/A [
.2 .3	Does this reporting entity have Separate Accounts? If yes, has a Separate Accounts Statement been filed with this Department?	re Separate Accounts statement, is not currently I account?	[X] No[] N/A[
.2 .3 .4	Does this reporting entity have Separate Accounts? If yes, has a Separate Accounts Statement been filed with this Department? What portion of capital and surplus funds of the reporting entity covered by assets in th distributable from the Separate Accounts to the general account for use by the general State the authority under which Separate Accounts are maintained: Connecticut General Statutes, Section 33a-433 and 33a-459.	re Separate Accounts statement, is not currently	\$ [X] No [] N/A [\$
.2 .3 .4	Does this reporting entity have Separate Accounts?	President Separate Accounts statement, is not currently laccount?	:[X] No [] N/A [\$
.2 .3 .4 .5	Does this reporting entity have Separate Accounts? If yes, has a Separate Accounts Statement been filed with this Department? What portion of capital and surplus funds of the reporting entity covered by assets in th distributable from the Separate Accounts to the general account for use by the general State the authority under which Separate Accounts are maintained: Connecticut General Statutes, Section 33a-433 and 33a-459. Was any of the reporting entity's Separate Accounts business reinsured as of Decemb Has the reporting entity assumed by reinsurance any Separate Accounts business as	Yes The Separate Accounts statement, is not currently I account? The statement is not currently The statement is not current	
.2 .3 .4 .5	Does this reporting entity have Separate Accounts?	Yes Per Separate Accounts statement, is not currently Per 31?	
2 .3 .4 .5 .6 .7	Does this reporting entity have Separate Accounts?	Yes Per Separate Accounts statement, is not currently Count? Per 31? P	: [X] No [] N/A [
.2 .3 .4 .5 .6	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The statement is not currently I account? The statement is not currently The statement is not currently The personnel or facilities of another entity or entities us an group contracts and joint mortality or morbidity	<pre>% [X] No [] N/A [</pre>
.2 .3 .4 .5 .6	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The statement is not currently I account? The statement is not currently The statement is not currently The personnel or facilities of another entity or entities us an group contracts and joint mortality or morbidity	<pre>% [X] No [] N/A [</pre>
.2 .3 .4 .5 .6 .7	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The statement is not currently The statement is not current	<pre>x [X] No [] N/A [</pre>
.2 .3 .4 .5 .6 .7	Does this reporting entity have Separate Accounts?	Yes Per Separate Accounts statement, is not currently I account? Per 31? Per 31? Precember 31? Precember 31? Preceivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued Pre personnel or facilities of another entity or entities u en group contracts and joint mortality or morbidity 4.21 Paid	 [X] No [] N/A [\$
.2 .3 .4 .5 .6 .7 .1	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account of the accounts of the account of the accounts of the account of t	<pre>s [X] No [] N/A [</pre>
.2 .3 .4 .5 .6 .7 .1	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account of the accounts of the account of the accounts of the account of t	<pre>:[X] No [] N/A [</pre>
.1 .2 .3 .4 .5 .6 .7 .1 .2 .1	Does this reporting entity have Separate Accounts?	Yes Per Separate Accounts statement, is not currently Laccount? Per 31? Per 31? Per 31? Present assumed receivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued Per personnel or facilities of another entity or entities u en group contracts and joint mortality or morbidity 4.21 Paid 4.22 Received	<pre>:[X] No [] N/A [</pre>
.2 .3 .4 .5 .6 .7 .1	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account is not currently The account? The account is a statement, is not currently The account is a statement is a stat	<pre> :[X] No [] N/A [</pre>
2 3 4 5 6 7 1 1 2 1 2	Does this reporting entity have Separate Accounts?	Yes Per Separate Accounts statement, is not currently Laccount? Per 31? Per 31? Per 31? Present assumed receivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued Per personnel or facilities of another entity or entities u en group contracts and joint mortality or morbidity 4.21 Paid 4.22 Received	<pre>:[X] No [] N/A [</pre>
2 3 4 5 6 6 7 1 1 2 2 1 2 5.	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account? The account of the accounts and the accounts are assumed receivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued The personnel or facilities of another entity or entities u an group contracts and joint mortality or morbidity 4.21 Paid 4.22 Received 5.21 Page 3, Line 1 5.22 Page 4, Line 1	<pre> [X] No [] N/A [</pre>
2 3 4 5 6 7 1 1 2 ·	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account? The account of the accounts and the accounts are assumed receivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued The personnel or facilities of another entity or entities u an group contracts and joint mortality or morbidity 4.21 Paid 4.22 Received 5.21 Page 3, Line 1 5.22 Page 4, Line 1	<pre> [X] No [] N/A [</pre>
.2 .3 .4 .5 .6 .7 .1	Does this reporting entity have Separate Accounts?	Yes The Separate Accounts statement, is not currently I account? The account? The account? The account of the accounts and the accounts are assumed receivable for reinsurance of Sep for "Transfers to Separate Accounts due or accrued The personnel or facilities of another entity or entities u an group contracts and joint mortality or morbidity 4.21 Paid 4.22 Received 5.21 Page 3, Line 1 5.22 Page 4, Line 1	<pre> [X] No [] N/A [</pre>

GENERAL INTERROGATORIES

8.1	8.1 Does the company reinsure any Workers' Compensation Carve-Out business defined as:					Yes []	No [)	(]
8.2	lf yes,	, has the reporting entity completed the Workers' Compensation Ca	arve-Out Supplement t	o the Annual Statement	?	Yes []	No []
8.3	lf 8.1	is yes, the amounts of earned premiums and claims incurred in this		_	-				
			1 Reinsurance Assumed	2 Reinsurance Ceded	3 Net Retained				
	8.31	Earned premium							
	8.32	Paid claims							
	8.33	Claim liability and reserve (beginning of year)							
	8.34	Claim liability and reserve (end of year)							
	8.35	Incurred claims							
8.4		surance assumed included amounts with attachment points below to Column (1) are:	\$1,000,000, the distrib	ution of the amounts re	ported in Lines 8.31 and 2				
		Attachment		Earned	Claim Liability				
		Point		Premium	and Reserve				
	8.41	<\$25,000							
	8.42	\$25,000 - 99,999							
	8.43	\$100,000 - 249,999							
	8.44	\$250,000 - 999,999							
	8.45	\$1.000.000 or more							
8.5	What	portion of earned premium reported in 8.31, Column 1 was assume	ed from pools?			\$			
9.		porting entities having sold annuities to another insurer where the i ant (payee) as the result of the purchase of an annuity from the rep int of loss reserves established by these annuities during the currer			,				
9.1						\$			
9.2	List th	he name and location of the insurance company purchasing the ann	uities and the stateme	ent value on the purchas	se date of the annuities.				
		1			2 Statement Val on Purchase D	ate			
		P&C Insurance Company And	d Location		of Annuities (i.e., Present Va				
		· · · · · · · · · · · · · · · · · · ·							
10.1	Do yo	ou act as a custodian for health savings accounts?				Yes []	No [)	(]
10.2	If yes,	, please provide the amount of custodial funds held as of the report	ing date.			\$			
10.3	Do yo	ou act as an administrator for health savings accounts?				Yes []	No [)	(]
10.4	lf yes,	, please provide the balance of funds administered as of the reporti	ng date			\$			

GENERAL INTERROGATORIES

111	Are any of the c	antive affiliates i	renorted on S	Schedule S	Part 3	authorized	reinsurers?	

.....Yes [] No [] N/A [X]

11.2 If the answer to 11.1 is yes, please provide the following:

1	2	3	4	Assets Supporting Reserve Credit		e Credit
	NAIC			5	6	7
	Company	Domiciliary	Reserve	Letters of	Trust	
Company Name	Code	Jurisdiction	Credit	Credit	Agreements	Other

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

12.1 Direct Premium Written\$	
12.2 Total Incurred Claims	
12.3 Number of Covered Lives	

		*Ordinary Life Insurance Includes					
	Term (whether full underwriting, limited underwriting, jet issue, "short form app")						
	Whole Life (whether full underwriting, limited underwriting, jet issue, "short form app")						
	Variable Life (with or without secondary gurarantee)						
	Universal Life (with or without secondary gurarantee)						
		Variable Universal Life (with or without secondary gurarantee)					
				Yes [X			
13.	13. Is the reporting entity licensed or chartered, registered, qualified, eligible or writing business in at least two states?						
13.1							
	the reporting entity?						

FIVE-YEAR HISTORICAL DATA

Show amounts in whole dollars only, no cents; show percentages to one decimal place, i.e. 17.6. \$000 omitted for amounts of life insurance

			nounts of life insura			-
		1 2018	2 2017	3 2016	4 2015	5 2014
	Life Insurance in Force					
	(Exhibit of Life Insurance)					
1.	Ordinary - whole life and endowment (Line 34, Col.	4.667.416	4,977,101	5 202 746	5 692 060	6 050 202
2.	4) Ordinary - term (Line 21, Col. 4, less Line 34, Col.					0,050,202
۷.	4)				4 , 183	
3.	Credit life (Line 21, Col. 6)					
4.	Group, excluding FEGLI/SGLI (Line 21, Col. 9 less Lines 43 & 44, Col. 4)	6 863 701	6 944 793	6 939 534	6 952 141	7 197 793
5.	Industrial (Line 21, Col. 2)					
6.	FEGLI/SGLI (Lines 43 & 44, Col. 4)					
7.	Total (Line 21, Col. 10)	11,534,481	11,925,817	12,236,389	12,640,284	13,252,424
7.1	Total in force for which VM-20					
	deterministic/stochastic reserves are calculated			XXX	XXX	XXX
	New Business Issued					
8.	(Exhibit of Life Insurance) Ordinary - whole life and endowment (Line 34, Col.					
0.	2)	1, 115				
9.	Ordinary - term (Line 2, Col. 4, less Line 34, Col. 2)					
10.	Credit life (Line 2, Col. 6)					
11.	Group (Line 2, Col. 9)					
	Industrial (Line 2, Col. 2)					
13.	Total (Line 2, Col. 10)	1,115		2,237	2,939	
	Premium Income - Lines of Business					
14.	(Exhibit 1 - Part 1) Industrial life (Line 20.4, Col. 2)					
	Ordinary-life insurance (Line 20.4, Col. 2)					
	Ordinary-individual annuities (Line 20.4, Col. 4)					
16	Credit life (group and individual) (Line 20.4, Col. 5)					
	Group life insurance (Line 20.4, Col. 6)					
	Group annuities (Line 20.4, Col. 7)					
18.1	A & H-group (Line 20.4, Col. 8)					
18.2	A & H-credit (group and individual) (Line 20.4,					
10.0	Col. 9)					
	A & H-other (Line 20.4, Col. 10) Aggregate of all other lines of business (Line					
19.	20.4,Col. 11)					
20.	Total		1,590,674			
	Balance Sheet (Pages 2 & 3)					
21.	Total admitted assets excluding Separate Accounts	504 004 500	405 070 004	500 005 000	404 057 700	000 101 000
00	business (Page 2, Line 26, Col. 3)					
22.	Total liabilities excluding Separate Accounts business (Page 3, Line 26)					
23.	Aggregate life reserves (Page 3, Line 1)					
23.1	Excess VM-20 deterministic/stochastic reserve over					
~ (NPR related to Line 7.1					
24.	Aggregate A & H reserves (Page 3, Line 2)					6 005 705
25. 26	Deposit-type contract funds (Page 3, Line 3)					6,325,705 4,323,715
26. 27.	Capital (Page 3, Lines 29 and 30)			, ,		2,500,200
27. 28.	Surplus (Page 3, Line 37)					
20.	Cash Flow (Page 5)					200, 100, 400
29.	Net Cash from Operations (Line 11)					
	Risk-Based Capital Analysis	, ,		, ,	, ,	
30.	Total adjusted capital					
31.	Authorized control level risk - based capital		2,681,761	2,482,639	2,652,876	
	Percentage Distribution of Cash, Cash					
	Equivalents and Invested Assets					
	(Page 2, Col. 3) (Line No. /Page 2, Line 12, Col. 3) x 100.0					
32.	Bonds (Line 1)					
33.	Stocks (Lines 2.1 and 2.2)					
34.	Mortgage loans on real estate(Lines 3.1 and 3.2)		0.7			
35.	Real estate (Lines 4.1, 4.2 and 4.3)					
36.	Cash, cash equivalents and short-term investments (Line 5)	F 4		40.0	45 0	04.4
97	(Line 5) Contract loans (Line 6)					
37. 38.	Derivatives (Page 2, Line 7)					
30. 39.	Other invested assets (Line 8)					
40.	Receivables for securities (Line 9)					
41.	Securities lending reinvested collateral assets (Line					
	10)					
42.	Aggregate write-ins for invested assets (Line 11)					
43.	Cash, cash equivalents and invested assets (Line 12)	100.0	100.0	100.0	100.0	100.0
	(=					

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company FIVE-YEAR HISTORICAL DATA

		1 2018	2 2017	3 2016	4 2015	5 2014
	Investments in Parent, Subsidiaries and Affiliates					
44.	Affiliated bonds (Schedule D Summary, Line 12, Col. 1)	6.271.740	7.099.665	6,404,131	1.642.655	2.287.5
45.	Affiliated preferred stocks (Schedule D Summary, Line 18, Col. 1)					
46.	Affiliated common stocks (Schedule D Summary Line 24, Col. 1),					
47.						
48.	Affiliated mortgage loans on real estate					
49.	All other affiliated					
50. 51.	Total of above Lines 44 to 49 Total Investment in Parent included in Lines 44 to 49 above			6,404,131	1,642,655	2,287,5
	Total Nonadmitted and Admitted Assets					
52.	Total nonadmitted assets (Page 2, Line 28, Col. 2).					4,449,0
53.	Total admitted assets (Page 2, Line 28, Col. 3)					
54.	Net investment income (Exhibit of Net Investment Income)					
55.	Realized capital gains (losses) (Page 4, Line 34, Column 1)					
56.	Unrealized capital gains (losses) (Page 4, Line 38, Column 1)		(41,250)	(19,222)		
57.	Total of above Lines 54, 55 and 56	17, 108,921	17,567,198	14,289,409	12,817,093	11,777,2
58.	Benefits and Reserve Increases (Page 6) Total contract benefits - life (Lines 10, 11, 12, 13, 14 and 15 Col. 1, minus Lines 10, 11,12, 13, 14 and 15 Cols. 9, 10 and 11)					
59.	Total contract benefits - A & H (Lines 13 & 14, Cols. 9, 10 & 11)					
60.	Increase in life reserves - other than group and annuities (Line 19, Cols. 2 and 3)	3,052,169	2,086,763	1,778,200	4,291,458	1,799,0
61.	Increase in A & H reserves (Line 19, Cols. 9, 10 & 11)					
62.	Dividends to policyholders (Line 30, Col. 1)					
63.	Insurance expense percent (Page 6, Col. 1, Lines 21, 22 & 23, less Line 6)/(Page 6, Col. 1, Line 1 plus Exhibit 7, Col. 2, Line 2) x 100.0					
64.	Lapse percent (ordinary only) [(Exhibit of Life Insurance, Col. 4, Lines 14 & 15) / 1/2 (Exhibit of Life Insurance, Col. 4, Lines 1 & 21)] x 100.0	5.3	6.0	6.5	5.8	6
65.	A & H loss percent (Schedule H, Part 1, Lines 5 and 6, Col. 2)					
66.	A & H cost containment percent (Schedule H, Pt. 1, Line 4, Col. 2)					
67.	expenses (Schedule H, Pt. 1, Line 10, Col. 2)					
68.	A & H Claim Reserve Adequacy Incurred losses on prior years' claims - group health (Schedule H, Part 3, Line 3.1 Col. 2)					
69.	Prior years' claim liability and reserve - group health (Schedule H, Part 3, Line 3.2 Col. 2)					
70.	Incurred losses on prior years' claims-health other than group (Schedule H, Part 3, Line 3.1 Col. 1 less Col. 2)					
71.	Prior years' claim liability and reserve-health other than group (Schedule H, Part 3, Line 3.2 Col. 1 less Col. 2)					
	Net Gains From Operations After Federal Income Taxes by Lines of Business (Page 6, Line 33)					
72.	Industrial life (Col. 2)					
73.	Ordinary - life (Col. 3)					
74.	Ordinary - individual annuities (Col. 4)	(44,312)		649,597	(71,572)	
75. 76.	Ordinary-supplementary contracts (Col. 5) Credit life (Col. 6)					
77.	Group life (Col. 7)			4,429,774	5, 172,836	
78.	Group annuities (Col. 8)					
79.	A & H-group (Col. 9)					
80.	A & H-credit (Col. 10)					
B1.	A & H-other (Col. 11)					
82.	Aggregate of all other lines of business (Col. 12)					
		18,225,866	14.803.294		20.692.555	15,640,7



DIRECT BUSINESS IN THE STATE OF Grand Total

DURING THE YEAR 2018

NAIC	Group Code 0435	LI	FE INSURANCE	NAIC Company Code 70416		
	DIRECT PREMIUMS AND ANNUITY CONSIDERATIONS	1 Ordinary	2 Credit Life (Group and Individual)	3 Group	4 Industrial	5 Total
1.				4.4. 0.00		
2.	Annuity considerations					, ,
3.	Deposit-type contract funds				XXX	
4.	Other considerations					
5.	Totals (Sum of Lines 1 to 4)	32,651,940		41,283		32,693,223
	DIRECT DIVIDENDS TO POLICYHOLDERS	, ,		· · · · · ·		, ,
Life in	surance:					
6.1	Paid in cash or left on deposit					
6.2						
	endowment or premium-paying period					
	Other					
	Totals (Sum of Lines 6.1 to 6.4)					
Annui						
7.1	Paid in cash or left on deposit					
7.2	Applied to provide paid-up annuities					
7.3	Other					
7.4	Totals (Sum of Lines 7.1 to 7.3)					
8.	Grand Totals (Lines 6.5 plus 7.4)					
	DIRECT CLAIMS AND BENEFITS PAID					
9.	Death benefits					
10.	Matured endowments					
11.	Annuity benefits					
12.	Surrender values and withdrawals for life contracts					
13.	Aggregate write-ins for miscellaneous direct claims and benefits paid					
	All other benefits, except accident and health	, .				
15.	Totals	84,285,517		49,746,448		134,031,965
	DETAILS OF WRITE-INS					
1301.						
1302.						
1303.						
	Summary of Line 13 from overflow page					
1399.	Totals (Lines 1301 thru 1303 plus 1398) (Line 13 above)					

			C	Credit Life						
	C	Ordinary	(Group	and Individual)		Group		ndustrial		Total
DIRECT DEATH BENEFITS AND MATURED ENDOWMENTS	1	2	3 No. of Ind.Pols. & Gr.	4	5 No. of	6	7	8	9	10
INCURRED	No.	Amount	Certifs.	Amount	Certifs.	Amount	No.	Amount	No.	Amount
16. Unpaid December 31, prior year		4,271,958			10					
17. Incurred during current year Settled during current year:					55					
18.1 By payment in full					58					
 18.2 By payment on compromised claims 18.3 Totals paid 18.4 Reduction by compromise 					58					
18.5 Amount rejected										
18.6 Total settlements					58					
 Unpaid Dec. 31, current year (16+17-18.6) 	29	4,184,132			7	6,341,570			36	10,525,702
POLICY EXHIBIT 20. In force December 31, prior year	26,524	4,981,023,650		(a)	No. of Policies	6,944,793,406				11,925,817,056
21. Issued during year										1, 115, 437
22. Other changes to in force (Net)	(1,505)	(311,359,439)								
23. In force December 31 of current year	25,019	4,670,779,648		(a)	15	6,863,701,295			25,034	11,534,480,943

Includes Group Credit Life Insurance Loans less than or equal to 60 months at issue, prior year \$, current year \$ Loans greater than 60 months at issue BUT NOT GREATER THAN 120 MONTHS, prior year \$, current year \$

ACCIDENT AND HEALTH INSURANCE

ACCIDENT AND REALTH INSURANCE								
	1	2	3	4	5			
			Dividends Paid Or					
		Direct Premiums	Credited On Direct		Direct Losses			
	Direct Premiums	Earned	Business	Direct Losses Paid	Incurred			
24. Group Policies (b)								
24.1 Federal Employees Health Benefits Plan premium (b)								
24.2 Credit (Group and Individual)								
24.3 Collectively renewable policies (b)								
24.4 Medicare Title XVIII exempt from state taxes or fees								
Other Individual Policies:								
25.1 Non-cancelable (b)								
25.2 Guaranteed renewable (b)								
25.3 Non-renewable for stated reasons only (b)								
25.4 Other accident only								
25.5 All other (b)								
25.6 Totals (sum of Lines 25.1 to 25.5)								
26. Totals (Lines 24 + 24.1 + 24.2 + 24.3 + 24.4 + 25.6)								
(b) For health business on indicated lines report: Number	of persons insured unde	er PPO managed care p	products	and number	r of persons			

insured under indemnity only products

EXHIBIT OF LIFE INSURANCE

(\$000 Omitted for Amounts of Life Insurance)

-		(\$UUU Omitted for Amounts of Industrial Ordinary									
		Indu				Credit Life (Grou	/		Group		10
		1	2	3	4	5 Number of Individual Policies and Group	6	Nu 7	mber of 8	9	Total
		Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance	Certificates	Amount of Insurance	Policies	Certificates	Amount of Insurance	Amount of Insurance
1.	In force end of prior year				4,981,024			1	5		
2.	Issued during year										
3.	Reinsurance assumed										
4.	Revived during year										
5.	Increased during year (net)										
6.	Subtotals, Lines 2 to 5			<u>5</u>	1,730						
7.	Additions by dividends during year	XXX									
8.	Aggregate write-ins for increases										
9.	Totals (Lines 1 and 6 to 8)				4,982,754				5		
	Deductions during year:			,	, ,					, ,	, ,
10.	Death							XXX	55	43,679	
11.	Maturity				,			XXX		, 	,
12.								XXX			
13.	Expiry										
14.											
15.	Lapse			347							
16.	Conversion				,			XXX	XXX	XXX	
17.				7						37,413	59,463
18.	Reinsurance				,					, 	,
19.	Aggregate write-ins for decreases										
20.	Totals (Lines 10 to 19)										
21	In force end of year (Line 9 minus Line 20)				4,670,780			1			11,534,481
22.		XXX		XXX	4,551,546	XXX		XXX	XXX	2,249,422	6,800,968
	Line 21 minus Line 22	XXX	-	XXX	119,234	XXX	(a)	XXX	XXX	4,614,280	4,733,513
	DETAILS OF WRITE-INS	7000		,,,,,	,=	7000	(0)	7000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.,,	.,,
0801.											
0802.											
0803.											
0898.	Summary of remaining write-ins for Line 8 from overflow page.										
0899.											
1901.											
1902.											
1903.		••••••									
1998.	Summary of remaining write-ins for Line 19 from overflow page.										
1999.	TOTALS (Lines 1901 thru 1903 plus 1998) (Line 19 above)										

(a) Group \$; Individual \$

EXHIBIT OF LIFE INSURANCE

(\$000 Omitted for Amounts of Life Insurance) (Continued) ADDITIONAL INFORMATION ON INSURANCE IN FORCE END OF YEAR

		Industrial		Ordi	nary
		1	2	3	4
		Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance
24.	Additions by dividends	XXX		XXX	
25.	Other paid-up insurance			5	
26.	Debit ordinary insurance	XXX	XXX		

ADDITIONAL INFORMATION ON ORDINARY INSURANCE

		Issued During Year (Included in Line 2)		In Force End of Year (Included in Line 21)		
		1	2	3	4	
	Term Insurance Excluding Extended Term Insurance	Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance	
27.	Term policies - decreasing					
28.	Term policies - other					
29.	Other term insurance - decreasing			XXX		
30.	Other term insurance	XXX		XXX	476	
31.	Totals (Lines 27 to 30)					
	Reconciliation to Lines 2 and 21:					
32.	Term additions			XXX		
33.	Totals, extended term insurance	XXX	XXX			
34.	Totals, whole life and endowment		1,115	24,961	4,667,416	
35.	Totals (Lines 31 to 34)		1,115	25,019	4,670,780	

CLASSIFICATION OF AMOUNT OF INSURANCE BY PARTICIPATING STATUS

		Issued Du (Included	uring Year in Line 2)	In Force End of Year (Included in Line 21)		
		1 Non-Participating	2 Participating	3 Non-Participating	4 Participating	
36	Industrial					
37.	Ordinary			4,670,780		
38.	Credit Life (Group and Individual)					
39.	Group			6,863,701		
40.	Totals (Lines 36 to 39)	1,115		11,534,481		

ADDITIONAL INFORMATION ON CREDIT LIFE AND GROUP INSURANCE

		Cred	it Life	Group		
		1	2	3	4	
		Number of Individual				
		Policie and Gro				
		Centes	Junt of Insurance	Number of Certificates	Amount of Insurance	
41.	Amount of insurance included in Line 2 ceded to exponenties			XXX		
42.	Number in force end of year if the number under reactions is unted on a pro-rata basis				xxx	
43.	Federal Employees' Group Life Insurance include in Line					
44.	Servicemen's Group Life Insurance included in Line 21					
45.	Group Permanent Insurance included in Line 21					

ADDITIONAL ACCIDENTAL DEATH BENEFITS

46. Amount of additional accidental death benefits in force end of year under ordinary policies 44,512

BASIS OF CALCULATION OF ORDINARY TERM INSURANCE

47. State basis of calculation of (47.1) decreasing ter wife and children under Family, Parent and Chil	suran etc.,	cier d rider	vily In e, Mor ge	tc., policies and riders and of (47.2) term insurance on				
47.1 47.2								

POLICIES WITH DISABILITY PROVISIONS

			Industrial		Ordinary		Credit		Group
		1	2	3	3 4		6	7	8
								Number of	
		Number of		Number of		Number of		Certifi-	Amount of Ins
	Disability Provisions	Policies	Amount of Insurance	Policies	Amount of Insurance	Policies	Amount of Insurance	cates	rance
48.	Waiver of Premium			11,447	1,894,192				
	Disability Income								
50.	Extended Benefits			XXX	XXX				
51.	Other								
52.	Total		(a)	11,447	(a) 1,894,192		(a)		(a)

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

EXHIBIT OF NUMBER OF POLICIES, CONTRACTS, CERTIFICATES, INCOME PAYABLE AND ACCOUNT VALUES IN FORCE FOR SUPPLEMENTARY CONTRACTS, ANNUITIES, ACCIDENT & HEALTH AND OTHER POLICIES SUPPLEMENTARY CONTRACTS

		Ordi	nary	Gr	oup
		1	2	3	4
		Involving Life	Not Involving Life	Involving Life	Not Involving Life
		Contingencies	Contingencies	Contingencies	Contingencies
1.	In force end of prior year				
2.	Issued during year				
3.	Reinsurance assumed				
4.	Increased during year (net)				
5.	Total (Lines 1 to 4)		128		
	Deductions during year:				
6.	Decreased (net)		19		
7.	Reinsurance ceded	+			
8.	Totals (Lines 6 and 7)	-	19		
9.	In force end of year				
10.	Amount on deposit		(a)15,605,645		(a)
11.	Income now payable				
12.	Amount of income payable	(a)	(a) 297,025	(a)	(a)

ANNUITIES

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

ACCIDENT AND HEALTH INSURANCE

		Gro	oup	Cre	edit	C	ther
		1	2	3	4	5	6
		Certificates	Premiums in Force	Policies	Premiums in Force	Policies	Premiums in Force
1.	In force end of prior year						
2.	Issued during year						
3.							
4.	Increased during year (net)		XXX		XXX		XXX
5.	Totals (Lines 1 to 4)		XXX		XXX		XXX
	Deductions during year:						
6.	Conversions				XXX	XXX	
7.	Decreased (net)						
8.	Reinsurance ceded		(XX)		XXX		XXX
9.	Totals (Lines 6 to 8)		cxx				XXX
10.	In force end of year		(a)		(a)		(a)

DEPOSIT FUNDS AND DIVIDEND ACCUMULATIONS

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

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

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

INTEREST MAINTENANCE RESERVE

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

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

ASSET VALUATION RESERVE

		Default Component			Equity Component		
	1	2	3	4	5 Real Estate and	6	7
	Other Than Mortgage Loans	Mortgage Loans	Total (Cols. 1 + 2)	Common Stock	Other Invested Assets	Total (Cols. 4 + 5)	Total Amount (Cols. 3 + 6)
1. Reserve as of December 31, prior year			5,070,023				5,070,023
2. Realized capital gains/(losses) net of taxes - General Account	(17,033)		(17,033)				(17,033
3. Realized capital gains/(losses) net of taxes - Separate Accounts			(23, 153)				(23, 153
4. Unrealized capital gains/(losses) net of deferred taxes - General Account	(16,914)		(16,914)				(16,914
5. Unrealized capital gains/(losses) net of deferred taxes - Separate Accounts							
6. Capital gains credited/(losses charged) to contract benefits, payments or reserves							
7. Basic contribution	1,087,859	4,863	1,092,722		425	425	1,093,147
8. Accumulated balances (Lines 1 through 5 - 6 + 7)			6, 105, 644				6, 106,069
9. Maximum reserve	5,883,987		5,900,145		1,672	1,672	5,901,817
10. Reserve objective	4,124,667	9,788	4,134,455		1,082	1,082	4,135,537
11. 20% of (Line 10 - Line 8)	(391,574)	(2,664)	(394,238)		131	131	(394,106
12. Balance before transfers (Lines 8 + 11)			5,711,406				5,711,963
13. Transfers		(4,286)					
14. Voluntary contribution							
15. Adjustment down to maximum/up to zero							
16. Reserve as of December 31, current year (Lines 12 + 13 + 14 + 15)	5,695,248	16,158	5,711,406		556	556	5,711,963

ASSET VALUATION RESERVE BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS DEFAULT COMPONENT

			1	2	3	4	Basic C	Contribution	Reserve	e Objective	Maximu	im Reserve
						Balance for	5	6	7	8	9	10
Line	NAIC			Reclassify		AVR Reserve						
Num- ber	Desig- nation	Description	Book/Adjusted Carrying Value	Related Party Encumbrances	Add Third Party Encumbrances	Calculations	- ·	Amount	- .	Amount	- .	Amount
ber	nation		Carrying value	Encumbrances	Encumprances	(Cols. 1 + 2 + 3)	Factor	(Cols.4 x 5)	Factor	(Cols. 4 x 7)	Factor	(Cols. 4 x 9)
		LONG-TERM BONDS	00 500 504	10.07	2004	00 500 504	0,0000		0,0000		0.0000	
1.		Exempt Obligations		XXX	XXX			00.750		475,000		
2.	1	Highest Quality		XXX	XXX						0.0030	
3.		High Quality		XXX	XXX		0.0019		0.0058			
4.		Medium Quality		XXX	XXX	1,859,293	0.0093		0.0230		0.0340	
5.		Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
6.	5	Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
7.	6	In or Near Default		XXX	XXX		0.000		0.2000		0.2000	
8.		Total Unrated Multi-class Securities Acquired by Conversion		XXX	XXX		XXX		XXX		XXX	
9.		Total Long-Term Bonds (Sum of Lines 1 through 8)	356,491,073	XXX	XXX	356,491,073	XXX	360,960	XXX	1,367,661	XXX	1,935,260
		PREFERRED STOCK										
10.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
11.	2	High Quality		XXX	XXX		0.0019		0.0058			
12.	3	Medium Quality		XXX	XXX		0.0093				0.0340	
13.		Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
14.		Lower Quality		XXX	XXX		0.0432				0.1700	
15.		In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
16.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
17.		Total Preferred Stocks (Sum of Lines 10 through 16)		XXX	XXX		XXX		XXX		XXX	
		SHORT - TERM BONDS		7000	,,,,,		,		7000		7000	
18.		Exempt Obligations			XXX		0.0000		0.0000		0.0000	
19.	1	Highest Quality			XXX		0.0004		0.0023		0.0030	
20.	2	High Quality	6.954.698		XXX	6.954.698	0.0019	13.214	0.0058	40.337	0.0090	62.592
20.	3	Medium Quality			XXX		0.0093		0.0230		0.0340	
21.		Low Quality			XXX		0.0213		0.0530		0.0750	
22.		Lower Quality			XXX		0.0432		0.0000		0.1700	
23.		In or Near Default			XXX		0.0000		0.2000		0.2000	
24. 25.	0	Total Short - Term Bonds (Sum of Lines 18 through 24)	6,954,698	XXX	XXX	6,954,698	XXX	13,214	XXX	40.337	XXX	62,592
25.			0,904,090	***	***	0,904,090	***	13,214	***	40,337	***	02,392
00		DERIVATIVE INSTRUMENTS			VVV		0.0004		0.0023		0.0030	
26.		Exchange Traded		XXX	XXX							
27.		Highest Quality		XXX	XXX	-	0.0004					
28.		High Quality		XXX	XXX				0.0058			
29.		Medium Quality		XXX	XXX		0.0093					
30.		Low Quality		XXX	XXX	-	0.0213		0.0530		0.0750	
31.		Lower Quality		XXX	XXX		0.0432		0.1100		0.1700	
32.	6	In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
33.		Total Derivative Instruments		XXX	XXX		XXX		XXX		XXX	
34.		Total (Lines 9 + 17 + 25 + 33)	363,445,771	XXX	XXX	363,445,771	XXX	374,174	XXX	1,407,998	XXX	1,997,852

ASSET VALUATION RESERVE (Continued) BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS DEFAULT COMPONENT

			1	2	3	4	Basic C	Contribution	Reserv	ve Objective	Maximu	m Reserve
Line Num- ber	NAIC Desig- nation	Description	Book/Adjusted Carrying Value	Reclassify Related Party Encumbrances	Add Third Party Encumbrances	Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	5 Factor	6 Amount (Cols.4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
		MORTGAGE LOANS						• •				· · ·
		In Good Standing:										
35.		Farm Mortgages - CM1 - Highest Quality			XXX		0.0010		0.0050		0.0065	
36.		Farm Mortgages - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
37.		Farm Mortgages - CM3 - Medium Quality			XXX				0.0175		.0.0225	
38.		Farm Mortgages - CM4 - Low Medium Quality			XXX		0.0105		0.0300		0.0375	
39.		Farm Mortgages - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
40.		Residential Mortgages - Insured or Guaranteed			XXX	2,588,322			0.0006	1,553	0.0010	
41.		Residential Mortgages - All Other			XXX		0.0013		0.0030		0.0040	
42.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003				0.0010	
43.		Commercial Mortgages - All Other - CM1 - Highest Quality			XXX		0.0010		0.0050		0.0065	
44.		Commercial Mortgages - All Other - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
45.		Commercial Mortgages - All Other - CM3 - Medium Quality			XXX				0.0175		0.0225	
46.		Commercial Mortgages - All Other - CM4 - Low Medium Quality			xxx		0.0105				.0.0375	
47.		Commercial Mortgages - All Other - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
		Overdue, Not in Process:										
48.		Farm Mortgages			XXX		0.0420		0.0760		0.1200	
49.		Residential Mortgages - Insured or Guaranteed			XXX		.0.0005		0.0012			
50.		Residential Mortgages - All Other			XXX		.0.0025				0.0090	
51.		Commercial Mortgages - Insured or Guaranteed			XXX		.0.0005		0.0012		0.0020	
52.		Commercial Mortgages - All Other									0.1200	
		In Process of Foreclosure:										
53.		Farm Mortgages			XXX		.0.000		0.1700		0.1700	
54.		Residential Mortgages - Insured or Guaranteed			XXX		.0.000		0.0040		0.0040	
55.		Residential Mortgages - All Other							0.0130		0.0130	
56.		Commercial Mortgages - Insured or Guaranteed							0.0040		0.0040	
57.		Commercial Mortgages - All Other			XXX		0.0000		0.1700		0.1700	
58.		Total Schedule B Mortgages (Sum of Lines 35 through 57)	2,744,083		XXX	2,744,083	XXX	979	XXX	2,020	XXX	3,211
59.		Schedule DA Mortgages			XXX		0.0030		0.0100		0.0130	
60.		Total Mortgage Loans on Real Estate (Lines 58 + 59)	2,744,083		XXX	2,744,083	XXX	979	XXX	2,020	XXX	3,211

ASSET VALUATION RESERVE BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS EQUITY AND OTHER INVESTED ASSET COMPONENT

			1	2	3	4	Basic C	ontribution	Reserve Objective		Maximu	um Reserve
Line Num-	NAIC Desig-		Book/Adjusted	Reclassify Related Party	Add Third Party	Balance for AVR Reserve Calculations	5	6 Amount	7	8 S	, 	10 Amount
ber	nation	Description	Carrying Value	Encumbrances	Encumbrances	(Cols. 1 + 2 + 3)	Factor	(Cols.4 x 5)	Factor	(Cols. 4 x 7) Fac	ctor	(Cols. 4 x 9)
		COMMON STOCK					0.0000					
1.		Unaffiliated - Public		XXX	XXX		0.0000		0.1300 (a)	0.1	300 (a)	
2.		Unaffiliated - Private		XXX	XXX		0.0000		0.1600		0.1600	
3.		Federal Home Loan Bank		XXX	XXX		0.0000		0.0050		0.0080	
4.		Affiliated - Life with AVR		XXX	XXX		0.0000		0.0000		0.000	
		Affiliated - Investment Subsidiary:										
5.		Fixed Income - Exempt Obligations					XXX		XXX		(XX)	
6.		Fixed Income - Highest Quality					XXX		XXX		(XX)	
7.		Fixed Income - High Quality					XXX		XXX		(XX)	
8.		Fixed Income - Medium Quality					XXX		XXX	X	(XX)	
9.		Fixed Income - Low Quality					XXX		XXX	X	(XX)	
10.		Fixed Income - Lower Quality					XXX		XXX	x	(XX)	
11.		Fixed Income - In/Near Default					XXX		XXX	x	(XX)	
12.		Unaffiliated Common Stock - Public					0.0000		0.1300 (a)	0.1	300 (a)	
13.		Unaffiliated Common Stock - Private							0.1600		0.1600	
14.		Real Estate					(b)		(b)		(b)	
15.		Affiliated - Certain Other (See SVO Purposes and Procedures Manual)		xxx	xxx		0.0000		0.1300		0.1300	
16.		Affiliated - All Other		XXX	XXX		0.0000		0.1600		0.1600	
17.		Total Common Stock (Sum of Lines 1 through 16)					XXX		XXX	XX	X	
		BEAL ESTATE					7001		7000			
18.		Home Office Property (General Account only)					0.0000		0.0750		0.0750	
19.		Investment Properties							0.0750		0.0750	
20.		Properties Acquired in Satisfaction of Debt					0.0000		0.1100		0.1100	
21.		Total Real Estate (Sum of Lines 18 through 20)					XXX		XXX	x		
		OTHER INVESTED ASSETS INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS OF BONDS										
22.		Exempt Obligations		XXX	XXX		0.0000		0.0000		0.000	
23.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
24.	2	High Quality		XXX	XXX		0.0019		0.0058		.0.0090	
25.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
26.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
27.	5	Lower Quality		XXX	XXX		0.0432		0.1100		.0.1700	
28.		In or Near Default		XXX	XXX		0.0000		0.2000		0.2000	
29.		Total with Bond Characteristics (Sum of Lines 22 through 28)		XXX	XXX		XXX		XXX	X	X	

ASSET VALUATION RESERVE (Continued) BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS EQUITY AND OTHER INVESTED ASSET COMPONENT

			1	2	3	4	Basic C	Contribution	Reserv	e Objective	Maximu	um Reserve
						Balance for	5	6	7	8	9	10
Line	NAIC			Reclassify		AVR Reserve						
Num-	Desig-		Book/Adjusted	Related Party	Add Third Party	Calculations	- ·	Amount	- .	Amount	- .	Amount
ber	nation		Carrying Value	Encumbrances	Encumbrances	(Cols. 1 + 2 + 3)	Factor	(Cols.4 x 5)	Factor	(Cols. 4 x 7)	Factor	(Cols. 4 x 9)
		INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS										
		OF PREFERRED STOCKS					0.0004					
30.	1	Highest Quality		XXX	XXX		0.0004		0.0023		0.0030	
31.	2	High Quality		XXX	XXX		0.0019		0.0058		0.0090	
32.	3	Medium Quality		XXX	XXX		0.0093		0.0230		0.0340	
33.	4	Low Quality		XXX	XXX		0.0213		0.0530		0.0750	
34.	5	Lower Quality		XXX	XXX		0.0432	425	0.1100		0.1700	
35.	6	In or Near Default		XXX	XXX				0.2000		0.2000	
36.		Affiliated Life with AVR		XXX	XXX		0.0000		0.0000		0.0000	
37.		Total with Preferred Stock Characteristics (Sum of Lines 30	0.004			0.004		105		4 000		4 .070
I		through 36)	9,834	XXX	XXX	9,834	XXX	425	XXX	1,082	XXX	1,672
		INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS										
		OF MORTGAGE LOANS										
		In Good Standing Affiliated:										
38.		Mortgages - CM1 - Highest Quality			XXX		0.0010		0.0050		0.0065	
39.		Mortgages - CM2 - High Quality			XXX		0.0035		0.0100		0.0130	
40.		Mortgages - CM3 - Medium Quality			XXX		0.0060		0.0175		0.0225	
41.		Mortgages - CM4 - Low Medium Quality			XXX		0.0105		0.0300		0.0375	
42.		Mortgages - CM5 - Low Quality			XXX		0.0160		0.0425		0.0550	
43.		Residential Mortgages - Insured or Guaranteed			XXX		0.0003		0.0006		0.0010	
44.		Residential Mortgages - All Other		XXX	XXX		0.0013		0.0030		0.0040	
45.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0003		0.0006		0.0010	
		Overdue, Not in Process Affiliated:										
46.		Farm Mortgages			XXX		0.0420		0.0760		0.1200	
47.		Residential Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
48.		Residential Mortgages - All Other			XXX		0.0025		0.0058		0.0090	
49.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0005		0.0012		0.0020	
50.		Commercial Mortgages - All Other			XXX		0.0420		0.0760		0.1200	
		In Process of Foreclosure Affiliated:										
51.		Farm Mortgages			XXX		0.0000		0.1700		0.1700	
52.		Residential Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
53.		Residential Mortgages - All Other			XXX		0.0000		0.0130		0.0130	
54.		Commercial Mortgages - Insured or Guaranteed			XXX		0.0000		0.0040		0.0040	
55.		Commercial Mortgages - All Other			XXX		0.0000		0.1700		0.1700	
56.		Total Affiliated (Sum of Lines 38 through 55)			XXX		XXX		XXX		XXX	
57.		Unaffiliated - In Good Standing With Covenants			XXX		(c)		(C)		(C)	
58.		Unaffiliated - In Good Standing Defeased With Government					. /				. ,	
		Securities			XXX		0.0010		0.0050		0.0065	
59.		Unaffiliated - In Good Standing Primarily Senior			XXX		0.0035		0.0010		0.0130	
60.		Unaffiliated - In Good Standing All Other			XXX		0.0060		0.0175		0.0225	
61.		Unaffiliated - Overdue, Not in Process			XXX		0.0420		0.0760		0.1200	
62.		Unaffiliated - In Process of Foreclosure			XXX		0.0000		0.1700		0.1700	
63.		Total Unaffiliated (Sum of Lines 57 through 62)			XXX		XXX		XXX		XXX	
64.		Total with Mortgage Loan Characteristics (Lines 56 + 63)			XXX		XXX		XXX		XXX	

ASSET VALUATION RESERVE (Continued) BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS EQUITY AND OTHER INVESTED ASSET COMPONENT

			1	2	3	4	Basic (Contribution	Reserve Objective		Maximum Reserve	
				D "		Balance for	5	6	7	8	9	10
Line Num-	NAIC		Book/Adjusted	Reclassify Related Party	Add Third Party	AVR Reserve Calculations		Amount		Amount		Amount
ber	Desig- nation	Description	Carrying Value	Encumbrances	Encumbrances	(Cols. 1 + 2 + 3)	Factor	(Cols.4 x 5)	Factor	(Cols. 4 x 7)	Factor	(Cols. 4 x 9)
001	nation	INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS	Carrying Value	Encombrances	Encombrances	(0013.1+2+0)	1 40101	(0013.4 × 0)	1 40101	(0013. 4 × 7)	1 40101	(0013: 4 × 0)
		OF COMMON STOCK										
65.		Unaffiliated Public		XXX	XXX		0.0000		0.1300 (a)		0.1300 (a)	
66.		Unaffiliated Private		XXX	XXX						0.1600	
67.		Affiliated Life with AVR			XXX		0.0000					
68.		Affiliated Certain Other (See SVO Purposes & Procedures										
		Manual)		XXX	XXX		0.0000		0.1300		0.1300	
69.		Affiliated Other - All Other		XXX	XXX		0.0000		0.1600		0.1600	
70.		Total with Common Stock Characteristics (Sum of Lines 65										
		through 69)		XXX	XXX		XXX		XXX		XXX	
		INVESTMENTS WITH THE UNDERLYING CHARACTERISTICS										
		OF REAL ESTATE										
71.		Home Office Property (General Account only)					0.0000		0.0750		0.0750	
72.		Investment Properties					0.0000		0.0750		0.0750	
73		Properties Acquired in Satisfaction of Debt					0.0000		0.1100		0.1100	
74.		Total with Real Estate Characteristics (Sum of Lines 71 through					XXX		XXX		XXX	
		73) LOW INCOME HOUSING TAX CREDIT INVESTMENTS					***		***		***	
75							0.0003		0.0006		0.0010	
75. 76.		Guaranteed Federal Low Income Housing Tax Credit Non-guaranteed Federal Low Income Housing Tax Credit					0.0063		0.0120		0.0190	
76. 77.		Guaranteed State Low Income Housing Tax Credit					0.0003		0.0120		0.0190	
77.		Non-guaranteed State Low Income Housing Tax Credit					0.0003		0.0120		0.0190	
70. 79.		All Other Low Income Housing Tax Credit					0.0273		0.0600		0.0975	
80.		Total LIHTC (Sum of Lines 75 through 79)					XXX		XXX		XXX	
00.		ALL OTHER INVESTMENTS					~~~		~~~		~~~	
81.		NAIC 1 Working Capital Finance Investments					0.0000		.0.0037		0.0037	
82.		NAIC 2 Working Capital Finance Investments		XXX			0.0000		0.0120		0.0120	
83.		Other Invested Assets - Schedule BA					0.0000		0.1300		0.1300	
84.		Other Short-Term Invested Assets - Schedule DA		XXX			0.0000		0.1300		0.1300	
85.		Total All Other (Sum of Lines 81, 82, 83 and 84)		XXX			XXX		XXX		XXX	
86.		Total Other Invested Assets - Schedules BA & DA (Sum of Lines										
		29, 37, 64, 70, 74, 80 and 85)	9,834			9,834	XXX	425	XXX	1,082	XXX	1,672

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

(b) Determined using the same factors and breakdowns used for directly owned real estate.

(c) This will be the factor associated with the risk category determined in the company generated worksheet.

Asset Valuation Reserve Replications (Synthetic) Assets

ΝΟΝΕ

Schedule F - Claims

Schedule H - Part 1 - Analysis of Underwriting Operations

Schedule H - Part 2 - Reserves and Liabilities **NONE**

Schedule H - Part 3 - Test of Prior Year's Claim Reserves and Liabilities **NONE**

Schedule H - Part 4 - Reinsurance

Schedule H - Part 5 - Health Claims

ΝΟΝΕ

Schedule S - Part 1 - Section 1 **NONE**

Schedule S - Part 1 - Section 2 NONE

Reinsurance Recoverable on Paid and Unpaid Losses Listed by Reinsuring Company as of December 31, Current Year

1	2	3	4	5	6	7					
NAIC											
Company	ID	Effective	N (2	B							
Code	Number	Date	Name of Company Massachusetts Mutual Life Insurance Company	Paid Losses	Unpaid Losses						
	04-1590850	09/07/1983									
	04-1590850	1,659,987									
	ife and Annuit	1,659,987	2,837,974								
	otal Life and A	1,659,987	2,837,974								
0699999. Total Life and Annuity - Non-U.S. Affiliates											
	otal Life and A	1,659,987	2,837,974								
86258	13-2572994	02/08/1999	General Re Life Corp. (CO81)	CT							
65676	35-0472300	02/08/1999	Lincoln National Life Ins. Co. (LN81) Munich American Reassurance Co (MU81) Munich American Reassurance Co (MU82)	IN		476,027					
66346	58-0828824	02/08/1999	Munich American Reassurance Co (MU81)	GA							
66346	58-0828824	01/01/1999	Munich American Reassurance Co (MU82)	GA							
935/2	43-1235868	01/01/1999	RGA Reinsurance Co. (AZ82)	MO	61.952						
935/2	43-1235868	02/08/1999	RGA Reinsurance Co. (GA81) Swiss Re Life & Health America Inc. (SR16)	MO							
				MO		1,959,529					
		y - U.S. Non-A			2,470,062	4,243,478					
		Annuity - Non-A	ifiliates		2,470,062	4,243,478					
	otal Life and A				4,130,049	7,081,452					
		and Health - U									
			on-U.S. Affiliates								
		and Health - At									
2199999. T	otal Accident a	and Health - N	on-Affiliates								
2299999. T	otal Accident a	and Health									
2399999. T	otal U.S. (Sun	n of 0399999, (0899999, 1499999 and 1999999)		4,130,049	7,081,452					
2499999. T	otal Non-U.S.	(Sum of 06999	999, 0999999, 1799999 and 2099999)								
9999999 To	otals - Life, An	nuity and Accid	dent and Health		4,130,049	7,081,452					

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

1 2 3 4 6 7 8 Rescance or prize 1 Output prize 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0			Reinsu	rance Ceded Life Insurance, Annuities, Deposit Funds	and Other Lia	bilities Without	Life or Disabili	ity Contingencies,	and Related Ber	nefits Listed by Re	einsuring Compa	any as of Decem	ber 31, Current	Year	
D. Concert D. Concert Description Type of the table of	1	1 2 3 4			5 6 7		7	8	Reserve Cr	edit Taken	11	Outstanding S	Surplus Relief	14	15
Constant Dire Prior Marce April Prior Marce Constant Prior Marce Prior Marce Constant Prior Marce					Domi-				9	10		12	13		
Company Display Proving Proving <t< td=""><td>NAIC</td><td></td><td></td><td></td><td>ciliarv</td><td>Type of</td><td>Type of</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Modified</td><td>Funds Withheld</td></t<>	NAIC				ciliarv	Type of	Type of							Modified	Funds Withheld
14 15 15 15 17 19 5.70 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17	Company	ID	Effective		Juris-		Business	Amount in Force						Coinsurance	Under
14 15 15 15 17 19 5.70 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17 19 5.70 15 17	Code	Number	Date	Name of Company	diction	Ceded	Ceded	at End of Year	Current Year	Prior Year	Premiums	Current Year	Prior Year	Reserve	Coinsurance
effect 8 9.9000 0.00000 0.00000 0.0000 <td></td> <td></td> <td></td> <td></td> <td>MA</td> <td></td>					MA										
1000000 General Account. Antipology U.S. Attlingto. 91:40-01 19:100 10:100					MA										
000000 Total General Account. Advanced U.S. Atlantee 81.446.61 4.586.75 1.586.94 00000 Total General Account. Advanced U.S. Atlantee 81.446.61 4.586.75 1.587.86 1.587.8					381 449 451	4 598 578	5 728 758								
088989 Full General Actional - Anthread Mallace 91.48 4.98 5.70															
OP/9807 Tell George Account Autorized Allines State 1 4.98 (b) 5.78 (b) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>001,440,401</td> <td>4,000,070</td> <td>0,720,700</td> <td>0,120,011</td> <td></td> <td></td> <td></td> <td></td>								001,440,401	4,000,070	0,720,700	0,120,011				
Jack Biology Bi								201 440 451	4 500 570	E 700 7E0	E 400 644				
Base 13 5/204 Open 14 bit for (160); Open 14 bit for					Ini		0								
Jack 2000 Jack 2000 John 2000 Jack 2000 <thjack 2000<="" th=""> <thjack 2000<="" th=""> <thj< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thj<></thjack></thjack>															
Laboration Description Laboration Number of particular formation of the particular formation of															
6646 9-402841 66/10% Ratio bare in absource (Adi) 64. 977 0. 978 70 958 70 958 6848 9-402841 66/10% Ratio bare in absource (Adi) 0. 977.4 0. 971.6 971.6 971.6 971.6 <td></td>															
Biology Biol Sector Biol															
Bit															
State 4: USBM JKN Image Sci (251) UD JNT/L QL SUT 44-200 2.07 2.01 Summark Sci (251) Summark Sci (251)<															
Jance A-102088 J. M. C. J. M. Starker S. (J. M. S. M. Samper S. (J. M. S. M. Samper S. (J. M. S. M. Samper S. (J. M. Samper S. (J. M. Samper S. M. Samper S. (J. M. Samper S.															
SB72 A-D388 EVENUE BS / 64.92 3.06.64 2.07.914 1.88.96															
April 1 B4-WR711 Q0/U11986 Sear II Life of ener Ins. Co. (1969). Q0 PT/T Q. PT/T PT/T <thp< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thp<>															
Labor document general constraint															
Lease 0.0007b Sins is a line in term have in term ha								0 175 100 006		0,424		20 550 150	21 546 275	106 246 000	
0699999, General Account - Authorized U.S. Miniates 4, 17, 890, 72 18, 89, 24 16, 72, 70 82, 29, 54 23, 984, 10 31, 946, 270 78, 394, 981 1199999, Total General Account - Authorized Non-Miniates 4, 17, 890, 72 16, 89, 24 16, 72, 70 82, 29, 54 23, 556, 10 31, 562, 27 13, 562, 27 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 37 14, 562, 563 14, 562, 563 1									14 001	10 000				120, 340, 990	
1109999. Total General Account Authorized Non-Affiliates 4, 70, 98, 742 19, 89, 241 19, 79, 74 32, 164, 273 23, 546, 275 23, 546, 275 165, 246, 986 11099999. Total General Account - Unsubforzed Non-Affiliates 2 2 4, 600, 602, 725 25, 646, 986 2 165, 272 25, 86, 986 11099999. Total General Account - Unsubforzed Non-Affiliates 2 2 6 2 2 6 2 2 6 2 2 5 36, 96, 976 36,					MU		UL					00 550 450	04 540 075	100,040,000	
1199999. Total General Account Authorized Mon-US. Affiliates 4, 560, 462, 23 21, 437, 491 22, 488, 442 31, 462, 278 28, 591, 30 31, 546, 278 28, 549, 549 11999999. Total General Account - Unauthorized Mon-US. Affiliates									,,			- , , -		1. 1.	
149999. Total General Account - Unauthorized UNA-USA. Militates Image: Control General Account - Unauthorized Anno. His Affiliates Image: Control General Account - Unauthorized Anno. His Affiliates 1399999. Total General Account - Unauthorized Anno. His Affiliates Image: Control General Account - Certified USA. Affiliates Image: Control General Account - Certified USA. Affiliates 2399999. Total General Account - Certified USA. Militates Image: Control General Account - Certified USA. Militates Image: Control General Account - Certified USA. Militates 2399999. Total General Account - Certified Mon - USA. Militates Image: Control General Account - Certified Minitates Image: Control General Account - Certified Militates 2399999. Total General Account - Certified Mon - Affiliates Image: Control General Account - Certified Militates Image: Control General Account - Certified Militates 2399999. Total General Account - Certified Mon - Affiliates Image: Control General Account - Certified Militates Image: Control General Account - Certified Militates 2399999. Total General Account - Muthorized Annotated Affiliates Image: Control General Account - Certified Militates Image: Control General Account - Certified Militates 2399999. Total General Account - Muthorized Annotates Image: Control General Account - Certified Militates Image: Control General Account - Certified Militates 2399999. Total Separate Accounts - Authorized Affiliates <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>															
1799999. Total General Account - Unauthorized Non-UlS. Affiliates <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>4,560,405,233</td><td>21,437,819</td><td>22,458,462</td><td>31,643,278</td><td>29,559,150</td><td>31,546,275</td><td>126,346,998</td><td></td></t<>								4,560,405,233	21,437,819	22,458,462	31,643,278	29,559,150	31,546,275	126,346,998	
1999999. Total General Account - Unauthorized Affiliates															
2199999. Total General Account - Landhorized Non-Affiliates <td></td>															
2299999. Total General Account - Certified Vis. Affiliates															
22599999. Total General Account: Centified Nor-US, Affiliates Image: Control General Account: Centified Nor-US, Affiliates Image: Control General Account: Centified Nor-Affiliates 2299999. Total General Account: Centified Nor-Affiliates Image: Control General Account: Centified Nor-Nithiates Image: Center Nor-Nithiates	2199999.	Total General	Account - U	nauthorized Non-Affiliates											
289999. Total General Account - Certified Non-JLS. Attiliates	2299999.	Total General	Account Un	authorized											
299999. Total General Account - Certified Atfiliates Image: Control	2599999.	Total General	Account - C	ertified U.S. Affiliates											
299999. Total General Account - Certified Atfiliates Image: Control	2899999.	Total General	Account - C	ertified Non-U.S. Affiliates											
329999. Total General Account - Certified Non-Affiliates image: control General Account Activities image: control Gene: Control General Account Activities															
3399999. Total General Account Authorized and Certified 4.500,462,573 21,457,819 22,458,462 31,546,275 152,346,999 3499999. Total General Accounts - Authorized U.S. Affiliates - Other 2,240,562,575 2,243,562,575 2,243,562,575 1,120,900,750 3799999. Total Separate Accounts - Authorized U.S. Affiliates 2,240,562,575 2,240,562,575 2,243,920 1,120,900,750 3799999. Total Separate Accounts - Authorized Non-U.S. Affiliates 2,240,562,575 2,240,562,575 2,289,920 1,120,900,750 4199999. Total Separate Accounts - Authorized Non-U.S. Affiliates 2,240,562,575 2,240,562,575 2,289,920 1,120,900,750 4299999. Total Separate Accounts - Authorized Non-U.S. Affiliates 2,240,562,575 2,240,562,575 2,289,920 1,120,900,750 4299999. Total Separate Accounts - Authorized Non-U.S. Affiliates 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 2,240,562,575 5,249,990 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993 5,1249,993															
3499999. Total General Account Authorized, Unauthorized and Certified 4, 560, 05, 233 21, 437, 819 22, 458, 462 31, 426, 275 31, 546, 275 112, 346, 986															
1.9935								4 560 405 222	21 /27 910	22 459 462	21 642 279	20 550 150	21 546 275	126 246 009	
3699999. Separate Accounts - Authorized U.S. Affiliates - Other 2,240,562,579 (2,89,800) 1,120,900,750 3799999. Total Separate Accounts - Authorized U.S. Affiliates 2,240,562,579 (2,89,800) 1,120,900,750 4199999. Total Separate Accounts - Authorized Miliates 2,240,562,579 (2,89,800) 1,120,900,750 4199999. Total Separate Accounts - Authorized Affiliates 2,240,562,579 (2,89,800) 1,120,900,750 4209999. Separate Accounts - Authorized U.S. Affiliates 0 0 0 0 499999. Total Separate Accounts - Authorized U.S. Affiliates 0 0 0 0 499999. Total Separate Accounts - Authorized U.S. Authorized					ма	Mc0/G	0		21,407,013	22,400,402		23,003,100	51,540,275		
3799999. Total Separate Accounts - Authorized Non-U.S. Affiliates 2,240,562,579 (2,289,920) 1,120,900,750 4099999. Total Separate Accounts - Authorized Milliates 2,240,562,579 (2,289,920) 1,120,900,750 199999. Total Separate Accounts - Authorized Milliates 2,240,562,579 (2,289,920) 1,120,900,750 280999. Total Separate Accounts - Authorized Milliates 2,240,562,579 (2,289,920) 1,120,900,750 4299999. Separate Accounts - Authorized Milliates 651,248,993 (51,248,993) (51,248,993) 44999999. Total Separate Accounts - Authorized Mon-Affiliates (2,20,562,579 (2,289,920) 1,772,149,743 44999999. Total Separate Accounts - Authorized Mon-Affiliates 2,240,562,579 (2,89,920) 1,772,149,743 44999999. Total Separate Accounts - Authorized Mon-Affiliates 2,240,562,579 (2,89,920) 1,772,149,743 44999999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates 2,240,562,579 (2,829,920) 1,772,149,743 4599999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates 2,240,562,579 (2,829,920) 1,772,149,743 5999999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates 2,240,562,579 (2,829,920) 1,772,149,743 5999999. Total Separate Accounts - Un					WA	IVICU/ 0	UL								
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4199999. Total Separate Accounts - Authorized JKIIIates 2,240,562,579 (2,289,920) 1,120,900,780 282827 _06-0839705 [12/31/2016]_Swiss Re Life & Health America (SR16V) 0. 0.651,248,993 4299999. Total Separate Accounts - Authorized U.S. Affiliates 0. 0.61,248,993 0.651,248,993 4499999. Total Separate Accounts - Authorized U.S. Affiliates 0. 0.61,248,993 0.651,248,993 4599999. Total Separate Accounts - Authorized U.S. Affiliates 0. 0. 0.61,248,993 5199999. Total Separate Accounts - Unauthorized U.S. Affiliates 0. 0. 0. 5199999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates 0. 0. 0. 5299999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates 0. 0. 0. 5299999. Total Separate Accounts - Unauthorized Non-Affiliates 0. 0. 0. 0. 5299999. Total Separate Accounts - Unauthorized Non-Affiliates 0. 0. 0. 0. 0. 0. 599999. Total Separate Accounts - Unauthorized Non-Affiliates 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.								2,240,562,579			(2,829,920)			1, 120,900,750	
B2627 06-0839705 12/31/2016 Seiss Re Life & Heal th America (\$R16V) M0 M00/1 L M0 M00/1 M0 M00/1 M0 M00/1 M0 M0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.040 500</td> <td></td> <td></td> <td>(0.000.000.000</td> <td></td> <td></td> <td></td> <td></td>								0.040 500			(0.000.000.000				
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4499999. Total Separate Accounts - Authorized Non-Affiliates661,248,9934899999. Total Separate Accounts - Unauthorized U.S. Affiliates2,240,562,579(2,829,920)1,772,149,7434899999. Total Separate Accounts - Unauthorized U.S. Affiliates </td <td></td> <td></td> <td></td> <td></td> <td> MO</td> <td>MCO/I</td> <td>0L</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>					MO	MCO/I	0L								
4599999. Total Separate Accounts - Unauthorized U.S. Affiliates1,772, 149, 7434899999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates <td></td> <td>- 1 1</td> <td></td>														- 1 1	
4899999. Total Separate Accounts - Unauthorized U.S. Affiliates Imathorized Non-U.S. Affiliates 5199999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates Imathorized Non-U.S. Affiliates 5299999. Total Separate Accounts - Unauthorized Affiliates Imathorized Affiliates 5599999. Total Separate Accounts - Unauthorized Affiliates Imathorized Non-Affiliates 5599999. Total Separate Accounts - Unauthorized Mon-Affiliates Imathorized Non-Affiliates 5699999. Total Separate Accounts - Certified U.S. Affiliates Imathorized Non-Affiliates 5999999. Total Separate Accounts - Certified Non-U.S. Affiliates Imathorized Non-Affiliates 6299999. Total Separate Accounts - Certified Non-U.S. Affiliates Imathorized Non-U.S. Affiliates 6399999. Total Separate Accounts - Certified Non-U.S. Affiliates Imathorized Non-U.S. Affiliates 6399999. Total Separate Accounts - Certified Non-U.S. Affiliates Imathorized Non-U.S. Affiliates 6399999. Total Separate Accounts - Certified Non-U.S. Affiliates Imathorized Non-U.S. Affiliates 6399999. Total Separate Accounts - Certified Non-Affiliates Imathorized Non-Affiliates 66999999. Total Separate Accounts - Certified Non-Affiliates Imathorized Non-Affiliates 6799999. Total Separate Accounts Certified Non-Affiliates Imathorized Non-Affiliates 67999999. Total Separate Accounts Certified Non															
5199999. Total Separate Accounts - Unauthorized Non-U.S. Affiliates Image: Control of								2,240,562,579			(2,829,920)			1,772,149,743	
5299999. Total Separate Accounts - Unauthorized Affiliates Image: Control of Control o	4899999.	Total Separat	e Accounts -	Unauthorized U.S. Affiliates											
5599999. Total Separate Accounts - Unauthorized Non-AffiliatesImage: Control of the co	5199999.	Total Separat	e Accounts -	Unauthorized Non-U.S. Affiliates											
5599999. Total Separate Accounts - Unauthorized Non-AffiliatesImage: Control of the co	5299999.	Total Separat	e Accounts -	Unauthorized Affiliates											
5699999. Total Separate Accounts UnauthorizedImage: Certified U.S. AffiliatesImage: Certified U.S. Affiliates5999999. Total Separate Accounts - Certified Non-U.S. AffiliatesImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control629999. Total Separate Accounts - Certified Non-U.S. AffiliatesImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control6399999. Total Separate Accounts - Certified Non-U.S. AffiliatesImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control6399999. Total Separate Accounts - Certified Non-AffiliatesImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control6799999. Total Separate Accounts Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control6799999. Total Separate Accounts Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision ControlImage: Certified Vision Control6799999. Total Separate Accounts Certified Vision Certified Visi															
5999999. Total Separate Accounts - Certified U.S. Affiliates Image: Control of the separate Accounts - Certified Non-U.S. Affiliates 6299999. Total Separate Accounts - Certified Non-U.S. Affiliates Image: Control of the separate Accounts - Certified Affiliates 6399999. Total Separate Accounts - Certified Non-Affiliates Image: Control of the separate Accounts - Certified Non-Affiliates 6699999. Total Separate Accounts - Certified Non-Affiliates Image: Control of the separate Accounts - Certified Non-Affiliates 6799999. Total Separate Accounts Certified Image: Certified Non-Affiliates 6799999. Total Separate Accounts Certified Image: Certified Non-Affiliates								1							İ
6299999. Total Separate Accounts - Certified Non-U.S. AffiliatesImage: Certified AffiliatesImage: Certified Affiliates6399999. Total Separate Accounts - Certified Non-AffiliatesImage: Certified Non-AffiliatesImage: Certified Non-Affiliates6699999. Total Separate Accounts - Certified Non-AffiliatesImage: Certified Non-AffiliatesImage: Certified Non-Affiliates6799999. Total Separate Accounts CertifiedImage: Certified Non-AffiliatesImage: Certified Non-Affiliates															
6399999. Total Separate Accounts - Certified Affiliates															
6699999. Total Separate Accounts - Certified Non-Affiliates															
679999. Total Separate Accounts Certified Cert															
6899999. Total Separate Accounts Authorized, Unauthorized and Certified 1,772,149,743															
	6899999.	I otal Separat	e Accounts A	Authorized, Unauthorized and Certified				2,240,562,579			(2,829,920)			1,772,149,743	

SCHEDULE S - PART 3 - SECTION 1

Reinsurance Ceded Life Insurance, Annuities, Deposit Funds and Other Liabilities Without Life or Disability Contingencies, and Related Benefits Listed by Reinsuring Company as of December 31, Current Year

							it) eentingeneree,					ser er, eanene		
1	2	3	4	5	6	7	8	Reserve Credit Taken		11	Outstanding Surplus Relief		14	15
				Domi-				9	10		12	13		
NAIC				ciliary	Type of	Type of							Modified	Funds Withheld
Company	ID	Effective		Juris-	Reinsurance	Business	Amount in Force						Coinsurance	Under
Code	Number	Date	Name of Company	diction	Ceded	Ceded	at End of Year	Current Year	Prior Year	Premiums	Current Year	Prior Year	Reserve	Coinsurance
6999999.	6999999. Total U.S. (Sum of 0399999, 0899999, 1499999, 1999999, 2599999, 3099999, 3799999, 4299999, 4899999, 5399999, 5999999 and													
	6499999)				6,800,967,812	21,437,819	22,458,462	28,813,358	29,559,150	31,546,275	1,898,496,741			
7099999.	Total Non-U.S	6. (Sum of 069	99999, 0999999, 1799999, 2099999, 2899999, 3199999, 4099999,											
6599999)														
9999999 -	Totals			6,800,967,812	21,437,819	22,458,462	28,813,358	29,559,150	31,546,275	1,898,496,741				

Schedule S - Part 3 - Section 2 **NONE**

Schedule S - Part 4

Schedule S - Part 4 - Bank Footnote

Schedule S - Part 5

Schedule S - Part 5 - Bank Footnote

SCHEDULE S - PART 6 Five Year Exhibit of Reinsurance Ceded Business

(\$000 Omitted)						-
		1 2018	2 2017	3 2016	4 2015	5 2014
	A. OPERATIONS ITEMS					
1.	Premiums and annuity considerations for life and accident and health contracts					
2.	Commissions and reinsurance expense allowances	10,345		61,255		
3.	Contract claims					
4.	Surrender benefits and withdrawals for life contracts		43,051			
5.	Dividends to policyholders					
6.	Reserve adjustments on reinsurance ceded	(71,779)	(70,296)		(15,069)	(12,815)
7.	Increase in aggregate reserve for life and accident and health contracts	(1,021)	(625)	(384)	41	
	B. BALANCE SHEET ITEMS					
8.	Premiums and annuity considerations for life and accident and health contracts deferred and uncollected	(437)		611		
9.	Aggregate reserves for life and accident and health contracts					23,426
10.	Liability for deposit-type contracts					
11.	Contract claims unpaid	7,081	14,323			4,901
12.	Amounts recoverable on reinsurance	4 , 130	4,375			
13.	Experience rating refunds due or unpaid			1,564	1,572	2,028
14.	Policyholders' dividends (not included in Line 10)					
15.	Commissions and reinsurance expense allowances due		14,776			
16.	Unauthorized reinsurance offset					
17.	Offset for reinsurance with Certified Reinsurers					
	C. UNAUTHORIZED REINSURANCE (DEPOSITS BY AND FUNDS WITHHELD FROM)					
18.	Funds deposited by and withheld from (F)					
19.	Letters of credit (L)					
20.	Trust agreements (T)					
21.	Other (O)					
	D. REINSURANCE WITH CERTIFIED REINSURERS (DEPOSITS BY AND FUNDS WITHHELD FROM)					
22.	Multiple Beneficiary Trust					
23.	Funds deposited by and withheld from (F)					
24.	Letters of credit (L)					
25.	Trust agreements (T)					
26.	Other (O)					

SCHEDULE S - PART 7

	Restatement of Balance Sheet to Identify Net Credit	for Ceded Reinsurance		
		As Reported (net of ceded)	2 Restatement Adjustments	3 Restated (gross of ceded)
	ASSETS (Page 2, Col. 3)			
1.	Cash and invested assets (Line 12)			479,619,597
2.	Reinsurance (Line 16)		(17,936,305)	
3.	Premiums and considerations (Line 15)	(2,729,876)	(437,429)	(3, 167, 305)
4.	Net credit for ceded reinsurance			
5.	All other admitted assets (balance)	9,268,502		9,268,502
6.	Total assets excluding Separate Accounts (Line 26)			529,946,656
7.	Separate Account assets (Line 27)	4,355,595,947		4,355,595,947
8.	Total assets (Line 28)	4,859,690,475	25,852,128	4,885,542,603
	LIABILITIES, CAPITAL AND SURPLUS (Page 3)			
9.	Contract reserves (Lines 1 and 2)			
10.	Liability for deposit-type contracts (Line 3)			
11.	Claim reserves (Line 4)		7,081,452	
12.	Policyholder dividends/reserves (Lines 5 through 7)			
13.	Premium & annuity considerations received in advance (Line 8)			
14.	Other contract liabilities (Line 9)		(2,700,187)	
15.	Reinsurance in unauthorized companies (Line 24.02 minus inset amount)			
16.	Funds held under reinsurance treaties with unauthorized reinsurers (Line 24.03 minus inset amount)			
17.	Reinsurance with Certified Reinsurers (Line 24.02 inset amount)			
18.	Funds held under reinsurance treaties with Certified Reinsurers (Line 24.03 inset amount)			
19.	All other liabilities (balance)	11,717,269	33,043	11,750,312
20.	Total liabilities excluding Separate Accounts (Line 26)			
21.	Separate Account liabilities (Line 27)	4,355,595,947		4,355,595,947
22.	Total liabilities (Line 28)			4,575,610,747
23.	Capital & surplus (Line 38)		XXX	309,931,856
24.	Total liabilities, capital & surplus (Line 39)	4,859,690,475	25,852,128	4,885,542,603
	NET CREDIT FOR CEDED REINSURANCE			
25.	Contract reserves			
26.	Claim reserves			
27.	Policyholder dividends/reserves			
28.	Premium & annuity considerations received in advance			
29.	Liability for deposit-type contracts			
30.	Other contract liabilities	(2,700,187)		
31.	Reinsurance ceded assets			
32.	Other ceded reinsurance recoverables			
33.	Total ceded reinsurance recoverables	43,755,390		
34.	Premiums and considerations	(437,429)		
35.	Reinsurance in unauthorized companies			
36.	Funds held under reinsurance treaties with unauthorized reinsurers			
37.	Reinsurance with Certified Reinsurers			
38.	Funds held under reinsurance treaties with Certified Reinsurers			
39.	Other ceded reinsurance payables/offsets			
50.				
40.	Total ceded reinsurance payable/offsets	(4/0.4/1/)		

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS (b)

·		Al	located by State	es and Territorie				
		1	Life Co	ntracts	Direct Bus 4	iness Only 5	6	7
		·	2	3	Accident and Health Insurance Premiums,	3		,
	States, Etc.	Active Status (a)	Life Insurance Premiums	Annuity Considerations	Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 through 5	Deposit-Type Contracts
1. 2.	AlabamaAL Alaska	L I						
2. 3.	Alaska AK Arizona AZ	L						
4.	Arkansas AR	L						
5.	California CA	<u>L</u>	4,046,954				4,046,954	
6. 7.	Colorado CO Connecticut	L						
7. 8.	Connecticut CT Delaware DE	⊢ I						
9.	District of Columbia DC							
10.	Florida FL	L	1,908,927				1,908,927	
11.	Georgia	Ļ						
12. 13.	Hawaii	L I						
13.	IllinoisIL		1, 152, 523					
15.	Indiana IN	L						
16.	Iowa IA	Ļ						
17. 18.	KansasKS KentuckyKY	L						
18.	Louisiana LA	⊾ L						
20.	Maine ME	L						
21.	Maryland MD	L	1,015,497				1,015,602	
22.	Massachusetts MA	L						
23. 24.	Michigan MI Minnesota MN	L	1,587,439 417,456				1,599,389 417,456	
24.	Mininesota MN Mississippi MS	L						
26.	Missouri MO	L						
27.	MontanaMT	L						
28.	Nebraska NE	L		1,800				
29. 30.	Nevada NV New Hampshire NH	L						
30.	New Jersey NJ		1,403,590				1,403,590	
32.	New Mexico NM	L						
33.	New York	N						
34. 35.	North Carolina NC North Dakota ND	L	1,111,706				1,111,706	
35. 36.	Ohio OH	⊢ I	6,200 1,174,026				6,200 1,174,026	
37.	Oklahoma OK							
38.	Oregon OR	L						
39.	Pennsylvania PA	Ļ	1,946,842				1,946,842	
40. 41.	Rhode Island RI South Carolina SC	L						
41.	South Carolina	⊾ I						
	Tennessee	L						
	Texas	L	2,617,298				2,617,298	
45.	Utah UT	Ļ						
	Vermont VT Virginia VA	L	71,309 	1,200				
	Washington	L						
49.	West Virginia WV	L						
	Wisconsin WI	Ļ						
	Wyoming WY American Samoa AS	L N	20,271				20,271	
52. 53.	American Samoa AS Guam GU	NN N						
54.	Puerto Rico PR	N.						
55.	U.S. Virgin Islands VI	N						
56.	Northern Mariana Islands MP	N						
57. 58.	Canada CAN Aggregate Other Alien OT	N						
58. 59.	Subtotal	XXX		16.855				
90.	Reporting entity contributions for employee benefits							
01	plans Dividends or refunds applied to purchase paid-up	XXX						
91.	additions and annuities	XXX						
92.	Dividends or refunds applied to shorten endowment							
93.	or premium paying period Premium or annuity considerations waived under	XXX						
	disability or other contract provisions	XXX						
94.	Aggregate or other amounts not allocable by State	XXX		10.055				
95. 96.	Totals (Direct Business) Plus reinsurance assumed	XXX XXX						
96. 97	Totals (All Business)	XXX XXX	33,010,020	16,855				
98.	Less reinsurance ceded	XXX		·				
99.	Totals (All Business) less Reinsurance Ceded	XXX	1,210,081	16,855	(C)		1,226,936	
59001	DETAILS OF WRITE-INS		74.000				74 000	
58001. 58002.	ZZZ Other Alien	XXX					74,209	
58002. 58003.		XXX .XXX						
	Summary of remaining write-ins for Line 58 from							
	overflow page	XXX						
ogaaaa.	Totals (Lines 58001 through 58003 plus 58998)(Line 58 above)	XXX	74,209				74,209	
9401.		XXX	,====				,====	
9402.		XXX						
9403.	Summary of romaining write ing for Line 04 for	XXX						
9498.	Summary of remaining write-ins for Line 94 from overflow page							
9499.	Totals (Lines 9401 through 9403 plus 9498)(Line							
(a) Active	94 above) Status Counte:	XXX						
(a) ACTIVA	Status Counts:							

(a) Active Status Counts:
 L - Licensed or Chartered - Licensed insurance carrier or domiciled RRG...

R - Registered - Non-domiciled RRGs. 50 Q - Qualified - Qualified or accredited reinsurer.....

E - Eligible - Reporting entities eligible or approved to write surplus lines in the state......
N - None of the above - Not allowed to write business in the state......

7

(b) Explanation of basis of allocation by states, etc., of premiums and annuity considerations
 Individual insurance premiums and annuity considerations - allocated to the states in which the policyholder resides (based on Company records when the premium is received). Group premiums - allocated consistent with the 500 lives rule.
 (c) Column 4 should balance with Exhibit 1, Lines 6.4, 10.4, and 16.4, Cols. 8, 9, 10, or with Schedule H, Part 1, Line 1, indicate which: Exhibit 1, Lines 6.4, 10.4, and 16.4, Cols. 8, 9, 10.

SCHEDULE T - PART 2

INTERSTATE COMPACT - EXHIBIT OF PREMIUMS WRITTEN Allocated by States and Territories

			1 Life	2 Annuities	Direct Bus 3 Disability Income	iness Only 4 Long-Term Care	5	6
	States, Etc.		(Group and Individual)	(Group and Individual)	(Group and Individual)	(Group and Individual)	Deposit-Type Contracts	Totals
1.	Alabama	AL						
2.	Alaska	AK						
3.	Arizona	AZ	779,490					
4.	Arkansas	AR						
5.	California	CA	4,046,954					4,046,954
6.	Colorado	со						
7.	Connecticut	СТ						
8.	Delaware	DE						
9.	District of Columbia	DC						
10.	Florida	FL	1,908,927					1,908,927
11.	Georgia	GA						
12.	Hawaii	н						
13.	ldaho	ID	61,102					
14.	Illinois	IL	1, 152, 523					1, 152, 523
15.	Indiana	IN						
16.	lowa	IA		1,800				
17.	Kansas	KS						
18.	Kentucky							
19.	Louisiana							
20.	Maine							
21.	Maryland	MD	1,015,497					1,015,602
22.	Massachusetts							
23.	Michigan		1,587,439					1,599,389
24.	Minnesota							417,456
25.	Mississippi							
26.	Missouri							
27.	Montana							
28.	Nebraska							
29.	Nevada			,				
30.	New Hampshire	NH						
31.	New Jersey	NJ	1,403,590					1,403,590
32.	New Mexico							
33.	New York							137,302
34.	North Carolina		1,111,706					1,111,706
35.	North Dakota							
36.	Ohio		1, 174,026					
37.	Oklahoma							
38.	Oregon							
39.	Pennsylvania		1,946,842					1,946,842
40.	Rhode Island							
41.	South Carolina							
42.	South Dakota							
43.	Tennessee							
44.	Texas		2,617,298					2,617,298
45.	Utah							
46.	Vermont							
47.	Virginia		1,444,379	,				1,444,379
48.	Washington							
49.	West Virginia							
50.	Wisconsin							
51.	Wyoming							
52.	American Samoa							
53.	Guam							
53. 54.	Puerto Rico							
54. 55.	U.S. Virgin Islands							
55. 56.	Northern Mariana Islands							
56. 57.	Canada							
57. 58.	Aggregate Other Alien							
50.		51	32,676,368	16,855				32,693,223

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>	NAIC Co Code	State of Domicile	
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY Direct & Indirect Owned Subsidiaries:	04-1590850	65935	Massachusetts	
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	70410	Delaware	
CML Mezzanine Investor L, LLC	06-1041383		Delaware	
CML Mezzanine Investor III, LLC	06-1041383		Delaware	
CML Special Situations Investor LLC	None		Delaware	
MML Mezzanine Investor L, LLC	04-1590850		Delaware	
Berkshire Way LLC	04-1590850		Delaware	
MML Special Situations Investor LLC	None		Delaware	
Timberland Forest Holding LLC	47-5322979		Delaware	
Lyme Adirondack Forest Company, LLC	None		Delaware	
Lyme Adirondack Timber Sales, Inc.	20-5305426		New York	
Lyme Adirondack Timberlands I, LLC	None		Delaware	
Lyme Adirondack Timberlands II, LLC	None		Delaware	
MSP-SC, LLC	04-1590850		Delaware	
Country Club Office Plaza LLC*	27-1435692		Delaware	
Insurance Road LLC	04-1590850		Delaware	
MassMutual Trad Private Equity LLC	04-1590850		Delaware	
MassMutual Intellectual Property LLC	04-1590850		Delaware	
Trad Investments I LLC	None		Delaware	
EM Opportunities LLC	None		Delaware	
Jefferies Finance LLC	27-0105644		Delaware	
JFIN GP Adviser LLC	None		Delaware	
JFIN Revolver Fund, L.P.	None		Delaware	
JFIN Fund III LLC	None		Delaware	
JFIN Asset Management LLC	None		Delaware	
JFAM GP LLC	None		Delaware	
JFAM GP LP	None		Delaware	
JFAM Loan Fund, LP	None		Delaware	
JFIN Revolver Holdings LLC	None		Delaware	
JFIN Revolver Holdings II LLC	None		Delaware	
JFIN Co-Issuer Corporation	None		Delaware	
JFIN Europe GP, S.a.r.l.	None		Luxembourg	
Jefferies Finance Europe, SCSp	None		Luxembourg	
Jefferies Finance Business Credit LLC JFIN Business Credit Fund I LLC	None		Delaware	
JFIN Business Credit Fund I LLC JFIN High Yield Investments LLC	None None		Delaware Delaware	
			Delaware	
JFIN High Yield Investments LLC	None		Delaware	

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
JFIN LC Fund LLC	None		Delaware
JFIN Revolver CLO Holdings LLC	None		Delaware
JFIN CLO 2007 Ltd.	None		Cayman Islands
JFIN CLO 2012 Ltd.	None		Cayman Islands
JFIN CLO 2013 Ltd.	None		Cayman Islands
JFIN CLO 2014 Ltd.	None		Cayman Islands
JFIN CLO 2014-II Ltd.	None		Cayman Islands
JFIN MM CLO 2014 Ltd.*	None		Cayman Islands
JFIN CLO 2015 Ltd.*	None		Cayman Islands
Apex Credit CLO 2015-II Ltd.*	None		Cayman Islands
JFIN Revolver CLO 2014 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2015 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2018 Ltd.	None		Cayman Islands
Apex Credit CLO 2016 Ltd.	None		Cayman Islands
Apex Credit CLO 2017 Ltd.	None		Cayman Islands
Apex Credit CLO 2017-II Ltd.	None		Cayman Islands
Apex Credit CLO 2018-II Ltd.	None		Cayman Islands
MassMutual Mortgage Lending LLC	None		Delaware
MassMutual Retirement Services, LLC	04-1590850		Delaware
MM Copper Hill Road LLC	04-1590850		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Mezzanine Investor, LLC	04-1590850		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2009-A	27-1379258		Delaware
MMAF Equipment Finance LLC 2011-A	45-2589019		Delaware
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures UK LLC	None		Delaware
MassMutual Ventures US I LLC	47-1296410		Delaware
MassMutual Ventures US II LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
LifeScore Labs, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda
Baring Asset Management (Asia) Limited	98-0457463		Hong Kong, Special Administrative Region of China
Baring Asset Management Korea Limited	None		Korea
Barings Investment Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Barings Overseas Investment Fund Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC
Barings Japan Limited	98-0236449		Japan
Baring Asset Management (Australia) Pty Limited	98-0457456		Australia
Barings Investment Advisors (Hong Kong) Limited	None		Hong Kong, Special Administrative Region of China
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None 04-3238351		Ireland
Barings Securities LLC	98-0437588		Delaware
Barings Guernsey Limited			Guernsey United Kingdom
Barings Europe Limited Barings Real Estate UK Holdings Limited	None None		United Kingdom Delaware
BREAE AIFM LLP	None		United Kingdom
Brings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe LLP Barings Real Estate Advisers Europe Finance LLP	98-0654388 98-0654412		United Kingdom
Darings Real Estate Advisers Europe Finance LLr	20-0034412		Onitou Kingdoni

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Real Estate Advisers GmbH	98-1194368		Germany
Baring Asset Management Limited	98-0241935		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Asset Management GmbH	98-0465031		Germany
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sarl	None		Switzerland
Baring France SAS	98-0497550		France
Baring Fund Managers Limited	98-0457586		United Kingdom
Baring Pension Trustees Limited	98-0457574		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Investment Fund (LUX) GP S.à. r.l.	None		Luxembourg
Barings GPC GP S.à. r.l.	None		Luxembourg
Almack Mezzanine GP III Limited	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Almack Mezzanine Fund II Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Multifamily Capital Holdings LLC	None		Delaware
Barings Multifamily Capital LLC	None		Michigan
Barings Multifamily Capital Corporation	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
MassMutual Baring Holding LLC	04-1590850		Delaware
MassMutual Holdings (Bermuda) Limited	None		Bermuda
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Aland Royalty Holdings LP	None		Delaware
Engs Holdings Inc.	None		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Novation Companies, Inc.	None		Maryland
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
EIP Holdings I, LLC	None		Delaware
Tamiami Citrus, LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
U.S. Pharmaceuticals Holdings I, LLC	46-0687392		Delaware

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
Validus Pharmaceuticals LLC	None		Delaware
VGS Acquisition Holding, LLC	None		Delaware
Aland Royalty GP, LLC	None		Delaware
BAI Funds SLP, LLC	None		Delaware
BAI GP, LLC	None		Delaware
Barings Alternative Investments SLP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Baring North America LLC	98-0241935		Massachusetts
Barings ABIF SLP, LLC	None		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Core Property Fund GP LLC	None		Delaware
Barings Direct Lending GP Ltd.	None		Cayman Islands
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings Multi Asset Income Fund	None		Hong Kong
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings/LAZ Parking Fund GP LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BREBF I GP LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
CCM Fund I REIT Manager LLC	None		Delaware
CCM Venture I GP LLC	None		Delaware
CCM Venture I REIT Manager LLC	None		Delaware
CEMF I GP LLC	None		Delaware
CHY Venture GP LLC	None		Delaware
CREF X GP LLC	None		Delaware
CREF VIII GP, LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Loan Strategies Management LLC	04-1590850		Delaware
Mezzco LLC	04-1590850		Delaware
Mezzco II LLC	02-0767001		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia LLC	90-0666326		Delaware
Mezzco Australia II LLC	None		Delaware
RECSA-NY GP LLC	None		Delaware

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Somerset Special Opportunities Management LLC	04-1590850		Delaware
Oppenheimer Acquisition Corp.	84-1149206		Delaware
OppenheimerFunds, Inc.	13-2527171		Colorado
OppenheimerFunds Distributor, Inc.	13-2953455		New York
Oppenheimer Real Asset Management, Inc.	84-1106295		Delaware
OFI Global Institutional. Inc	13-4160541		New York
HarbourView Asset Management Corporation	22-2697140		New York
OC Private Capital, LLC	None		Delaware
OFI Global Trust Company	13-3459790		New York
OFI International, Ltd.	None		United Kingdom
SNW Asset Management Corporation	None		Delaware
Seattle Northwest Asset Management LLC	None		Washington
Trinity Investment Management Corporation	25-1951632		Pennsylvania
OFI SteelPath, Inc.	84-1128397		Delaware
Shareholder Services, Inc.	84-1066811		Colorado
OFI Advisors, LLC	None		Delaware
Index Management Solutions, LLC	None		Pennsylvania
OFI Global Asset Management, Inc.	84-0765063		Delaware
OFI Private Investments Inc.	91-2036414		New York
Tremont Group Holdings, LLC	62-1210532		New York
Tremont Partners, LLC	06-1121864		Connecticut
Tremont GP, LLC	20-8215352		Delaware
Settlement Agent, LLC	90-0874510		Delaware
Tremont (Bermuda) Limited	None		Bermuda
MassMutual International LLC	04-3313782		Delaware
Yunfeng Financial Group Limited	None		Hong Kong
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
Cornerstone Global REIT Corporation	20-8730751		Delaware
Other Affiliates & Funds:	04.1500050		D 1
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216 04-1590850		Delaware
300 South Tryon LLC			Delaware
54 West Capital LLC	20-3887968		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP Almack Mezzanine Fund III LP*	None		United Kingdom
Almack McZzanine rund III Lr [*]	None		United Kingdom

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Barings Asset-Based Income Fund (US) LP	36-4868350		Delaware
Barings Emerging Markets Corporate Bond Fund	None		Ireland
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson CLO Ltd. 2016-II	None		Cayman Islands
Barings CLO Ltd. 2017-I	None		Cayman Islands
Barings CLO 2018-III	None		Cayman Islands
Barings CLO 2018-IV	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Babson Euro CLO 2016-I BV	None		Netherlands
Barings Euro Equity Income Fund	None		Hong Kong
Barings Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Inv. Grade Strat Fund	None		Ireland
Barings Global Private Loan Fund	None		Luxembourg
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings Middle Market CLO 2017-I Ltd & LLC	None		Cayman Islands
Barings Middle Market CLO 2018-I	None		Cayman Islands
Barings North American Private Loan Fund LP	38-4010344		Delaware
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Baring International Small Cap Equity Fund	26-4142796		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Braemar Energy Ventures I, L.P. *	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Barings/LAZ Parking Fund LP	46-5437441		Delaware

PART 1 – ORGANIZATIONAL CHART

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	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I LP	80-0691253		Delaware
Gillem GA Industrial LLC	04-1590850		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-404	1012	New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Kazwell Realty Partners LLC	20-3887968		Delaware
KKR-MM Vector LP	82-1512591		Delaware
Marco Hotel LLC	46-4255307		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
MM Debt Participations LLC	81-3000420		Delaware
Oakley Grove Development LLC	20-3887968		Delaware
Old Pasco Properties LLC	20-3887968		Delaware
RB Apartments LLC	82-4411267		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Riva Portland LLC	30-0713071		Delaware
Rockall CLO B.V.	None		United Kingdom
Rockville Town Center LLC	54-2055778		Virginia
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Pasco Properties LLC	20-3887968		Delaware
Ten Fan Pier Boulevard LLC	35-2553915		Delaware
Tower Square Capital Partners II, L.P.*	30-0336246		Delaware
Tower Square Capital Partners II-A, L.P.	32-0160190		Delaware
Tower Square Capital Partners III, L.P.	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Tower Square Capital Partners IV-A, L.P.	80-0920367		Delaware
West 46 th Street Hotel LLC	05-1590850		Delaware
ffiliates & Funds:	N		T 1 1
Barings Emerging Markets Debt Blended Total Return Fund	None		Ireland
Barings Emerging Markets Debt Short Duration Fund	None		Ireland
Barings Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings Emerging Markets Debt Blended Total Return Fund	47-3758432		Massachusetts
Barings Global High Yield Fund	47-3790192		Massachusetts
Baring Greater China Equity Fund	None		Hong Kong

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code State of Domicile
Barings Total Return Bond Fund	47-3734770	Massachusetts
Barings U.S. High Yield Fund	47-3801860	Massachusetts
Great Lakes II LLC*	71-1018134	Delaware
Somerset Special Opportunities Master Fund LP	None	Cayman Islands
Barings Real Estate Affiliates Funds:		, ,
Wood Creek Venture Fund LLC	04-1590850	Delaware
50 Liberty LLC*	36-4823011	Delaware
One Harbor Shore LLC*	80-0948028	Delaware
Budapester Strasse LLC	81-4382111	Delaware
Calgary Railway Holding LLC*	82-2285211	Delaware
Combrook PRS Holdings LLC	82-3307907	Delaware
Cornerstone California Mortgage Fund I LLC	95-4207717	California
Cornerstone California Mortgage Fund II LLC	95-4207717	California
Cornerstone California Mortgage Fund III LLC	95-4207717	California
Cornerstone Fort Pierce Development LLC*	56-2630592	Delaware
Cornerstone Permanent Mortgage Fund	45-2632610	Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537	Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693	Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735	Massachusetts
CREA Madison Member LLC	81-0890084	Delaware
CCB Montford Park LLC*	82-1563809	Delaware
Danville Riverwalk Venture, LLC	82-2783393	Delaware
Fan Pier Development LLC*	20-3347091	Delaware
Farringdon London Holdings LLC*	46-3880526	Delaware
Johnston Groves LLC	20-4819358	Delaware
Landmark Manchester Holdings LLC	81-5360103	Delaware
MM Island Member LLC	04-1590850	Delaware
NoHo West Venture LLC	83-0881588	Delaware
PACO France Logistics LLC	04-1590850	Delaware
PACO France Logistics 2 LLC	04-1590850	Delaware
PACO France Logistics 3 LLC	04-1590850	Delaware
Portland 400 Sixth Manager LLC	82-3393166	Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None	Delaware
Sawgrass Village Shopping Center LLC*	27-2977720	Delaware
Spain Avalon Holding LLC	04-1590850	Delaware
Three PW Office Holding LLC	81-5273574	Delaware
Twenty Two Liberty LLC*	35-2484550	Massachusetts
UK LIW Manager LLC	45-4606547	Delaware
UK LIW Member LLC	45-4606547	Delaware
Unna, Dortmund Holding LLC	82-3250684	Delaware
Via Ceresio Milan LLC	82-3281588	Delaware

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Washington Gateway Apartments Venture LLC*	45-5401109		Delaware
Waterloo London Holdings LLC	47-1993493		Delaware
WeHo Domain LLC*	46-3122029		Delaware
Ygnatio Valley Funding	20-5481477		Delaware
MassMutual Premier Funds:			
MassMutual Barings Dynamic Allocation Fund	45-3168892		Massachusetts
MassMutual Premier Focused International Fund	02-0754273		Massachusetts
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Premier Value Fund	04-3277550		Massachusetts
MassMutual Select Funds:			
MassMutual Select Diversified International Fund	14-1980900		Massachusetts
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Large Cap Value Fund	04-3513019		Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts
MassMutual Select T. Rowe Price Retirement 2005 Fund	82-3347422		Massachusetts
MassMutual Select T. Rowe Price Retirement 2010 Fund	82-3355639		Massachusetts
MassMutual Select T. Rowe Price Retirement 2015 Fund	82-3382389		Massachusetts
MassMutual Select T. Rowe Price Retirement 2020 Fund	82-3396442		Massachusetts
MassMutual Select T. Rowe Price Retirement 2025 Fund	82-3417420		Massachusetts
MassMutual Select T. Rowe Price Retirement 2030 Fund	82-3430358		Massachusetts
MassMutual Select T. Rowe Price Retirement 2035 Fund	82-3439837		Massachusetts
MassMutual Select T. Rowe Price Retirement 2040 Fund	82-3451779		Massachusetts
MassMutual Select T. Rowe Price Retirement 2045 Fund	82-3472295		Massachusetts
MassMutual Select T. Rowe Price Retirement 2050 Fund	82-3481715		Massachusetts
MassMutual Select T. Rowe Price Retirement 2055 Fund	82-3502011		Massachusetts
MassMutual Select T. Rowe Price Retirement 2060 Fund	82-3525148		Massachusetts
MassMutual Select T. Rowe Price Retirement Balanced Fund	82-3533944		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MML Series II Special Situations Fund	47-3559064		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts

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

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						Exchange		Domi-	ship		Management,	ship		Filina	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		-	ID	Federal		(U.S. or	Parent, Subsidiaries		Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Group	a b	Company			0.11/			Loca-		Directly Controlled by					
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	Ŷ
							Massachusetts Mutual Life Insurance Company			Massachusetts Mutual Life Insurance					
0435	Massachusetts Mut Life Ins Co		04-1590850	3848388			(MMLIC)	MA	UIP	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	·				
0435	CM Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	UDP	Company	Ownership	100.000	MMLIC		
	MML Baystate Life Ins Co	70416	43-0581430				MML Bay State Life Insurance Company	CT	RE	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
0000	mine Daystate Erre mis oo		06-1041383				CML Mezzanine Investor, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
0000			06-1041383				CML Mezzanine Investor L, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
0000													MMLIC		
			06-1041383				CML Mezzanine Investor III, LLC	DE	NI A	C.M. Life Insurance Company	Ownership				
0000							CML Special Situations Investor LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
				1	1					Massachusetts Mutual Life Insurance					
			04-1590850				MML Mezzanine Investor L, LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
1										Massachusetts Mutual Life Insurance				1	
				1	1		MML Special Situations Investor LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
			1					1		Massachusetts Mutual Life Insurance				- I	T
0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
			47-5322979				Timberland Forest Holding LLC		NIA	Company C.M. Life Insurance Company	Ownership		MMLIC	- [
			47-5322979				Timberland Forest Holding LLC	DE	NI A	Wood Creek Capital Management LLC	Management		MMLIC		
							Lyme Adirondack Forest Company, LLC	DE	NI A	Timberland Forest Holding LLC	Ownership		MMLIC		
			20-5305426				Lyme Adirondack Timber Sales, Inc	NY	NI A	Timberland Forest Holding LLC	Ownership		MMLIC		
							Lyme Adirondack Timberlands I, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership		MMLIC		
0000							Lyme Adirondack Timberlands II. LLC	DE	NI A	Timberland Forest Holding LLC	Ownership		MMLIC		
							_,			Massachusetts Mutual Life Insurance					
			04-1590850				Berkshire Way LLC	DE	NIA	Company	Ownership		MMLIC		
			04-1030000				Derksinne way LLC	UL		Massachusetts Mutual Life Insurance	owner simp		LIC		
0000			04 1000000				MSP-SC. LLC	DE	NIA		0	100,000	MMLIC		
			04-1590850				MSP-SC, LLC	UE	NI A	Company	Ownership		MMLIG		
										Massachusetts Mutual Life Insurance					
			27-1435692				Country Club Office Plaza LLC	DE	NI A	Company	Ownership		MMLIC		
0000			27-1435692				Country Club Office Plaza LLC	DE	NI A	C.M. Life Insurance Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
							EM Opportunities LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-1590850				Insurance Road LLC	DE	NIA	Company	Ownership	100.000	MMLIC	1	
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 DE	NIA	Insurance Road LLC	Ownership Ownership	100.000	MMLIC		
			04-1090800											[
0000							Trad Investments I LLC	DE	NI A	Insurance Road LLC	Ownership		MMLIC		
1								1 1		Massachusetts Mutual Life Insurance				1	1
			27-0105644				Jefferies Finance LLC	DE	NI A	Company	Ownership		MMLIC		
				1	1					Massachusetts Mutual Life Insurance					
							MassMutual Mortgage Lending LLC	DE	NI A	Company	Ownership		MMLIC		
							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
. 0000							JFIN Revolver Fund, L.P.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		1
0000							JFIN Fund 111 LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC	- [
							JFAM GP LLC	DE	NI A	JFIN Asset Management, LLC	Ownership		MMLIC	- [
0000							JFAM GP LP	DE	NI A	JFIN Asset Management, LLC	Ownership	100.000	MMLIC		
0000							JFAM Loan Fund, LP	DE	NI A	JFIN Asset Management, LLC	Ownership		MMLIC		
							JFIN Revolver Holdings LLC	DE	NI A	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Revolver Holdings II LLC	DE	NI A	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							JFIN Europe GP. S.a.r.I.	LUX	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							Jefferies Finance Europe, SCSp	LUX	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
									NIA				MMLIC		
							Jefferies Finance Business Credit LLC	DE	NIA NIA	Jefferies Finance LLC Jefferies Finance LLC	Ownership		MMLTC	- [
0000							JFIN Business Credit Fund I LLC JFIN High Yield Investments LLC	DE DE	NIA	Jefferies Finance LLC	Ownership Ownership				

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						Name of Securities			Relation-		Board,	Owner-		SCA	
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	2
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000	-					í (,	FIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		-
							IFIN Revolver CLO Holdings LLC		NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
								CYM					MMLIC		
							IFIN CLO 2007 Ltd.		NIA	Jefferies Finance LLC	Ownership				
							IFIN CLO 2012 Ltd	CYM	NI A	Jefferies Finance LLC	Ownership		MMLIC		
0000							IFIN CLO 2013 Ltd	CYM	NI A	Jefferies Finance LLC	Ownership		MMLIC		
							IFIN CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							IFIN CLO 2014 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership		MMLIC		
							FIN CLO 2014-11 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							FIN MM CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
								CYM					MMLIC		
							IFIN CLO 2015 Ltd.		NIA	Jefferies Finance LLC	Ownership				
							IFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership		MMLIC		
							pex Credit CLO 2015-II Ltd	CYM	NI A	Jefferies Finance LLC	Ownership		. MMLIC		
0000						k	pex Credit CLO 2015-II Ltd	CYM	NI A	Apex Credit Partners LLC	Ownership		MMLIC		
							IFIN Revolver CLO 2014 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							FIN Revolver CLO 2015 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
. 0000							FIN Revolver CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
							FIN Revolver CLO 2017-II Ltd	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							FIN Revolver CLO 2017-III Ltd	CYM	NI A	Jefferies Finance LLC	Ownership		MMLIC		
0000							IFIN Revolver CLO 2018 Ltd	CYM	NI A	Jefferies Finance LLC	Ownership		MMLIC		
						A	pex Credit CLO 2016 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000						A	pex Credit CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							pex Credit CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance	• ***•• • • • • • • • • • • • • • • • •				
0000			04-1590850				lassMutual Retirement Services. LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
			04-1590650			N	assmutual Retirement Services, LLC		NIA		Owner snip		MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-1590850			N	M Copper Hill Road LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-3356880			M	ML Distributors LLC	MA	NIA	Company	Ownership		MMLIC		
			04-3356880			I I I I I I I I I I I I I I I I I I I	ML Distributors LLC		NI A	MassMutual Holding LLC	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	6 miler en p				
							ML Investment Advisers, LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
						h	INC TIVESTMENT AUVISEIS, LLC	UE	NIA	Massachusetts Mutual Life Insurance	Owner simp		MMLIC		
0000			04-1590850			M	ML Mezzanine Investor, LLC	DE	NI A	Company	Ownership		MMLIC		
				1		I – – – – – – – – – – – – – – – – – – –				Massachusetts Mutual Life Insurance	1				1
0000			46-3238013			N	ML Strategic Distributors, LLC	DE	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					1
			06-1563535	2881445		1	he MassMutual Trust Company, FSB	CT	NIA	Company	Ownership	100.000	MMLIC	Y	1
										Massachusetts Mutual Life Insurance	P				1
.0000			26-0073611	1			lassMutual Asset Finance LLC	DE	NIA	Company	Ownership	99,600	MMLIC		1
			26-0073611				lassMutual Asset Finance LLC	DE	NI A	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
			27-1379258			N	MAF Equipment Finance LLC 2009-A	DE	NI A	MassMutual Asset Finance LLC	Ownership		MMLIC		
			45-2589019				MAF Equipment Finance LLC 2011-A	DE	NI A	MassMutual Asset Finance LLC	Ownership		MMLIC		
				1		1	ML Private Placement Investment Company			Massachusetts Mutual Life Insurance	1				1
	l	l	04-1590850			l lı	LC		NI A	Company	Ownership		MMLIC		
						· · · · · · · · · · · · · · · · · · ·				Massachusetts Mutual Life Insurance			1		1
			04-1590850	1			ML Private Equity Fund Investor LLC	DE	NIA	Company	Ownership	100.000	MMLIC		1
0000			04-1590850				ML Private Equity Fund Investor LLC	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
												400.000			
0000			04-1590850			N	M Private Equity Intercontinental LLC	DE	NI A	MML Private Equity Fund Investor LLC	Ownership		MMLIC		
					1					Massachusetts Mutual Life Insurance	1				1
			45-2738137			F	ioneers Gate LLC	DE	NI A	Company	Ownership		MMLIC		
				1		I I				Massachusetts Mutual Life Insurance	1				1
			04-2854319	2392316		1	lassMutual Holding LLC	DE	NIA	Company	Ownership		MMLIC	Y	1
0000			06-1597528				lassMutual Assignment Company	NC	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		1
			37-1732913				ern Street LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLTC		
0000			31-1132913			h	enn Street LLG	VE	INI A	Massmutual Holding LLC	ownership		. MMLIU		<u>,</u>

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Code		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000	•		46-2252944			,	Haven Life Insurance Agency, LLC	DE	NIA	MassMutual Holding LLC	Ownership		MMLIC		
			04-1590850				MassMutual Capital Partners LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
0000							MassMutual Ventures Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
							Crane Venture Partners LLP	GBR	NIA	MassMutual Holding LLC	Ownership		MMLIC		
							MassMutual Ventures Management LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
							MassMutual Ventures SEA Management Private								
0000								DE.	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
							MassMutual Ventures Southeast Asia LLC	DE	NIA	MassMutual Holding LLC	Ownership		MMLIC		
0000							MassMutual Ventures UK LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
			47-1296410				MassMutual Ventures US LLC	DE	NIA	MassMutual Holding LLC	Ownership		MMLIC		
			47-1290410				MassMutual Ventures US II LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
0000			04-1590850				MM Rothesay Holdco US LLC		NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
								DE							
			47-1466022				LifeScore Labs, LLC	MA	NIA	MassMutual Holding LLC	Ownership		MMLIC		
			04-1590850				MML Investors Services, LLC	MA	NIA	MassMutual Holding LLC	Ownership		MMLIC		
			04-1590850				MML Insurance Agency, LLC	MA	NI A	MML Investors Services, LLC	Ownership		MMLIC		
0000			41-2011634				MMLISI Financial Alliances, LLC	DE	NIA	MML Investors Services, LLC	Ownership		MMLIC		
			45-4000072				MM Asset Management Holding LLC	DE	NI A	MassMutual Holding LLC	Ownership	100.000	MMLIC		
			51-0504477				Barings LLC	DE	NI A	MassMutual Asset Management Holding LLC	Ownership		MMLIC		
							Baring Asset Management (Asia) Holdings								
			98-0524271				Limited	HKG	NI A	Barings LLC	Ownership		MMLIC		
							Baring International Fund Managers (Bermuda)			Baring Asset Management (Asia) Holdings					
			98-0457465				Limited	BMU	NI A	Limited	Ownership		MMLIC		
										Baring Asset Management (Asia) Holdings					
			98-0457463				Baring Asset Management (Asia) Limited	HKG	NI A	Limited	Ownership		MMLIC		
							Baring Asset Management Korea Limited	KOR	NI A	Baring Asset Management (Asia) Limited	Ownership		MMLIC		
							Barings Investment Management (Shanghai)								
							Limited	HKG	NI A	Baring Asset Management (Asia) Limited	Ownership		MMLIC		
							Barings Overseas Investment Fund Management				-				
							(Shanghai) Limited	HKG	NI A	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		
										Baring Asset Management (Asia) Holdings					
			98-0457707				Baring SICE (Taiwan) Limited	TWN	NIA	Limited	Ownership		MMLIC		
							5 (1)			Baring Asset Management (Asia) Holdings					
			98-0236449				Barings Japan Limited	JPN.	NIA	Limited	Ownership		MMLIC		
							Baring Asset Management (Australia) Pty			Baring Asset Management (Asia) Holdings					
			98-0457456				Limited	AUS	NIA	Limited	Ownership	100.000	MMLIC		
							Barings Investment Advisors (Hong Kong)			Baring Asset Management (Asia) Holdings					
.0000							Limited	HKG	NIA	Limited	Ownership.	100.000	MMLIC		
										Baring Asset Management (Asia) Holdings					
							Barings Australia Holding Company Pty Ltd	AUS	NIA	Limited	Ownership	100.000	MMLIC		
0000			98-0457456				Barings Australia Pty Ltd	AUS	NIA	Baring Australia Holding Company Pty Ltd	Ownership Ownership		MMLIC		
			90-0457450 80-0875475				Barings Australia Fly Lto	AUS DE	NIA	Baring Australia Holding Company Pty Ltd Barings LLC	Ownership	100.000	MMLIC		
			00-00/04/0				BCF Europe Funding Limited		NIA	Barings Finance LLC	Ownership		MMLIC		
							BCF Senior Funding LLC	DE	NIA	Barings Finance LLC	Ownership		MMLIC		
									NIA	barings Finance LLC	ownership		MML10		
0000							BCF Senior Funding I Designated Activity	IRL	NIA	Barings Finance LLC	Ownership	100,000	MMLIC		
			04.0000054				Company								
			04-3238351				Barings Securities LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
			98-0437588				Barings Guernsey Limited	GGY	NIA	Barings LLC	Ownership		MMLIC		
							Barings Europe Limited	GBR	NIA	Barings Guernsey Limited	Ownership		MMLIC		
							Barings Real Estate UK Holdings Limited	DE		Barings Europe Limited	Ownership	100.000	MMLIC		
0000							BREAE AIFM LLP	GBR	NI A	Barings Real Estate UK Holdings Limited	Ownership		MMLIC		
							Barings Real Estate Advisers (Continental								
			98-0654401				Europe) Limited	GBR	NI A	Barings Real Estate UK Holdings Limited	Ownership		MMLIC		
			98-0654388				Barings Real Estate Advisers Europe LLP	GBR	NI A	Barings Real Estate UK Holdings Limited	Ownership		MMLIC		

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						Name of Securities			Relation-		Board.	Owner-		SCA	
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						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Éntity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
					-		Barings Real Estate Advisers Europe Finance			(
			98-0654412				LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
0000			98-1194368				Barings Real Estate Advisers GmbH	DEU		Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
			98-0241935				Baring Asset Management Limited	GBR	NIA	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
0000			98-1012393				Barings Global Advisors Limited	GBR		Baring Asset Management Limited	Ownership	100.000	MMLIC		
			30-1012333				BCGSS 2 GP LLP	GBR	NIA	Baring Asset Management Limited Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000							Barings European Direct Lending 1 GP LLP	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
			00 0457000										MMLIC		
			98-0457328				Baring International Investment Limited	GBR	NI A	Baring Asset Management Limited	Ownership		MMLIC		
							Baring International Investment Management				a				
0000			98-0457587				Holdings	GBR	NI A	Baring Asset Management Limited	Ownership		MMLIC		
										Baring International Investment Management					
			98-0457576				Baring Asset Management UK Holdings Limited .	GBR	NI A	Holdings	Ownership		MMLIC		
										Baring Asset Management UK Holdings Limited					
			98-0465031				Baring Asset Management GmbH	DEU	NI A		Ownership		MMLIC		
							Baring International Fund Managers (Ireland)			Baring Asset Management UK Holdings Limited					
			98-0524272				Limited	IRL	NIA		Ownership		MMLIC		
										Baring Asset Management UK Holdings Limited	-				
0000							Baring Asset Management Switzerland Sàrl	CHE	NIA	· · · ·	Ownership	100.000	MMLIC		
										Baring Asset Management UK Holdings Limited					
0000			98-0497550				Baring France SAS	FRA	NIA	Sal nig noost management of horanigo Eimrica	Ownership	100.000	MMLIC		
			98-0457586				Baring Fund Managers Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
			98-0457574				Baring Pension Trustees Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MILIC		
			98-0457578				Baring Investment Services Limited	GBR		Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000			30-0431310				Baring GPC GP S.à. r.I.	LUX		Baring Asset Management Limited	Ownership	100.000	MMLIC		
							Barings Investment Fund (LUX) GP S.à. r.I .	LUX		Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000							Almack Mezzanine GP III Limited	GBR	NIA	Baring Asset Management Limited Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000								GBR			Ownership	100.000	MMLIC		
							Almack Holding Partnership GP Limited	GBR		Baring Asset Management Limited			MMLIC		
							Almack Mezzanine Fund Limited			Baring Asset Management Limited	Ownership				
0000							Almack Mezzanine Fund II Limited	GBR		Baring Asset Management Limited	Ownership		MMLIC		
0000			98-0432153				Barings (U.K.) Limited	GBR		Barings Guernsey Limited	Ownership		MMLIC		
							Barings Multifamily Capital Holdings LLC	DE	NI A	Barings LLC	Ownership		MMLIC		
0000							Barings Multifamily Capital LLC	MI	NIA	Barings LLC	Ownership	100.000	MMLIC		
							Barings Multifamily Capital Corporation	DE	NIA	Barings LLC	Ownership		MMLIC		
		.	04-3238351	3456895			Barings Real Estate Advisers Inc	CA	NIA	Barings Real Estate Advisers LLC	Ownership	100.000	MMLIC		
			04-1590850				MassMutual Baring Holding LLC	DE	NI A	MassMutual Asset Management Holding LLC	Ownership		MMLIC		
							MassMutual Holdings (Bermuda) Limited	BMU	NI A	MassMutual Baring Holding LLC	Ownership	100.000	MMLIC		
		1								Massachusetts Mutual Life Insurance				1	
		.	81-2244465				Chassis Acquisition Holding LLC	DE	NI A	Company	Ownership/Influence		MMLIC		
			81-2244465				Chassis Acquisition Holding LLC	DE	NI A	Barings LLC	Influence		MMLIC		
		1								Massachusetts Mutual Life Insurance					
0000			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Company	Ownership/Influence	40.000	MMLIC	1	
0000			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Barings LLC	Influence		MMLIC		
		1	5. 1200100							Massachusetts Mutual Life Insurance					
		1	83-0560183				Aland Royalty Holdings LP	DE	NIA	Company	Ownership	26.700	MMLIC	1	
			83-0560183				Aland Royalty Holdings LP	DE	NIA	Barings LLC	Management.		MMLIC		
			00-0000100				ATANU NUYATTY HUTUINUS LF		NIA	Massachusetts Mutual Life Insurance	manayonon t		IIIIILIV		
0000		1					Enas Holdinas Inc.	DE	NIA		Omersehin	21,700	MMLIC	1	
							Engs motulings inc.	UE	NIA	Company	Ownership		. MMLIU		
0000		1	40.0044000					05		Massachusetts Mutual Life Insurance	a	10,000		1	1
0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Company	Ownership		MMLIC		
			47-3055009				Milestone Acquisition Holding, LLC.	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		
		-	47-3055009				Milestone Acquisition Holding, LLC.	DE	NIA	Barings LLC	Influence		MMLIC		
		1								Massachusetts Mutual Life Insurance				1	
		.					Novation Companies, Inc.	MD	NIA	Company	Ownership	21.100	MMLIC		
			-	•	-					•				•	•

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		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact.	Provide		Re-	
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Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
										Massachusetts Mutual Life Insurance					
0000			46-5460309				Red Lake Ventures, LLC	DE	NI A	Company	Ownership/Influence		MMLIC		
0000			46-5460309				Red Lake Ventures, LLC	DE	NI A	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
			81-4065378				Remington L & W Holdings LLC	DE	NI A	Company	Ownership/Influence	66.700	MMLIC		
			81-4065378				Remington L & W Holdings LLC	DE	NI A	Barings LLC	Influence		MMLIC		
							с с			Massachusetts Mutual Life Insurance					
0000							Tamiami Citurus, LLC	DE	NIA	Company	Ownership	15,700	MMLIC		
0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
0000							Teaktree Acquisition, LLC		NIA	Barings LLC	Influence		MMLIC		
							Tourties Asquisition, LES			Massachusetts Mutual Life Insurance					
0000			46-0687392	1			US Pharmaceutical Holdings I, LLC	DE	NIA	Company	Management		MMLIC		
			- 40-000/392				uo rhanmadeuticai notuinys I, LLC		NIA		manayement	-+			
0000			00 0070405	1			U0 Dhanna and included in the U.S.	DE	NI: 4	Massachusetts Mutual Life Insurance	Ourseshie (Influe	40, 400	100 10		
			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			20-2970495				US Pharmaceutical Holdings II, LLC	DE	NI A	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							EIP Holdings I, LLC	DE	NI A	Company	Ownership/Influence		MMLIC		
							EIP Holdings I, LLC	DE	NI A	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
							Validus Pharmaceuticals LLC	DE	NI A	Company	Ownership/Influence	100.000	MMLIC		
							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		
0000							VGS Acquisition Holding, LLC	DE	NIA	Barings LLC	Management.		MMLIC		
							Aland Royalty GP, LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
0000							BAI GP. LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
							BAI Funds SLP. LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000							Barings Alternative Investments SLP, LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
							Baring Asset-Based Income Fund (US) GP, LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
							Barings Global Investment Funds (U.S.)		NIA	barings LLC	ownership		MML10		
.0000			04-1590850				Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
			- 04-1590850					DE		Barings LLC	Ownership	100.000	MILIC		
							Babson Global Loan Feeder Management, LLC	DE							
			98-0241935				Baring North America LLC	MA		Barings LLC	Ownership		MMLIC		
							Barings ABIF SLP, LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
							Barings CLO Investment Partners GP, LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000			-				Barings Core Property Fund GP LLC	DE		Barings LLC	Ownership		MMLIC		-
0000							Barings Direct Lending GP Ltd	CYM	NIA	Barings LLC	Ownership		MMLIC		
			1	1			Barings Global Energy Infrastructure								
0000							Advisors, LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Multi Asset Income Fund	HKG	NI A	Barings LLC	Ownership		MMLIC		
							Barings North American Private Loan Fund			, , , , , , , , , , , , , , , , , , ,					
							Management, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC	l	I
			1				Barings Global Real Assets Fund GP, LLC			Barings LLC	Ownership	100.000	MMLIC		
							Barings/LAZ Parking Fund GP LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
0000			98-0536233				Benton Street Advisors. Inc.	CYM		Barings LLC	Ownership.	100.000	MILIC		
			_ 00 0000200				BREBF GP LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
0000							BRECS VII GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
							CCM Fund I REIT Manager LLC			Barings LLC Barings LLC	Ownership	100.000	MMLIC		
								DE		Barings LLC	Ownership	100.000	MMLIC		
							CCM Venture GP LLC								
0000							CCM Venture REIT Manager LLC	DE		Barings LLC	Ownership		MMLIC		
							CEMF I GP LLC	DE		Barings LLC	Ownership	100.000	MMLIC		
							CHY Venture GP LLC	DE		Barings LLC	Ownership		MMLIC		
							CREF X GP LLC	DE		Barings LLC	Ownership		MMLIC		
0000							CREF VIII GP, LLC	DE	NI A	Barings LLC	Ownership		MMLIC		
			04-1590850				Great Lakes III GP, LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000							Lake Jackson LLC	DE	NI A	Barings LLC	Ownership		MMLIC		

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						Exchange		Domi-	ship		Management,	ship		Filing	
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence.	Percen-	Ultimate Controlling	quired?	
Code	Craun Nama			RSSD	CIK	International)	Or Affiliates		Entity		Other)			(Y/N)	*
	Group Name	Code	Number	R22D	CIK	International)		tion		(Name of Entity/Person)	÷)	tage	Entity(ies)/Person(s)	(Y/N)	
0000			04-1590850				Loan Strategies Management LLC	DE		Barings LLC	Ownership		MMLIC		
0000			04-1590850				Mezzco LLC	DE		Barings LLC	Ownership		MMLIC		
			02-0767001				Mezzco II LLC	DE	NI A	Barings LLC	Ownership	98.400	MMLIC		
0000			41-2280126				Mezzco III LLC	DE	NIA	Barings LLC	Ownership	.99.300	MMLIC		
			80-0920285				Mezzco IV LLC	DE		Barings LLC	Ownership	99.300	MMLIC		
			90-0666326				Mezzco Australia LLC			Barings LLC	Ownership		MMLIC		
0000			90-0000320					DE		Barings LLC		100.000	MMLIC		
							Mezzco Australia II LLC				Ownership				
0000							RECSA-NY GP LLC	DE	NI A	Barings LLC	Ownership		MMLIC		
						1	Somerset Special Opportunities Management LLC						1	1	1
0000			04-1590850					DE		Barings LLC	Ownership		MMLIC		
0000			84-1149206	2897101			Oppenheimer Acquisition Corp.	DE	NIA	MassMutual Asset Management Holding LLC	Ownership	96.600	MMLIC		
.0000			13-2527171	2679183			OppenheimerFunds, Inc.	CO		Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC	l	
			13-2953455				OppenheimerFunds Distributor, Inc.	NY		OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
			84-1106295				Oppenheimer Real Asset Management, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership		MMLIC		1
				0450405											
0000			13-4160541	. 3458125			OFI Global Institutional, Inc.	NY	NI A	OppenheimerFunds, Inc.	Ownership		MMLIC		
			22-2697140				HarbourView Asset Management Corporation	NY		OFI Institutional Asset Management, Inc	Ownership		MMLIC		
0000							OC Private Capital, LLC	DE	NI A	OFI Institutional Asset Management, Inc	Ownership		MMLIC		
0000			13-3459790	2914875			OFI Global Trust Company	NY	NI A	OFI Institutional Asset Management, Inc	Ownership		MMLIC		
							OFI International, Ltd.	GBR	NI A	OFI Institutional Asset Management, Inc	Ownership	100.000	MMLIC		
0000							SNW Asset Management Corporation	DE		OFI Institutional Asset Management, Inc.	Ownership	100.000	MMLIC		
			60-2233720				Seattle Northwest Asset Management LLC	WA		OFI Institutional Asset Management, Inc	Ownership	100.000	MMLIC		
.0000			25-1951632				Trinity Investment Management Corporation	PA		OFI Institutional Asset Management, Inc	Ownership	100.000	MMLIC		
0000			84-1128397				OFI SteelPath, Inc.	DE		OppenheimerFunds, Inc.	Ownership		MMLIC		
0000			84-1066811				Shareholder Services, Inc	C0	NI A	OppenheimerFunds, Inc	Ownership		MMLIC		
0000							OFI Advisors , LLC	DE	NI A	OppenheimerFunds, Inc	Ownership		MMLIC		
0000							Index Management Solutions, LLC	PA	NI A	OppenheimerFunds, Inc.	Ownership		MMLIC		
0000			84-0765063				OFI Global Asset Management, Inc	DE	NI A	OppenheimerFunds, Inc.	Ownership		MMLIC		
0000			91-2036414				OFI Private Investments Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC		
			62-1210532				Tremont Group Holdings, LLC	NY	NIA	Oppenheimer Acquisition Corp.	Ownership	100.000	MNLIC		
			06-1121864				Tremont Partners, LLC	CT	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC		
			20-8215352				Tremont GP, LLC	DE	NIA	Tremont Group Holdings, Inc.			MMLIC		
											Ownership				
			90-0874510				Settlement Agent, LLC	DE	NIA	Tremont GP	Ownership		MMLIC		
0000							Tremont (Bermuda) Limited	BMU	NI A	Tremont Group Holdings, Inc	Ownership		MMLIC		
						1				Massachusetts Mutual Life Insurance			1	1	1
0000			04-3313782				MassMutual International LLC	DE	NI A	Company	Ownership		MMLIC	Y	
							Yunfeng Financial Group Limited	HKG	NIA	MassMutual International LLC	0wnership	24.800	MMLIC		
			1			1				Massachusetts Mutual Life Insurance				1	1
			04-2443240			1	MML Management Corporation	MA	NIA	Company	Ownership	100.000	MMLIC	v	1
			04-2548444				MassMutual International Holding MSC, Inc	MA		MML Management Corporation	Ownership		MMLIC		1
							Masshutual Hitching NCC	MA							
			04-3341767				MassMutual Holding MSC, Inc.	MA		MML Management Corporation	Ownership		MML10		
						1				Massachusetts Mutual Life Insurance				1	1
0000			04-1590850				MML Mezzanine Investor II, LLC	DE	NI A	Company	Ownership		MMLIC		·
						1				Massachusetts Mutual Life Insurance			1	1	1
0000			04-1590850				MML Mezzanine Investor III, LLC	DE	NI A	Company	Ownership		MMLIC		
							· · · · · · · · · · · · · · · · · · ·			Massachusetts Mutual Life Insurance					
			27-3576835			1	MassMutual External Benefits Group LLC	DE	NIA	Company	Ownership	100.000	MMLIC	1	1
							Building total External Denotities aloup LEC	···· UL		Massachusetts Mutual Life Insurance	omior on p				
			20-8730751			1	Corneratore Clabel DELT Correction	DE	NIA		Ownership	100.000	MMLIC	1	1
			20-8/30/51				Cornerstone Global REIT Corporation		INI A	Company	Ownership		MML10		
										Massachusetts Mutual Life Insurance				1	
0000			04-1590850				100 w. 3rd Street LLC	DE	NI A	Company	Ownership		MMLIC		
			1							Massachusetts Mutual Life Insurance			1	1	
0000			82-2432216				300 South Tryon Hotel LLC	DE	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	•				
			04-1590850			1	300 South Tryon LLC	DE	NIA	Company	Ownership	100.000	MILIC	1	1
							000 000th Hydh LLD	<i>V</i> L		company	omior 3111p		mmL I V	1	<u>+</u>

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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	2
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
	·									Massachusetts Mutual Life Insurance					1
			20-3887968				54 West Capital LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
							Almack Mezzanine Fund I LP	GBR	NIA	Company	Ownership/Influence		MMLIC		
0000							Almack Mezzanine Fund I LP	GBR	NIA	C.M. Life Insurance Company	Ownership	4.600	MMLIC		
										Massachusetts Mutual Life Insurance	owner enrip				
0000							Almack Mezzanine Fund II Unleveraged LP	GBR	NIA	Company	Ownership/Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Almack Mezzanine Fund III LP	GBR	NIA	Company	Ownership/Influence	34,200	MMLIC		
							Almack Mezzanine Fund III LP	GBR	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
0000							Almack Mezzanine Fund III LP	GBR	NIA	Barings (U.K.) Limitied		۵.۵۰۰	MMLIC		
							Annack Mezzanine Fund III LP	UDH	NI A		Management				
										Massachusetts Mutual Life Insurance		a		1	1
			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NI A	Company	Ownership/Influence		MMLIC		
			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NI A	C.M. Life Insurance Company	Ownership/Influence	2.400	. MMLIC		
0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NI A	Barings LLC	Management		MMLIC		
							Barings Emerging Markets Corporate Bond Fund			Massachusetts Mutual Life Insurance					
								IRL	NI A	Company	Ownership/Influence		MMLIC		
							Barings Emerging Markets Corporate Bond Fund								
								IRL	NI A	Barings LLC	Management		MMLIC		
							Babson Capital Global Special Situation			Massachusetts Mutual Life Insurance	········				
			98-1206017				Credit Fund 2	DE	NIA	Company	Ownership/Influence		MMLIC		
			00 1200011				Babson Capital Global Special Situation			company					
			98-1206017				Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MMLIC		
			90-1200017				Babson Capital Global Special Situation		INTA	C.W. LITE Insulance company	ownership				
			00 1006017				Credit Fund 2	DE	NIA	Destinge LLC	Venegement		MMLIC		
			98-1206017				creait Funa 2	UE	NIA	Barings LLC Massachusetts Mutual Life Insurance	Management		MMLIC		
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NI A	Company	Ownership/Influence		MMLIC		
			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NI A	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
							Barings US High Yield Bond Fund	IRL	NI A	Company	Ownership/Influence				
							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Ownership				
							Barings US High Yield Bond Fund	IRL	NI A	Barings LLC	Management		MMLIC		
							Babson CLO Ltd. 2013-1	CYM	NIA	Barings LLC	Influence		MMLIC		3
		l					Babson CLO Ltd. 2014-1	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Babson CLO Ltd. 2015-1	CYM	NIA	Barings LLC	Influence		MMLIC		5
0000							Babson CLO Ltd. 2015-11	CYM	NIA	Barings LLC	Influence		MMLIC		6
							Babson CLO Ltd. 2016-1	CYM.	NIA	Barings LLC	Influence				
							Babson CL0 Ltd. 2016-1	CYM.	NIA	Barings LLC	Influence		MMLIC	-	1
							Barings CLO Ltd. 2017-1	CYM	NIA	Barings LLC Barings LLC	Influence		MMLIC		
								CYM	NIA 	Barings LLC	Influence		MMLIC		
							Barings CLO 2018-111								
							Barings CLO 2018-IV	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2014-II BV	NLD	NI A	Barings LLC	Influence		MMLIC		
							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2016-I BV	NLD	NI A	Barings LLC	Influence		MMLIC		
							Barings Euro Equity Income Fund	HKG	NI A	Baring Asset Management Limited	Ownership/Influence		MMLIC		
		1		1						Massachusetts Mutual Life Insurance				1	
			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Company	Ownership/Influence		MMLIC		
			81-0841854				Barings CLO Investment Partners LP		NIA	Barings LLC	Management.				
							Barings Real Estate European Value Add I SCSp			Massachusetts Mutual Life Insurance					1
							Sallingo nour cotato caropoan farao nua 1 000p	GBR	NIA	Company	Ownership/Influence	53,800	MMLIC	1	
							Barings Real Estate European Value Add I SCSp		NI A	oompany	owner amp/ mindelice		. mmL IV		
		1		1			Darings near Estate European varue Adu 1 303p	GBR	NIL A		Ownershie	c 000	MMLIC	1	
1 (1111)		1						UBH	NI A	C.M. Life Insurance Company	Ownership				

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Group		Company	ID	Federal	0.11/	(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	· .
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	^
							Barings Real Estate European Value Add I SCSp						188.10		
								GBR	NI A	Barings LLC Barings LLC	_ Management		. MMLIC		
			82-5330194				Barings Global Em. Markets Equity Fund	NC	NIA	Massachusetts Mutual Life Insurance	_ Management		MMLTC		
			98-1332384				Barings Global Energy Infrastructure Fund I	CYM	NIA	Company	Ownership/Influence	95,700	MMLIC		
			90-1002004				Barings Global Energy Infrastructure Fund I				ownership/inituence		NMLTC		
0000			98-1332384				IP	CYM	NIA	Baring Asset Management Limited	Management		MMLIC		
0000			50 1002004				Barings Global Inv. Grade Strat Fund	IRL	NIA	Baring Asset management Ennired	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
							Barings Global Private Loan Fund	LUX	NIA	Company	Ownership/Influence		MMLIC		
							Barings Global Private Loan Fund	LUX	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			82-3867745				Barings Global Real Assets Fund LP	DE	NI A	Company	Ownership/Influence		MMLIC		
			82-3867745				Barings Global Real Assets Fund LP	DE	NI A	C.M. Life Insurance Company	Ownership		MMLIC		
			82-3867745				Barings Global Real Assets Fund LP	DE	NI A	Barings LLC	Management		MILIC		
							Barings Global Special Situations Credit Fund			Massachusetts Mutual Life Insurance					
							3	IRL	NI A	Company	Ownership/Influence				
							Barings Global Special Situations Credit Fund								
0000							3	IRL	NI A	Barings LLC	Management		MMLIC		
							Barings Middle Market CLO 2017-I Ltd & LLC	CYM	NIA	Barings LLC	Influence				
0000							Barings Middle Market CLO 2018-1	CYM	NI A	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance			188.10		
0000			38-4010344 38-4010344				Barings North American Private Loan Fund LP .	DE	NI A	Company	Ownership/Influence				
			38-4010344				Barings North American Private Loan Fund LP _	DE	NIA	Baring Asset Management Limited Massachusetts Mutual Life Insurance	_ Management		MMLTC		
0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Company	Ownership/Influence	38,600	MMLIC		
			98-1332384				Barings RE Credit Strategies VII LP Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
			30-1332304				Darings ne credit strategres vir Er			Massachusetts Mutual Life Insurance					
			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			26-4142796				Baring International Small Cap Equity Fund	DE	NIA	Baring Asset Management Limited	Management		MNLIC		
										Massachusetts Mutual Life Insurance					
0000							Braemar Energy Ventures I, L.P	DE	NI A	Company	Ownership/Influence		MMLIC		
							Braemar Energy Ventures I, L.P	DE	NI A	C.M. Life Insurance Company	Ownership		MMLIC		
0000							Braemar Energy Ventures I, L.P.	DE	NI A	Barings LLC	Management		MMLIC		
							Barings European Core Property Fund SCSp	LUX	NI A	MassMutual Holding LLC	Ownership/Influence				
0000							Barings European Core Property Fund SCSp	LUX	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
							Barings European Core Property Fund SCSp	LUX	NIA	Barings Real Estate Advisers LLC	Management				
			38-4059932				Benchmark 2018-B2 Mortgage Trust	NY	NI A	Barings LLC	Influence	-+	. MMLIC		
							Benchmark 2018-B4	NY	NIA	Barings LLC	Influence		MMLIC		
0000			00 0700754				Corneratore Clabel Beel Estate 10	DE	NIA	Massachusetts Mutual Life Insurance	Ownerschie (Influence	00.000			
0000			20-8730751 20-8730751				Cornerstone Global Real Estate LP Cornerstone Global Real Estate LP	DE	NIA NIA	Company C.M. Life Insurance Company	Ownership/Influence Ownership				
			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
			20-0130131				Connerstone Global near Estate LF			Massachusetts Mutual Life Insurance	manayement				
0000			36-4770946				Cornerstone High Yield Venture LP	DE	NIA	Company	Ownership/Influence	49.700	MMLIC		
			36-4770946				Cornerstone High Yield Venture LP	DE	NIA	Barings Real Estate Advisers LLC	Management		. MMLIC		
0000			20-5578089				Barings Core Property Fund LP		NIA	MassMutual Holding LLC	Ownership/Influence	13.000	MMLIC		
			20-5578089				Barings Core Property Fund LP	DE		Barings Real Estate Advisers LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			46-5432619				Cornerstone Real Estate Fund X LP	DE	NI A	Company	Ownership/Influence		MMLIC		
			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
			46-5432619				Cornerstone Real Estate Fund X LP	DE	NI A	Barings Real Estate Advisers LLC	Management		. MMLIC		
										Massachusetts Mutual Life Insurance	1				
		·····	46-5437441				Barings/LAZ Parking Fund LP	DE	NI A	Company	Ownership/Influence				

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0000			46-5437441				Barings/LAZ Parking Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
				4007502			Duchess VII CLO B.V.	GBR	NIA	Barings LLC	Influence		MMLIC		
				1001002						Massachusetts Mutual Life Insurance					
			20-3887968				E-Wise Land Venture LLC		NIA	Company	Ownership		MMLIC		
			20-300/900				E-wise Lanu venture LLC		NIA	Massachusetts Mutual Life Insurance	Owner snip		MMLIC		
			80-0691253				Gateway Mezzanine Partners I, L.P	DE	NI A	Company	Ownership/Influence				
										Massachusetts Mutual Life Insurance					
			37-1708623				Great Lakes III, L.P	DE	NI A	Company	Ownership/Influence		. MMLIC		
			37-1708623				Great Lakes III, L.P.		NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				Gillem GA Industrial LLC	DE.	NIA	Company	Ownership	100.000	MMLIC		
			04 1000000				JPMCC Commercial Mortgage Securities Trust			company	owner amp				
0000			00.4044044							D : 110			144 10		
0000			38-4041011				2017–JP7	NY	NI A	Barings LLC	Management		MMLIC		
							JPMDB Commercial Mortgage Securities Trust								
			38-4032059				2017–C5	NY	NI A	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			20-3887968				Kazwell Realty Partners LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
			82-1512591				KKR-MM Vector LP	DE	NIA	Company	Ownership/Influence	52,300	MMLIC		
			02-1012091				NNN-WWW VECTOI LF		NIA	Massachusetts Mutual Life Insurance	ownership/initidence		. MMLIC		
											a				
			46-4255307				Marco Hotel LLC	DE	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			45-3623262				HB Naples Golf Owner LLC	DE	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			81-3000420				MM Debt Participations LLC	DF	NIA	Company	Ownership/Influence		MMLIC		
0000			81-3000420				MM Debt Participations LLC	DE DE	NIA	Barings LLC	Management.		MMLIC		
			01 0000120							Massachusetts Mutual Life Insurance	management				
0000			20-3887968				Oakley Grove Development LLC		NIA		Ownership		MMLIC		
			20-388/968				Uakiey Grove Development LLC		NIA	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
			20-3887968				Old Pasco Properties LLC	DE	NI A	Company	Ownership				
										Massachusetts Mutual Life Insurance					
			82-4411267				RB Apartments LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000			75-2901061				Reston Arboretum LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			30-0713071				Riva Portland LLC	DE	NIA	Company	Ownership	100,000	MMLIC		
			JU-U/ IJU/ I											·	
							Rockall CLO B.V.	GBR	NI A	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
			54-2055778				Rockville Town Center LLC	VA	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			20-8856877				Somerset Special Opportunities Fund L.P	DE	NIA	Company	Ownership/Influence		MMLIC		
			20-8856877				Somerset Special Opportunities Fund L.P		NI A	C.M. Life Insurance Company	Ownership		MMLIC		
			20 0000011							Massachusetts Mutual Life Insurance	owner entry.				
			20-3887968				South Pasco Properties LLC	DE	NIA		Ownership		MMLIC		
			20-300/908				South Pasco Properties LLC		A	Company	Ownership			·	
										Massachusetts Mutual Life Insurance					
			35-2553915				Ten Fan Pier Boulevard LLC	DE	NI A	Company	Ownership		MMLIC	.	
										Massachusetts Mutual Life Insurance	1				
			30-0336246				Tower Square Capital Partners II, L.P	DE	NI A	Company	Ownership/Influence		MMLIC		
0000			30-0336246				Tower Square Capital Partners II, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance			1		
0000			32-0160190				Tower Square Capital Partners II-A, L.P		NIA	Company	Ownership/Influence		MMLIC		
			41-2280127				Tower Square Capital Partners III, L.P	DE	NI A	Barings LLC	Management		MMLIC		
0000			41-2280127				Tower Square Capital Partners III, L.P	DE	NI A	MassMutual Holding LLC	Ownership/Influence				

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Code	Gloup Name	Code	Number	N33D	UIN	International)	Of Allillates	lion	Enuty	Massachusetts Mutual Life Insurance	Other)	tage	Entity(les)/Feison(s)	(T/N)	
			41-2280129				Tower Square Capital Partners IIIA, L.P.	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MMLIC		
			41-2280129				Tower Square Capital Partners IIIA, L.P	DE	NIA	Barings LLC	Management		MMLIC		
			41-2200129				Tower Square Capital Faithers TITA, L.F.			Massachusetts Mutual Life Insurance	management.				
0000			80-0920367				Tower Square Capital Partners IV-A, L.P	DE	NIA	Company	Ownership/Influence	21,300	MMLIC		
			00 0020007							Massachusetts Mutual Life Insurance					
0000			04-1590850				West 46th Street Hotel LLC	DE	NIA	Company	Ownership	100,000	MMLIC		
			01 1000000				Barings Emerging Markets Debt Blended Total								
0000							Return Fund	IRL	NIA	Barings LLC	Management		MMLIC		
							Barings Emerging Markets Debt Short Duration			541 mgo 220					
							Fund	IRL	NIA	Barings LLC	Management		MMLIC		
							Barings Emerging Markets Sovereign Debt Fund			541 mgo 220					
								IRL	NIA	Barings LLC	Management		MMLIC		
							Babson Capital Loan Strategies Master Fund L								
								CYM	NI A	Barings LLC	Management		MMLIC		
							Barings Emerging Markets Debt Blended Total								
			47-3758432				Return Fund	MA	NI A	Barings LLC	Management		MMLIC		
			47-3790192				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
							Baring Greater China Equity Fund	HKG	NI A	Baring Asset Management Limited	Management		MMLIC		
			47-3734770				Barings Total Return Bond Fund	MA	NI A	Barings LLC	Management		MMLIC		
			47-3801860				Barings U.S. High Yield Fund	MA	NI A	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			71-1018134				Great Lakes II LLC	DE	NI A	Company	Ownership				
			71-1018134				Great Lakes II LLC	DE	NI A	C.M. Life Insurance Company	Ownership	1.000	MMLIC		
							Somerset Special Opportunities Master Fund								
							LP	CYM	NI A	Barings LLC	Management		. MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				Wood Creek Venture Fund LLC	DE	NI A	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance		50, 400	184 10		
			36-4823011				50 Liberty LLC	DE	NI A	Company	Ownership				
			36-4823011				50 Liberty LLC	DE	NI A	C.M. Life Insurance Company	Ownership	5.800			
0000			00.0040000				One lineber Obers 110	DE	ALL A	Massachusetts Mutual Life Insurance	0	40,000	100		
			80-0948028				One Harbor Shore LLC	DE	NIA NIA	Company	Ownership				
0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company Massachusetts Mutual Life Insurance	Ownership				
			81-4382111				Budapester Strasse LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
			01-4002111				Duuapestel silasse LLG	· ····¤	NIA	Massachusetts Mutual Life Insurance	0milel SIIIP				
			82-2285211				Calgary Railway Holding LLC	DE	NIA	Company	Ownership		MML1C	1	
			82-2285211				Calgary Railway Holding LLC Calgary Railway Holding LLC	DE	NIA NIA	Company C.M. Life Insurance Company	Ownership				
			02 2200211				ourgary natimay noturing LEC			Massachusetts Mutual Life Insurance	omior on p				
			82-3307907				Cornbrook PRS Holdings LLC	DE	NIA	Company	Ownership	100.000	MMLIC	1	
							Contraction of the fortuning of LEC			Massachusetts Mutual Life Insurance	since on p				
.0000			95-4207717				Cornerstone California Mortgage Fund LLC	CA	NIA	Company	Ownership.		MMLIC		
							Letter a more guyor and T LEU			Massachusetts Mutual Life Insurance	on p				
0000			95-4207717				Cornerstone California Mortgage Fund II LLC .	CA	NIA	Company	Ownership.		MMLIC		
							Cornerstone California Mortgage Fund III LLC			Massachusetts Mutual Life Insurance					
			95-4207717					CA	NIA	Company	Ownership		MMLIC		
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			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	Company	Ownership		MMLIC		
			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NI A	C.M. Life Insurance Company	Ownership				
										Massachusetts Mutual Life Insurance					
			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NI A	Company	Ownership		MMLIC		
0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NI A	Barings LLC	Management				

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mm maximum Max				61-1750537				Cornerstone Permanent Mortgage Fund II	MA			Ownership				
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0.000 0.002 <th< td=""><td></td><td></td><td></td><td>82-2783393</td><td></td><td></td><td></td><td>Danville Riverwalk Venture, LLC</td><td> DE</td><td>NIA</td><td></td><td>Ownership</td><td></td><td> MMLIC</td><td></td><td></td></th<>				82-2783393				Danville Riverwalk Venture, LLC	DE	NIA		Ownership		MMLIC		
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				04-1590850				PACO France Logistics 2 LLC	DE	NI A		Ownership		MMLIC		
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			. 82-2237734				Revenue ETF	DE	NI A	OppenheimerFunds, Inc.	Management			-	
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0000							Oppenheimer Global Equity UCITS	IRL	NI A	OppenheimerFunds, Inc	Management		MMLIC		
0000			. 81-3480754				Oppenheimer Global ESG Revenue ETF	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC		
0000			83-1689208				Oppenheimer Global ILS Fund LP	NY	NI A	OppenheimerFunds, Inc.	Management		MMLIC		
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			47-3676235				Oppenheimer Global Multi-Asset Growth Fund	DE	NI A	OppenheimerFunds, Inc.	Management		MMLIC		
0000			81-5010075				Oppenheimer Global Revenue ETF	DE	NIA	OppenheimerFunds. Inc.	Management.		MMLIC		
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0000						Oppenheimer Global Value Equity UCITS	IRL		OppenheimerFunds, Inc.	Management		MMLIC		
		82-2693880				Oppenheimer Global Unconstrained Bond Fund	DE		OppenheimerFunds, Inc	Management		MMLIC		
		81-4969331				Oppenheimer International Revenue ETF	DE	NI A	OppenheimerFunds, Inc	Management		MMLIC		
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		82-2271542				Revenue ETF	DE	NI A	OppenheimerFunds, Inc.	Management		MMLIC		·
0000		82-3462739				Oppenheimer Preferred Securities & Income	DE	NIA	OppenheimerFunds, Inc.	Management		MMETC		1
		02-3402739				Oppenheimer Russell 2000 Dynamic Multifactor			oppennermerrunus, mc.			MMETC		[
0000	5	82-2794856				FTF	DF	NIA	OppenheimerFunds, Inc.	Management		MMLIC		1
						Oppenheimer Russell 1000 Momentum Factor ETF								
0000		82-2716323					DE	NI A	OppenheimerFunds, Inc.	Management		MMLIC		l
	8	82-2759921				Oppenheimer Russell 1000 Value Factor ETF	DE	NI A	OppenheimerFunds, Inc.	Management		MMLIC		
						Oppenheimer Russell 1000 Low Volatility								1
		82-2701797				Factor ETF	DE		OppenheimerFunds, Inc	Management		MMLIC		
<u>0000</u>		82-2740997				Oppenheimer Russell 1000 Size Factor ETF	DE		OppenheimerFunds, Inc.	Management		MMLIC		
		82-2732571				Oppenheimer Russell 1000 Quality Factor ETF .			OppenheimerFunds, Inc.	Management.		MMLIC		
D000	6	82-2768498				Oppenheimer Russell 1000 Yield Factor ETF	DE	NI A	OppenheimerFunds, Inc	Management		MMLIC		
		82-2222426				Oppenheimer SteelPath MLP & Energy Infrastructure Fund	DE	NIA	OppenheimerFunds. Inc.	Management		MMLIC		1
		02-222420				1111 astructure runu	UĽ	NI A	oppennermerrunus, mc.	manayement				
														(

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 6.09% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own 6.7% and includes only Great Lakes III, L.P.
3	Debt investors own 9.6% and includes only Babson Capital Loan Strategies Fund, L.P.
4	Debt investors own 5.9% and includes only Great Lakes III, L.P.
5	Debt investors own 7.5% and includes only Great Lakes III, L.P.

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I	2	3	4	Э	o	/ Income/	0	9	10	11	12	13
						(Disbursements)						
					Purchases, Sales	Incurred in						Reinsurance
					or Exchanges of	Connection with		Income/		Any Other Material		Recoverable/
					Loans, Securities,	Guarantees or		(Disbursements)		Activity Not in the		(Payable) on
NAIC					Real Estate,	Undertakings for	Management	Incurred Under		Ordinary Course of		Losses and/or
Company	ID	Names of Insurers and Parent,	Shareholder	Capital	Mortgage Loans or	the Benefit of any	Agreements and	Reinsurance		the Insurer's		Reserve Credit
Code	Number	Subsidiaries or Affiliates	Dividends	Contributions	Other Investments	Affiliate(s)	Service Contracts	Agreements	*	Business	Totals	Taken/(Liability)
65935		Massachusetts Mutual Life Insurance										
		Company (MMLIC)		1,081,021,918	(236,795,000)						1,760,535,158	
	06-1041383	C.M. Life Insurance Company										
	43-0581430	MML Bay State Life Insurance Company										4,497,961
	80-0875475	Barings Finance LLC										
		EM Opportunities LLC										
		NoHo West Venture LLC										
		Cornerstone Permanent Mortgage Fund III										
		Ten Fan Pier Boulevard LLC										
	61-1750537	Cornerstone Permanent Mortgage Fund II										
		Spain Avalon Holding LLC		45,079,597								
	82-3867745	Barings Global Special Situations Credit 3										
		Barings Asset-Based Income Fund (US) LP										
		Barings Global Real Assets Fund LP										
		PACO France Logistics 2 LLC										
		MM Mortgage Lending LLC										
	95-4207717	Cornerstone California Mortgage Fund I LLC										
	82-2783393	Danville Riverwalk Venture, LLC										
		Cornerstone California Mortgage Fund III										
		LLC										
	81-2244465	Chassis Acquisition Holding LLC										
	81-0841854	Barings CLO Investment Partners LP										
	82-3307907	Cornbrook PRS Holdings LLC										
		Cornerstone California Mortgage Fund II										
		LLC									14,704,737	
		EIP Holdings LLC										
		Aland Royalty Holdings LP										
		MM Island Member LLC		13,220,127						+		
	81-5360103	Landmark Manchester Holdings LLC									11, 169, 441	
	98-1332384	Barings Real Estate Credit Strategies VII										
		LP										
		Barings North American Private Loan Fund										
		LP		9,916,974							9,916,974	
		CCB Montford Park LLC										
		MML Private Equity Fund Investor LLC								+	9,505,142	
		PACO France Logistics LLC										
	04-1590850	MM Copper Hill Road LLC									8,644,391	
	61-1793735	Cornerstone Permanent Mortgage Fund IV		6,438,185						+	6,438,185	
	47-1993493	Waterloo London Holdings LLC									3,202,256	
	46-5432619	Cornerstone Real Estate Fund X LP									2,329,524	
		Via Ceresio Milan LLC		1,412,300						+	1,412,300	
	81-5273574	Three PW Office Holding LLC		1,268,424							1,268,424	

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						(Disbursements)						
					Purchases, Sales	Incurred in						Reinsurance
					or Exchanges of	Connection with		Income/		Any Other Material		Recoverable/
					Loans, Securities,	Guarantees or		(Disbursements)		Activity Not in the		(Payable) on
NAIC					Real Estate,	Undertakings for	Management	Incurred Under		Ordinary Course of		Losses and/or
Company	ID	Names of Insurers and Parent,	Shareholder	Capital	Mortgage Loans or	the Benefit of any	Agreements and	Reinsurance		the Insurer's		Reserve Credit
Code	Number	Subsidiaries or Affiliates	Dividends	Contributions	Other Investments	Affiliate(s)	Service Contracts	Agreements	*	Business	Totals	Taken/(Liability)
		Calgary Railway Holding LLC										
	04-1590850	Berkshire Way LLC										
		Tamiami Citrus, LLC										
		Braemar Energy Ventures I, L.P.									284,722	
	56-2630592	Cornerstone Fort Pierce Development LLC									_250,921	
	46-3123110	Sweet Tree Holdings 1, LLC										
		PACO France Logistics 3 LLC										
	04-3584140	MassMutual Select Small Company Value										
		Fund	(1)								(1)	
	51-0529328	MassMutual Premier Main Street Fund	(936)								(936)	
	47-3055009	Milestone Acquisition Holding, LLC.	, ,	(1,602)							(1,602)	
	14-1980900	MassMutual Select Diversified										
		International Fund	(1,763)								(1,763)	
		Barings US Loan Fund Series		(2.073)							(2,073)	
	42-1710935	MassMutual Select Mid-Cap Value Fund	(3,962)								(3,962)	
	04-3277550	MassMutual Premier Value Fund	(4,138)								(4,138)	
	04-3513019	MassMutual Select Large Cap Value Fund	(6.035)								(6,035)	
	04 00 100 10	Alchemy Copyrights LLC									(7,683)	
	47-3559064	MML Series II Special Situations Fund	(37,933)								(37,933)	
		MassMutual RetireSMART 2055 Fund	(66,021)								(66,021)	
	40 0200207	Baring Investment Series LLC		(111,299)							(111,299)	
	06-1041383	CML Mezzanine Investor L, LLC		(164,959)							(164,959)	
		UK LIW Manager LLC		(167,863)							(167,863)	
	20-2970495	US Pharmaceutical Holdings II, LLC		(254,281)							(254,281)	
	20 2010400	Barings European Core Property Fund SCSp		(308,045)							(308,045)	
	81-3000420	MM Debt Participations LLC		(308,043)							(325,000)	
	01-0000420	Barings Affordable Housing Mortgage Fund I									(323,000).	
		LLC		(355,980)							(355,980)	
	46-5491311	Seattle 1415 Hotel Owner LLC		(367,108)							(367,108)	
	40-5491511	OPPENHEIMERFUNDS ICAV	(404,612)								(404,612)	
	81-4258759	CRA Aircraft Holding LLC		(480,000)							(404,012)	
		CML Mezzanine Investor, LLC		(480,000) (547.449)							(480,000)	
	06-1041383 80-0691253	Gateway Mezzanine Investor, LLC		(547,449) (641,178)							(547,449) (641,178)	
	71-1018134			(849,114)							(849,114)	
	20-4819358	Great Lakes II LLC Johnston Groves LLC		(849,114) (954,687)							(849,114) (954.687)	
		Cambridge Hotel LLC		(954,687)							(954,687)	
	27-0547156	Cornerstone Real Estate Fund VIII LP										
	46-2344300	Intermodal Holdings LLC		(1,334,200) (1,415,700)							(1,334,200) (1,415,700)	
	46-2344300 20-2970495			(1,415,700)								
		Waterford Development Associates									(1,428,898)	
	04-1590850	MML Mezzanine Investor L, LLC		(1,484,635)							(1,484,635)	
	06-1041383	CML Mezzanine Investor III, LLC		(1,495,397)							(1,495,397)	
		Twenty Two Liberty LLC		(1,950,000)							(1,950,000)	
	81-4382111	Budapester Strasse LLC		(1,960,595)						<u></u> ∤	(1,960,595)	
	30-0336246	Tower Square Capital Partners II, L.P	<u> k</u>	(2,009,574)							(2,009,574)	

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					Purchases, Sales	Incurred in		. ,				Reinsurance
					or Exchanges of	Connection with		Income/		Any Other Material		Recoverable/
					Loans, Securities,	Guarantees or		(Disbursements)		Activity Not in the		(Payable) on
NAIC	15			0 11 1	Real Estate,	Undertakings for	Management	Incurred Under		Ordinary Course of		Losses and/or
Company	ID	Names of Insurers and Parent,	Shareholder	Capital	Mortgage Loans or	the Benefit of any	Agreements and	Reinsurance		the Insurer's	T	Reserve Credit
Code	Number	Subsidiaries or Affiliates	Dividends	Contributions	Other Investments	Affiliate(s)	Service Contracts	Agreements		Business	Totals	Taken/(Liability)
	16–1720387	Alexandria Towers Investors LLC		(2,396,120)							(2,396,120)	
	45-3751572	Cornerstone Enhanced Mortgage Fund I LP		(2,446,842)							(2,446,842)	
	06-1563535	The MassMutual Trust Company, FSB	(2,500,000)								(2,500,000)	
	45-5401109	Washington Gateway Apartments Venture LLC										
				(2,519,912)							(2,519,912)	
		CML Special Situations Investor LLC		(2,607,906)							(2.607.906)	
	47-3517233	MML Series II Asset Momentum Fund	(2,967,885)								(2,967,885)	
	46-3122029	WeHo Domain LLC	(2,001,000)	(2,974,321)							(2,974,321)	
	27-2977720	Sawgrass Village Shopping Center LLC		(3,324,993)							(3,324,993)	
		wood creek venture Fund LLC		(3,328,920)							(3,328,920)	
	47-3544629	MML Series II Equity Rotation Fund	(3,360,067)								(3,360,067)	
	81–1552222	Willowwood Lakeside Master LLC		(4,210,080)							(4,210,080)	
	46-5437441	Barings/LAZ Parking Fund LP		(4,747,473)							(4,747,473)	
	04-1590850	MML Mezzanine Investor, LLC		(4,927,037)							(4,927,037)	
	46-3880526	Farringdon London Holdings LLC		(4,941,880)							(4,941,880)	
	45-2632610	Cornerstone Permanent Mortgage Fund		(5,333,156)							(5,333,156)	
	98-1332384	Barings Global Energy Infrastructure Fund										
		I LP		(5,706,215)							(5,706,215)	
	82-1512591	KKR MM Project Vector LP		(5,881,034)							(5,881,034)	
		WE SO THE										
	26–4441097	WP-SC, LLC		(6,948,079)								
		OPPENHEIMER GLOBAL REAL ESTATE FD	(7,509,106)								(7,509,106)	
	32–0160190	Tower Square Capital Partners II-A, L.P		(7,645,202)							(7,645,202)	
	04-1590850	MML Mezzanine Investor II, LLC		(8,788,710)							(8,788,710)	
	26-1611591	Fallon Cornerstone One MPD LLC		(10, 126, 558)							(10, 126, 558)	
		Great Lakes III, L.P.		(13,058,261)							(13,058,261)	
	04-1590850	MML Mezzanine Investor III, LLC		(13,458,577)							(13,458,577)	
	90-0991195	Gateway Mezzanine Partners II LP		(16,367,279)							(16,367,279)	
	45-4606547	UK LIW Member LLC		(16,487,566)							(16,487,566)	
	20-0348173	CREA/PPC Venture LLC		(23,437,699)							(23,437,699)	
	36-4770946	Cornerstone High Yield Venture LP		(23,537,615)							(23,537,615)	
		Barings Real Estate European Value Add I		(20,007,010)								
				(05 000 070)							(05,000,070)	
		SCSp										
		Baring Investment Series LLC		(25,418,967)							(25,418,967)	
		Barings Global Private Loan Fund										
	20-3347091	Fan Pier Development LLC		(29,353,835)							(29,353,835)	
	41-2280129	Tower Square Capital Partners IIIA, L.P		(39,412,688)							(39,412,688)	
		Jefferies Finance LLC		(40,000,000)								
		MML Special Situations Investor LLC		(40,857,186)							(40,857,186)	
	82-3393166	Portland 400 Sixth Manager LLC		(41,559,148)							(41,559,148)	
	81-4065378	Remington L & W Holdings LLC		(46,461,590)							(46,461,590)	
	47-5322979	Timberland Forest Holding LLC		(55,556,468)							(55,556,468)	
	82-3250684											
		MML Investment Advisers, LLC		(71,684,844)							(71,684,844)	
		50 Liberty LLC										

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						Income/						
						(Disbursements)						
					Purchases, Sales	Incurred in						Reinsurance
					or Exchanges of	Connection with		Income/		Any Other Material		Recoverable/
					Loans, Securities,	Guarantees or		(Disbursements)		Activity Not in the		(Payable) on
NAIC					Real Estate,	Undertakings for	Management	Incurred Under		Ordinary Course of		Losses and/or
Company	ID	Names of Insurers and Parent,	Shareholder	Capital	Mortgage Loans or	the Benefit of any	Agreements and	Reinsurance		the Insurer's		Reserve Credit
Code	Number	Subsidiaries or Affiliates	Dividends	Contributions	Other Investments	Affiliate(s)	Service Contracts	Agreements	*	Business	Totals	Taken/(Liability)
	04-1590850	Insurance Road LLC		(177,754,582)							(177,754,582)	
	04-2854319	MassMutual Holding LLC	(900,000,000)								(556,511,362)	
	04-3313782	MassMutual International LLC		(1,368,732,774)							(1,368,732,774)	
9999999 Cor	ntrol Totals								XXX			

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

The following supplemental reports are required to be filed as part of your statement filing unless specifically waived by the domiciliary state. However, in the event that your domiciliary state waives the filing requirement, your response of WAIVED to the specific interrogatory will be accepted in lieu of filing a "NONE" report and a bar code will be printed below. If the supplement is required of your company but is not being filed for whatever reason enter SEE EXPLANATION and provide an explanation following the interrogatory questions.

		Responses
	MARCH FILING	
1.	Will the Supplemental Compensation Exhibit be filed with the state of domicile by March 1?	YES
2.	Will the confidential Risk-based Capital Report be filed with the NAIC by March 1?	YES
3.	Will the confidential Risk-based Capital Report be filed with the state of domicile, if required, by March 1?	YES
4.	Will an actuarial opinion be filed by March 1?	YES
	APRIL FILING	
5.	Will Management's Discussion and Analysis be filed by April 1?	YES
6.	Will the Life, Health & Annuity Guaranty Association Model Act Assessment Base Reconciliation Exhibit be filed with the state of domicile and the	YES
	NAIC by April 1?	160
7.	Will the Adjustments to the Life, Health & Annuity Guaranty Association Model Act Assessment Base Reconciliation Exhibit (if required) be filed with the state of domicile and the NAIC by April 1?	YES
8.	Will the Supplemental Investment Risks Interrogatories be filed by April 1?	YES
	JUNE FILING	
9.	Will an audited financial report be filed by June 1?	YES
10.	Will Accountant's Letter of Qualifications be filed with the state of domicile and electronically with the NAIC by June 1?	YES
10.	AUGUST FILING	
11.	Will the regulator-only (non-public) Communication of Internal Control Related Matters Noted in Audit be filed with the state of domicile and	
11.	electronically with the NAIC (as a regulator-only non-public document) by August 1?	YES

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

12.	Will Schedule SIS (Stockholder Information Supplement) be filed with the state of domicile by March 1?	NO
13.	Will the Medicare Supplement Insurance Experience Exhibit be filed with the state of domicile and the NAIC by March 1?	NO
14.	Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC by March 1?	NO
15.	Will the actuarial opinion on participating and non-participating policies as required in Interrogatories 1 and 2 to Exhibit 5 be filed with the state of domicile and electronically with the NAIC by March 1?	NO
16.	Will the actuarial opinion on non-guaranteed elements as required in interrogatory #3 to Exhibit 5 be filed with the state of domicile and electronically with the NAIC by March 1?	YES
17.	Will the actuarial opinion on X-Factors be filed with the state of domicile and electronically with the NAIC by March 1?	NO
18.	Will the actuarial opinion on Separate Accounts Funding Guaranteed Minimum Benefit be filed with the state of domicile and electronically with the NAIC by March 1?	NO
19.	Will the actuarial opinion on Synthetic Guaranteed Investment Contracts be filed with the state of domicile and electronically with the NAIC by March 1?	NO
20.	Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC by March 1?	NO
21.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC by March 1?	NO
22.	Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC by March 1?	NO
23.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC by March 1?	NO
24.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC by March 1?	NO
25.	Will the C-3 RBC Certifications required under C-3 Phase I be filed with the state of domicile and electronically with the NAIC by March 1?	YES
26.	Will the C-3 RBC Certifications required under C-3 Phase II be filed with the state of domicile and electronically with the NAIC by March 1?	YES

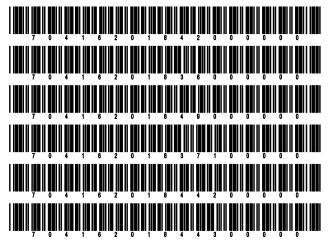
SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

27.	Will the Actuarial Certifications Related to Annuity Nonforfeiture Ongoing Compliance for Equity Indexed Annuities be filed with the state of domicile and electronically with the NAIC by March 1?		
28.	Will the actuarial opinion required by the Modified Guaranteed Annuity Model Regulation be filed with the state of domicile and electronically with the NAIC by March 1?		
29.	Will the Actuarial Certifications Related to Hedging required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1?		
30.	Will the Financial Officer Certification Related to Clearly Defined Hedging Strategy required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1?		
31.	Will the Management Certification That the Valuation Reflects Management's Intent required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1?		
32.	Will the Actuarial Certification Related to the Reserves required by Actuarial Guideline XLIII be filed with the state of domicile and electronically with the NAIC by March 1?		
33.	Will the Actuarial Certification regarding the use of 2001 Preferred Class Tables required by the Model Regulation Permitting the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserve Liabilities be filed with the state of domicile and electronically with the NAIC by March 1?		
34.	Will the Worker's Compensation Carve-Out Supplement be filed by March 1?		
35.	Will Supplemental Schedule O be filed with the state of domicile and the NAIC by March 1?		
36.	ill the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC by March 1?		
37.	Will an approval from the reporting entity's state of domicile for relief related to the five-year rotation requirement for lead audit partner be filed electronically with the NAIC by March 1?		
38.	Will an approval from the reporting entity's state of domicile for relief related to the one-year cooling off period for independent CPA be filed electronically with the NAIC by March 1?		
39.	Will an approval from the reporting entity's state of domicile for relief related to the Requirements for Audit Committees be filed electronically with the NAIC by March 1?		
40.	Will the VM-20 Reserves Supplement be filed with the state of domicile and the NAIC by March 1?		
	APRIL FILING		
41.	Will the confidential Regulatory Asset Adequacy Issues Summary (RAAIS) required by the Valuation Manual be filed with the state of domicile by April 1?		
42.	Will the Long-Term Care Experience Reporting Forms be filed with the state of domicile and the NAIC by April 1?		
43.	Will the Interest-Sensitive Life Insurance Products Report Forms be filed with the state of domicile and the NAIC by April 1?		
44.	Will the Credit Insurance Experience Exhibit be filed with the state of domicile and the NAIC by April 1?		
45.	Will the Accident and Health Policy Experience Exhibit be filed by April 1?		
46.	Will the Analysis of Annuity Operations by Lines of Business be filed with the state of domicile and the NAIC by April 1?		
47.	Will the Analysis of Increase in Annuity Reserves During the Year be filed with the state of domicile and the NAIC by April 1?		
48.	Will the Supplemental Health Care Exhibit (Parts 1, 2 and 3) be filed with the state of domicile and the NAIC by April 1?		
49.	Will the regulator only (non-public) Supplemental Health Care Exhibit's Expense Allocation Report be filed with the state of domicile and the NAIC by April 1?		
50.	Will the confidential Actuarial Memorandum required by Actuarial Guideline XXXVIII 8D be filed with the state of domicile by April 30?		
51.	Will the Supplemental Term and Universal Life Insurance Reinsurance Exhibit be filed with the state of domicile and the NAIC by April 1?		
52.	Will the Variable Annuities Supplement be filed with the state of domicile and the NAIC by April 1?		
53.	Will Management's Report of Internal Control Over Financial Reporting be filed with the state of domicile by August 1?		

Not Required 12.

13. 14. This line of business is not written by the company.

- Not Required 15. Not Required
- 17. Not Required
- 18. Not Required
- Not Required Not Required 19.
- 20. 21. Not Required
- 22 Not Required
- 22. 23. 24. Not Required
- Not Required This line of business is not written by the company. 27. 28. This line of business is not written by the company.
- 29. Not Required
- 30. Not Required
- 33. Not Regured
- 34. 35. This line of business is not written by the company. This line of business is not written by the company.
- 36. 37. This line of business is not written by the company.
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- 38.
- Not Requred Not Requred This line of business is not written by the company. 39. 42.
- This line of business is not written by the company. This line of business is not written by the company. 44
- 45 48. This line of business is not written by the company
- 49 This line of business is not written by the company.
- 50. Not Required
- 51 Not Required Does not meet the threshold of \$500 million premium test. 53.
- Bar Codes
- 12. SIS Stockholder Information Supplement [Document Identifier 420]
- Medicare Supplement Insurance Experience Exhibit [Document Identifier 360] 13.
- 14 Trusteed Surplus Statement [Document Identifier 490]
- Participating Opinion for Exhibit 5 [Document Identifier 371] 15.
- Actuarial Opinion on X-Factors [Document Identifier 442] 17.
- 18. Actuarial Opinion on Separate Accounts Funding Guaranteed Minimum Benefit [Document Identifier 443]



ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES				
19.	Actuarial Opinion on Synthetic Guaranteed Investment Contracts [Document Identifier 444]			
20.	Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]			
21.	Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]			
22.	Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]			
23.	Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]			
24.	Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]			
27.	Actuarial Certifications Related to Annuity Nonforfeiture Ongoing Compliance for Equity Indexed Annuities [Document Identifier 452]			
28.	Modified Guaranteed Annuity Model Regulation [Document Identifier 453]			
29.	Actuarial Certifications Related to Hedging required by Actuarial Guideline XLIII [Document Identifier 436]			
30.	Financial Officer Certification Related to Clearly Defined Hedging Strategy required by Actuarial Guideline XLIII [Document Identifier 437]			
33.	Actuarial Certification regarding the use of 2001 Preferred Class Tables required by the Model Regulation Permitting the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserve Liabilities [Document Identifier 454]			
34.	Workers' Compensation Carve-Out Supplement [Document Identifier 495]			
35.	Supplemental Schedule O [Document Identifier 465]			
36.	Medicare Part D Coverage Supplement [Document Identifier 365]			
37.	Relief from the five-year rotation requirement for lead audit partner [Document Identifier 224]			
38.	Relief from the one-year cooling off period for independent CPA [Document Identifier 225]			
39.	Relief from the Requirements for Audit Committees [Document Identifier 226]			
42.	Long-Term Care Experience Reporting Forms [Document Identifier 306]			
44.	Credit Insurance Experience Exhibit [Document Identifier 230]			
45.	Accident and Health Policy Experience Exhibit [Document Identifier 210]			
48.	Supplemental Health Care Exhibit (Parts 1, 2 and 3) [Document Identifier 216]			
49.	Supplemental Health Care Exhibit's Expense Allocation Report [Document Identifier 217]			
50.	Actuarial Memorandum Required by Actuarial Guideline XXXVIII 8D [Document Identifier 435]			
51.	Supplemental Term and Universal Life Insurance Reinsurance Exhibit [Document Identifier 345]			

NONE

SUMMARY INVESTMENT SCHEDULE Admitted Assets as Reported Gross Investment Holdings in the Annual Statement 3 4 6 Securities Lending Reinvested Total (Col. 3 + 4) Collateral Percentage Amount Investment Categories Amount Amount Amount Percentage 1. Bonds: 1.1 U.S. treasury securities 39.523.594 8.241 39.523.594 39.523.594 8.241 1.2 U.S. government agency obligations (excluding mortgage-backed securities): .0.000 .0.000 1.21 Issued by U.S. government agencies . 0.000 0.000 1.22 Issued by U.S. government sponsored agencies 1.3 Non-U.S. government (including Canada, excluding mortgaged-backed 0.000 0.000 securities) 1.4 Securities issued by states, territories, and possessions and political subdivisions in the U.S. : 1.41 States, territories and possessions general obligations .0.000 0.000 1.42 Political subdivisions of states, territories and possessions and .0.000 0.000 political subdivisions general obligations 0.000 0.000 1.43 Revenue and assessment obligations 1.44 Industrial development and similar obligations .0.000 0 000 1.5 Mortgage-backed securities (includes residential and commercial MBS) 1.51 Pass-through securities: 1.511 Issued or guaranteed by GNMA ... 4.997 0 001 4.997 4.997 0 001 0.000 0.000 1.512 Issued or guaranteed by FNMA and FHLMC ... 11,310,835 2.358 11,310,835 11,310,835 .2.358 1.513 All other 1.52 CMOs and REMICs: .47,543 .0.010 ...47,543 .47,543 0.010 1.521 Issued or guaranteed by GNMA. FNMA. FHLMC or VA 1.522 Issued by non-U.S. Government issuers and collateralized by mortgage-backed securities issued or guaranteed by 0 000 agencies shown in Line 1.521 ... 0 000 .85.210.674 .17.766 .85,210,674 85.210.674 17.766 1.523 All other ... 2. Other debt and other fixed income securities (excluding short-term): 2.1 Unaffiliated domestic securities (includes credit tenant loans and hybrid 175.916.566 36 678 175.916.566 175.916.566 36 678 securities) .38,271,586 .7.980 .38,271,586 .38,271,586 7.980 2.2 Unaffiliated non-U.S. securities (including Canada) . 2.3 Affiliated securities .6,205,278 ..1.294 .6,205,278 .6,205,278 .1.294 3. Equity interests: .0.000 .0.000 3.1 Investments in mutual funds 3.2 Preferred stocks: .0.000 0.000 3.21 Affiliated .0.000 3.22 Unaffiliated 0.000 3.3 Publicly traded equity securities (excluding preferred stocks): 0.000 0.000 3.31 Affiliated 3.32 Unaffiliated ..0.000 0.000 3.4 Other equity securities: .0.000 3.41 Affiliated 0.000 0.000 0 000 3.42 Unaffiliated 3.5 Other equity interests including tangible personal property under lease .0.000 0 000 3.51 Affiliated 0.000 0.000 3 52 Unaffiliated 4. Mortgage loans: 4.1 Construction and land development 0 000 0 000 ..0.000 .0.000 4.2 Agricultural . 2.744.083 0.572 2.744.083 2.744.083 0.572 4.3 Single family residential properties 0.000 0.000 4.4 Multifamily residential properties ..0.000 0.000 4.5 Commercial loans 0.000 0.000 4.6 Mezzanine real estate loans Real estate investments: .0.000 .0.000 5.1 Property occupied by company 5.2 Property held for production of income (including \$0 of property acquired in satisfaction of 0.000 0.000 debt)0 5.3 Property held for sale (including \$.0.000 .0.000 property acquired in satisfaction of debt) ... 96 005 102 20 017 Contract loans 96 005 102 96 005 102 20 017

24,369,505

479,619,597

9,834

.0.000

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0.002

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24,369,505

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XXX

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7.

8.

9

10.

11.

12.

Derivatives.

Receivables for securities

Other invested assets

Total invested assets

Securities Lending (Line 10, Asset Page reinvested collateral).

Cash, cash equivalents and short-term investments .

SCHEDULE A - VERIFICATION BETWEEN YEARS

	Real Estate	
1.	Book/adjusted carrying value, December 31 of prior year	
2.	Cost of acquired:	
	2.1 Actual cost at time of acquisition (Part 2, Column 6)	
	2.2 Additional investment made after acquisition (Part 2, Column 9)	
3.	Current year change in encumbrances:	
	3.1 Totals, Part 1, Column 13	
	3.2 Totals, Part 3, Column 11	
4.	Total gain (loss) on disposals, Part 3, Column 18	
5.	Deduct amounts received on disposals, Part 3, Origina 15	
6.	Total foreign exchange change in book/adjusted and g van:	
	6.1 Totals, Part 1, Column 15	
	6.2 Totals, Part 3, Column 13	
7.	Deduct current year's other than temporary impairment recognized:	
	7.1 Totals, Part 1, Column 12	
	7.2 Totals, Part 3, Column 10	
8.	Deduct current year's depreciation:	
	8.1 Totals, Part 1, Column 11	
	8.2 Totals, Part 3, Column 9	
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)	
10.	Deduct total nonadmitted amounts	
11.	Statement value at end of current period (Line 9 minus Line 10)	

SCHEDULE B - VERIFICATION BETWEEN YEARS

Mortgage Loans

1.	Book value/recorded investment excluding accrued interest, December 31 of prior year	3, 187, 846
2.	Cost of acquired:	
	2.1 Actual cost at time of acquisition (Part 2, Column 7)	
	2.2 Additional investment made after acquisition (Part 2, Column 8)	
3.	Capitalized deferred interest and other:	
	3.1 Totals, Part 1, Column 12	
	3.2 Totals, Part 3, Column 11	
4.	Accrual of discount	
5.	Unrealized valuation increase (decrease):	
	5.1 Totals, Part 1, Column 9	
	5.2 Totals, Part 3, Column 8	
6.	Total gain (loss) on disposals, Part 3, Column 18	
7.	Deduct amounts received on disposals, Part 3, Column 15	440,677
8.	Deduct amortization of premium and mortgage interest points and commitment fees	4,998
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest:	
	9.1 Totals, Part 1, Column 13	
	9.2 Totals, Part 3, Column 13	
10.	Deduct current year's other than temporary impairment recognized:	
	10.1 Totals, Part 1, Column 11	
	10.2 Totals, Part 3, Column 10	
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	2,744,083
12.	Total valuation allowance	
13.	Subtotal (Line 11 plus 12)	2,744,083
14.	Deduct total nonadmitted amounts	
15.	Statement value of mortgages owned at end of current period (Line 13 minus Line 14)	2,744,083

SCHEDULE BA - VERIFICATION BETWEEN YEARS

Other Long-Term Invested Assets

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

SCHEDULE D - VERIFICATION BETWEEN YEARS

Bonds and Stocks

1.	Book/adjusted carrying value, December 31 of prior year	
2.	Cost of bonds and stocks acquired, Part 3, Column 7	
3.	Accrual of discount	
4.	Unrealized valuation increase (decrease):	
	4.1. Part 1, Column 12	
	4.2. Part 2, Section 1, Column 15	
	4.3. Part 2, Section 2, Column 13	
	4.4. Part 4, Column 11	(20,586)
5.	Total gain (loss) on disposals, Part 4, Column 19	(240,855)
6.	Deduction consideration for bonds and stocks disposed of, Part 4, Column 7	
7.	Deduct amortization of premium	
8.	Total foreign exchange change in book/adjusted carrying value:	
	8.1. Part 1, Column 15	
	8.2. Part 2, Section 1, Column 19	
	8.3. Part 2, Section 2, Column 16	
	8.4. Part 4, Column 15	
9.	Deduct current year's other than temporary impairment recognized:	
	9.1. Part 1, Column 14	
	9.2. Part 2, Section 1, Column 17	
	9.3. Part 2, Section 2, Column 14	
		17 033
	9.4. Part 4, Column 13	
10.	9.4. Part 4, Column 13 Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Notes 5R, Line 5R(2)	
10. 11.		
-	Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Notes 5R, Line 5R(2)	

SCHEDULE D - SUMMARY BY COUNTRY Long-Term Bonds and Stocks OWNED December 31 of Current Year

		Long-Term Bonds and Sto	cks OWNED December 31			
n	escripti		1 Book/Adjusted Carrying Value	2 Fair Value	3 Actual Cost	4 Par Value of Bonds
BONDS	<u>escripti</u> 1.	United States				
Governments	2.	Canada	,			
(Including all obligations guaranteed	3.	Other Countries				
by governments)	4.		39,528,591	38,906,142	39,562,647	39,505,087
U.S. States, Territories and Possessions					,,	
(Direct and guaranteed)	5.	Totals				
U.S. Political Subdivisions of States, Territories and Possessions (Direct and guaranteed)	6.	Totals				
U.S. Special Revenue and Special Assessment Obligations and all Non- Guaranteed Obligations of Agencies and Authorities of Governments and				54.005		10,075
their Political Subdivisions	7.	Totals	47,543	51,935	49,339	46,675
Industrial and Miscellaneous. SVO	8.	United States				
Identified Funds, Bank Loans and	9.	Canada	, ,	, ,		
Hybrid Securities (unaffiliated)	10.	Other Countries	31,674,726	31,167,729	31,513,143	31,794,267
	11.	Totals	310,643,199	306,532,104	310,637,362	312,456,297
Parent, Subsidiaries and Affiliates	12.	Totals	6,271,740	6,287,920	6,364,842	6,440,291
	13.	Total Bonds	356,491,073	351,778,101	356,614,190	358,448,350
PREFERRED STOCKS	14.	United States				
Industrial and Miscellaneous (unaffiliated)	15.	Canada				
(unannatod)	16.	Other Countries Totals				
Parent. Subsidiaries and Affiliates	<u>17.</u> 18.	Totals				
Parent, Subsidiaries and Amiliates		Total Preferred Stocks				
COMMON STOCKS	19. 20.					
Industrial and Miscellaneous	20. 21.	United States				
(unaffiliated)	21.	Canada Other Countries				
	22.	Totals				
Parent, Subsidiaries and Affiliates	24.	Totals				
	25.	Total Common Stocks				
	25.	Total Stocks				
	27.	Total Bonds and Stocks	356,491,073	351,778,101	356,614,190	

SCHEDULE D - PART 1A - SECTION 1

Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

		2	3		5	6	es by Major Types	8	9	10	11	12
	1	Over 1 Year	Over 5 Years	Over 10 Years	°,	No Maturity	1	Col. 7 as a % of	Total from Col. 7	% From Col. 8	Total Publicly	Total Privately
NAIC Designation	1 Year or Less	Through 5 Years	Through 10 Years	Through 20 Years	Over 20 Years	Date	Total Current Year	Line 11.7	Prior Year	Prior Year	Traded	Placed (a)
1. U.S. Governments		00 500 407				2004	00 500 501		00 544 450	10.7		
1.1 NAIC 1 1.2 NAIC 2						XXX XXX		10.4				
1.3 NAIC 3												
1.4 NAIC 4						XXX XXX						
1.5 NAIC 5 1.6 NAIC 6												
1.6 NAIC 6 1.7 Totals	. 1.858	39,526,437	296			XXX	39,528,591	10.4	39,541,459	10.7	39,528,591	
2. All Other Governments	1,000	39,320,437	290			XXX	39,528,391	10.4	39, 341, 439	10.7	39,328,391	
						2007						
2.1 NAIC 1						XXX						
2.2 NAIC 2						XXX						
2.3 NAIC 3						XXX						
2.4 NAIC 4						XXX						
2.5 NAIC 5						XXX						
2.6 NAIC 6						XXX						
2.7 Totals						XXX						
3. U.S. States, Territories and Possessions etc.,												
Guaranteed						1004						
3.1 NAIC 1						XXX						
3.2 NAIC 2						XXX						
3.3 NAIC 3						XXX						
3.4 NAIC 4						XXX						
3.5 NAIC 5						XXX						
3.6 NAIC 6						XXX						
3.7 Totals						XXX						
4. U.S. Political Subdivisions of States, Territories and												
Possessions, Guaranteed						1004						
4.1 NAIC 1						XXX						
4.2 NAIC 2						XXX						
4.3 NAIC 3						XXX						
4.4 NAIC 4						XXX						
4.5 NAIC 5						XXX						
4.6 NAIC 6						XXX						
4.7 Totals						XXX						
5. U.S. Special Revenue & Special Assessment												
Obligations, etc., Non-Guaranteed	0.075					100/			FF 00.1			
5.1 NAIC 1			11,575	1,111		XXX				0.0	47,542	
5.2 NAIC 2						XXX						
5.3 NAIC 3						XXX						
5.4 NAIC 4						XXX						
5.5 NAIC 5						XXX						
5.6 NAIC 6						XXX						
5.7 Totals	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	

SCHEDULE D - PART 1A - SECTION 1 (Continued) Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

							ues by Major Types	OI ISSUES AND INF		10	11	12
	I	Over 1 Year	Over 5 Years	Over 10 Years	5	No Maturity	/	o Col. 7 as a % of	Total from Col. 7	% From Col. 8	Total Publicly	Total Privately
NAIC Designation	1 Year or Less	Through 5 Years	Through 10 Years	Through 20 Years	Over 20 Years	Date	Total Current Year	Line 11.7	Prior Year	Prior Year	Traded	Placed (a)
6. Industrial & Miscellaneous (Unaffiliated)												
6.1 NAIC 1					2,520,552	XXX						
6.2 NAIC 2				1,285,224	1,451,741	XXX	129,370,901		135,679,622			
6.3 NAIC 3		1,134,969				XXX	1,859,293	0.5	1,742,542			1,016,30
6.4 NAIC 4			2,001,644				2,508,988	0.7	2,699,406	0.7	2,508,988	
6.5 NAIC 5	61,447	72.248				XXX	180,148	.0.0		0.1	,. ,.	
6.6 NAIC 6	,	,	1,440	159		XXX	1,599	0.0	,		1,599	,
6.7 Totals	36,365,036	66,507,353	223,482,112	5,359,069	3,972,293		335,685,863	88.0	323,595,481	87.3	240,255,549	95,430,31
7. Hybrid Securities	, ,	, ,	, ,	, ,	, ,		, ,		, ,		, ,	, ,
7.1 NAIC 1						XXX						
7.2 NAIC 2						XXX			350.000	0.1		
7.3 NAIC 3						XXX			,	······································		
7.4 NAIC 4						XXX						
7.5 NAIC 5						XXX						
7.6 NAIC 6						XXX						
7.7 Totals						XXX			350,000	0.1		
8. Parent, Subsidiaries and Affiliates						7000			000,000	0.1		
8.1 NAIC 1				7.814		xxx		1.3		1.6		
8.2 NAIC 2						XXX		0.2		0.2		
8.3 NAIC 3						XXX						
8.4 NAIC 4						XXX						
8.5 NAIC 5						XXX						
8.6 NAIC 5					431,866		431,866	0.1	452,453	0.1		431,86
8.7 Totals	6.586	1.368.060	4,457,415	7.814	431,866		6,271,741	1.6		1.9	34.887	6,236,85
9. SVO Identified Funds	0,000	1,300,000	4,437,413	7,014	431,000	~~~	0,271,741	1.0	7,039,005	1.3	34,007	0,230,63
		2004	2007	2007	2004							
9.1 NAIC 1		XXX	XXX	XXX	XXX							
9.2 NAIC 2		XXX	XXX	XXX	XXX							
9.3 NAIC 3	XXX	XXX	XXX	XXX	XXX							
9.4 NAIC 4		XXX	XXX	XXX	XXX							
9.5 NAIC 5		XXX	XXX	XXX	XXX							
9.6 NAIC 6	XXX	XXX	XXX	XXX	XXX	-			-			
9.7 Totals	XXX	XXX	XXX	XXX	XXX							
10. Bank Loans												
10.1 NAIC 1						XXX			XXX	XXX		
10.2 NAIC 2						XXX			XXX	XXX		
10.3 NAIC 3						XXX			XXX	XXX		
10.4 NAIC 4						XXX			XXX	XXX		
10.5 NAIC 5						XXX			XXX	XXX		
10.6 NAIC 6						XXX			XXX	XXX		
10.7 Totals						XXX			XXX	XXX		

SCHEDULE D - PART 1A - SECTION 1 (Continued)

Quality and Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Types of Issues and NAIC Designations

	Quality and I	Maturity Distributi	ion of All Bonds C	whed December 3	31, at Book/Adjus	ted Carrying valu	les by Major Types	of issues and INA	AIC Designations			
	1	2	3	4	5	6	7	8	9	10	11	12
		Over 1 Year	Over 5 Years	_Over 10 Years	0 00 1	No Maturity	T	Col. 7 as a % of	Total from Col. 7	% From Col. 8	Total Publicly	Total Privately
NAIC Designation	1 Year or Less	Through 5 Years	Inrough 10 Years	Through 20 Years	Over 20 Years	Date	Total Current Year	Line 11.7	Prior Year	Prior Year	Traded	Placed (a)
11. Total Bonds Current Year	0 000 405	00 400 550	454 004 004	4 000 000	0 500 550		0.40 407 500				100 110 050	55 000 570
11.1 NAIC 1	(d)3,339,405			4,080,030	2,520,552					XXX		
11.2 NAIC 2	(d)32,487,341	23,680,446		1,285,224	1,451,741				XXX	XXX		
11.3 NAIC 3	(d)64,434	1, 134, 969					1,859,293	0.5	XXX	XXX		1,016,306
11.4 NAIC 4	(d)430,803		2,001,644				2,508,988	0.7	XXX	XXX	2,508,988	
11.5 NAIC 5	(d)61,447						(c)180,148	0.0	XXX	XXX		
11.6 NAIC 6	(d)		1,440	159	431,866		(c) 433,465	0.1	XXX	XXX	1,599	431,866
11.7 Totals		107,426,756			4,404,159		(b)381,533,737		XXX	XXX		
11.8 Line 11.7 as a % of Col. 7	9.5	28.2	59.7	1.4	1.2		100.0	XXX	XXX	XXX	73.4	26.6
12. Total Bonds Prior Year												
12.1 NAIC 1	.5,904,907		130.372.977	4.689.455	1.585.154		XXX	XXX	228.736.283	61.7		
12.2 NAIC 2	56,709,651	28,889,348	47,635,293	2,112,984	1,452,970		XXX	XXX	136,800,246	36.9		66,567,582
12.3 NAIC 3	107,559				,		XXX	XXX	1,742,542	0.5		1,409,626
12.4 NAIC 4	435.997		2.001.831				XXX	XXX	2,699,406	0.7	2.514.815	
12.5 NAIC 5	75.978			1.964			XXX	XXX	(c)211,599	0.1		211,599
12.6 NAIC 6					452,453		XXX	XXX	(c) 452,453	0.1		452,453
12.7 Totals							XXX		(b)370,642,529			
12.7 Totals		31.4	48.7	1.9					(b)	XXX		147,381,880
	17.1	31.4	40.7	1.9	0.9		***	***	100.0	***	00.2	39.0
13. Total Publicly Traded Bonds	700,005	E4 004 04E	40.4 000 000	0.005.500	4 045 000		190.443.952	49.9	150.180.248	40.5	100 110 050	1004
13.1 NAIC 1					1,015,680							XXX
13.2 NAIC 2	7,071,428			1, 102,983	1,451,741							XXX
13.3 NAIC 3								0.2		0.1		XXX
13.4 NAIC 4			2,001,644				2,508,988	0.7	2,514,815	0.7	2,508,988	XXX
13.5 NAIC 5												XXX
13.6 NAIC 6			1,440	159			1,599	0.0			1,599	XXX
13.7 Totals					2,467,421							XXX
13.8 Line 13.7 as a % of Col. 7				1.2	0.9			XXX	XXX	XXX		XXX
13.9 Line 13.7 as a % of Line 11.7, Col. 7,												
Section 11	2.2	19.2	50.4	0.9	0.6		73.4	XXX	XXX	XXX	73.4	XXX
14. Total Privately Placed Bonds												
14.1 NAIC 1				1,714,444	1,504,872						XXX	
14.2 NAIC 2	25,415,913	2,636,923	15,840,193				44,075,270		66,567,582		XXX	44,075,270
14.3 NAIC 3							1,016,306		1,409,626		XXX	1,016,306
14.4 NAIC 4	, , , , , , , , , , , , , , , , , , , ,	, -	, .							0.0	XXX	, , , , , , , , , , , , , , , , , , , ,
14.5 NAIC 5	.61,447			2,581				0.0		0.1	XXX	
14.6 NAIC 6	,,.,	,=			431,866		431,866	0.1	452,453	0.1	XXX	431,866
14.7 Totals	28,084,394	34.078.790		1,899,266	1,936,738			26.6		39.8	XXX	
14.8 Line 14.7 as a % of Col. 7				1.9	1.9					XXX		
14.9 Line 14.7 as a % of Line 11.7, Col. 7,												
Section 11	7.4	8.9	9.3	0.5	0.5		26.6	XXX	XXX	XXX	XXX	26.6
	, , , , , , , , , , , , , , , , , , , ,	0.0	0.0	0.0	0.0	1	20.0	/////	////	////	/////	20.0

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

SCHEDULE D - PART 1A - SECTION 2

Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Type and Subtype of Issues

	Iviatu	2			5		by Major Type and			10	11	12
	I	2 Over 1 Year	3 Over 5 Years	4 Over 10 Years	5	6 No Maturity	1	8 Col. 7 as a % of	9 Total from Col. 7	% From Col. 8	Total Publicly	Total Privately
Distribution by Type	1 Year or Less	Through 5 Years	Through 10 Years	Through 20 Years	Over 20 Years	Date	Total Current Year	Line 11.7	Prior Year	Prior Year	Traded	Placed
1. U.S. Governments	1 1001 01 2000	Through o Teals	Through to reals	Through 20 Tears	01012010013	Duic		Ellio TT.7	i noi i cai	Thorreat	Haded	T labea
1.1 Issuer Obligations						XXX	.39,523,594					
1.2 Residential Mortgage-Backed Securities	1.858	2.843	296				4.997	0.0	5.960	0.0	4.997	
1.3 Commercial Mortgage-Backed Securities	1,000	2,040								0.0		
1.4 Other Loan-Backed and Structured Securities												
1.5 Totals	1,858	39,526,437	296			XXX	39,528,591	10.4	39,541,459	10.7	39,528,591	
2. All Other Governments	1,000	00,020,407	230			~~~	00,020,001	10.4	00,041,00	10.7	00,020,001	
2.1 Issuer Obligations												
2.2 Residential Mortgage-Backed Securities						XXX XXX						
2.3 Commercial Mortgage-Backed Securities 2.4 Other Loan-Backed and Structured Securities						XXX						
						XXX						
2.5 Totals						XXX						
3. U.S. States, Territories and Possessions, Guaranteed												
3.1 Issuer Obligations						XXX						
3.2 Residential Mortgage-Backed Securities						XXX						
3.3 Commercial Mortgage-Backed Securities						XXX						
3.4 Other Loan-Backed and Structured Securities						XXX						
3.5 Totals						XXX						
4. U.S. Political Subdivisions of States, Territories and												
Possessions, Guaranteed												
4.1 Issuer Obligations						XXX						
4.2 Residential Mortgage-Backed Securities						XXX						
4.3 Commercial Mortgage-Backed Securities						XXX						
4.4 Other Loan-Backed and Structured Securities						XXX						
4.5 Totals						XXX						
5. U.S. Special Revenue & Special Assessment Obligations												
etc., Non-Guaranteed												
5.1 Issuer Obligations						XXX						
5.2 Residential Mortgage-Backed Securities				1,111		XXX		0.0		0.0		
5.3 Commercial Mortgage-Backed Securities						XXX						
5.4 Other Loan-Backed and Structured Securities						XXX						
5.5 Totals	9,950	24,906	11,575	1,111		XXX	47,542	0.0	55,924	0.0	47,542	
6. Industrial and Miscellaneous												
6.1 Issuer Obligations	33,538,669		131,833,164	2,022,765	2,444,277	XXX	202, 197, 343		168,751,977		151,780,255	
6.2 Residential Mortgage-Backed Securities	506, 188					XXX	2,170,536	0.6		0.7	1,740,905	
6.3 Commercial Mortgage-Backed Securities	54,060	15,898,700	78,331,757			XXX	94,284,517		94,522,662	.25.5	79,350,180	.14,934,33
6.4 Other Loan-Backed and Structured Securities	2,266,119	17,300,642	12,927,092	3,011,612	1,528,002	XXX	37,033,467	9.7	57,637,678	15.6	7,384,209	29,649,25
6.5 Totals	36,365,036	66,507,353	223,482,113	5,359,068	3,972,293	XXX	335,685,863	88.0	323,595,481	87.3	240,255,549	95,430,31
7. Hybrid Securities	00,000,000	00,007,000	220, 102, 110	0,000,000	0,072,200	7000	000,000,000	00.0	020,000,101	01.0	210,200,040	00,100,01
7.1 Issuer Obligations						XXX				0.1		
7.2 Residential Mortgage-Backed Securities						XXX						
7.3 Commercial Mortgage-Backed Securities						XXX						
7.4 Other Loan-Backed and Structured Securities												
7.5 Totals						XXX			350,000	0.1		
8. Parent, Subsidiaries and Affiliates						777			300,000	0.1		
8.1 Issuer Obligations				.		XXX						
8.2 Residential Mortgage-Backed Securities	6,586		9, 190	7,814		XXX		0.0		0.0	34,887	
8.3 Commercial Mortgage-Backed Securities						XXX				0.2		
8.4 Other Loan-Backed and Structured Securities		1,325,187	4,448,225		431,866	XXX	6,205,278	1.6		1.7		6,205,27
8.5 Totals	6,586	1,368,059	4,457,415	7,814	431,866	XXX	6,271,740	1.6	7,099,665	1.9	34,887	6,236,85

SCHEDULE D - PART 1A - SECTION 2 (Continued) Maturity Distribution of All Bonds Owned December 31, at Book/Adjusted Carrying Values by Major Type and Subtype of Issues

							by major Type and					
	1	2 Over 1 Year	3 Over 5 Years	4 Over 10 Years	5	6 No Maturity	7	8 Col. 7 as a % of	9 Total from Col. 7	10 % From Col. 8	11 Total Publicly	12 Total Privatelv
Distribution by Type	1 Year or Less	Through 5 Years	Through 10 Years	Through 20 Years	Over 20 Years	Date	Total Current Year	Line 11.7	Prior Year	Prior Year	Traded	Placed
9. SVO Identified Funds												
9.1 Exchange Traded Funds Identified by the SVO	XXX	XXX		XXX	XXX							
9.2 Bond Mutual Funds Identified by the SVO	XXX	XXX	XXX	XXX	XXX							
9.3 Totals	XXX	XXX	XXX	XXX	XXX							
10. Bank Loans												
10.1 Bank Loans - Issued						XXX			XXX	XXX		
10.2 Bank Loans - Acquired						XXX			XXX	XXX		
10.3 Totals						XXX			XXX	XXX		
11. Total Bonds Current Year												
11.1 Issuer Obligations	33,538,669	71.882.062	131.833.164	2.022.765	2.444.277		241.720.937	63.4		XXX	191.303.849	50.417.088
11.2 Residential Mortgage-Backed Securities		1,020,164		333,616	14	XXX	2,289,537	0.6	XXX	XXX	1,828,331	461,206
11.3 Commercial Mortgage-Backed Securities	54,060	15.898.700	78,331,757	,		XXX	94.284.517	24.7	XXX	XXX	79,350,180	14.934.337
11.4 Other Loan-Backed and Structured Securities	2,266,119	18,625,829	17,375,317	3,011,612	1,959,868	XXX	43,238,745	11.3	XXX	XXX	7,384,209	35,854,536
11.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX				XXX	XXX		
11.6 Bank Loans						XXX			XXX	XXX		
11.7 Totals		107,426,755							XXX	XXX	279,866,569	
11.8 Line 11.7 as a % of Col. 7	9.5	28.2	59.7	1.4	1.2		100.0	XXX	XXX	XXX	73.4	26.6
12. Total Bonds Prior Year												
12.1 Issuer Obligations		75.575.937	68,596,916	2.615.636	1,452,970	XXX	XXX	XXX	208.637.476	56.3	136.067.541	72.569.935
12.2 Residential Mortgage-Backed Securities	909,941	1, 140, 499	433,610		212	XXX	XXX	XXX	2,831,003	0.8	2,265,062	565.941
12.3 Commercial Mortgage-Backed Securities	115,024	13.674.663		,		XXX	XXX	XXX			79,483,023	15,830,272
12.4 Other Loan-Backed and Structured Securities	1,813,110			4,072,783		XXX	XXX	XXX		17.2	5,445,017	58,415,738
12.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX		XXX	XXX	, ,			
12.6 Bank Loans	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
12.7 Totals							XXX	XXX				
12.8 Line 12.7 as a % of Col. 9	17.1	31.4	48.7	1.9	0.9		XXX	XXX	100.0	XXX	60.2	39.8
13. Total Publicly Traded Bonds												
13.1 Issuer Obligations	7,421,062			2,022,765	2,444,277	XXX						XXX
13.2 Residential Mortgage-Backed Securities					14	XXX		0.5	2,265,062	0.6	1,828,331	XXX
13.3 Commercial Mortgage-Backed Securities		2,448,331				XXX						XXX
13.4 Other Loan-Backed and Structured Securities		1,886,308		1,261,803		XXX		1.9	5,445,017	1.5	7, 384, 208	XXX
13.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX							XXX
13.6 Bank Loans						XXX			XXX	XXX		XXX
13.7 Totals				3,468,727	2,467,421							XXX
13.8 Line 13.7 as a % of Col. 7				1.2	0.9			XXX	XXX	XXX		XXX
13.9 Line 13.7 as a % of Line 11.7, Col. 7, Section 11	2.2	19.2	50.4	0.9	0.6		73.4	XXX	XXX	XXX	73.4	XXX
14. Total Privately Placed Bonds												
14.1 Issuer Obligations		3,695,064				XXX					XXX	
14.2 Residential Mortgage-Backed Securities						XXX		0.1		0.2	XXX	
14.3 Commercial Mortgage-Backed Securities			1,429,908			XXX				4.3	XXX	
14.4 Other Loan-Backed and Structured Securities	1,869,377	16,739,521		1,749,809	1,936,738	XXX		9.4			XXX	
14.5 SVO Identified Funds	XXX	XXX	XXX	XXX	XXX						XXX	
14.6 Bank Loans						XXX			XXX	XXX	XXX	
14.7 Totals				1,899,266	1,936,738				147,381,886		XXX	101,667,168
14.8 Line 14.7 as a % of Col. 7			35.1	1.9	1.9			XXX	XXX	XXX	XXX	
14.9 Line 14.7 as a % of Line 11.7, Col. 7, Section 11	7.4	8.9	9.3	0.5	0.5		26.6	XXX	XXX	XXX	XXX	26.6

SCHEDULE DA - VERIFICATION BETWEEN YEARS

Short-Term Investments

	1	2	3	4 Other Short-term	5 Investments in Parent,
	Total	Bonds	Mortgage Loans	Investment Assets (a)	Subsidiaries and Affiliates
1. Book/adjusted carrying value, December 31 of prior year					
2. Cost of short-term investments acquired					
3. Accrual of discount					
4. Unrealized valuation increase (decrease)					
5. Total gain (loss) on disposals					
6. Deduct consideration received on disposals					
7. Deduct amortization of premium					
8. Total foreign exchange change in book/adjusted carrying value					
9. Deduct current year's other than temporary impairment recognized					
10. Book adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	6,954,698	6,954,698			
11. Deduct total nonadmitted amounts					
12. Statement value at end of current period (Line 10 minus Line 11)	6,954,698	6,954,698			

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

Schedule DB - Part A - Verification - Options, Caps, Floors, Collars, Swaps and Forwards **NONE**

Schedule DB - Part B - Verification - Futures Contracts **NONE**

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open **NONE**

Schedule DB-Part C-Section 2-Reconciliation of Replication (Synthetic Asset) Transactions Open **NONE**

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

NONE

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company SCHEDIII F F - PART 2 - VERIFICATION RETWEEN YEARS

		1	2	3 Money Market	4
		Total	Bonds	Mutual funds	Other (a)
1.	Book/adjusted carrying value, December 31 of prior year				
2.	Cost of cash equivalents acquired	1,456,893,952	1,456,893,952		
3.	Accrual of discount				
4.	Unrealized valuation increase (decrease)				
5.	Total gain (loss) on disposals				
6.	Deduct consideration received on disposals	1,496,770,547	1,496,770,547		
7.	Deduct amortization of premium				
8.	Total foreign exchange change in book/adjusted carrying value				
9.	Deduct current year's other than temporary impairment recognized				
10.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6- 7+8-9)				
11.	Deduct total nonadmitted amounts				
12.	Statement value at end of current period (Line 10 minus Line 11)	18,087,966	18,087,966		

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

Schedule A - Part 1 - Real Estate Owned

Schedule A - Part 2 - Real Estate Acquired and Additions Made **NONE**

Schedule A - Part 3 - Real Estate Disposed **NONE**

SCHEDULE B - PART 1

Showing All Mortgage Loans OWNED December 31 of Current Year

				0.1011	<u> </u>	.go _ou.io 011	NLD December 5							
1	2	Locat	ion	5	6	7	8		Change in B	ook Value/Recorde	d Investment		14	15
		3	4				Book	9	10	11	12	13		
							Value/Recorded			Current Year's				Date of
							Investment	Unrealized		Other-Than-		Total Foreign		Last
							Excluding	Valuation	Current Year's	Temporary	Capitalized	Exchange	Value of	Appraisal
				Loan	Date	Rate of	Accrued	Increase	(Amortization)/	Impairment	Deferred Interest	Change in	Land and	or
Loan Number	Code	City	State	Type	Acquired	Interest	Interest	(Decrease)	Accretion	Recognized	and Other	Book Value	Buildings	Valuation
00077AFG5		Various	State	туре	03/28/2006	Interest		(Decrease)	(527)	necognizeu	and Other	DOOK Value		03/28/2006
00077AH19		Various	νη		09/26/2006				(555)					03/26/2006
059610EF8		Various	PR											
059610N09		Various	PR		04/12/2006		258.347		(297)				251,280	
073245BC5		Various	IL		07/27/2007		236.883		1.646					
222375CD7		Various	ΤΧ											06/29/2007
258125GG2		Various	PR		11/16/2004									
709301DE2		Various	FL		09/29/2015				(1,082)					09/29/2015
749549DE8		Various	PR		06/15/2004				(50)					06/15/2004
902975BC4		Various	LA											09/28/2006
949750EF6		Various	ΤΧ	· · · · · · · · · · · · · · · · · · ·	08/15/2006									08/15/2006
949750FG3		Various	ΤΧ		09/07/2006				(141)					09/07/2006
949750GH0		Various	χ											11/07/2006
949750N07		Various	ΙΧ						(714)					
		nding - Residential mortgages-insured	or guaranteed	-			2,588,322		(4,848)				2,453,152	
749549EF4		Various	PR		06/30/2004									06/30/2004
0399999. Mortgages in g	jood stai	nding - Residential mortgages-all othe	r				155,761		433				152,736	XXX
0899999. Total Mortgage							2,744,083		(4,415)				2,605,888	
1699999. Total - Restruc														XXX
2499999. Total - Mortgag	ges with	overdue interest over 90 days												XXX
3299999. Total - Mortgag	ges in th	e process of foreclosure												XXX
3399999 - Totals							2,744,083		(4,415)				2,605,888	XXX

interest due and unpaid.

SCHEDULE B - PART 2

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

	0.1011	ng All Mongage Loans Alogo						
1	Location		4	5	6	7	8	9
	2	3					Additional	
			Loan			Actual Cost at	Investment Made	Value of Land
Loan Number	City	State	Туре	Date Acquired	Rate of Interest	Time of Acquisition	After Acquisition	and Buildings
059610N09	Various	PR		05/15/2018	5.819			
073245BC5	Various	IL						
949750GH0	Various	TX			5.390		2	
0299999. Mortgages in good star	nding - Residential mortgages-insured or guaranteed						1,329	692,817
0899999. Total Mortgages in goo	od standing						1,329	692,817
1699999. Total - Restructured Mo	ortgages							
2499999. Total - Mortgages with	overdue interest over 90 days							
3299999. Total - Mortgages in the	e process of foreclosure							
3399999 - Totals							1,329	692,817

SCHEDULE B - PART 3

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

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

SCHEDULE BA - PART 1

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

	0	0	1			7	•	•	10	4.4		0				1	10	10	
1	2	3	Location		6	/	8	9	10	11	12	Cha	inge in Bool	k/Adjusted C	arrying val	ue	18	19	20
			4	5								13	14	15	16	17			
														Current					
						NAIC							Current	Year's		Total			
						Designation					Book/		Year's	Other-		Foreign			
						and					Adjusted		(Depre-	Than-	Capital-	Exchange		Commit-	
						Admini-					Carrying		ciation)	Temporary	ized	Change in		ment	
						strative					Value	Unrealized	or	Impair-	Deferred	Book/		for	Percen-
CUSIP						Symbol/	Date	Туре			Less	Valuation	(Amorti-	ment	Interest	Adjusted	Invest-	Additional	tage of
Identi-					Name of Vendor	Market	Originally	and	Actual	Fair	Encum-	Increase	zation)/	Recog-	and	Carrying	ment	Invest-	Owner-
fication	Name or Description	Code	City	State	or General Partner	Indicator	Acquired	Strategy	Cost	Value	brances	(Decrease)	Accretion	nized	Other	Value	Income	ment	ship
023138-AA-8	8020 Ambac Assurance Corp		New York	NY	Guardian Life Ins Co Amer	5	12/31/2018		9,834										
2399999. S	urplus Debentures, etc - Unaffiliated								9,834	9,834	9,834								XXX
4499999. T	otal - Unaffiliated								9,834	9,834	9,834								XXX
4599999. T	otal - Affiliated																		XXX
4699999 -	Fotals								9,834	9,834	9,834								XXX

SCHEDULE BA - PART 2

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

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

SCHEDULE BA - PART 3

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

							,												
1	2	Location		5	6	7	8		Change i	n Book/Adjı	usted Carryi	ng Value		15	16	17	18	19	20
		3	4	N			k/ ry alue ess	9 eali	10 10 Year's (Depre-	11 Current Year's Other- Than- Temporary	12 Capital- ized	13 Total Change in Book/ Adjusted	14 Total Foreign Exchange Change in	Book/ Adjusted Carrying Value Less		Foreign Exchange			
					Date		brances,	uat Increase	or (Amorti-	Impair- ment	Deferred Interest	Carrying Value	Book/ Adjusted	Encum- brances		Gain (Loss)	Realized Gain	Total Gain	Invest-
CUSIP				Name of Purchaser or	Originally	Disposal	Prior	(De-	zation)/	Recog-	and	(9+10-	Carrying	on	Consid-	` on ´	(Loss) on	(Loss) on	ment
Identification	Name or Description	City	State	Nature of Disposal	Acquired	Date	Year	crease)	Accretion	nized	Other	11+12)	Value	Disposal	eration	Disposal			Income
4699999 - To	tals																		I

SCHEDULE D - PART 1

	-	-			_		Showing All Lon	0		1										
1	2	Coc		6	7	F	air Value	10	11		<u>ın Book/A</u> dj	usted Carryin	g Value			lr	nterest		Da	ates
		3 4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
			Ũ			U U	ů –						Total							
													Foreign							
		F		NAIC								Current	Exchange							
				-																
		0		Desig-								Year's	Change							
		r		nation		Rate					Current	Other-	in							
		Ce				Used to			Book/	Unrealized	Year's	Than-	Book/				Admitted			Stated
				and																
		o i		Admini-		Obtain			Adjusted	Valuation	(Amor-	Temporary	Adjusted		Effective		Amount	Amount		Contractual
CUSIP		d g	Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
	Description	- 3																	A	
Identification	Description	e n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
912828-07-8	US TREASURY N/B-NOTE			1										1.375	1.205	AO				
912828-07-8	US TREASURY N/B-NOTE	SD		1	4,477,196		4,335,264	4,445,000	4,460,010		(6,332)			1.375	1.227	AO		44,825		04/30/2021
	US TREASURY N/B-NOTE			1	12,524,902			12,500,000			(5,483)			1.625	1.580	ID .				
											(0,400)					JU				
	US TREASURY N/B-NOTE								, ,					1.625	1.625	JJ			07/29/2015	07/31/2020
0199999. Sub	total - Bonds - U.S. Governments - Issi	uer Obligatio	ons		39,557,547	XXX	38,900,918	39,500,000	39,523,594		(11,905)			XXX	XXX	XXX	295,306	614,130	XXX	XXX
	GOVERNMENT NATIONAL MORT-POOL #8746 ARMS		4		5,100	102.6917	5,224	5.087	4,997	1		1		3, 125	4,171	MON	13	155	12/01/1996	11/01/2025
							y, 227	0,007												
	total - Bonds - U.S. Governments - Res	sidential Mor	rigage-Ba	аскеа																
Sec	urities				5,100	XXX	5,224	5,087	4,997		63			XXX	XXX	XXX	13	155	XXX	XXX
	al - U.S. Government Bonds				39,562,647	XXX	38,906,142	39,505,087	39,528,591		(11.842)			XXX	XXX	XXX	295,319	614.285	XXX	XXX
					39,362,647		38,906,142	39,505,08/	39,528,591		(11,842)	+					295,319	014,285		
1099999. Tota	al - All Other Government Bonds					XXX								XXX	XXX	XXX			XXX	XXX
	al - U.S. States, Territories and Posses	sions Rondo				XXX						1	i i	XXX	XXX	XXX	İ		XXX	XXX
		SIGIS DUIUS)									+								
2499999. Tota	al - U.S. Political Subdivisions Bonds					XXX								XXX	XXX	XXX			XXX	XXX
313398-SD-2	FREDDIE MAC-SERIES 2335 CLASS CZ		4	1		. 111.8205			.38.528					7.000	6.406	MON			01/08/2003	07/01/2031
	FREDDIE MAC-SERIES 2117 CLASS HG		4	1	.9, 189	108.8965					(12)				5.568	MON	46			01/01/2029
		<u>+</u>	- <u> 7</u>	· · · · · · · · · · · · · · · · · · ·	v, 109, ت				9,013		(12)			0.000		m/N		۲۷ ز	12/ 11/2002	
2699999. Sub	total - Bonds - U.S. Special Revenues	 Residentia 	I Mortgag	ge-																
Bac	ked Securities				49,339	XXX	51.935	46.675	47.543		(75)			XXX	XXX	XXX	267	3,223	XXX	XXX
								1 .												
	al - U.S. Special Revenues Bonds				49,339	XXX	51,935	46,675	47,543		(75)	L		XXX	XXX	XXX	267	3,223	XXX	XXX
00108W-AG-5	AEP Texas Inc-SENIOR UNSECURED		. 1	1FE		. 100.1491								3.950	4.022	JD			06/13/2018	06/01/2028
0010EP-AN-8	AEP TEXAS CENTRAL CO-SR UNSECURED		1	1FE										3.850	3.969	AO				10/01/2025
	ABBOTT LABORATORIES-SENIOR UNSECURED		1	2FE	.521,919	. 101.2586	531,608	525,000			322			3.875	3.957	MS	5,990		03/22/2017	
			- []													MO				
	AbbVie Inc-SENIOR UNSECURED NOTE		- !	2FE							1, 119			2.900	3.084	MN			10/16/2014	
	ACE INA HOLDINGS-SR UNSECURED		. 1	1FE	1,883,108		1,878,187	1,920,000	1,885,678		2, 147			3.350	3.628	MN			06/26/2018	
008252-AM-0	Affiliated Managers Grou-SENIOR UNSECURE		. 1	1FE							(1,234)			4.250	3.875	FA				
	Affiliated Managers Grou-SR UNSECURED		1	1FE	1,068,320		1.068.924	1, 100,000	1.070.091						3.973	FA		19,250		.08/01/2025
	AIRGAS INC-SENIOR UNSECURED NOTE		1	1FE	150.081		149.393	.150,000	150.013					2.375	2.366	EV	1.346	.3,563		
			· [¦ ·····				1,001,613	1,000,000							4.345	10				
010392-FS-2	Alabama Power Co-SENIOR UNSECURED		·Ľ::			100. 1613								4.300		JJ				07/15/2048
	AMCOR FINANCE USA INC-SENIOR UNSECURED		. 1,5	2FE					499,886		11			3.625	3.628	AU			04/19/2016	04/28/2026
	American Express Co-SUBORDINATED NOTE		. 2	1FE										3.625	3.682	JD	1,257		12/02/2014	
026874-DK-0	American International G-SENIOR UNSECURE		. 1	2FE	1,090,500		1,059,700	1,100,000	1,090,942		.442			4.200	4.308	AO				
	AMERICAN TOWER CORP-SR UNSECURED		1	2FE		98.1049	392.420	400,000	395.065					4.000	4.221	JD	1,333	16,000	11/10/2015	
	AMERICAN TOWER CORP SR NT		1	2FE					89.806					4.400	4.435	FA		3,960	01/08/2016	02/15/2026
			· [,'																	
03027X-AP-5	AMERICAN TOWER CORP-SENIOR UNSECURED		·Ľ	2FE										3.550	3.577	JJ			06/27/2017	07/15/2027
03040W-AL-9	AMERICAN WATER CAPITAL C-SR UNSECURED		. [1	1FE							1,071			3.400	3.641	MS		17,000	06/06/2018	03/01/2025
03073E-AM-7	AmerisourceBergen Corp-SENIOR UNSECURED		. 1	2FE		95.5033								3.250	3.313	MS	4,875		02/19/2015	03/01/2025
03522A-AD-2	Anheuser-Busch Cos LLC /-SENIOR UNSECURE		1,5	2FE.			.756,439	800,000	798,204					3.650	3.686	FA	12, 167			02/01/2026
	Arrow Electronics Inc-SENIOR UNSECURED N	T	1	2FE		102.8277									6.004	40				
				2FE					473,874					2.750		MN			11/05/2014	
	ASSOC BANC-CORP-SR UNSECURED		- Lá												2.779	MIN				
	AutoNation Inc-SR UNSECURED		. 1,5	2FE							158			4.500	4.542	AU			09/16/2015	10/01/2025
05348E-AU-3	AVALONBAY COMMUNITIES IN-SR UNSECURED		. [1	1FE										3.500	3.590	MN			11/12/2014	
05348E-AW-9	AVALONBAY COMMUNITIES IN-SR UNSECURED		. 11	1FE						L		L	l	3.500	3.539	MN			11/04/2015	
	Aviation Capital Group L-SENIOR UNSECURE		1	2FE											4.376	MN		12,250		
	Bank of America Corp-SUBORDINATED NOTE		- ['					200.000						4.200	4.209	EV.	2.917			
																10				
	Bank of America Corp-SUBORDINATED			2FE							744			4.000	4.332	JJ			02/25/2016	01/22/2025
	Bank of New York Mellon -SENIOR UNSECURE		. 2	1FE	1, 462, 185		1,458,539	1,500,000	1,464,071		1,886			3.400	3.713	JJ	21,533		07/09/2018	01/29/2028
075887-BF-5	BECTON DICKINSON & CO-SR UNSECURED		. 1	2FE		96.5996								3.734	3.733	JD			12/04/2014	
	BEMIS CO-SENIOR UNSECURED NOTE		1	2FE	.330,426	102.1618		.300,000	.302,265		(3,753)			6.800	5.456	FA	8.500	.20,400	.09/15/2009	.08/01/2019
	BERKSHIRE HATHAWAY INC-SENIOR UNSECURED		1	1FE	1,348,731	96.9240	1.308.475	1,350,000	1.349.007					3, 125		MS	12,422			03/15/2026
			- ['													MO		, ,		
	BIOGEN INC-SR UNSECURED		·Ľ	1FE										4.050	4.079	MS			09/10/2015	09/15/2025
	Boeing Co/The-SENIOR UNSECURED		. [1	1FE	1,072,797		1,077,491	1, 100,000	1,073,911		1, 114			3.250	3.555	MS	11,917		07/11/2018	03/01/2028
10112R-AS-3	BOSTON PROPERTIES LP-SENIOR UNSECURED NO		. 1	2FE		101.3550								4. 125	4.400	MN	1,581		09/26/2011	
	BOSTON PPTYS LP SR NT		1	2FE		.96.7660		100,000						3.650	3.685	FA	1,521	3,650	01/08/2016	02/01/2026
	BRAMBLES USA INC-SR UNSECURED		1	2FE	1,002,520	100.1339	1,001,339	1,000,000	1,002,378		(182)			4, 125	4.075	40		22.688		10/23/2025
			·Ľ													∩V				
	BROADRIDGE FINANCIAL SOL-SENIOR UNSECURE		-[]	2FE		101.0009								3.950	3.971		5,925	17,775	08/14/2013	
11133T-AC-7	Broadridge Financial Sol-SENIOR UNSECURE		. 1,5	2FE										3.400	3.449	JD				

SCHEDULE D - PART 1

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Identification	Description	e n	Char	Symbol		Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
120568-AW-0	BUNGE LTD FINANCE CORP-SR UNSECURED		. 1	2FE							(36)			3.500		MN		1,400	01/22/2016	11/24/2020
120568-AX-8	BUNGE LTD FINANCE CORP-SENIOR UNSECURED		1	2FE	647,604	87.6171	613,320	700,000	651,407		3,307			3.250	4.325	FA	8,594	14,625	06/06/2018	08/15/2026
12527G-AB-9	CF INDUSTRIES INC-SENIOR UNSECURED NOTE		1			103.0000	169.950		173.087		(31, 169)			7.125	3.331		1.959			
12572Q-AG-0	CME GROUP INC-SR UNSECURED					.97.3708								3.000	3.022				03/04/2015	
			-]																	03/15/2025
12626P-AM-5	CRH AMERICA INC-UNSECURED		. 1	2FE		.96.1106					60			3.875	3.890				05/12/2015	05/18/2025
12636Y-AA-0	CRH America Finance Inc-SENIOR UNSECURED		. 1	2FE		91.8032			476,658		1, 328			3.400	4.064	MN			05/31/2018	05/09/2027
126650-CF-5	CVS Health Corp-SENIOR UNSECURED NOTE		. 1	2FE		.96.9817					618			3.375	3.485	FA			08/07/2014	08/12/2024
12673P-AC-9	CA INC-NOTE	1	. 1	2FE	.396.648	101.2862	405, 145		399.595		.399			5.375	5.484	JD	1.792			12/01/2019
127055-AK-7	CABOT CORP-SENIOR UNSECURED	T	1	2FE		95.3359	1.020.095	1,070,000	1,073,343					3,400	3.294		10.712			
133131-AV-4	CAMDEN PROPERTY TRUST-SENIOR UNSECURED N		· 🔓											3.400					09/03/2014	
			·Ľ			.98.5031														09/15/2024
151020-AP-9	CELGENE CORP-SENIOR UNSECURED NOTE		-[]	2FE							131			3.625	3.666			14,500	05/06/2014	05/15/2024
151020-AS-3	CELGENE CORP-SR UNSECURED		. [1	2FE		96.2662					106			3.875	3.993				08/03/2015	08/15/2025
167885-AA-0	CHICAGO PARKING METERS L-SENIOR NOTE		. 1	2FE		103.6205					(5,608)			5.489	3.929	JD			05/08/2013	12/30/2020
171340-AN-2	Church & Dwight Co Inc-SENIOR UNSECURED		1.5		2,039,499	.94.0640	2,069,408	2,200,000	2,047,030		7,531			3. 150	4.120	FA				
17252M-AK-6	CINTAS CORPORATION NO. 2-SENIOR UNSECURE		1	1FE		102.6102	513.051				(3,551)			4.300			1.792			
17252M-AN-0	Cintas Corp No 2-SENIOR UNSECURED		1	2FE		.97.6660	488.330							3.700	3.849		4,625		07/17/2018	
			- 1																	
172967-JL-6	CITIGROUP INC-SUBORDINATED			2FE		.96.7189						•••••		3.875	4.339				02/25/2016	03/26/2025
186108-CK-0	Cleveland Electric IIIum-SENIOR UNSECURE		. 1	2FE		95.2644	1,333,701	1,400,000	1, 338, 459		2,460			3.500	4.075				07/19/2018	04/01/2028
189054-AU-3	CLOROX CO SR NT		. 1	2FE	699,349	.99.8922					61			3.500	3.511	JD	1,089		12/04/2014	12/15/2024
195869-AP-7	COLONIAL PIPELINE CO-SR UNSECURED		. 1	1FE		101.0044								3.750	3.783	A0				10/01/2025
20453K-AA-3	COMPASS BANK-SUBORDINATED		2			.95.8624	460,140	.480,000						3.875	3.995		4, 185		04/07/2015	
207597-EJ-0	Connecticut Light & Powe-SECURED		1	1FE		.98.2260	1,375,164	1,400,000	1,350,602		2,878			3.200	3.702					03/15/2027
											2,0/0									
219350-BF-1	CORNING INC-SENIOR UNSECURED			2FE		.83.9301		1,000,000						4.375	4.377				11/06/2017	11/15/2057
22160K-AM-7	Costco Wholesale Corp-SENIOR UNSECURED		. 1	1FE		96.4579	1,061,037	1, 100,000	1,057,605		2, 144			3.000	3.535				06/28/2018	05/18/2027
224044-CG-0	COX COMMUNICATIONS INC-SENIOR UNSECURED		. 1	2FE		.92.2601					75			3.350	3.370	MS				09/15/2026
22822V-AE-1	Crown Castle Internation-SENIOR UNSECURE		1.5	2FE	597,468	97.3965	584.379	600,000	597.865		.214			4.000	4.051	MS	8,000	24,000	01/30/2017	
22966R-AB-2	CUBESMART LP-SENIOR UNSECURED NOTE REID		1	2FE		102.2833	409,133	400,000	407,278		(1,379)			4.375	3.948		778	17,500	07/15/2014	12/15/2023
22966R-AC-0				2FE		.97.7504					(1,0/3) 18			4.000	4.032				10/19/2015	
	CUBESMART LP-SR UNSECURED		- []																	11/15/2025
23317H-AA-0	DDR Corp-SENIOR UNSECURED NOTE REID		.]	2FE		102.6764					(3,851)	•••••		4.625	3.579				08/13/2014	07/15/2022
25389J-AJ-5	DIGITAL REALTY TRUST LP-SENIOR UNSECURED		. 1	2FE		103.2616					(3,853)			5.250	3.849		4,715		05/29/2014	03/15/2021
25389J-AL-0	DIGITAL REALTY TRUST LP-SR UNSECURED		. 1	2FE		100.5941								3.950	4.076	JJ			06/18/2015	
25389J-AQ-9	DIGITAL REALTY TRUST LP-SENIOR UNSECURED		1	2FE		102.1713								4.750	4.750	AO			03/08/2016	10/01/2025
25466A-AG-6	DISCOVER BANK-SR UNSECURED		2	2FE			.521,405							3.100	3.105		1,221	16,275		
254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED		2	2FE				400,000						4.100	4.584				07/12/2018	
			· 🔓																	
25470D-AK-5	DISCOVERY COMMUNICATIONS-SR UNSECURED		·[!	2FE		93.4528								3.450	3.460		4,774		02/25/2015	03/15/2025
25470D-BD-0	Discovery Communications-SENIOR UNSECURE		. 1,5	2FE		.96.0571					84	h		3.950	3.973				04/05/2018	06/15/2025
257469-AJ-5	Dominion Resources Inc/V-SENIOR NOTE		. 1	2FE		107.1041					11			5.250	5.275		2, 188		10/06/2004	08/01/2033
26441Y-AZ-0	DUKE REALTY LP-SENIOR UNSECURED		. 1	2FE		95.1098								3.250	3.360	JD			06/16/2016	06/30/2026
26884A-BD-4	ERP OPERATING LP-UNSECURED		1	1FE		.98.2576		775,000			395			3.375	3.440		2,180			
26884L-AB-5	EQT Corp-SENIOR NOTE		· [•	2FE		101.9117								4.875	4.992					
26884T-AR-3	ERAC USA Finance LLC-SENIOR UNSECURED		·[¦	2FE		.93.9883	1.033.871												06/13/2018	12/01/2026
			·Ľ																	
277432-AN-0	EASTMAN CHEMICAL CO-SENIOR UNSECURED NOT		·Ľ	2FE		100.1301					(1,792)			3.600	3.092		5,440	14,400	02/26/2013	08/15/2022
278865-AL-4	Ecolab Inc-SENIOR UNSECURED NOTE		. [1	1FE		102.7393					(6,419)			4.350	2.888				02/26/2013	12/08/2021
278865-AU-4	ECOLAB INC NT		. 1	1FE		.99.6127					(242)			3.250	3.258	JJ			01/11/2016	01/14/2023
28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURE		. 11	2FE		101.1035	.2. 123. 174	2,100,000			(23)	L	L	4.300	4.321	JD	4.014			
29273R-AN-9	Energy Transfer Partners-SENIOR UNSECURE		1	2FE		101.7392	432.391	.425,000	436,883		(5,202)			4.650	3.303	l.n	1.647			
29364D-AU-4	ENTERGY ARKANSAS INC 1ST MTG BD		Ti	1FE		.99.3969	695.778	700.000	698.238						3.539		6, 125	24,500	01/05/2016	04/01/2026
29364D-A0-4 29364N-AS-7			·Ľ	1FE		101.5680	609,408	600.000						3.750						
	ENTERGY MISSISSIPPI INC-SECURED NOTE		·Ľ									h			3.754				03/18/2014	07/01/2024
29717P-AR-8	ESSEX PORTFOLIO LP-SENIOR UNSECURED		. 1	2FE		96.3901								3.625	3.704		2,719		04/07/2017	05/01/2027
302445-AD-3	FLIR SYSTEMS INC-SENIOR UNSECURED		. 1	2FE		98.5929	1,025,366	1,040,000	1,040,671					3. 125	3.056		1,444		06/01/2016	06/15/2021
302491-AQ-8	FMC CORP-SENIOR NOTE		. 1	2FE		101.1181								5.200	5.243	JD			11/24/2009	12/15/2019
302520-AB-7	FNB Corp/PA-SUBORDINATED		1	2FE		98.4292	531,518	540,000	540.000					4.875	4.875		6,508		09/29/2015	10/02/2025
313747-AU-1	Federal Realty Investmen-SENIOR UNSECURE		· [·	1FE		101.3084	1.013.084	1,000,000						3.950	3.716					01/15/2024
			·['																	
345397-XT-5	FORD MTR CR CO LLC NT		· [2FE		100.0003								2.943	2.942			15,451	01/05/2016	01/08/2019
359694-AB-2	H.B. FULLER CO-SENIOR UNSECURED		. 1	4FE			1,680,000				(187)			4.000	3.951			80,000	02/09/2017	02/15/2027
361448-AW-3	GATX CORP-SR UNSECURED		. 1	2FE		.94.0348			474,812					3.250	3.443	MS			03/17/2015	03/30/2025
369550-AZ-1	General Dynamics Corp-SENIOR UNSECURED		. 11	1FE		92.2105	1,383,158	1,500,000	1,391,469			L	L	2.625	3.584		5.031	19.688		11/15/2027
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SCHEDULE D - PART 1

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Identification	Description	e n	Char	Symbol	Cost Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of			During Year	Acquired	Date
369550-BG-2		e ii	Unai	1FE					(Decrease)		necognizeu	value	-						
	General Dynamics Corp-SENIOR UNSECURED	· · · · · · · · · · · · · · · · · · ·				1,394,279	1,400,000	1,395,200					3.500	3.560	MN	6,261			05/15/2025
373298-CF-3	GEORGIA-PACIFIC LLC-SENIOR UNSECURED NOT		· ['	1FE		360 , 181 123 , 348				(11,351)			8.000	3.401	JJ			04/18/2013	01/15/2024
375558-AZ-6 375558-BF-9	GILEAD SCIENCES INC-SENIOR UNSECURED			IFE						(124) (15)			3.500	3.377	FA			10/09/2015	02/01/2025
375558-BF-9 378272-AL-2	GILEAD SCIENCES INC-SR UNSECURED		4.5										4.000	3.647	MS	3,750		09/11/2015 04/08/2015	03/01/2026
378272-AL-2	GLENCORE FUNDING LLC-SR UNSECURED	·····	. 1,0	2FE2FE									4.000	4.107	AU	1,378		06/20/2018	04/16/2025
	Glencore Funding LLC-SENIOR UNSECURED														AU				10/27/2027
384780-AA-0	GRAIN SPECTRUM FUND II-SECURED NOTE	+	1 5	1FE						(46)			3.290	3.290				09/16/2014	10/10/2019
391164-AF-7 40414L-AH-2	Great Plains Energy Inc-SR UNSECURED	· 	. 1, 0	2FE						(1, 183)			5.292	2.785		1,117		03/03/2016	06/15/2022
	HCP Inc-SENIOR UNSECURED NOTE		¦	2FE		695,013 465,924				(147)			2.625	2.603		7,656 3.236		03/07/2013	02/01/2020
413875-AR-6	HARRIS CORPORATION-SR UNSECURED	+	·Ľ	2FE						(100)			3.832	3.832	AU			04/22/2015	04/27/2025
413875-AW-5	Harris Corp-SENIOR UNSECURED		·[¦	2FE						(126)			4.400	4.236	JU		4,669	05/30/2018	06/15/2028
42217K-AW-6	WELLTOWER INC-SR UNSECURED		·[¦	2FE									5.250	3.596	JJ			02/24/2016	01/15/2022
42217K-BF-2 42225U-AD-6	Welltower Inc-SENIOR UNSECURED	+	·L'	2FE 2FE									4.000	4.009	JU	1,667 8.021		05/20/2015	06/01/2025
	HEALTHCARE TRUST OF AMER-SENIOR UNSECURE													3.533	FA			07/07/2016	08/01/2026
42225U-AF-1	HEALTHCARE TRUST OF AMER-SENIOR UNSECURE		1	2FE									3.750	3.811	JJ	1,875		06/01/2017	07/01/2027
428291-AN-8	Hexcel Corp-SENIOR UNSECURED	· · · · · · · · · · · · · · · · · · ·	. 1,5	2FE									3.950	4.004		10, 147		02/13/2017	02/15/2027
42981C-AA-6	HIGH STREET FUNDING TRUS-SENIOR UNSECURE			2FE						1,757			4.111						02/15/2028
431282-AN-2	HIGHWOODS REALTY LP-SENIOR UNSECURED NOT			2FE									3.200	3.363				05/19/2014	06/15/2021
44107H-AC-6	NY Society for Relief of-SECURED	• • • • • • • • • • • • • • • • • • • •		1FE	1,388,240 100.7818	1,410,945	1,400,000	1,388,796					3.737	3.840				06/05/2018	04/01/2028
44107T-AT-3	Host Hotels & Resorts LP-SENIOR UNSECURE		. 1,5	2FE						(3,223)			4.750	3.844				05/07/2014	03/01/2023
44107T-AW-6	HOST HOTELS & RESORTS LP-SR UNSECURED		· []	2FE									4.500		FA			10/08/2015	02/01/2026
445658-CD-7	JB HUNT TRANSPRT SVCS-SENIOR UNSECURED N			2FE						(1,387)			3.850	3.598	MS			05/06/2014	03/15/2024
445658-CE-5	JB HUNT TRANSPRT SVCS-SR UNSECURED			2FE									3.300	3.340	FA			08/03/2015	08/15/2022
452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED	•••••••••		1FE						6,922			2.650	3.587	MN			07/17/2018	11/15/2026
457187-AB-8 45866F-AF-1	INGREDION INC-SENIOR UNSECURED			2FE						1,729			3.200	4.094	AU			07/17/2018	10/01/2026
	Intercontinental Exchang-SENIOR UNSECURE			1FE						6,390			3.100	3.912	MS	20,081		06/25/2018	09/15/2027
460146-CE-1	International Paper Co-SENIOR UNSECURED		. 1,5	2FE						(4,409)			7.500	4.488		4,817		08/03/2011	08/15/2021
460146-CJ-0	International Paper Co-SENIOR UNSECURED	•••••••••	. 1	2FE									3.650	3.695				06/03/2014	06/15/2024
463556-AD-2	IROQUOIS GAS TRANSMISSIO-BOND		2	2FE									6.100	6.098					10/31/2027
46625H-JY-7	JPMorgan Chase & Co-SUBORDINATED NOTE			1FE									3.875	3.939		8,364		09/03/2014	09/10/2024
49446R-AN-9	Kimco Realty Corp-SR UNSECURED	+		2FE									3.400	3.456				10/08/2015	11/01/2022
49446R-AS-8	Kimco Realty Corp-SENIOR UNSECURED			2FE									3.800		AU	1,900		06/21/2018	04/01/2027
494550-AT-3	KINDER MORGAN ENER PART-NOTE		·Ľ	2FE									5.800	5.964	Mð			04/25/2005	03/15/2035
501044-DC-2	KROGER CO SR NT		·L'	2FE									3.500	3.528	FA			01/08/2016	02/01/2026
502413-BA-4 50540R-AP-7	L-3 Communications Corp-SENIOR NOTE	+	·[¦	2FE 2FE						(2,800)			4.950	3.916	FA	5,610 6,333		08/10/2011	02/15/2021
	Laboratory Corp of Ameri-SR UNSECURED		·Ľ										3.200	3.213	FA			01/21/2015	02/01/2022
50540R-AQ-5 512807-AN-8	Laboratory Corp of Ameri-SR UNSECURED		· [¦	2FE 2FE									3.600	3.987	FA			06/05/2018	02/01/2025
	LAM RESEARCH CORP-SR UNSECURED	+	·L'															03/05/2015	03/15/2025
52107Q-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED	+	·Ľ	1FE									3.750	4.219				07/12/2018	02/13/2025
52107Q-AH-8	LAZARD GROUP LLC-SENIOR UNSECURED	+	·[¦	1FE 2FE		1,316,673	1,400,000	1, 324, 205 		3,585 69			3.625	4.421				07/12/2018	03/01/2027
524901-AT-2 53117C-AR-3	Legg Mason Inc-SENIOR UNSECURED NOTE LIBERTY PROPERTY LP-SR UNSECURED	· •	· ¦	2FE									3.950	3.972				06/23/2014 03/17/2015	07/15/2024 04/01/2025
53117C-AR-3 532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED	+	· [1FE										3.793				03/17/2015	
532457-AZ-1 534187-BH-1	Lincoln National Corp-SENIOR UNSECURED		· ¦	IFE 2FE	1,058,11296.9869	1,347,076	1,200,000	1, 357, 387		(7,637) 			5.500	4.283	MG	19,433 3.483		06/11/2018	03/15/2027 03/01/2028
534187-BH-1		+	¦'								<u> </u>				INO				
559080-AH-9	MPLX LP SR NT	+	¦	2FE 2FE									4.000	4.044	ГА	7,178 6.596		02/09/2015 	02/15/2025 03/15/2025
559080-AH-9 565122-AB-4	Keurig Dr Pepper Inc-SENIOR UNSECURED	·	1 5	2FE									3.200	4.558	MO				03/15/2025
56585A-AF-9	MARATHON PETROLEUM CORP-SENIOR UNSECURED		1,5	2FE2		431,495	400,000			(1.236)			6.500		MS			07/12/2018	03/01/2041
571748-AX-0			'l'	2FE									3.500					09/03/2014	03/10/2025
571748-AX-0 571748-AZ-5	Marsh & McLennan Cos Inc-SENIOR UNSECURE Marsh & McLennan Cos Inc-SR UNSECURED	+	¦	IFE						241			3.500	3.544				09/03/2014	03/10/2025
571748-AZ-5 571903-AU-7		- 	¦							(14)									
57 1903-AU-7 579780-AN-7	MARRIOTT INTERNATIONAL-SENIOR UNSECURED MCCORMICK & CO INC/MD-SENIOR UNSECURED		· ¦	2FE 2FE		1.322.536				(14,277) 4.050			7.150 3.400	2.872		2,085 17.982	25,025 23,800	12/20/2016 06/13/2018	12/01/2019 08/15/2027
		+	¦	2FE															
581557-BE-4 59523U-AA-5	McKesson Corp-SENIOR UNSECURED NOTE	+	¦	2FE						(187)			3.796	3.738				03/14/2014	03/15/2024
59523U-AA-5	MID-AMERICA APT LP-SENIOR UNSECURED NOTE	+	'l'	2FE										3.585	nv	3,631		05/07/2015	10/15/2023
595230-AN-7 60871R-AG-5	MID-AMERICA APARTMENTS L-SENIOR UNSECURE	+	'l'	2FE		1,051,874	1,090,000	1,086,057					3.600	3.650	JU			05/02/2017	06/01/2027
	MOLSON COORS BREWING CO-SENIOR UNSECURED		·[¦												JJ				07/15/2026
615369-AC-9	Moody's Corp-SENIOR UNSECURED NOTE	· · · · · · · · · · · · · · ·		2FE									4.875	4.945	FA	13,813		08/07/2013	02/15/2024

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CUSIP		d g	Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
Identification	Description	e n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
	Varragansett Electric Co-SENIOR UNSECURE	•	1	1FE	1,100,000	. 101.2488	1,113,737	1, 100,000	1,100,000	(20010000)	71001011011	riccognizou	Value	3.919	3.919	EA		During Tour	07/24/2018	
637417-AG-1			1	2FE		100.0522	475,248				90				3.919	FA		10 505	05/05/2018	
	NATL RETAIL PROPERTIES-SENIOR UNSECURED		!											3.900		JD				06/15/2024
64128X-AG-5	NEUBERGER BERMAN GRP/FIN-SENIOR UNSECURE		1	2FE										4.500	4.600	MS			03/09/2017	03/15/2027
	New York Life Global Fun-SECURED			1FE	2, 172, 787		2, 199, 878		2, 178,080		5,293			3.000	3.696	JJ			07/10/2018	01/10/2028
	NORTHERN STATES PWR-MINN 1ST MTG BD		1	1FE		.111.9416					11			5.250	5.263	JJ	4,842		07/14/2005	07/15/2035
	Northrop Grumman Systems-SENIOR UNSECURE			2FE		122.7421					(6, 196)			7.875	4.102	MS			07/18/2018	03/01/2026
	Northrop Grumman Corp-SENIOR UNSECURED		1	2FE							1,501			3.250	3.931	JJ			07/12/2018	01/15/2028
670346-AP-0	Nucor Corp-SENIOR UNSECURED		1	1FE				1,000,000						3.950	3.966	MN			06/01/2018	
67103H-AD-9	D'REILLY AUTOMOTIVE INC-SENIOR UNSECURED		1	2FE	462,978	100.4926					(1,484)			3.850	3.459	JD			08/07/2014	
67103H-AF-4	D'REILLY AUTOMOTIVE INC-SENIOR UNSECURED		1	2FE	998,400	.95.2745	.952,745	1,000,000						3.600	3.619	MS	12,000			09/01/2027
680033-AC-1	Old National Bancorp/IN-SENIOR UNSECURED					100.4018						[[4. 125	4.124	FA	10,908			
681919-AZ-9	Omnicom Group Inc-SENIOR UNSECURED NOTE		1	2FE												MN			09/13/2013	
	PNC Bank NA-SENIOR UNSECURED		2	2FE	1,044,615		1,049,284							3. 100	3.740	Δ <u>Ω</u>			09/13/2013	
			4 1	2FE										3.100	3.740	۸۰			05/30/2018	
	PACKAGING CORP OF AMERIC-SENIOR UNSECURE		Ľ													JU				06/15/2022
	Patterson-UTI Energy Inc-SENIOR UNSECURE		Ľ	2FE	1,803,217		1,650,591	1,800,000	1,803,136		(81)			3.950	3.910	FA			09/10/2018	
	PEACHTREE FUNDING TRUST-SR UNSECURED		[]	2FE										3.976	3.975	FA			03/10/2015	02/15/2025
	PENSKE TRUCK LEASING/PTL-SENIOR UNSECURE		1	2FE		. 101.5064					(1,100)			4.250	3.955	JJ			05/31/2013	01/17/2023
	Penske Truck Leasing Co -SENIOR UNSECURE		1	2FE		93.4567								3.400	4.346	MN			06/07/2018	
709599-AZ-7	Penske Truck Leasing Co -SENIOR UNSECURE		1	2FE										3.950	<u>4</u> .145	MS			06/07/2018	03/10/2025
714046-AE-9	PerkinElmer Inc-SENIOR UNSECURED NOTE		1	2FE		. 103. 1746								5.000	5.080	MN			10/20/2011	
718546-AR-5	Phillips 66-SENIOR UNSECURED		1	2FE	1,083,027		1,062,586	1,100,000	1,083,712					3.900	4.094	MS			07/10/2018	03/15/2028
	PHILLIPS 66 PARTNERS LP-SENIOR UNSECURED		1	2FE	469,845	.96.0735	451,546	470,000	469,882					3.605	3.609	FA	6,401	16,944		
723787-AM-9	PIONEER NATURAL RESOURCE-SR UNSECURED		1	2FE	524,417	100.9649	530,066	525,000	524,582					4.450	4.463	.1.1	10,773	23,363	11/30/2015	01/15/2026
724479-AN-0	Pitney Bowes Inc-SENIOR UNSECURED		1 5		382.500		375.063	425.000	386.092		3.592			4.950		40	15,778	20,000		
72925P-AC-9	PLUM CREEK TIMBERLANDS-SENIOR UNSECURED		1,5											4.30	4.042	MG	6.228		08/12/2013	
			1	2FE	40,000		49.142		49.977		(2,000)			3.250		MO		1,625		
	PLUM CREEK TIMBERLANDS-SENIOR UNSECURED		!													MS				
	POST APARTMENT HOMES LP-SENIOR UNSECURED		!	2FE										3.375	3.210	JD			05/20/2013	
	PROLOGIS LP-SENIOR UNSECURED NOTE REID		1	1FE		.103.2362					127			4.250	4.282	FA			08/08/2013	08/15/2023
	Prologis LP-SENIOR UNSECURED		1	1FE		101.8045 .					(129)			3.875	3.828	MS	5,705	4,575 .	06/19/2018	09/15/2028
	RPM INTERNATIONAL INC-NOTE		1	2FE		101.8206					(712)			6.125	6.005	AO			10/06/2009	10/15/2019
	RELX CAPITAL INC-SENIOR UNSECURED NOTE		1,5	2FE							5,022			3. 125	3.983	AO	4,618		07/08/2013	10/15/2022
759351-AG-4	Reinsurance Group of Ame-SENIOR UNSECURE		1	2FE		. 102.6653					(19,517)			6.450	2.894	MN	4,739		04/04/2013	11/15/2019
75972Y-AA-9	RENAISSANCERE FINANCE-SR UNSECURED		1	1FE				1,000,000						3.700	3.775	AO			04/10/2017	04/01/2025
771196-BK-7	ROCHE HOLDING INC-SR UNSECURED		1	1FE				1,000,000						2.625	2.737	MN			02/22/2016	
779382-AP-5	ROWAN COMPANIES INC-SENIOR UNSECURED NOT		1	4FE	78,316	82.5000	61,875				(446)			4.875	4.176	JD	305	3,656		
78355H-JX-8	RYDER SYSTEM INC-UNSECURED NOTE		1	2FE	698.418		696.384		699.776					2.450	2.496	MS	5.717			.09/03/2019
	S&P GLOBAL INC-SR UNSECURED		1	1FE		. 101.8244	.794,230					[[4.000	4.091	.D	1,387		12/14/2015	
	S&P Global Inc-SENIOR UNSECURED		1	1FE					278,654					2.950	3.991		3,909	4,425		
	SEST LLC-SENTOR UNSECURED NOTE		1	4FE				425,000	430,803						5.633	n			11/10/2014	
			L'																	
	SVB FINANCIAL GROUP-SR UNSECURED		Ľ	1FE										3.500	3.714	JJ			07/10/2018	01/29/2025
	salesforce.com Inc-SENIOR UNSECURED		1	1FE		. 100.5285			1,987,642		612			3.700	3.779	AU				04/11/2028
80282K-AD-8	SANTANDER HOLDINGS USA-SR UNSECURED		2	2FE										2.650	2.736	AU			04/14/2015	04/17/2020
	Charles Schwab Corp/The-SENIOR UNSECURED		1	1FE	1,014,010	. 102.0021	1,020,021	1,000,000	1,012,935		(1,075)			3.850	3.616	MN	4,278		05/31/2018	05/21/2025
	Self Help FCU COIN			1		100.0000								0.000	0.000	MAT			08/31/2016	
824348-BF-2	SHERWIN-WILLIAMS CO/THE-SENIOR UNSECURED		1	2FE							(1,168)			3.950	3.446	JJ	5,464		08/09/2017	01/15/2026
857477-AN-3	State Street Corp-SR UNSECURED			1FE	1,382,234		1,386,681	1,400,000	1,383,414		1, 180			3.300	3.522	JD	1,925		07/09/2018	12/16/2024
875484-AH-0	Tanger Properties LP-SENIOR UNSECURED		1	2FE		.96.9811			.96,633					3.750	4.402	JD	313	1,875		12/01/2024
875484-AJ-6	TANGER PROPERTIES LP-SENIOR UNSECURED		1	2FE	991, 199	89.1637	980,801	1,100,000			5,856			3.125	4.586	MS	11,458	17,188	06/19/2018	09/01/2026
883203-BQ-3	Textron Inc-NOTE		1	2FE		. 103.0441	.618,265					[[7.250		AO	10,875			
883556-BR-2	Thermo Fisher Scientific-SENIOR UNSECURE		1	21 L 2FE				400.000						2.950	4.032	MS				
883556-BX-9	Thermo Fisher Scientific-SENIOR UNSECURE		1	2FE 2FE											4.032	m0				
886546-AB-6	TIFFANY & CO-SR UNSECURED		4	2FE 2FE	473.646	100.2785	476.323	475.000			2,200			3.800	3.836	10	4,513		05/08/2018	10/01/2024
			Ľ							I						MU				
891092-AD-0	TORO CO-DEBENTURE		[]	2FE		119.5434					(2,514)			7.800	7.010	JU			07/21/2004	06/15/2027
89236T-EM-3	Toyota Motor Credit Corp-SENIOR UNSECURE		1	1FE	2,844,555		2,894,753		2,852,245		7 , 690			3.050	3.696	JJ			06/07/2018	01/11/2028
899896-AC-8	TUPPERWARE BRANDS CORP-SENIOR UNSECURED		1	2FE		102.4494					(62)			4.750	4.705	JD			01/06/2012	06/01/2021
90131H-AS-4	21ST CENTURY FOX AMERICA-SENIOR NOTE			2FE	1,073,242	120.7127	1,026,058				(14,992)			8.875	6.443	AO	13,621		07/08/2004	
902494-AT-0	TYSON FOODS INC-SENIOR UNSECURED NOTE		1	2FE		. 102. 1390								4.500	3.045	JD			02/10/2016	
							2.0,000	200,000				r								

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CUSIP		d	q	Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
Identification	Description		n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized		of	of	Paid	Accrued	During Year	Acquired	Date
	UDR INC-SENIOR UNSECURED NOTE REID	e		1	2FE	436.332	102.7034	410.814	400,000	413,469	(Decrease)		necognizeu	value	4,625	3.346	1 alu	8.788	18.500		01/10/2022
90265E-AK-6	UDR INC-SENTON UNSECURED NOTE RETU			۱ ۱	2FE							(4,552) 73			4.000	4.028	JJ			09/15/2015	10/01/2025
90205E-AK-0 91159H-HM-5	US Bancorp-SUBORDINATED			0	2FE												AU		14,000	05/30/2018	04/27/2026
91159H-HR-4	US Bancorp-SUBURUTNATED		4	2 0	IFE	1,345,092		1,341,167	1,500,000	1, 428, 695					3. 100	3.851	AU			05/30/2018	
92276M-AX-3	VENTAS REALTY LP/CAP CRP-SENIOR UNSECURE		4	4	2FE											3.101	AU			02/26/2015	04/21/2021
92345Y-AD-8	Verisk Analytics Inc-UNSECURED			۱ ۱	2FE		101.7098								4.230		Mo		27,825		06/15/2025
92826C-AD-4	VISA INC-SR UNSECURED			۱ ۱	2FE																
928260-AD-4 929360-AA-7	WP CAREY INC-SENIOR UNSECURED NOTE REID			1 1	IFE 2FE	1,077,510 448,376		1,031,825	1,050,000 450,000	1,070,043 .449,036		(2,676) 154	·		3.150	2.836				02/08/2016	12/14/2025 04/01/2024
929360-AA-7 931427-AH-1	Walgreens Boots Alliance-SENIOR UNSECURE			1	2FE															11/06/2014	
931427-AH-1 94106L-BA-6	Waste Management Inc-SR UNSECURED			·	2FE				470,000						3.800	3.828				02/18/2015	03/01/2025
948741-AL-7	WEINGARTEN REALTY INVEST-SENIOR UNSECURE			۰ ۱	2FE										3. 125	3.175				05/07/2015	
948741-AL-7 948741-AM-5	WEINGARIEN REALTY INVEST-SENIOR UNSECURE	-+	.	1 1	2FE										3.850		GU				06/01/2025
948741-AM-5 94974B-GH-7					2FE 1FE										3.250	3.350	EA			08/02/2016	
94974B-GH-7 95000U-2A-0	Wells Fargo & Co-SR UNSECURED			 າ	IFE 1FE										3.000	4.099				02/11/2015	02/19/2025
950000-2A-0 95709T-AD-2	Wells Fargo & Co-SENIOR UNSECURED WESTAR ENERGY INC-NOTE		4	۲ ۱	IFE										3.584					05/31/2018	05/22/2028
960386-AH-3	Westar Energy Inc-Nute			 1																08/05/2013	
960413-AF-9	WESTLAKE CHEMICAL CORP-SENIOR UNSECURED			 E	2FE				470,000						4.3/5					09/12/2013	
962166-BR-4	Westlake Chemical CORP-Senior Unsecored			1,0	2FE				400,000	462,586					7.375	5.674				06/27/2013	03/15/2022
963320-AT-3	Whirlpool Corp-SR UNSECURED			۱ ۱	2FE		96.8386	193.677	200.000			(0,117)			3.700	3.704		1.233	7.400	10/07/2015	05/01/2025
970648-AE-1	WILLIS NORTH AMERICA INC-SENIOR UNSECURE			1 1 E	2FE		102.2949	409, 179	400,000	408,891					7.000	3.926			,	06/12/2013	
983024-AG-5	Wyeth LLC-SENIOR UNSECURED NOTE			1,0	2FE 1FE		102.2949					(11,603)			6.500					07/12/2013	09/29/2019 02/01/2034
98310W-AJ-7	WYNDHAM WORLDWIDE CORP-SENIOR UNSECURED			1,0											4.250		FA			01/16/2013	03/01/2022
98310W-AL-2	WYNDHAM WORLDWIDE CORP-SENTOR UNSECURED			۱ ۱	3FE	16,762 270,418		241.040		267.529		(89) (1,301)				3.321	MO	3.406		09/21/2016	03/01/2022
98389B-AR-1	XCEL ENERGY INC-SR UNSECURED			۱ ۱											3.300	3.209	MO			03/03/2016	
98389B-AV-2	Xcel Energy Inc-SENIOR UNSECURED			 1	2FE			202.287							4.000		JD				06/15/2028
98956P-AF-9	Zimmer Biomet Holdings I-SR UNSECURED			1	2FE												JD			03/10/2015	04/01/2025
98978V-AL-7	Zoetis Inc-SENIOR UNSECURED			1	2FE		92.3544					2.098	•••••		3.000	3.912	AU	6,358	10,803	03/10/2013	04/01/2023
96978V-AL=7 06366R-JJ-5	BANK OF MONTREAL-SR UNSECURED			۱ ۱	2FE	1,078,182		1.042,436							2.550	2.501				02/24/2016	11/06/2022
064159-HM-1	BANK NOVA SCOTIA B C SR NT				IFE			1,042,430							2.350	2.301					03/22/2021
11271L-AA-0	BROOKFIELD FINANCE INC-SENIOR UNSECURED			1 5	IFE													1.900	23,588		03/22/2021
11271L-AC-6	Brookfield Finance Inc-SENIOR UNSECURED			1,0	IFE			472,006		480,120			•••••			4.370				05/31/2018	01/25/2028
15135U-AD-1	CENOVUS ENERGY INC-SENIOR UNSECURED NOTE			۱ ۱	2FE										5.700						10/15/2019
380956-AD-4	GOLDCORP INC-SENIOR UNSECURED NOTE			1 1	2FE										3.700		AU			03/07/2010	03/15/2023
559222-AR-5	Magna International Inc-SR UNSECURED			1	2FE 1FE												MO			09/16/2015	
67077M-AA-6	Nutrien Ltd-SENIOR UNSECURED	A.		۱ 1			101.009/		450,000											04/12/2018	
780082-AD-5	Royal Bank of Canada-SUBORDINATED	A.		·	2FE		. 101. 1445								4.650					06/29/2018	05/15/2019
780082-AD-5 884903-BT-1	Thomson Reuters Corp-SENIOR UNSECURED NO			1	IFE			1,029,408				(1,003) 240	·		4.650		NG			09/29/2018	01/27/2026
00084D-AJ-9	ABN AMRO Bank NV-SENIOR UNSECURED	А.			2FE										2.450		ID			05/28/2015	
00084D-AJ-9	ADN AMRO BARK NV-SENTOR ONSECORED			1					475,000						2.450					05/28/2015	
00185A-AF-1	ACTAVIS FUNDING SCS-SENIOR UNSECURED NOT	U		۱ ۱	2FE			463,827	475,000	472,847					3.800	3.992				03/03/2015	03/15/2025
005070-AS-0 00774M-AB-1	ACTAVIS FUNDING SCS-SENIOR UNSECURED NOT		.	1 1	2FE										3.800	3.843				03/03/2015	03/15/2025
00774M-AE-5	AERCAP INELAND CAPITAL D-SENTOR UNSECURE			1 1	2FE										3.850					02/15/2018	01/23/2028
00774M-AE-5	ARCASTLE LTD-SENIOR UNSECURE			1 1	2FE	1, 146, 373		1,038,017		1, 150, 172					3.8/5						
009280-AQ-4 023150-AA-6	ATREASTLE LTD-SENTOR UNSECORED			' 2	∠FE 5Z							ð, uðð			4.125				22,088 1,517	02/12/2018	
023150-AA-0	ANGLO AMERICAN CAPITAL P-SENIOR UNSECURE		4	 1								21			4.000		MS				
04363U-AB-2	ANGLO AMERICAN CAPITAL P-SENTOR UNSECURE			1 1	2FE										4.625	4.005	MS			09/08/2017	
052528-AK-2	AUST & NZ BANKING GROUP-SUBORDINATED	D		•	2FE2FE							(5,340) (973)			4.625	4.229	MN	4, 107		04/18/2013	09/23/2020 05/19/2026
15132H-AD-3	Cencosud SA-SENIOR UNSECURED NOTE	D		1 5	2FE			326,803				(1, 131)			4.875	4.458	.kl			04/24/2013	01/20/2023
2027 1R-AP-5	COMMONWEALTH BK AUSTR NY-SENIOR UNSECURE	n	.	1,0								(1, 131) 324					MS			03/08/2016	03/15/2021
25243Y-AZ-2	Diageo Capital PLC-SENIOR UNSECURED			· 1	IFE										3.875		MN				05/18/2028
43474T-AA-1	Holcim US Finance Sarl &-UNSECURED NOTE	D		 1 5	2FE		101.2037					(3,373)			6.000			9.050			12/30/2019
50247W-AB-3	LYB International Finance-SENIOR UNSECURE	D		1,5	2FE	1,045,869		1,001,358	1, 100,000	1,048,862					3.500	4.179				05/31/2018	03/02/2019
552081-AD-3	LyondellBasell Industrie-SENIOR UNSECURE		······ .	· 1	2FE				400,000						6.000					04/03/2013	11/15/2021
606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURE				2FE 1FE							(9,205) 291			3.961					07/17/2018	03/02/2028
62854A-AN-4	MITSUBISTI UFJ FINANCIAI-SENTOR UNSECORE			1	2FE										3.961	4.036				01/31/2017	
714264-AA-6	Pernod Ricard SA-BOND			1	2FE				400,000						5.750				21,725	01/31/2017	06/15/2026
714264-AA-6 714295-AC-6		D	······ .	۱ ۱	2FE 2FE							(10, 142) 185			5.750	2.978	n∪	5,367			
/ 14290-80-0	PERRIGO FINANCE PLC-SENIOR UNSECURED NOT			1	ZFE							185			3.900	ว. ม วา	JU			11/24/2014	12/15/2024

SCHEDULE D - PART 1

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1 2		Coc	des	6	7	F	air Value	10	11	Change	in Book/Adj	usted Carryin	ig Value			Interest		Da	ates
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	5	4	5			0	9			12	15	14	-	10	17 10	19	20	21	22
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		F		NAIC								Current	Exchange						
				-															
		0		Desig-								Year's	Change						
		r		nation		Rate					Current	Other-	in						
		1		nation							Guneni	Other-	111						
	C	e		and		Used to			Book/	Unrealized	Year's	Than-	Book/			Admitted			Stated
	Ŭ	č													- "				
	0			Admini-		Obtain			Adjusted	Valuation	(Amor-	Temporary	Adjusted		Effective	Amount	Amount		Contractual
CUSIP	d	~	Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate When	n Due and	Received		Maturity
	u	g																	
Identification Description	е	n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of Paid	Accrued	During Year	Acquired	Date
801060-AD-6 Sanof i-SENIOR UNSECURED		D	4	1FE		100.4267	1,405,974	1,400,000	1,390,221	(======================================				3.625					
	· · · · · · · · · · · · · · · · · · ·		- I		1,389,780						441				3.713 JD				06/19/2028
806854-AH-8 Schlumberger Investment -SR UNSECURED		D	. 1	1FE		. 100.4763					(3,776)			3.650				05/19/2015	
87969N-AC-9 Telstra Corp Ltd-NOTE		D	1	1FE		. 103.8987					(2.627)			4.800	4.246 A0			10/04/2011	10/12/2021
92857W-BK-5 Vodafone Group PLC-SENIOR UNSECURED		D		2FE	1,989,110		1,940,402				447			4.375	4.443 MN			06/05/2018	05/30/2028
92936M-AB-3 WPP FINANCE 2010-SENIOR UNSECURED NOTE		D	1.5	2FE		. 101.8392			749,263		8.516			4.750					
984851-AD-7 YARA INTERNATIONAL ASA-SENIOR UNSECURED		ln	11	2FE	586,494	94.1579	564.947	600,000	588.857		1,258			3.800	4.092 JD	1,583			06/06/2026
		- ⁰	-Ľ																
984851-AF-2 Yara International ASA-SENIOR UNSECURED			<u>. </u>	2FE							8	<u> </u>		4.750	4.782 JD			05/24/2018	
3299999. Subtotal - Bonds - Industrial and Miscellane		Unaffi	liated) -	lssuer															
		Chain				NAM /								1000				\\\\\	\\\\\\
Obligations					177,990,152	XXX	175,024,224	178,694,828	177, 154, 685		(70,906)			XXX	XXX XXX	1,751,212	5,303,071	XXX	XXX
004375-CB-5 ACCREDITED MORTGAGE LOAN-SERIES 2004-4 C			4	1FM	64,504		64,968	65,135			228			3.286		36	1,809	07/26/2007	
	+	-1	- 12								220								
040104-EW-7 ARGENT SECURITIES INCSERIES 2004-W1 CL			. 4	1FM						⊦ ŀ		h	·	3. 146	3.902 MON			01/21/2004	03/25/2034
05948J-AA-0 BANC OF AMERICA MORTGAGE-SERIES 2002-L C			. 4	1FM										3. 136	5.116 MON			08/10/2004	
06050H-KX-5 BANC OF AMERICA MORTGAGE-SERIES 2002-G C		1	4				.50,289		.32,742					4.817	21.551 MON				07/01/2032
			- []																
06050H-KY-3 BANC OF AMERICA MORTGAGE-SERIES 2002-G C			4	1FM		95.6144	40 , 124				4,608			4.817	39.637 MON			07/18/2003	07/01/2032
06051G-BD-0 BANC OF AMERICA FUNDING -SERIES 2004-A C			4	1FM		101.2815	16,597		16,242			L	L	4.375	5.390 MON	57			06/01/2032
07384M-S6-0 BEAR STEARNS ADJUSTABLE -SERIES 2004-5 C			4	1FM	10.302		.11.524	12, 159						4.334	6.748 MON	42			
			- 4													42			
07386H-GG-0 BEAR STEARNS ALT-A TRUST-SERIES 2004-3 C			. 4	1FM				7, 192	7 , 192					3. 146	3.789 MON			08/24/2004	04/25/2034
1248RH-AD-9 CREDIT-BASED ASSET SERVI-SERIES 2007-CB6			4	1FM										2.846				07/10/2007	07/25/2037
			4	1FM	2,911	90.9968	2,888	3, 173	3,135		199			3.991	7.449 MON	33	143	04/12/2004	
			- 4																09/01/2033
12669F-VD-2 COUNTRYWIDE HOME LOANS-SERIES 2004-6 CLA			. 4	1FM										4. 158	6.821 MON			07/09/2004	
152314-MJ-6 CENTEX HOME EQUITY-SERIES 2005-A CLASS M			4	1FM	43.023		56.223	.58,003						3.256		31	1.594		
			A	1FM			12.693												
			- 4			110.2857					14			7.500				05/19/2004	03/01/2032
22541N-FL-8 CREDIT SUISSE FIRST BOST-SERIES 2002-24			. 4	1FM	201,282			, 228, 183			4,982			6.500	10.023 MON		13,596		
22541N-T5-8 CREDIT SUISSE FIRST BOST-SERIES 2003-8 C			4	1FM										5.750	5.542 MON			04/27/2004	
			- 4																
22541Q-JR-4 CREDIT SUISSE FIRST BOST-SERIES 2003-17			. 4,5	1FM	(291)	0.0010			(2,731)		(4,029)			5.500	5.500 MON			04/15/2004	
23332U-AC-8 DSLA MORTGAGE LOAN TRUST-SERIES 2004-AR1			4				23.993							3.290	5.027 MON				
251510-FB-4 DEUTSCHE ALT-A SECURITIE-SERIES 2005-AR1			A	1FM	34,965	87.7146	47.682				3,209			2.816	9.243 MON				08/25/2035
			- 4																
36242D-BJ-1 GSR MORTGAGE LOAN TRUST-SERIES 2004-9 CL			. 4	1FM							42			4.104	5.428 MON		141	07/08/2004	
40431K-AE-0 HSI ASSET LOAN OBLIGATIO-SERIES 2007-WF1			4.5	1FM							4,454			6.220		4.573			
41161P-FR-9 HARBORVIEW MORTGAGE LOAN-SERIES 2004-6 C			A	1FM	18.354		20.397	.20,765	19.980					4.526	5.702 MON				08/01/2034
			- 4																
45254N-PU-5 IMPAC CMB TRUST-SERIES 2005-5 CLASS A1			. 4	1FM							2,988			3.146	6.903 MON			06/28/2005	08/25/2035
45660N-Q2-4 INDYMAC INDX MORTGAGE LO-SERIES 2004-AR4			4	1FM	13.072									3.943		8	599		
		1	4 5							[[ſ			(00 500)			
			- 4,0											6.300	45.792 MON				
576433-GW-0 MASTR ADJUSTABLE RATE MO-SERIES 2003-6 C			4	1FM		90.6219					4,335			4.809			1,406	08/27/2004	01/01/2034
589929-X2-9 MERRILL LYNCH MORTGAGE I-SERIES 2003-A4		1	4	1FM	135,040		131.844	147,762	147,566		1,095			4.560	5.168 MON		6,065		
		1	Т <u>і</u>										[06/12/2007	
		1	- [*			47.9954				⊦ ŀ			·	2.656					09/25/2036
65106F-AG-7 NEWCASTLE MORTGAGE SECUR-SERIES 2007-1 C			. 4	6FM	(27,300)	1.9485					(10,972)	17,033		3. 156	3.156 MON		1,307	07/03/2007	04/25/2037
669884-AF-5 NOVASTAR HOME EQUITY LOA-SERIES 2006-1 C			4	1FM	.3,310	8.8549	.6,254		.2,774					2.956		1,226			
68383N-CA-9 OPTEUM MORTGAGE ACCEPTAN-SERIES 2005-4 C		1	4	1FM	50,960	98.7200	58.552	59.311	58.099		1.176			2.816	4.525 MON	28	1.365	08/11/2005	11/25/2035
	+	1	-17																
80557B-AC-8 SAXON ASSET SECURITIES T-SERIES 2007-3 C			4	1FM										2.826	3.960 MON			09/27/2007	09/25/2047
863579-WR-5 STRUCTURED ADJUSTABLE RA-SERIES 2005-16X		1	4	1FM										2.846		8		07/29/2005	
86358R-A2-3 STRUCTURED ASSET SECURIT-SERIES 2002-6 C			4.5		43,303									6.560		403			
		-1	4,0																04/01/2032
86359A-6A-6 STRUCTURED ASSET SECURIT-SERIES 2003-34A			. 4	1FM		81.2487								4.401	41.260 MON			08/27/2004	11/01/2033
92922F-NW-4 WAMU MORTGAGE PASS-THROU-SERIES 2004-AR2			4	1FM	,22,956				25,571					3.557		75	729		04/01/2044
949810-AB-1 WELLS FARGO MORTGAGE BAC-SERIES 2004-V C		1	Т <u>і</u>			103.1276		.42.036		[[Γ	4.551		159			10/01/2034
			- 14			103. 12/0	43,39I	4∠,U3b						4.001					10/01/2034
3399999. Subtotal - Bonds - Industrial and Miscellane	eous (I	Unaffi	liated) -											1	I I				
	(4 007 011	VVV	0 470 000	0 400 007	0 470 500		140 701	47.000		XXX	xxx xxx	17 010		VVV	XXX
Residential Mortgage-Backed Securities					1,697,311	XXX	2,470,068	3,130,887	2,170,536		113,764	17,033				(7,648)		XXX	
060352-AK-7 BANK-SERIES 2017-BNK6 CLASS B			4		720,992		686,763		718,415		(1,819)			3.964		2,312		07/14/2017	
		1	4.5	1FM	1,099,952		1,051,456			[[, 510) A		[07/14/2017	
	+		- 4,3					1, 100,000		⊦ ŀ		h		3.851					07/01/2060
06054A-BC-2 BANC OF AMERICA COMMERCI-SERIES 2005-UBS			4,5	1FM							(2,034)			4.362	4.124 MON			09/14/2015	09/01/2048
06054A-BD-0 BANC OF AMERICA COMMERCI-SERIES 2005-UBS			4.5	1FM	721,349		733.770	750,000	729, 141		2.583			4.362	4.913 MON	2.726	33, 180		
		1	1, je	1FM															
06541F-BF-5 BANK 2017-BNK4-SERIES 2017-BNK4 CLASS C			4,5		1,029,997			1,000,000	1,025,636		(2,602)			4.372	4.003 MON			04/05/2017	05/01/2050
12515G-AH-0 CD COMMERCIAL MORTGAGE T-CD 2017-CD3 C			4.5	1FM							(1,887)	L	L	4.562				01/27/2017	
12531W-BA-9 CFCRE 2016-3 MTG TR PASS THRU CTF CL A-2		1	4		1,641,230		1.620.804	1,625,000	1,636,837	[[(1,521)		[3.597		4.871			
			- 4																01/01/2048
12532A-BA-6 CFCRE COMMERCIAL MORTGAG-SERIES 2016-C6			4,5	1FM	1,730,377		1,641,065	1,680,000			(4,540)			3.502	3.150 MON			11/01/2016	11/01/2049
12532A-BB-4 CFCRE COMMERCIAL MORTGAG-SERIES 2016-C6		1	4	1FM	1,730,388	97.4849	1,637,746	1,680,000	1.721.094] [(4,493)	1		3.804	3.447 MON	5,326	63,907	11/01/2016	11/01/2049
LEGGER DE T OF OTHE COMMILITETAL MOTTUNO OLITILO 2010 00	<u>k</u>	- <u>t</u>	- [⁻²	0 m	1,700,000		1,007,740	1,000,000				<u> </u>			דריע				

SCHEDULE D - PART 1

		1			_		Ū	Ig-Territ BOND												
1	2		Codes	6	7	F	air Value	10	11	Change	in Book/Adjus	sted Carryin	g Value			Ir	nterest		Da	tes
		3	4 5			8	9			12	13	14	15	16	17	18	19	20	21	22
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			U			.					• •		. 0							
			r	nation		Rate					Current	Other-	in							
		С	е	and		Used to			Book/	Unrealized	Year's	Than-	Book/				Admitted			Stated
			e																	
		0	i	Admini-		Obtain			Adjusted	Valuation	(Amor-	Temporary	Adjusted		Effective		Amount	Amount		Contractual
CUSIP		d	g Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization) I	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
		-														-				,
Identification	Description	е	n Cha	r Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion F	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
12592K-BF-0	COMM MORTGAGE TRUST-SERIES 2014-UBS5 REI		4 5								(2,232)			4.514	4.149	MON	2,972			
12592K-BH-6	COMM MORTGAGE TRUST-SERIES 2014-UBS5 CLA		4,0	1FM	705.287		696.757	700,000	703,865		(483)			4.611	4.582	MON	5.470	32,639		09/01/2047
			4,0		. ,															
12592L-BM-3	COMM MORTGAGE TRUST-SERIES 2014-CR20 CLA		4,5	1FM		101.0684					(2,551)			4.239	3.877				10/22/2014	11/01/2047
12592M-BN-9	COMM MORTGAGE TRUST-SERIES 2014-LC17 CLA		4.5	1FM		102.0772					(1,815)			4.490	4.124	MON				10/01/2047
12592M-BQ-2	COMM MORTGAGE TRUST-SERIES 2014-LC17 CLA		4.5		.50.288		.49.598	.50,000			(17)			4.554	4.568		384	2,312		10/01/2047
12592X-BG-0			4,0	1FM			908.456	920,000			(2,585)			3.926	3.569		3,010			
	COMM MORTGAGE TRUST-SERIES 2015-1A CLASS		4,5																03/18/2015	03/01/2048
12592X-BJ-4	COMM MORTGAGE TRUST-SERIES 2015 CR22 C		4,5	1FM									·	4.121	3.991				03/18/2015	03/01/2048
12593A-BD-6	COMM MORTGAGE TRUST-SERIES 2015-CR23 CLA		4,5	1FM		100.4033					(1,612)			4. 183	3.820	MON				05/01/2048
12593Y-BD-4	COMM 2016-CCRE28 MTG TR-MTG PASS THRU CL		4	1FM	1,514,921		1,494,968	1,500,000	1,510,897		(1,408)			3.495	3.375		4,369			
			····· 🔓 ·····	1FM					1,638,241						2.740					
12594M-BC-1	COMM MORTGAGE TRUST-COMM 2016-COR1 A4		4		1,647,964		1,536,072	1,600,000			(4,498)			3.091			4, 121		10/07/2016	10/01/2049
12594M-BE-7	COMM MORTGAGE TRUST-COMM 2016-COR1 B		4	1FM	1, 132, 959	98.0543	1,078,597	1, 100,000	1 , 126 , 555		(2,977)			3.897	3.536				10/07/2016	10/01/2049
12625K-AP-0	COMM MORTGAGE TRUST-SERIES 2013-CR8 CLAS		4.5	1FM										3.961	5.593	MON				
12629N-AJ-4	COMM MORTGAGE TRUST-SERIES 2015-DC1 CLAS		15				849.574	850,000	866,521		(2,417)			4.035	3.674		2,858			02/01/2048
			4,J																	
12629N-AL-9	COMM MORTGAGE TRUST-SERIES 2015-DC1 CLAS		4,5	1FM							(1,150)			4.351	4.186				02/24/2015	02/01/2048
12636M-AJ-7	CSAIL 2016-C6 COML MTG T-COML MTG PASSTH		4	1FM							(2, 135)		L	3.346	2.993					01/01/2049
12636M-AK-4	CSAIL 2016-C6 COML MTG T-COML MTG PASSTH		4.5	1FM	1,091,790		1,047,342	1,060,000	1.084.419		(2,901)			3.924	3.563	MON	3,466			01/01/2049
12636M-AL-2	CSAIL 2016-C6 COML MTG T-COML MTG PASSTH		4 5				820.013	800,000	812,971		(1, 101)			4.752	4.603		16,051			01/01/2049
			4,J																	
17322V-AV-8	CITIGROUP COMMERCIAL MOR-SERIES 2014-GC2		4	1FM		101.5554					(720)			3.863	3.507		805		07/17/2014	07/01/2047
17322V-AX-4	Citigroup Commercial Mtg Trust Series 20		4,5	1FM					457,995		(1,305)			4.451	4.143	MON	1,722			07/01/2047
17324T-AJ-8	CITIGROUP COMMERCIAL MOR-SERIES 2016-GC3		4	1FM	1,622,201	100.7788		1,575,000			(4,342)			3.849	3.490	MON				02/01/2049
200474-BH-6	COMM MORTGAGE TRUST-SERIES 2015-LC19 CLA		4 E	1FM							(1,908)			4.259	3.967		2,531	29,804		
			4,0																	
23305X-AD-3	DBUBS MORTGAGE TRUST-SERIES 2011-LC2A CL		4	1FM	1,009,893	102.8123	1,028,045		1,002,288					4.537					06/17/2011	07/01/2044
23305Y-AJ-8	DBUBS MORTGAGE TRUST-SERIES 2011-LC3A CL		4,5			104.6320	1,046,320	1,000,000			1,558			5.338	5.599	MON	22,542	40,633		
23312J-AJ-2	DEUTSCHE BANK COMMERCIAL-SERIES 2017-C6		4.5	1FM	1,338,939		1.254.590	1.300.000	1,333,849		(3,410)			3.792			4, 108			
			4 ,5																	
23312J-AK-9	DEUTSCHE BANK COMMERCIAL-SERIES 2017-C6		4,5		1, 132, 948		1,045,873	1, 100,000	1, 128, 713		(2,840)			4. 174	3.811				06/14/2017	06/01/2050
23312L-AU-2	DBJPM 2016-C1 MTG TR PASSTHRU CTF CL B		4,5	1FM	1,081,414		1,044,465	1,050,000	1,073,925		(2,849)			4. 195	3.831			44,047	03/31/2016	05/01/2049
23312V-AJ-5	DEUTSCHE BANK COMMERCIAL-DBJPM 2016-C3 B		4	1FM	1,029,932			1,000,000	1,023,526		(2,732)			3.264	2.918	MON	2,720			
23312V-AK-2	DEUTSCHE BANK COMMERCIAL-DBJPM 2016-C3 C		4.5			.91.7274		825.000	807.706		1,816			3.493	3.858		2,498	29,305		
			4,5		959,439										3.594		2,935			
36191Y-BB-3	GS MORTGAGE SECURITIES T-SERIES 2011-GC5		4			101.2788								3.707					09/22/2011	08/01/2044
36197X-AB-0	GS MORTGAGE SECURITIES T-SERIES 2013-GC1		4,5	2FM		91.9217					1,700			4.450	5.048					06/01/2046
36248F-AG-7	GS MORTGAGE SECURITIES T-SERIES 2011-GC3		4	1FM		. 102.7651					(1,422)			4.753	4.487	MON	(16)			03/01/2044
36250P-AJ-4	GS MORTGAGE SECURITIES T-SERIES 2015-GC3		4.5	1FM	.849.690	101.4010	836.558				(2,506)			4.401	4.056	MON	15.333		07/16/2015	07/01/2048
36250P-AL-9			4,5											4.411	4.693					
	GS MORTGAGE SECURITIES T-SERIES 2015-GC3		4,5			98.8425													07/16/2015	07/01/2048
36250V-AJ-1	GS MORTGAGE SECURITIES T-SERIES 2015-GC3		4,5	1FM	1,029,968	101.4974	1,014,974		1,021,581		(2,720)			4.466					10/14/2015	10/01/2048
36250V-AL-6	GS MORTGAGE SECURITIES T-SERIES 2015-GC3		4,5	1FM		100. 1537								4.653	5.084	MON			10/14/2015	10/01/2048
36251P-AJ-3	GS MORTGAGE SECURITIES T-GSMS 2016-GS3 B		4.5	1FM	1,132,937		1,053,442	1,100,000	1, 126, 303		(3,001)		1	3.395	3.045	MON				
36251P-AL-8	GS MORTGAGE SECURITIES T-GSMS 2016-GS3 C		4,0 4 E								(1,596)			3.997	3.787				09/22/2016	10/01/2049
			4,5																	
36252H-AK-7	GS MORTGAGE SECURITIES T-GSMS 2017-GS5 C		4,5	1FM	1,081,427		1,041,695		1,076,672		(2,716)			4.299	3.935			45, 140	03/07/2017	03/01/2050
36252T-AV-7	GS MTG SECS TR 2016-GS2-COML MTG PASSTHR		4	1FM	1,647,966		1,562,796	1,600,000	1,636,522		(4,572)			3.292	2.935					05/01/2049
36252T-AW-5	GS Mortgage Securities T-COML MTG PASSTH		4.5	1FM	1,096,885		1.049.913	1,065,000	1.089.532		(2,953)		1	3.759	3.398	MON	3.336	40,033		05/01/2049
36252T-AY-1	GS MTG SECS TR 2016-GS2-COML MTG PASSTHR		A 5			101.8567			818,937		(1, 150)		[4.528	4.342		15,298			05/01/2049
			4,J																	
36253P-AH-5	GS MORTGAGE SECURITIES T-SERIES 2017-GS6		4	1FM	1,441,901		1,381,347	1,400,000	1,436,149		(3,670)			3.869	3.511		4,514		05/19/2017	05/01/2050
46590M-AW-0	JP MORGAN CHASE COMMERCI-JPMCC 2016-JP2		4,5	1FM	1,091,799	94.9938	1,006,934	1,060,000	1,084,899		(2,903)			3.460	3.108				07/08/2016	08/01/2049
46590M-AX-8	JP MORGAN CHASE COMMERCI-JPMCC 2016-JP2		4.5		773,802	93.6138	748,910	800,000	778,887		2, 180		L	3.792	4.246	MON	5, 157		07/08/2016	08/01/2049
46636D-AJ-5	JP MORGAN CHASE COMMERCI-SERIES 2011-C4		4		984,413	102.5595					(845)			4.388	4.283		3,564	42.767	05/25/2011	
46636D-AS-5				IFM										4.801						
	JP MORGAN CHASE COMMERCI-SERIES 2011-C4		4			. 103.0018									4.698	MON	1,600		05/25/2011	07/01/2046
46640L-AJ-1	JPMBB COMMERCIAL MORT-SERIES 2013-C14 CL		4,5	1FM		102.2660								4.566	4.753					08/01/2046
46640L-AK-8	JPMBB COMMERCIAL MORT-SERIES 2013-C14 CL		4.5	1FM	235,677	101.5192	253,798		243,259		1,615			4.566	5.440	MON	1,903	11,576		08/01/2046
46640L-AN-2	JPMBB COMMERCIAL MORT-SERIES 2013-C14 CL		A E		429,929			500,000	463,610					4.566	6.619		3,806	23, 152		
			4,5																	
46642E-BD-7	JPMBB COMMERCIAL MORT-SERIES 2014-C21 CL		4,5	1FM		100 . 1256					(1,283)			4.341	3.979				07/01/2014	08/01/2047
46642E-BE-5	JPMBB COMMERCIAL MORT-SERIES 2014-C21 CL		4,5	1FM							(1,472)			4.654		MON	1,745		07/01/2014	08/01/2047
46644A-BL-5	JPMBB COMMERCIAL MORT-SERIES 2015-C27 CL		4	1FM				900,000	917.473		(2,539)			3.898	3.542		2,924			
46644A-BM-3			A E								(1,242)			4.343	4.176					
	JPMBB COMMERCIAL MORT-SERIES 2015-C27 CL		4, J																	02/01/2048
46645L-AY-3	JPMBB COMMERCIAL MORT-SERIES 2016-C1 CLA		4	1FM		100.0887	1,601,418		1,635,683		(4,493)			3.576	3.219		4,768			03/01/2049
46645L-BE-6	JPMBB COMMERCIAL MORT-SERIES 2016-C1 CLA		4.5	1FM	.988,766	103.0271	1,030,271	1,000,000						4.738	4.943	MON				
617459-AG-7	MORGAN STANLEY CAPITAL I-SERIES 2011-C2		15	1FM	504,990	101.9469	509.735	500.000	501,189		(453)			5.200	5.095		2.167	25,993	06/09/2011	06/01/2044
			4,J																	
617459-AH-5	MORGAN STANLEY CAPITAL I-SERIES 2011-C2		4,5	1FM		101.3280								5.485	5.647	MON			06/09/2011	06/01/2044

SCHEDULE D - PART 1

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		е	n Cha							(Decrease)		necognizeu	value						Acquired	
61760R-BB-7	MORGAN STANLEY CAPITAL I-SERIES 2011-C3		4	1FM	1,009,996	102.2655	1,022,655	1,000,000	1,002,479					4.118	4.010	MON			09/14/2011	07/01/2049
61761X-AA-6	MORGAN STANLEY CAPITAL I-SERIES 2013-WLS		4	1FM	922,472						(3, 320)			2.695	2.313	MON	2,021	24,255	02/14/2013	01/01/2032
61761X-AG-3	MORGAN STANLEY CAPITAL I-SERIES 2013-WLS		4	1FM			693.800				(2,588)			2.897	2.513	MON	1.690			01/01/2032
61761X-AJ-7	MORGAN STANLEY CAPITAL I-SERIES 2013-WLS		1					600,000	602.288		(2,225)				2.812		1,600	19, 194		01/01/2032
61761X-AL-2	MORGAN STANLEY CAPITAL I-SERIES 2013-WLS		······ · · · · · · · · · · · · · · · ·					400,000	399.651					3.512	3.659		1,210			01/01/2032
		· · · · · · · · · · · · · · · · · · ·	4,3																	
61764P-BX-9	MORGAN STANLEY BAML TRUS-COML MTG PT CTF	·	4,5	1FM							(2,277)			4.000	3.679				12/09/2014	12/01/2047
61764P-BZ-4	MORGAN STANLEY BAML TRUS-COML MTG PT CTF	·	4	1FM				700,000			2,217			4.000	4.421				12/09/2014	12/01/2047
61765D-AX-6	MORGAN STANLEY CAPITAL I-SERIES 2015-MS1	. .	4,5	1FM		100.5285	1,005,285	1,000,000						4.031	4.144			40,863	06/25/2015	05/01/2048
61765D-AZ-1	MORGAN STANLEY CAPITAL I-SERIES 2015-MS1	L	4.5	1FM	762,435				773,567					4.031	4.686	MON	2,687			
61766C-AK-5	MORGAN STANLEY CAPITAL I-SERIES 2016-UBS		4 5	1FM	1,086,579	102.7767	1,084,294	1,055,000	1,079,221		(2,629)			4.526	4.238		12.071		02/19/2016	03/01/2049
61766C-AL-3	MORGAN STANLEY CAPITAL I-SERIES 2016-UBS		л. с	1FM										4.542						03/01/2049
	MODOAN CTANLET UMFITHE TOUR OFFICE COTO COD	· []	4,0	IFM 1FM																
61766E-BE-4	MORGAN STANLEY BAML TRUS-SERIES 2016-C29	+	4								(2, 151)			3.325	2.970		2, 106		04/22/2016	
61766E-BH-7	MORGAN STANLEY BAML TRUS-SERIES 2016-C29		4	1FM	1,647,903		1,573,607	1,600,000	1,636,433		(4,404)			3.604	3.250		4,805		04/22/2016	05/01/2049
61766E-BJ-3	MORGAN STANLEY BAML TRUS-SERIES 2016-C29	l	4	1FM	1,081,481		1,025,131	1,050,000	1,074,629		(2,912)			4.039	3.670	MON			04/22/2016	05/01/2049
78419C-AD-6	SG COMMERCIAL MORTGAGE S-SGCMS 2016-C5 A		4	1FM	1,647,984		1,539,455	1,600,000			(4,508)			3.055	2.706	MON	4,073		07/01/2016	10/01/2048
90270Y-AN-9	UBS-BARCLAYS COMMERCIAL -SERIES 2013-C5		4 5											4.080						03/01/2046
90276C-AJ-0	UBS Commercial Mortgage -SERIES 2017-C2		л		1,338,989		1,282,447	1,300,000	1,334,395		(3,372)				3.632		4,326			
			4,J						1, 129, 105						3.931					
90276C-AK-7	UBS Commercial Mortgage -SERIES 2017-C2		4,5		1,132,914	95.7455	1,053,200	1, 100,000			(2,797)			4.295		MON		47,245	07/31/2017	08/01/2050
92903P-AC-3	VORNADO DP LLC-SERIES 2010-VNO CL A2FX R		4	1FM		101.8858	1,018,858	1,000,000			1,531			4.004	4.172			40,035	08/05/2011	09/10/2028
92935J-BC-8	WF-RBS COMMERCIAL MORTGA-SERIES 2011-C2C		4,5	1FM		102.6530					(2,404)			4.869	4.544				08/25/2011	02/01/2044
92935V-AG-3	WF-RBS COMMERCIAL MORTGA-SERIES 2011-C3C			1FM	1,009,952	102.0349	1,020,349	1,000,000	1,004,064		(1,725)			4.375	4.182	MON	3.646			
92935V-AN-8	WF-RBS COMMERCIAL MORTGA-SERIES 2011-C2C		4		504,979	. 101.7544	508,772	500,000	501,122		(445)			4.740	4.638	MON	1,975			03/01/2044
92936J-AG-9	WF-RBS COMMERCIAL MORTGA-SERIES 2011-C5C		4 5	1FM	526,528	105.2705	578,988	550,000	542,044		2,687			5.672	6.347		2,601	31,625	11/01/2011	11/01/2044
92939G-AA-5			4,5	1FM		. 101. 1044	960, 492				(2,849)								08/07/2014	
	WFLD MORTGAGE TRUST-SERIES 2014-MONT CLA		4,5											3.755			2,973			
92939G-AL-1	WFLD MORTGAGE TRUST-SERIES 2014-MONT CLA	· · · · · · · · · · · · · · · · · · ·	4,5	1FM		95.6970					2, 127			3.755			1,486		08/07/2014	08/01/2031
94989H-BF-6	WELLS FARGO COMMERCIAL M-WFCM 2015-NXS1		4,5	1FM							(2,588)			3.658	3.306				04/20/2015	05/01/2048
94989H-BJ-8	WELLS FARGO COMMERCIAL M-WFCM 2015-NXS1		4,5	1FM	699,973		675,681		699,885						3.851	MON	2,245	26,936	04/20/2015	05/01/2048
94989V-AJ-8	WELLS FARGO COMMERCIAL M-WFCM 2015-NXS3		4 5	1FM	1.079.381	102.3843	1.075.035	1.050.000	1.070.968		(2,660)			4.487	4.207	MON			09/25/2015	
94989V-AK-5	WELLS FARGO COML MTG 2015-NXS3 PASS THRU		4 5	1FM				800,000			3,023			4.638	5.095		21,645	18,450		09/01/2057
94989Y-BB-8	WELLS FARGO COMMERCIAL M-WFCM 2016-C32 C		4,5		1,544,937	. 100.8078	1,512,117	1,500,000	1,533,343		(4, 133)				3.591		4,940			01/01/2059
		· · · · · · · · · · · · · · · · · · ·	4																	
95000A-AZ-0	WELLS FARGO COMMERCIAL M-WFCM 2015-P2 CL		4	1FM		100.0623					(1,991)			4.255	3.891				12/08/2015	12/15/2048
95000A-BA-4	Wells Fargo Commercial M-SERIES 2015-P2		4,5	1FM										4.739	4.978				12/08/2015	12/15/2048
95000G-BA-1	WELLS FARGO COMMERCIAL M-SERIES 2016-BNK		4	1FM							(2, 129)			2.814	2.472					08/01/2049
95000G-BD-5	WELLS FARGO COMMERCIAL M-SERIES 2016-BNK		4	1FM		91.3195					(1,521)			2.967	2.625	MON			08/04/2016	08/01/2049
95000M-BP-5	WELLS FARGO COMMERCIAL M-WFCM 2016-C36 A		4	1FM	1,730,348		1,622,624	1,680,000	1,720,453		(4,651)				2.719	MON	8,582	51,492	10/21/2016	11/01/2059
95000M-BU-4	WFCM 2016-C36 B		15	1FM	1,153,561		1.087.523	1,120,000	1, 147, 152		(3,023)				3.316		3,426	41, 115	10/21/2016	11/01/2059
95001M-AK-6	Wells Fargo Commercial M-SERIES 2017-C38	l	л		1,338,909		1,279,631	1,300,000	1,333,963		(3,401)			3.917	3.557					
		+	4,0								(3,401)									
95001M-AL-4	Wells Fargo Commercial M-SERIES 2017-C38		4,5	1FM	1, 199, 930	94.5294	1, 134, 352	1,200,000	1, 199, 940		b			3.903	3.904	MUN			06/27/2017	07/01/2050
3499999. Sub	ototal - Bonds - Industrial and Miscellaned	ous (U	naffiliated)		1									1						
Co	mmercial Mortgage-Backed Securities		,		94.595.445	XXX	92.067.728	93.249.751	94.284.511		(123,206)			XXX	XXX	XXX	516,108	3,650,580	XXX	XXX
		1 1	4	455							(120,200)									
023765-AA-8	AMER AIRLINE 16-2 AA PTT-FIRST LIEN		[]	1FE										3.200	3.199		1,023	23,027	05/02/2016	
02376U-AA-3	AMER AIRLS INC 2016-1 CL AA CTF	l		1FE							(83)			3.575	3.520			6,466	01/14/2016	01/15/2028
023770-AA-8	AMER AIRLN 15-1 A PTT-SECURED		1	1FE		95.0340								3.375	3.375				03/02/2015	05/01/2027
07325Y-AB-4	BAYVIEW COMMERCIAL ASSET-SERIES 2007-3 C	. L I	4		133,246		137,450	145,943	145,270		1,373			2.796	3.627	MON		3,329		07/25/2037
12532*-AA-0	CFT Investments 1, LLC Equipment Note	1	1	1		104. 1611					1				5.657	JJ		4,656		
12532@-AA-8	CFT Investments 2 LLC Equipment Note	T	1	1		104.1611					[-				5.657			4,656		01/15/2023
12532@-AA-6	CFT Investments 3 LLC Equipment Note				125.916	104.1611								5.660	5.657		3.286			01/15/2023
			Ľ													JJ				
12533*-AA-9	CFT Investments 4 LLC Equipment Note	· 	1			. 103.9864					<u> </u>			5.660	5.657	JJ			10/13/2004	01/15/2023
125330-AA-7	CFT Investments 5 LLC Equipment Note	. 	1	1		103.9864			64,748					5.660	5.657				10/13/2004	01/15/2023
126650-BV-1	CVS Pass-Through Trust-FIRST LIEN		5	2FE		105.1324					(1,073)			5.773	4.491	MON				01/10/2033
233046-AD-3	DB MASTER FINANCE LLC-DNKN 2015 - 1A A21		4	3AM.	523.675	. 101.3940	517.236	510,125	520,792		980			3.980	3.632		2,312	20,303		02/20/2045
23342B-AB-0	DRB PRIME STUDENT LOAN T-SERIES 16-R CLA		4	1FE	410.327		406.893	410,402	411.004		34			3.070	3.025		210	13,689	10/04/2016	10/25/2044
		†	7					1,085,460												
26827X-AA-1	ECMC GROUP STUDENT LOAN -SERIES 2016-1A	+	4	1FE	1,085,460	101.3961	1, 100, 614		1,085,460					3.856	3.423				08/19/2016	07/26/2066
27034M-AC-8	EARNEST STUDENT LOAN PRO-SERIES 2016-D C		4	1FE										3.800	3.725		145		10/25/2016	01/25/2041
36246M-AU-3	GTP ACQ PARTNERS I-SECD REV NT AMER TWR		1	1FE							(748)			3.482	3.349	MON	1,045		02/26/2016	06/16/2025
38217K-AA-2	GOODGREEN TRUST-SERIES 16-1A CLASS A		4	1FE	1,240,260		1,220,780	1,240,878	1,240,878					3.230	3.396	MON			10/28/2016	10/15/2052

SCHEDULE D - PART 1

1	2	Cod		6	7		air Value	10	11			usted Carryin	a Valuo	1		b	nterest		D	ates
1	Z	3 4		0	/			10	11	12			<u> </u>	10	17			00		
		3 4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
													Total							
													Foreign							
		F		NAIC								Current	Exchange							
		0		Desig-								Year's	Change							
		0		0		.					<u> </u>		0							
		r		nation		Rate					Current	Other-	in							
		Сe		and		Used to			Book/	Unrealized	Year's	Than-	Book/				Admitted			Stated
		o i		Admini-		Obtain			Adjusted	Valuation	(Amor-	Temporary	Adjusted		Effective		Amount	Amount		Contractual
CUSIP		d g	Bond	strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
Identification	Description	e n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
42770X-AC-1	HERO FUNDING TRUST-SERIES 16-3A CLASS A2	e II	Gilai	1FE	1,148,569	100,4593		1, 120, 575	1, 150, 544	(Declease)	Accretion	necognizeu	value	3.910				Duning Teal	.09/15/2016	
			4,5				1, 125, 722				00.000				3.910	MON				
429827-AB-4	HIGHER EDUCATION FUNDING-SERIES 2004-1 C		4	1FE			1, 122, 340	1, 180,000	1,089,786					2.723	6.376				08/16/2016	01/01/2044
429827-AM-0 429827-AP-3	HIGHER EDUCATION FUNDING-SERIES 2004-1 C		4	1FE 1FE										2.119	5.710	MON		00 740		01/01/2044
	HIGHER EDUCATION FUNDING-SERIES 2004-1 C		4											2.101	5.483					01/01/2044
61205P-AL-3 629420-BH-5	MONTANA HIGHER EDUCATION-SERIES 12-1 CLA		4	1FE		100 . 1305 .			1,476,584 1,698,844		14, 134			3.520					10/28/2016	07/20/2043
	NEW RESIDENTIAL ADVANCE -SERIES 16-T3 CL		4	1FE	1,699,999			1,700,000			85			2.833	2.840				10/14/2016	10/16/2051
63940L-AC-8	NAVIENT STUDENT LOAN TRU-SERIES 2016-6A	+	4	1FE	1,700,000	102. 1467	1,736,494				04 500			3.806	3.738		1,078		10/12/2016	03/25/2066
66705R-AA-7	NORTHSTAR EDUCATION FINA-NEF 2016-1 A	+	4	1FE		101.0378 .								3.756						05/27/2036
68784U-AE-2	OSCAR US FUNDING TRUST-OSCAR 2016-2A A4	· · · · · · · · · · · · · · · · · · ·	4	1FE			1,713,869		1,731,294		(737)			2.990	2.986	MON			09/14/2016	12/15/2023
72349C-AB-8	CROWN CASTLE-SERIES 2009-1CLASS A2	+	4	1FE		103.0010					40. /00			9.000	9.000	MON	6,375		10/27/2009	08/15/2029
78442G-PS-9	SLM STUDENT LOAN TRUST-SERIES 2005-5 CLA	+l	4	1FE								·		2.740	5.144	JAJ0			10/04/2016	10/25/2040
	SLMA 2005-9 STUDENT LN-BKD NT CL B	+	4	1FE										2.790	5.334					01/25/2041
	SLM STUDENT LOAN TRUST-SERIES 2006-7 CLA	+	4	1FE							1,825			1.980	4.907	MON				01/27/2042
	SLM STUDENT LOAN TRUST-SERIES 2013-4 CLA	+	4	1FE		100.0027								4.006	4.744				08/03/2016	
	SOFI CONSUMER LOAN PROGR-SCLP 2016-1A A	· [[4	1FE							(343)			3.260	3.161	MON			08/09/2016	08/25/2025
	SOFI CONSUMER LOAN PROGR-SERIES 2016-3 C		4	1FE										3.050	2.834				10/06/2016	12/26/2025
	SLM STUDENT LN TR 2006-5-NOTE CL B		4	1FE		94.6576					11,239			2.700	5.490	JAJ0	2,788		09/28/2016	10/25/2040
83402Q-AA-0	SOFI CONSUMER LOAN PROGR-SCLP 2016-2A A		4	1FE							(306)			3.090	3.001	MON			08/03/2016	10/27/2025
87342R-AC-8	TACO BELL FUNDING LLC-SERIES 2016-1A CLA		4			. 102.7890					(690)			4.970	4.867	FMAN			05/11/2016	05/25/2046
88576P-AE-3	321 HENDERSON RECEIVABLE-SERIES 05-1A CL		4	1FE		95.2314					3,974			2.685		MON			10/28/2016	11/15/2040
90932N-AA-1	UNITED AIRLINES 2018-1 C-UNTD AIR 18-1 B		1	2FE	1,000,000	100.0418	1,000,418	1,000,000						4.600	4.601	MS			05/09/2018	03/01/2026
90932P-AA-6	UNITED AIR 2014-1 A PTT-SECURED NOTE		1	1FE	1, 147, 201		1, 103,673	1,107,639	1, 135, 621					4.000	3.369	AO			12/22/2015	04/11/2026
03329M-AE-9	ANCHORAGE CREDIT FUNDING-ANCHF 2015-2A D	D	4				498,855							7.300	7.298	JJ			09/07/2016	01/25/2031
04964H-AN-8	ATRIUM CDO CORP-SERIES 8A CLASS BR	D	4	1FE	1, 100,000	100.0008	1, 100,009	1, 100,000	1 , 100 , 000					4.377	4.047				10/06/2016	10/23/2024
04964H-AQ-1	ATRIUM VIII-DEF NT CL C-R	D	4	1FE										4.977	4.688	JAJ0			10/06/2016	10/23/2024
05875F-AC-1	BALLYROCK LTD-SERIES 16-1A CLASS B1	D	4	1FE	1, 100,000		1,094,578	1, 100,000	1, 100,000					4.436		JAJ0			08/16/2016	10/15/2028
11014P-AB-1	BRISTOL PARK CLO LTD-SERIES 2016-1A CLA	D	4	1FE	1, 150,000		1, 146, 733	1, 150, 000	1 , 150 , 000					4.336	4.222				11/01/2016	04/15/2029
14309Y-AQ-7	CARLYLE GLOBAL MARKET ST-SERIES 2012-4A	D	. 4	1FE	1, 150,000		1, 147,031	1, 150,000	1 , 150 , 000					4.369	3.990	JAJ0			10/14/2016	01/20/2029
14309Y-AY-0	CARLYLE GLOBAL MARKET ST-SERIES 2012-4A	D	4	1FE										5.069	4.718				10/14/2016	01/20/2029
87155M-AC-5	SYMPHONY CLO V LTD-SR SECD NT CL A-2 144	D	4	1FE		100.0091	1, 150, 105	1, 150,000	1, 133, 456		15,442			3.936	5.508	JAJ0		40,010	10/01/2009	01/15/2024
87244A-BC-3	WIND RIVER CLO LTD-SERIES 12-1A CLASS BR	D	4	1FE	1, 100,000			1, 100,000	1, 100,000					4.286	3.770	JAJO	10,216		09/29/2016	01/15/2026
87244A-BE-9	WIND RIVER CLO LTD-WINDR 2012-1A CR	<u>D</u>	4	1FE										5.086	4.928				09/29/2016	01/15/2026
87246M-AA-0	TICP CLO LTD-SERIES 2016-6A CLASS A	D	4	1FE	1,400,000	100.0015	1,400,021	1,400,000	1,400,000					3.986	3.712			73,040	10/26/2016	01/15/2029
87246M-AB-8	TICP CLO LTD-SERIES 2016-6A CLASS B	D	4	1FE	1,097,140		1,097,246	1, 100,000	1, 100,000					4.496	4.681		10,716		10/26/2016	01/15/2029
	VIRGIN AUST 2013-1A TRST-SECURED	D		2FE		101.2800					(7,087)			5.000	1.804	JAJ0	1,817	9,619	05/07/2015	10/23/2023
	ototal - Bonds - Industrial and Miscellaneo	ous (Unaffil	iated) - C	Other								1			1	1				
Loa	In-Backed and Structured Securities				36,354,454	XXX	36,970,084	37,380,831	37,033,467		148,924			XXX	XXX	XXX	335,444	1,349,024	XXX	XXX
	al - Industrial and Miscellaneous (Unaffilia	ated) Rond	\$		310,637,362	XXX	306,532,104	312,456,297	310,643,199		68.576	17.033		XXX	XXX	XXX	2,595,116	10,397,479	XXX	XXX
	1		•		510,057,302	XXX	000,002,104	012,400,201	010,040,199		00,070	17,000	1	XXX	XXX	XXX	2,000,110	10,001,419	XXX	XXX
	al - Hybrid Securities	1 1	4	451			4											·-		
79549A-RE-1	SALOMON BROTHERS MORTGAG-SERIES 2002-HYB	+	4	1FM	1, 196	. 100.8439					(4)			4.232	3.646	MON	4		05/25/2004	09/01/2032
79549A-SM-2	SALOMON BROTHERS MORTGAG-SERIES 2003 UP1	+	4,5	1FM							1,449			5.460	9.598	MON			03/28/2003	04/01/2032
	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2		4	1FM										7.000	12.329					06/01/2033
	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2	+	4	1FM		96.7351					1,328			7.000	49.384	MON			08/29/2003	06/01/2033
	ototal - Bonds - Parent, Subsidiaries and A	Affiliates - I	Resident	ial										1						
Mo	rtgage-Backed Securities				72,383	XXX	88,869	90,291	66,462		3,685	1		XXX	XXX	XXX	480	5,759	XXX	XXX
	BABSON CLO LTD-BABSN 2016-2A SUB	D	4,5	6*						(20,586)				0.000	0.000	JAJ0			07/29/2016	07/20/2028
	BARINGS CLO LTD-BABSN 2016-3A A1	D	4	1FE	1,400,000		1,399,999	1,400,000	1,400,000	,				3.866	3.614	JAJ0				01/15/2028
	BARINGS CLO LTD-BABSN 2016-3A A2	D	4	1FE	2,000,000		1,994,592	2,000,000	2,000,000					3.058	4.169	JAJ0		52,029	10/28/2016	01/15/2028
	BARINGS CLO LTD-BABSN 2016-3A B	D	4	1FE	1,600,000		1,599,864	1,600,000						4.936	4.814	JAJ0			10/28/2016	01/15/2028
	BARINGS CLO LTD-BABSN 2016-3A C	D	4	2AM										6.386	6.639	JAJ0			10/28/2016	01/15/2028
	ototal - Bonds - Parent, Subsidiaries and A	Affiliates - (Other I o				1.44										,			
				an	6,292,459	XXX	6,199.051	6 0E0 000	0.005.070	(00 500)	2.788			XXX	XXX	XXX	83.742	233.947	XXX	XXX
	cked and Structured Securities				1 : 1 : :		1 / .	6,350,000	6,205,278	(20,586)										
	al - Parent, Subsidiaries and Affiliates Bor	nds			6,364,842	XXX	6,287,920	6,440,291	6,271,740	(20,586)	6,473			XXX	XXX	XXX	84,222	239,706	XXX	XXX
6099999. Sub	ototal - SVO Identified Funds					XXX								XXX	XXX	XXX			XXX	XXX
														•			•			

SCHEDULE D - PART 1

1	2		Cod	les	6	7	F	air Value	10	11	Change	in Book/Adj	usted Carryin	g Value			h	nterest		Da	ates
		3	4	5			8	9			12	13	14	15	16	17	18	19	20	21	22
														Total							
														Foreign							
			F		NAIC								Current	Exchange							
			0		Desig-								Year's	Change							
		_	r		nation		Rate					Current	Other-	in							
		С	е		and		Used to			Book/	Unrealized	Year's	_ Than-	Book/				Admitted			Stated
		0	i		Admini-		Obtain		_	Adjusted	Valuation	(Amor-	Temporary	Adjusted		Effective		Amount	Amount		Contractual
CUSIP		d	g		strative	Actual	Fair	Fair	Par	Carrying	Increase/	tization)	Impairment	Carrying	Rate	Rate	When	Due and	Received		Maturity
Identification	Description	е	n	Char	Symbol	Cost	Value	Value	Value	Value	(Decrease)	Accretion	Recognized	Value	of	of	Paid	Accrued	During Year	Acquired	Date
	ototal -Bank Loans						XXX								XXX	XXX	XXX			XXX	XXX
	al - Issuer Obligations					217,547,699	XXX	213,925,142	218, 194, 828	216,678,279		(82,811)			XXX	XXX	XXX	2,046,518	5,917,201	XXX	XXX
	al - Residential Mortgage-Backed Sec					1,824,133	XXX	2,616,096	3,272,940	2,289,538		117,437	17,033		XXX	XXX	XXX	(6,888)	103,941	XXX	XXX
7999999. Tot	al - Commercial Mortgage-Backed Se	curities				94,595,445	XXX	92,067,728	93,249,751	94,284,511		(123,206)			XXX	XXX	XXX	516,108	3,650,580	XXX	XXX
8099999. Tot	al - Other Loan-Backed and Structure	d Securit	ies			42,646,913	XXX	43, 169, 135	43,730,831	43,238,745	(20,586)	151,712			XXX	XXX	XXX	419, 186	1,582,971	XXX	XXX
8199999. Tot	al - SVO Identified Funds						XXX								XXX	XXX	XXX			XXX	XXX
8299999. Tot	al - Bank Loans						XXX								XXX	XXX	XXX			XXX	XXX
8399999 - To	tal Bonds					356,614,190	XXX	351,778,101	358,448,350	356,491,073	(20,586)	63, 132	17,033		XXX	XXX	XXX	2,974,924	11,254,693	XXX	XXX

Schedule D - Part 2 - Section 1 - Preferred Stocks Owned NONE

Schedule D - Part 2 - Section 2 - Common Stocks Owned $N\ O\ N\ E$

SCHEDULE D - PART 3

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

1	2 3	4		6	7	8	9 Daid far Assruad
CUSIP		Date		Number of Shares			Paid for Accrued Interest and
Identification	Description Foreign	Acquired	Name of Vendor BARCLAYS CAPITAL INC	of Stock	Actual Cost	Par Value	Dividends
00108W-AG-5 00440E-AV-9	ACE INA HOLDINGS-SR UNSECURED		WELLS FARGO				
008252-AM-0	Affiliated Managers Grou-SENIOR UNSECURE		KEY CAPITAL MARKETS		815.024	800.000	12.467
008252-AN-8	Affiliated Managers Grou-SR UNSECURED	07/16/2018	KEY CAPITAL MARKETS		1,068,320		
010392-FS-2	Alabama Power Co-SENIOR UNSECURED	06/21/2018	MORGAN				· · · · · · · · · · · · · · · · · · ·
026874-DK-0	American International G-SENIOR UNSECURE	06/26/2018	VARIOUS			1, 100,000	
03040W-AL-9	AMERICAN WATER CAPITAL C-SR UNSECURED	06/06/2018	MORGAN				
03522A-AD-2	Anheuser-Busch Cos LLC /-SENIOR UNSECURE	11/13/2018	EXCHANGE OFFER				
05369A-AA-9 06406R-AF-4	Aviation Capital Group L-SENIOR UNSECURE	05/30/2018 07/09/2018	CITIGROUP GLOBAL MAR				
097023-BX-2	Boeing Co/The-SENIOR UNSECURED		CREDIT SUISSE SECURI		1,402,183		
10510K-AC-1	BRAMBLES USA INC-SR UNSECURED	05/31/2018	CITIGROUP GLOBAL MAR		902,763		4,228
120568-AX-8	BUNGE LTD FINANCE CORP-SENIOR UNSECURED		DEUTSCHE BANK SECURI				
12636Y-AA-0	CRH America Finance Inc-SENIOR UNSECURED	05/31/2018	JP MORGAN SECURITIES				
171340-AN-2	CHURCH & DWIGHT CO INC-SENIOR UNSECURED	06/25/2018	VARIOUS				
17252M-AN-0	Cintas Corp No 2-SENIOR UNSECURED	07/17/2018	BANK OF AMERICA CORP				5,550
186108-CK-0 207597-EJ-0	Cleveland Electric IIIum-SENIOR UNSECURE	07/19/2018 06/06/2018	DEUTSCHE BANK SECURI				
207597-EJ-0 22160K-AM-7	Connecticut Light & Powe-SEQURED Costco Wholesale Corp-SENIOR UNSECURED		CREDIT SUISSE SECURI				
254709-AM-0	DISCOVER FINANCIAL SVS-SENIOR UNSECURED		VALOT SOTSE SECON			400,000	
25470D-BD-0	Discovery Communications-SENIOR UNSECURE	04/05/2018	EXCHANGE OFFER		.529,220		6,397
26884T-AR-3	ERAC USA Finance LLC-SENIOR UNSECURED	06/13/2018	BARCLAYS CAPITAL INC		1,033,021	1, 100,000	
28176E-AD-0	Edwards Lifesciences Cor-SENIOR UNSECURE	06/11/2018	VARIOUS				
313747-AU-1	Federal Realty Investmen-SENIOR UNSECURE	06/28/2018	BANK OF AMERICA CORP		1,011,160		
369550-AZ-1	General Dynamics Corp-SENIOR UNSECURED		JP MORGAN SECURITIES		1,385,565	1,500,000	
369550-BG-2 378272-AQ-1	General Dynamics Corp-SENIOR UNSECURED	06/01/2018 06/20/2018	BANK OF AMERICA CORP				
413875-AW-5	Harris Corp-SENIOR UNSECURED	05/30/2018	WELLS FARGO		202,608		
42981C-AA-6	HIGH STREET FUNDING TRUS-SENIOR UNSECURE		VARIOUS		2,158,486		.25,625
44107H-AC-6	NY Society for Relief of-SECURED	06/05/2018	GOLDMAN		1,388,240	1,400,000	
452308-AX-7	Illinois Tool Works Inc-SENIOR UNSECURED	07/17/2018	CANTOR				
457187-AB-8	INGREDION INC-SENIOR UNSECURED	07/17/2018	LIQUIDNETINC				5,760
45866F-AF-1	Intercontinental Exchang-SENIOR UNSECURE		VARIOUS		2,062,819	2,200,000	
49446R-AS-8 50540R-AQ-5	Kimco Realty Corp-SENIOR UNSECURED Laboratory Corp of Ameri-SR UNSECURED	06/21/2018 06/05/2018	FIRST TEMESSEE				
52107Q-AG-0	LAZARD GROUP LLC-SENIOR UNSECURED		MITSUBISHI UFJ SEC I				2,813
52107Q-AH-8	LAZARD GROUP LLC-SENIOR UNSECURED	07/12/2018	BRILEY		1,320,620	1,400,000	18,427
532457-AZ-1	Eli Lilly & Co-SENIOR UNSECURED	07/11/2018	WELLS FARGO		1,365,024	1,200,000	
534187-BH-1	Lincoln National Corp-SENIOR UNSECURED	06/11/2018	BRILEY		1,058,112	1, 100,000	
565122-AB-4	Maple Escrow Subsidiary -SENIOR UNSECURE	06/20/2018	CREDIT SUISSE SECURI				
579780-AN-7 60871R-AG-5	MCCORMICK & CO INC/ND-SENIOR UNSECURED	06/13/2018	VARIOUS		1,319,596	1,400,000 1,400,000	
608/1H-AG-5 631005-BH-7	NOLSON COURS BHEWING CO-SENIOR UNSECURE	06/12/2018 07/24/2018	VARTOUS			1,400,000	
64952W-CX-9	New York Life Global Fun-SECURED		UBSSECURITIES		2,172,787		
65106F-AG-7	NEWCASTLE MORTGAGE SECUR-SERIES 2007-1 C	12/26/2018	PAYUP			1,875	
666807-AQ-5	Northrop Grumman Systems-SENIOR UNSECURE	07/18/2018	BRILEY				
666807-BN-1	Northrop Grumman Corp-SENIOR UNSECURED	07/12/2018	CREDIT SUISSE SECURI				
670346-AP-0	Nucor Corp-SENICR UNSECURED	06/01/2018	BARCLAYS CAPITAL INC				4,279
69353R-FG-8 703481-AB-7	PNC Bank NA-SENIOR UNSECURED	05/30/2018 09/10/2018	GULUMAN			1 , 100 , 000 1 . 800 . 000	
703481-AB-7 709599-AW-4	Penske Truck Leasing Co -SENIOR UNSECURE		U.S. BANCORP				
709599-AZ-7	Penske Truck Leasing to -SENIOR UNSECURE		U. S. BANCORP		.100,702	200,000	
718546-AR-5	Phillips 66-SENIOR ÜNSECURED	07/10/2018	CITIGROUP GLOBAL MAR		1,083,027	1, 100,000	
724479-AN-0	Pitney Bowes Inc-SENIOR UNSECURED	07/10/2018	MORGAN				
74340X-BH-3	Prologis LP-SENIOR UNSECURED	06/19/2018	WELLS FARGO				
78409V-AM-6 78486Q-AD-3	S&P Global Inc-SENIOR UNSECURED	06/12/2018	BANK OF AMERICA CORP				
78486Q-AD-3 79466L-AF-1	svb FINANCIAL GHUP-SH UNSECURED	07/10/2018 06/05/2018	VARIOUS			400,000 2,000,000	6,319
808513-AX-3	Charles Schwab Corp/The-SENIOR UNSECURED		PBC CAPITAL MARKETS	[]	1,987,030	2,000,000	
857477-AN-3	State Street Corp-SR UNSECURED	07/09/2018	NORGAN		1,382,234		
875484-AH-0	Tanger Properties LP-SENIOR UNSECURED	07/18/2018	MORGAN				
875484-AJ-6	TANGER PROPERTIES LP-SENIOR UNSECURED	06/19/2018	WELLS FARGO			1, 100,000	
883556-BR-2	Thermo Fisher Scientific-SENIOR UNSECURE	06/26/2018	CREDIT SUISSE SECURI				
883556-BX-9	Thermo Fisher Scientific-SENIOR UNSECURE		GOLDMAN				
89236T-EM-3	Toyota Motor Credit Corp-SENICR UNSECURE	06/07/2018	HSBC SECURITIES INC				

SCHEDULE D - PART 3

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

1	2	3	4	5	6	7	8	9 Paid for Accrued
CUSIP			Date		Number of Shares			Interest and
Identification	Description	Foreign	Acquired	Name of Vendor	of Stock	Actual Cost	Par Value	Dividends
	UNITED AIRLINES 2018-1 C-UNTD AIR 18-1 B			CREDIT SUISSE SECURI				
	US Bancorp-SUBORDINATED		05/30/2018	U. S. BANCORP		1,423,845		
91159H-HR-4	US Bancorp-SENIOR UNSECURED		05/30/2018	GOLDMAN		1,345,092	1,400,000	4, 165
95000U-2A-0	Wells Fargo & Co-SENIOR UNSECURED			CREDIT SUISSE SECURI				
	Xcel Energy Inc-SENIOR UNSECURED			JP MORGAN SECURITIES				
98978V-AL-7	Zoetis Inc-SENIOR UNSECURED			CREDIT SUISSE SECURI				
11271L-AC-6 67077M-AA-6	Brookfield Finance Inc-SENIOR UNSECURED	A		DEUTSCHE BANK SECURI				
	Nutrien Ltd-SENIOR UNSECURED	A	06/29/2018					
	AerCap Ireland Capital D-SENIOR UNSECURE	A		BRILEY		1. 146. 373		
	AIRCASTLE LTD-SENIOR UNSECURED	D		VARIOUS		1.058.750	1,200,000	
003250-AQ-4 023150-AA-6	Ambad LSNI LLC-FIRST LIEN	D	02/12/2018					
25243Y-AZ-2	Diageo Capital PLC-SENIOR UNSECURED	D		U B S SECURITIES	[[1.011.100	1,000,000	.3,660
50247W-AB-3	LYB International Financ-SENIOR UNSECURE	D	05/31/2018	U B S SECURITIES			1, 100,000	
606822-AV-6	Mitsubishi UFJ Financial-SENIOR UNSECURE	D	07/17/2018	MITSUBISHI UFJ SEC I		1.091.728	1,100,000	17.428
	Sanofi-SENIOR UNSECURED	D	06/12/2018	MORGAN		1,389,780	1,400,000	· · · · · · · · · · · · · · · · · · ·
	Vodafone Group PLC-SENIOR UNSECURED	D	06/05/2018					
984851-AF-2	Yara International ASA-SENIOR UNSECURED	D	05/24/2018	CITIGROUP GLOBAL MAR				
	tal - Bonds - Industrial and Miscellaneous (Unaffiliated)					79, 171, 211	81,441,753	591,094
	JPMCC COMMERCIAL MORTGAG-SERIES 2017-JP7		01/01/2018	JP MORGAN SECURITIES			(1,000,000)	(3,797)
	tal - Bonds - Parent, Subsidiaries and Affiliates					(784,455)	(1,000,000)	(3,797)
8399997. Total	- Bonds - Part 3					78,386,756	80,441,753	587,297
8399998. Total	- Bonds - Part 5					4,222,560	4,300,000	32,054
8399999. Total	- Bonds					82,609,316	84,741,753	619,351
8999997. Total	- Preferred Stocks - Part 3						XXX	
8999998. Total	- Preferred Stocks - Part 5						XXX	
8999999. Total	- Preferred Stocks						XXX	
9799997. Total	- Common Stocks - Part 3						XXX	
9799998. Total	- Common Stocks - Part 5						XXX	
9799999. Total	- Common Stocks						XXX	
	- Preferred and Common Stocks						XXX	
9999999 - Tota	s					82,609,316	XXX	619,351

SCHEDULE D - PART 4

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

1 2 3 4 5 6 7 8 9 10 Change In Book/Adductor Carring Value 10 17 18 10 CUSIP Decipion For- port particle Name Name Name Per Value For- Particle For- Particl	
CLSP For Discost Name Number of Structoria Structoria Prior Year (Arrow Adjusted) Current Voats Coal Tables (Arrow Valuation Total Coarsen (Arrow Valuation Total Coarsen (Arrow Valuation Total Coarsen (Arrow Valuation <thtotal coarsen<br="">(Arrow Valuation<td>20 21</td></thtotal>	20 21
LUSP For Disposal Name Number of Status of Disposal Par Value Status of Status of Disposal Par Value Status of Disposal Par Value Status of Disposal Current Status of Disposal Current Status of Disposal Total Gain Status of Disposal Total Gain Disposal Total Gain Disposal <thtotal gain<br="">Disposal Total Gain Dispos</thtotal>	1
Loss For Dispose Name Number of Dispose Part New Prov New Current Book Current Variant Courteent Thermany Courteent Thermany<	
CUSP For Disposal Name Name Stock Stock Per Value Actual Cost Current Stock Book Cost The stock Disposal Disposal <th< th=""><td>Bond</td></th<>	Bond
USDP For Operation For Operation For Operation Number of Protocol	
CUSP Ford Object Number of Database Number of States of Ford States of Ford States of Composition (Amore States of Ford Ford Ford States of Ford Ford Ford Fo	Interest/
US.P For US.P Back Number of Surge of	Stock Stated
CLSP Product State and Sta	Dividends Con-
Identi- factor Corr, Description Corr, epsilon Description Object of Explore Name Shares of Store Corr, elso store <	
Internal Description eight Park Of Purchaser Stock storage Actual Cost Value Description Control Park Description Description <thdescription< th=""> Description Descript</thdescription<>	Received tractua
Descent or Lange the angle Descent or Lange the angle <th< th=""><td>During Maturity</td></th<>	During Maturity
Descr. +1 Descr. +1 <thdescr. +1<="" th=""> <thdescr. +1<="" th=""> <thd< th=""><td>Year Date</td></thd<></thdescr.></thdescr.>	Year Date
D5959999 Subtlatil-Bondial-US. Covernment 1.00	
STUBLE OF THELE BLOCENES 200 CLOS G TOTAL SALE TOTAL SALE <thtotal sale<="" th=""> <thtotal sale<="" th=""></thtotal></thtotal>	
DBBM DBM DBM D2.00 D2.00 <thd2.00< th=""> <thd2.00< th=""> <thd2.00< <="" th=""><td>17 XXX</td></thd2.00<></thd2.00<></thd2.00<>	17 XXX
13190990 Subtral - Bonds - U.S. Special Revenues 8.17 8.18 9.80 9.80 9.80 1.70 1.70 9.80 02075 - 34 Add HAR M, Wo JA, THAR LUP 107807 million 10780 million 10	
OND-S.4. AVEXID 15 UNINGE LUN SPRIS (2004 SP AC L) 127/2016 PATOM 9.88 <	
OND-S.4. AVEXID 15 UNINGE LUN SPRIS (2004 SP AC L) 127/2016 PATOM 9.88 <	325 XXX
D2053-4-4 B4 ANLE F 24 AFT_FINIS LINE D2703-4-3 B4 ANLE F 24 AFT_FINIS LINE D38,00 S8,00	19901/25/203
L0200-14-3 Aller IAEs Into 2016 - 0. AL CF D// 50/201 Silken & Poller 9 4/3 9 4/4 9 - 07 -11	
CONTRANT MERT AURU NET AL PT-SCRED 11/11/2012 Simular Simular Signed Sign	
UBSER-1-1 UPEREFISION INECT FIN GD III 11/1/2018 EXAMPLE PROM PROM </th <td></td>	
State // + 4 Aver International Unscaled Notice 11/2/2018 Exercise 2,00 99,76 99,76 97<	
0064A, 4-0 NR. 0* Mellin Mindue Sense Sub-1 C 1.70/1/2018 PMOM	9.696
05886-92 DW. G* MERICA WITGE-SHES 200-1 D. TOYLOPIE PNOM 2.200 65.355 1.96 (728) (728) 2.300 06050-05-2 DW. G* MERICA WITGE-SHES 200-4 C TOYLOPIE PNOM 2.81 2.951 1.72 1.739 1.759 2.551	
0000-HC-5 MAL GF ARRIUL MUTUALE-SRIES 2002-0 1/201/2018 PATOMA 2.251 2.951	
0605H-P-3 BMC & MERICA MERICAL SCIEGE 200-6 C 12/01/2016 PMOM 2,81 7.72 1,579 1,579 2,81 0728-4-8-4 BMT (S MERICA MERICAL SCIES 200-5 C 120/02/018 PMOM 24,85 2,81 7.72 3.8 3.8 3.41 3.4	
0655 00-0 BAKE OF AREICLA FUNDING -SERIES 2004-0.C 1207/10716 PAPODIM 1965 2.011 1.066 3.8 3.8 1.965 2.023 07280-16-4 BAKE STEAMES 200-5 C 1207/10716 PAPODIM 2.243 2.238 2.239 3.06 2.655 2.655 2.035 3.06 2.655<	
OPC29-04-04 BAVIET OWNERUL ASSET-SENTES 200-3 C 1/22/2018 PNDOM 24.283 24.283 2.280 3.41	
073889-0-0 ECAR STERMA LULTALEL -SERIES 2004-5 C 1/2/17/2018 PM/000N 2.65 2.33 2.232 .36 .366 2.655	
078896-0-0 9EAR STARS & LT-A TRST-SRIFE SUB-24 (2 1228/2018 PLVCOM 2.142 2.142 2.199 2.129 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.111 2.1111 2.111 2.111 <	
12488+0-9	
132279-49- (3669)-47.1 0'F NAST-FIGNE TURST-FIRST FUELENCE. 0101/10/2018 FUECEBO	
12680-0V-1 OVE PASS-TRADUM TRUST-FIRST LIEN 01/1/2018 CALL 100 1.119 1.119 1.260 1.276	
12666F-H0-3 CONTINUE HUBE LONS-SERIES 2004-9 CL 1207/12018 PATODN 2 489 2 282 2 303 166 166 2 489 12666F-H0-2 CONTINUE HUBE LONS-SERIES 2004-9 CL 1207/12018 MITINIT 450,000 527,747 400,065 (40,965) (40,965) 450,000 527,747 400,065 (40,965) (40,965) 450,000 527,747 400,065 (40,965) <t< th=""><td></td></t<>	
1266F-VD-2 CUMPRIVIE HORE LOAR-SERIES 2004-6 (LA 12/01/2018 PV/DDIN 3.33 3.33 2.821 3.665 2.77 2.77 3.33	
13282-R0-9 CALEMENT INTL. CORP-SENIG INSECURED NOTE: D/7/5/2018 MITURITY 450,000 527,747 480,965 (40,965)	
13328-40-9 CALEMENT INTL. CORP-SENIGR UNSCLEMED NOTE D/7/15/2018 MITURITY 450,000 527,747 480,965 (40,965) <td></td>	
19300-R0-6 COLLEGE & UNIVERSITY FAC-SERIES 202-2 De/O/1/2018 PAYDOIN 1.959	28,688 07/15/201
2254/W-G7-1 QPEDIT SUISSE FIRST BOST-SERIES 2002-9 C 12/01/2018 PAVDOIN 900 900 919 790 10 900 900 2254/W-F7-6 OPEDIT SUISSE FIRST BOST-SERIES 2002-24 11/01/2018 PAVDOIN 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 16.572 16.227 2.559 2.559 18.767 18.767 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 16.227 2.559 2.559 18.767 18.767 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 157.705 16.227 2.559 2.559 2.559 2.559 2.559 2.559 2.559 2.559 2.559 2.559 2.559	
22541W-F1-5	30 03/01/203
225410-FL-8. CREDIT SUISSE FIRST BOST-SERIES 2002-24. 1.11/01/2018 PAYDOIN 18,787 16,572 2.559 2.559 1.8,787 225410-FR-4. CREDIT SUISSE FIRST BOST-SERIES 2002-8 C 1.22/01/2018 PAYDOIN 3.451 3.468 3.469 1.18) .180 .441 225410-FR-4. CREDIT SUISSE FIRST BOST-SERIES 2002-77 1.22/01/2018 PAYDOIN .24.461 .03220 .(21) .1,350	1,720
22541W1-5-8 OEDIT SUISSE FIRST BOST-SERIES 2003-8 C 12/01/2018 PAYDOIN 3.451 3.461 3.469 (18)	625
225410-,R-4 OREDIT SUISSE FIRST BOST-SERIES 2003-17 12/01/2018 PAVDOIN 24,461 (332) (21) 1,350 1,350 23304-A0-3 DB MASTER FINANCE LLC-DAWN 2015 - TA A21 .11/20/2018 PAVDOIN 5,300 .5,441 .6,401 .1011	105 04/01/203
233046-AD-3 DB MASTER FINANCE LLC-DKIN 2015 - 1A A2I 11/20/2018 PAYDOWN 5,300 5,41 5,401 (101) <t< th=""><td>(17) 06/01/203</td></t<>	(17) 06/01/203
23305/-AD-3 DBUBS MORTGAGE TRUST-SERIES 2011-LC2A CL .02/01/2018 PAYDOWN .76 .77 .76 .76 .77 .76	132
233150-AC-5 DCT IND OPER PTNR LP-SENIGR UNSECURED NO .09/21/2018 CALL 105.81534 .476, 169 .450,000 .468,374 .462,338 (1,449) (1,449) (1,449) (10,890) <td< th=""><td></td></td<>	
23332U-AC-8 DSLA MORTGAGE LOAN TRUST-SERIES 2004-AR1 12/19/2018 PAYDOWN 2,579 2,759 <	45,069 10/15/202
233428-A8-0 DRB PRIME STUDENT LOAN T-SERIES 16-R CLA 10/25/2018 PAYDOWN 270,508 270,508 270,459 270,482 (374) (374) (374) (374) 270,508 270,508 (374)	
251510-FB-4 DEUTSCHE ALT-A SECURITIE-SERIES 2005-AR1 12/26/2018 PAVD0IN 13,534 14,668 9,370 10,106 3,891 3,891 13,534 12/26/2018 PAVD0IN 153,657	4.71810/25/204
26827X-AA-1 ECMC GROUP STUDENT LOAN -SERIES 2016-1A 12/26/2018 PAYDOWN 153,657 164,657 </th <td></td>	
27034III-AC-8 EARNEST STUDENT LOAN PRO-SERIES 2016-D C 12/25/2018 PAYDOWN 157,246 157,246 157,246 157,246 157,246 160,257 2708465-AL-4 Ecolab Inc-SENIOR UNSECURED NOTE 01/01/2018 PAYDOWN 157,246 157,246 160,257 160,057 (60,057) (70,017) (70,017) <	2,252
278865-AL-4 Ecolab Inc-SENIOR UNSECURED NOTE .01/01/2018 CALL 106.835 .119,655 .112,000 .124,601 .118,049 .8	2,935 01/25/204
362341-TIN-1 GSAIUP TRUST-SERIES 2005-SE42 CLASS A1	
36242D-BJ-1 GSR MORTGAGE LOAN TRUST-SERIES 2004-9 CL 12/01/2018 PAYDOWN 1,065 1,065 20 20 1,065 36242B-JA-7 GS MORTGAGE SECURITIES T-SERIES 2011-GC3 12/01/2018 PAYDOWN 61,854 63,115 62,265 (411) (411) 61,854 36962G-XZ-2 GENERAL ELEC CAP CORP-NOTE 02/13/2018 BANK OF AMERICA CORP 249,900 200,000 241,450 234,711 (198) (198) (198) 15,386 15,386	
36248F-AG-7 GS MORTGAGE SECURITIES T-SERIES 2011-GC3 12/01/2018 PAYDOWN 61,854 .62,265	
36962G-XZ-2 GENERAL ELEC CAP CORP-NOTE	
13821/(-4a-2) LGULIGREN RUSL-SERIES 16-14 (2485 A) 1 12/15/2018 [PAVIDUN] 1 304 /1/1 304 /1/1 304 566 303 793 925 925 925 925 1 304 717	
384780-AA-0 GRAIN SPECTRUM FUND 11-SECUPED NOTE	
393505-BK-7 CONSECD FINANCIAL CORP-SERIES 1993-3 CLA	
40431K-AE-0 HSI ASSET LOAN OBLIGATIO-SERIES 2007-IF1	
41161P-FR-9 HARBORVIEW MORTGAGE LOAN-SERIES 2004-6 C	
412830-AB-9 HARLEY-DAV IDSON FUNDING-SENIOR UNSECURED	
44266R-AC-1 HOWARD HUGHES MEDICAL IN-SENIOR UNSECURE	
444859-AU-6 Humana Inc-SENIOR UNSECURED	
449669-CD-0 MOSAIC GLOBAL HLDG-SENIOR UNSECURED NOTE	
45254N-PU-5 IMPAC CMB TRUST-SERIES 2005-5 CLASS A1	
45660N-02-4 INDYMAC INDX MORTGAGE LO-SERIES 2004-AR4 12/01/2018 PAYD0IN 3,298 3,298 2,620 2,836 462 3,298	
45887a-AL-6 INGERSOLL-RAND GL HLD CO-SENIOR UNSECURE 03/15/2018 CALL 100.4186652	10,509 01/15/201
463556-4D-2 IROQUOIS GAS TRANSUISSID-BOND 10/31/2018 SINKING PAVIENT 5,882 5,882 5,882 5,882 5,882	

SCHEDULE D - PART 4

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

1 2 5 4 5 6 7 9 9 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 7 9 9 00 10 10 10 10		-	-	· .	-	U U			JUKS SOLD, F					<u> </u>							
Lord For Bis of Distribution Section of Distr	1	2	3	4	5	6	7	8	9	10)	16	17	18	19	20	21
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Line Fig. Description Fig.															-						
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Light Light <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Current</td><td>Total</td><td>Foreign</td><td></td><td></td><td></td><td></td><td>Bond</td><td></td></th<>													Current	Total	Foreign					Bond	
Light Light <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Vear's</td><td>Change in</td><td>Exchange</td><td>Book/</td><td></td><td></td><td></td><td>Interest/</td><td></td></th<>													Vear's	Change in	Exchange	Book/				Interest/	
Burger Problem Problem <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Drier Veer</td><td></td><td>0</td><td></td><td></td><td></td><td></td><td>Foreign</td><td></td><td></td><td></td><td>Ctotod</td></th<>										Drier Veer		0					Foreign				Ctotod
USE Particle												Current		BOOK/							
CLUE Decom Number of Location Con- transmission Con- transmis										Book/	Unrealized	Year's	Than-	Adjusted	Book/	Carrying	Exchange			Dividends	Con-
Both Description Prof. Distance Prof. Distance Long Distance Long Distance Distance </td <td>CUSIP</td> <td></td> <td></td> <td></td> <td></td> <td>Number of</td> <td></td> <td></td> <td></td> <td>Adjusted</td> <td>Valuation</td> <td>(Amor-</td> <td>Temporary</td> <td></td> <td></td> <td>Value at</td> <td>Gain</td> <td>Realized</td> <td>Total Gain</td> <td>Received</td> <td>tractual</td>	CUSIP					Number of				Adjusted	Valuation	(Amor-	Temporary			Value at	Gain	Realized	Total Gain	Received	tractual
Interne Date Open of Private No.e Solved Private Add. Cost Visit Date D			F	Disconst	Nama		0														
Basil of Basil o	Identi-		For-								Increase/	tization)/	Impairment	value	Carrying					0	
Bindlow Bindlow <t< td=""><td>fication</td><td>Description</td><td>eign</td><td>Date</td><td>of Purchaser</td><td>Stock</td><td>sideration</td><td>Par Value</td><td>Actual Cost</td><td>Value</td><td>Decrease</td><td>Accretion</td><td>Recognized</td><td>(11+12-13)</td><td>Value</td><td>Date</td><td>Disposal</td><td>on Disposal</td><td>Disposal</td><td>Year</td><td>Date</td></t<>	fication	Description	eign	Date	of Purchaser	Stock	sideration	Par Value	Actual Cost	Value	Decrease	Accretion	Recognized	(11+12-13)	Value	Date	Disposal	on Disposal	Disposal	Year	Date
BBD: -6 PBB: Mig. SME-Feb 2014 Differ	464124_AD_4	IBWIN HOME FOULTY_SERIES 2006_P1 CLASS 2	Ŭ	12/01/2018	PAYDOWN		1/16 135	1/6 135	47 669							1/6 135				2 /85	06/01/2037
Number of the service of th																					
BBR-1-6 Weil, UND MINA, AL-MILL BURST, MILL DUTOR MORE A.G.A. B.G.A. .G.A. B.G.A. B.G.A																					
Inter - 6.97 Jump																					
Home - Device Stranger Expension - Company 1 / Model																					
Constraint Constraint Standard Standard <tt>Standard</tt> <tt>Standard</tt>																					
Dot2 - 0.0 DetL. Statework in unbounder (Arrow		NEWCASTLE MORTGAGE SECUR-SERIES 2007-1 C		11/26/2018 .	VARIOUS		(4, 160)			(26)				3, 168		(4, 160)					04/25/2037
Besi & Bareles Unit or Burges Burges </td <td>651229-AM-8</td> <td>NEWELL RUBBERMAID INC-SENIOR UNSECURED N</td> <td></td> <td>05/29/2018 _</td> <td>VARIOUS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>(904)</td> <td></td> <td>(904)</td> <td></td> <td></td> <td></td> <td>(7,839)</td> <td>(7,839)</td> <td></td> <td>06/15/2022</td>	651229-AM-8	NEWELL RUBBERMAID INC-SENIOR UNSECURED N		05/29/2018 _	VARIOUS							(904)		(904)				(7,839)	(7,839)		06/15/2022
Besi & Bareles Unit or Burges Burges </td <td></td> <td></td> <td></td> <td></td> <td>DEUTSCHE BANK SECURI</td> <td></td> <td></td> <td></td> <td>40,409</td> <td></td>					DEUTSCHE BANK SECURI				40,409												
Bioline Long Marcel 201-1 District District <thdistrit< th=""> <thdistrict< th=""> <thdistrict< td=""><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>[</td><td></td><td>[</td><td></td><td>[</td><td></td><td></td><td></td><td></td></thdistrict<></thdistrict<></thdistrit<>			1										[[[
Image 4-2 Second operation Dirac Dirac <thdira< th=""> Dira Dirac</thdira<>			-1			1															
0800-0-3 PTEM MURINE ASSUMPTION 01000100 10000100 100000 100000 100000 <			-1			1															
Carti-Add Pirch Sin In-Grang Marcala With Optical Marcala Mar																					
Nati-A-9 Ist is is it is i																					
Name: A - I All All All All All All All All All A																		(57,963)	(57,963)		
Parties A. J. Parties of S. L. Parker S. L. Parker S. L. Parker S. Parker		SLM STUDENT LOAN TRUST-SERIES 2005-5 CLA		10/25/2018 .	PAYDOWN															861	
NBD 0.4 SP SP 0.0848 (LV MPR9-027 011-14 UVDS UVDS D17, 30	78442G-RC-2		1		PAYDOWN											46.374					
NH F-A SPI 000800 (LM RP06-PHI) 2016-5 C J/20201 PROM J/102			1																		
Market Markt Markt Markt <td></td> <td></td> <td>-1</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td> </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			-1			1															
10056-06 SIMPS FITNES MIND_OF USECRET 4405/2011 DOWLE GPT 510 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>																					
Bioles Har Second Processing Processing Procesting Processing Processing												4,598		4,598							
State State <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																					
Stophe A- M SUCR 0 P Structure M Process																		(4,459)	(4,459)		
Name Introduction	83149E-AG-2	SLM STUDENT LN TR 2006-5-NOTE CL B		10/25/2018	PAYDOWN																10/25/2040
SHOLD-AM SPI COMMEND AND FROM PLOY 2016-04. JUD/STATE PUTON PT1 100 PT1 200 PT000 PT1 100 PT1 200 <	832696-AK-4			.07/06/2018	VARIOUS		450, 184		469.878	469.880						469.888		(19,703)	(19,703)		03/15/2025
StRD=PA STRUPE ALSE HA-SHIE 200-6 (L 1/2/2/07 P/V/07 1/1 10			-									(380)		(380)							
NBSR-26 STUTUED AS EST SOLT-SELES 20.26 4. LPU/00/05 PU/00/05														(000)							
Rester Contract Set Statut - Set Statu - Set Statut - Set Statu - Set Statut - Set Statut - Set												2 000		2 000							
8784-4-4 110.4 XSET MUT FIN LL-SRUG MSURE																					
873/87-46 100 Exit LPUING LLD-SERIE 201+10 A.J.																					
BistPie-Fa Del HeuEsson Receivable -Selits Gel + GL 1/2/7/2018 P/1/201 P/1/2014 P/1/2014 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>																					
BREER-Lee IUPERINALE ROMES COPF-BUICIT INSCREPTION 10/24/2018 JP 4000M SCORFIES 22,423 22,400 22,77 22,003 (7) (7) 22,72 4.11 4.11 4.949 B////2024 26359-47-4 Winson Inc-Buict Park 2014 Similar Park 2014 57,78 (7) (7																					
90022-4-4 WITE AIR 201+1 AFT-EGGE NOTE 10/11/2018 SIMILE PARAMENT 75.276 77.66 77	88576P-AE-3	321 HENDERSON RECEIVABLE-SERIES 05-1A CL		12/17/2018	PAYDOWN																11/15/2040
90022-4-4 WITE AIR 201+1 AFT-EGGE NOTE 10/11/2018 SIMILE PARAMENT 75.276 77.66 77	899896-AC-8	TUPPERWARE BRANDS CORP-SENIOR UNSECURED		10/24/2018	JP MORGAN SECURITIES							(7)		(7)		22.022					
SESS=74-9 Viacon In-SOURCE MEXICUE 0.02/20/216 ELLS FARCO 57, 641 .57, 643 .57, 644 .142 .1.42 .1.42 .1.42 .1.44 .1.42 .1.42 .1.42 .1.44 .1.42 .1.42 .1.44 .1.44 .1.4	90932P-AA-6				SINKING PAYMENT							(209)		(209)							
URAZE - Mail MAIL MICRIGACE PASS-TRADU-SERIES 2014-VI2 12/07/2018 PAPCORM 4,775 4,475 6.6 0.4/07/204 S023S-DeC-8 PRES COMPECTAL MURCH-SERIES 2014-VIC 12/07/2018 PAPCORM 26,865 27,465 27,165 (229) 22,964 7.15 20/07/2014 PAPCORM 26,865 27,465 (27) 17,10 29,895 26,87 7.15 20/07/2014 PAPCORM 26,865 27,465 (27) 17,10 29,895 27,17 7.15 20/07/2014 PAPCORM 26,865 27,465 (27) 17,10 39,892 (27,17) 17,35 44,633 (41,43) 14,41,000 14,400,000 14,00,00 14,00,000<												16						1 142	1 142		
92855-16-9 IF-RS COMBERIAL MARTIN-SERIES 2011-02C 12/01/2018 PM/DOIN 25.856 27.68 27.9 12.291 28.856 775 00/01/2034 15/032-0-1 COMUS BERRY INC-SUNG MSCHER NOT A. 10/22/2018 F/MODIN 12.24 12.72 12.77 12.72 12.77 12.72 12.77 12.72 12.77 12.72 12.74 12.74 12.74 12.74 12.74 12.77 12.74 12.77 12.74 12.77 12.74 12.77 12.71 12.7																					
94810-4-1 IELLS FAGD WRTEAGE BLAC SHEES 2004-V C 12/01/2018 PARCIN 226 12/2 226 12/01/2018 71530-4-1-4 CANUSE BERGY IN-EXERING WESCHEEM A 00/12/2018 RCUIN 12/2017 <						+									h						
15132-0-1 CENVUS DEPKY IN-SENIGU MASCARED NOTE A. 1/02/2018 2/1/1						+															
17758-44-2 VTLSH: ODP-SL9SKUTCE/IM-SUNDR UNSCUPE A																					
032320-AH-7 AMOCRAGE CAPT IA, 0.0 1-400C 2012-14.8 D. 0.40/13/2028 PATOON 1.400.000 1.400.000 1.400.000 1.400.000 25,742 0.11/13/2028 03763V-4-9 APLOS CLO-4FIDE 512-114 CASS CAR D. 1.228/2018 PATOON 800.000<			. A																		
02763/-4-0-9 4P10S 0.0-4PID 2012-4PID			. A									(3,209)		(3,209)				(43,433)	(43,433)		
027637-42-9 4P100S C0.2-4PID 2012-2012 PATONIN 1.150.000 1.150.000 94102S 027637-42-5 AP100S C0.5-SERIES 2014/17/2228 PATONIN 800.000 800.000 800.000 800.000 9276/42/18 PATONIN 1.150.000 94102S 44235 442 4010S C0.5-SERIES 2014/17/2228 PATONIN 94000 869.000 800.000 800.000 9276/42/18 PATONIN 1.150.000 1.150.000 1.150.000 941/17/2228 PATONIN 1.150.000 941/17/2228 PATONIN 1.150.000 1.150.000 1.150.000 941/17/2228 PATONIN 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 941/12/228 PATONIN 1.150.000 1.150.000 1.150.000 941/12/228 PATONIN 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000 1.150.000	033290-AN-7	ANCHORAGE CAPITAL CLO LT-ANCHC 2012-1A A	D	04/13/2018	PAYDOWN		1,400,000		1,400,000	1,400,000						1,400,000					01/13/2027
027637-8-5 AP IDS CLO-SERIES 12-11A QLSS CR D. 12/26/2018 PATION 800.000 <t< td=""><td>03763Y-AQ-9</td><td>APIDOS CLO-APID 2012-11A BR</td><td>. D</td><td>12/26/2018</td><td>PAYDOWN</td><td> </td><td>1,150,000</td><td></td><td>1,150,000</td><td>1, 150,000</td><td></td><td></td><td></td><td></td><td>L</td><td></td><td></td><td></td><td></td><td></td><td>01/17/2028</td></t<>	03763Y-AQ-9	APIDOS CLO-APID 2012-11A BR	. D	12/26/2018	PAYDOWN		1,150,000		1,150,000	1, 150,000					L						01/17/2028
107764X-AL-B API0S QL-SENIES 2014-TA CLASS A2B D. 10/17/2018 PAYDOIN 1,150,000 1,150,000 1,150,000			D																		
194255-&F-2 ATLAS SENGE 0. 0.4/23/2018 Call 107.386 5.56, 300 560, 300 669, 975 5.47, 394 (8, 707) .575, 618			n n																		
IndextPact ATLAS SENICR LOAM FUND L-ATCL0 2016-7A B D. 11/01/2018 PAYDOIN 1,150,000 1,000,000 1			۰ <u>۲</u> ۳			1						(0 707)		(0 707)				(00 200)	(00 200)		
Opecaer-Au-B BLUENUMTAIN CLO LD-BLUE 2012-A2 ABR D. 11/20/2018 PAVDOIN 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,00						+						(0,/0/)		(0,/0/)				(38,088)	(38,088)		
151320-AJ-6 CENT COD 14 LTD-SR TERM NT SER 207-14A D. D1/01/2018 PAYDOWN 1.000,000 1,000,000																					
26244H-AC-6 ORYDEN SENIOR LOAN FUND-DRSLF 2016-45A B D. 10/24/2018 PAYDOIN 1,000,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000 1,150,000							1, 150,000	1, 150,000	1, 150,000	1, 150,000						1, 150,000					
381370-AC-2 GOLDENTREE LOAN OPPORTUN-GOLD9 2014-9A B D. 1/1/29/2018 PAYDOIN 1,150,000 1,150,000 1,150,000 495,625 499,680 310			_ D																		
381370-AC-2 GOLDENTREE LOAN OPPORTUN-GOLD9 2014-9A B D. 1.0/29/2018 PAYDOIN 1.150,000 1.150,000 1.150,000			. D		PAYDOWN																07/15/2027
50188G-AN-3 LGM XVIII LDD PARTNERSHIP-DEF MEZZ NT CL D. D. D.5/01/2018 PAVD0IN 500,000 .495,625 .499,690 .310 .310 .310 .01 .050,000 .445.8 D. .11/08/2018 PAVD0IN .1,150,000 .1,100,000 .1,100,000 .1,100,000 .1,100,000 .1,100,000 .1,40,430,404 .1,41,420,430,41,420,430,41,420,430,41,420,430,41,420,430,41,44,44,44,44,44,44,44,44,44,44,44,44,	38137Q-AC-2		. D		PAYDOWN		1, 150,000	1, 150,000							LL						10/29/2026
SoldBar-Ac-6 LOI LTD PARTNERSHIP-SERIES 22A CLASS A2 D. 11/08/2018 PAYDOIN 1.150,000			D									310		310							
55951P-AR-8 MAGNETITE CLO LID-MAGNE 2012-7A A2R D. .02/13/2018 PAYDOIN .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,100,000 <			D												[
55952Y-AK-3 MAGNETITE CLO LID-SERIES 14-8A CLASS BR D. .05/14/2018 PAYDOIN 1,100,000 1,100,000 1,100,000 .00/15/2026 55952Y-AL-1 MAGNETITE CLO LID-MAGNE 2014-9A CLASS BR D. .05/14/2018 PAYDOIN .800,000<			D																		
55952Y-AL-1 MagNETITE CLO LID-MagNE 2014-8A CLASS CR D. 0.5714/2018 PAYDOIN .800,000			- Lo			+									h						
67092R-AA-6 OCP CL0 2016-12 Ltd-SERIES 16-12A CLASS D 1/1/18/2018 PAYDOIN 1,400,000 1,400,000 1,408,809						+															
71645W-AR-2 PETROBRAS GLOBAL FINANCE-SENIOR UNSECURE D 03/29/2018 TENDERED 153,375 150,000 158,565 153,799 (289) (289) (136) 9,920 01/27/2021 74734L-AA-9 0G06 ATLANTIC/ALSKAN RI-SECURED B0ND D 07/30/2018 153,375 150,000 158,565 153,799 (289) 140 0.07/30/2018 1400 0.07/30/2018 1400 0.07/30/2018 1400 0.07/30/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2018 1.0025/2028 1.0028/2028 1.002/2028 1.0028/2028 1.002/2028 1.002/2028 1.0028/2028 1.002/2028 1.0028/2028 1.002/20																					
74734L-AA-9 0G0G ATLANTIC/ALASKAN RI-SECURED BOND D. 07/30/2018 SINKING PAYMENT .43,750 .66,269 .43,750 .1,400 .07/30/2018 79410U-AC-5 SALEN FIELDS CL0 LTD-SERIES 16-2A CLASS D. .10/25/2018 PAYDOWN .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,150,000 .1,101/2028 88433B-AC-1 WIND RIVER CL0 LTD-SERIES 16-2A CLASS B D. .11/01/2018 .11/01/2018 .11/01/2028 .11/01/2028 .11/01/2028 .11/01/2028			- D																		
79410U-AC-5 SALEN FIELDS CL0 LTD-SERIES 16-2A CLASS D .10/25/2018 PAYDOWN 8433B-AC-1 WIND RIVER CL0 LTD-SERIES 16-2A CLASS B D .11/01/2018 PAYDOWN .11/01/2018 11/01/2018 PAYDOWN .11/01/2018 .11/01/2018 .11/01/2018 .11/01/2018			. D									(289)		(289)				(136)	(136)		
79410U-AC-5 SALEN FIELDS CL0 LTD-SERIES 16-2A CLASS D .10/25/2018 PAYDOWN 8433B-AC-1 WIND RIVER CL0 LTD-SERIES 16-2A CLASS B D .11/01/2018 PAYDOWN .11/01/2028			D																		
88433B-AC-1 WIND RIVER CL0 LTD-SERIES 16-2A CLASS B D. 11/01/2018 PAYDOWN 1, 150,000 1, 10, 100,000 1, 100,000 1, 100,000 1, 100,000 1, 100,00	79410U-AC-5		. D		PAYDOWN		1,150,000	1, 150,000	1, 150,000	1, 150,000					L	1, 150,000					
92765Y-AA-5 VIRGIN AUST 2013-1A TRST-SECURED D. 10/23/2018 SINKING PAYMENT			D																		
		VIRGIN AUST 2013-1A TRST-SECURED	D	10/23/2018								(3 040)		(3 040)	[Γ				
						-r							F	F	r		F	r			

SCHEDULE D - PART 4

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

	2	3	4	E		7	8	9	10				Carrying Value		16	17	18	19	20	21
	2	3	4	5	O	/	0	Э	10	11	лапge in во 12	13	14	15	10	17	10	19	20	21
											12	13	14	Total						
												• •	T						David	
												Current	Total	Foreign	D 1/				Bond	
											-	Year's	Change in	Exchange	Book/				Interest/	
									Prior Year		Current	Other-	Book/	Change in	Adjusted	Foreign			Stock	Stated
									Book/	Unrealized	Year's	Than-	Adjusted	Book/	Carrying	Exchange			Dividends	Con-
CUSIP					Number of				Adjusted	Valuation	(Amor-	Temporary	Carrying	Adjusted	Value at	Gain	Realized	Total Gain	Received	tractual
Identi-		For-	Disposal	Name	Shares of	Con-			Carrying	Increase/	tization)/	Impairment	Value	Carrying	Disposal		Gain (Loss)	(Loss) on	During	Maturity
fication	Description	eign		of Purchaser	Stock	sideration	Par Value	Actual Cost	Value	Decrease	Accretion	Recognized	(11+12-13)	Value	Date	Disposal	on Disposal	Disposal	Year	Date
92915P-AB-1	VOYA CLO LTD-INGIM 2014-1A A2AR	. D	04/18/2018 .				1, 100,000	1, 100,000	1, 100,000						1, 100,000					04/18/2026
	WELLFLEET CLO LTD-WELF 2016-2A A1	. D	11/08/2018 .			1,400,000	1,400,000	1,400,000	1,400,000						1,400,000					
	WELLFLEET CLO 2016-2 LTD-WELF 2016-2A A2	D	11/08/2018 .	_ PAYDOWN CALL 118.355339		1, 100,000 473,421	1, 100,000 400,000	1,096,700 468,728	1, 114, 247 456, 178		(14,247) (7,171)		(14,247) (7,171)		1, 100,000 522,428		(49.007)	(49,007)		
	XLIT LTD-SR UNSECURED	U				.,	,	,			(, , ,		, , ,		,				, ,	
	Subtotal - Bonds - Industrial and Misc	ellane			1	34,094,775	34, 114, 143	34,348,165	34,014,112		129,099		129,099		34,318,750		(223,967)	(223,967)	1,414,037	
	GOLDMAN SACHS CAPITAL I-SUBORDINATED NOT			BRILEY																02/15/2034
	Subtotal - Bonds - Hybrid Securities				1	384,787	350,000	350,000	350,000		(0.470)		(0.470)		350,000		34,787	34,787	28,623	
	JPMCC COMMERCIAL MORTGAG-SERIES 2017-JP7 SALOMON BROTHERS MORTGAG-SERIES 2002-HYB		01/01/2018 .	. JP MORGAN SECURITIES			501	F00			(6,178)			•••••					(1,383)	09/01/2050 09/01/2032
	SALOMON BROTHERS MORIGAG-SERIES 2002-HYB		12/01/2018										2/						/	09/01/2032
	SALOMON BROTHERS MORTGAG-SERIES 2003 UP1		1.11/01/2018	PAYDOWN															320	04/01/2032
	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2		12/01/2018			4,962	4,962				1,087		1,087		4,962					06/01/2033
	SALOMON BROTHERS MORTGAG-SERIES 2003-UP2		12/01/2018			3,781							2,677							06/01/2033
5599999. 5	Subtotal - Bonds - Parent, Subsidiarie	es and	Affiliates			29,254	29,254	24,870	23, 178		(100)		(100)		29,254				(770)	XXX
8399997.1	Гotal - Bonds - Part 4					34,518,010	34,502,591	34,732,685	34, 396, 622		128,862		128,862		34,707,198		(189,180)	(189,180)	1,442,232	XXX
8399998. 1	Гotal - Bonds - Part 5					4, 172, 782	4,300,000	4,222,560			1,897		1,897		4,224,457		(51,675)	(51,675)	107,203	XXX
	Fotal - Bonds					38,690,792	38,802,591	38,955,245	34,396,622		130,759		130,759		38,931,655		(240,855)	(240,855)	1,549,435	
	Fotal - Preferred Stocks - Part 4						XXX													XXX
	Fotal - Preferred Stocks - Part 5						XXX													XXX
	Fotal - Preferred Stocks						XXX													XXX
	Fotal - Common Stocks - Part 4						XXX													XXX
	Fotal - Common Stocks - Part 5						XXX													XXX
	Fotal - Common Stocks						XXX													XXX
	Fotal - Preferred and Common Stocks	S					XXX													XXX
9999999 -	Totals		-			38,690,792	XXX	38,955,245	34,396,622		130,759		130,759		38,931,655		(240,855)	(240,855)	1,549,435	XXX

SCHEDULE D - PART 5

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

		1		-		Long Term Dona.			Ū			0								
1	2	3	4	5	6	7	8	9	10	11	C	hange in Bo	ok/Adjusted C	Carrying Value	e	17	18	19	20	21
											12	13	14	15	16					
															Total					
													Current	Total	Foreign					
							Par Value						Year's	Change in	Exchange				Interest	
							(Bonds)			Book/		Current	Other-	Book/	Change in	Foreign			and	Paid for
							(_ or			Adjusted	Unrealized	Year's	Than-	Adjusted	Book/	Exchange	Realized		Dividends	Accrued
CUSIP							Number of			Carrying	Valuation	(Amort-	Temporary	Carrying	Adjusted	Gain	Gain	Total Gain	Received	Interest
Identi-		For-	Date		Disposal	Name of	Shares		Consid-	Value at	Increase/		Impairment	, ,	Carrying	(Loss) on	(Loss) on	(Loss) on	During	and
	D	-												· ·	, ,		· · · ·	· /	0	
fication	Description	eign	Acquired	Name of Vendor	Date	Purchaser	(Stock)	Actual Cost			(Decrease)	Accretion	Recognized	13 - 14)	Value	Disposal	Disposal	Disposal	Year	Dividends
31428X-BP-0	FedEx Corp-SENIOR UNSECURED		07/09/2018		CITIGROUP GLOBAL MAR CITIGROUP GLOBAL MAR	1,500,000	1, 430, 242				1,712		1,712			(12, 189)	(12,189)			
693506-BP-1	PPG Industries Inc-SENIOR UNSECURED		06/04/2018	RAYMOND JAMES											(39,486)	(39,486)		10,313		
	Patterson-UTI Energy Inc-SENIOR UNSECURE																			
703481-AA-9			01/11/2018	VARIOUS	09/10/2018 _	EXCHANGE OFFER	1,800,000	1,803,438	1,803,217	1,803,217		(221)		(221)						
3899999. 5	Subtotal - Bonds - Industrial and M	/liscella	aneous (Un	affiliated)			4,300,000	4,222,560	4,172,782	4,224,457		1,897		1,897			(51,675)	(51,675)	107,203	32,054
8399998. T	Fotal - Bonds	4,300,000	4,222,560	4,172,782	4,224,457		1,897		1,897			(51,675)	(51,675)	107,203	32,054					
8999998. T	Fotal - Preferred Stocks																			
9799998. T	Fotal - Common Stocks																			
9899999. T	Fotal - Preferred and Common Sto	ocks																		
9999999 - 7	Totals							4,222,560	4, 172, 782	4,224,457		1,897		1,897			(51,675)	(51,675)	107,203	32,054

Schedule D-Part 6-Section 1-Valuation of Shares of Subsidiary, Controlled or Affiliated Companies **NONE**

Schedule D - Part 6 - Section 2 NONE

SCHEDULE DA - PART 1

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

1	Codes	4	5	6	7	1		usted Carrying		12	13			Intere	est			20
	2 3					8	9	10	11			14	15	16	17	18	19	1
									Total								1 I	1
								Current	Foreign			Amount Due					1 I	1
								Year's	Exchange			and Accrued					1 I	1
							Current	Other-	Change in			Dec. 31 of					1 _ /	1
					Book/	Unrealized	Year's	_ Than-	Book/			Current Year	Non-				Amount	
		Data		Martinita	Adjusted	Valuation	(Amor-	Temporary	Adjusted			on Bond	Admitted	. .	Effective		Received	Paid for
Description	For-	Date		Maturity	Carrying	Increase/	tization)/	Impairment	Carrying	DanMahaa		Not	Due and	Rate	Rate	When	During	Accrued
Description	Code eign	Acquired	Name of Vendor	Date	Value	(Decrease)	Accretion	Recognized	Value	Par Value	Actual Cost	in Default	Accrued	of	of	Paid	Year	Interest
0599999. Total - U.S. Governmen						-								XXX	XXX	XXX	ļJ	l
1099999. Total - All Other Govern														XXX	XXX	XXX	ļļ	l
1799999. Total - U.S. States, Terr 2499999. Total - U.S. Political Sul		ons Bonds												XXX XXX	XXX XXX	XXX XXX	ļļ	<u> </u>
														XXX	XXX	XXX	<u>⊢−−−−</u> /	
3199999. Total - U.S. Special Rev BELL CANADA INC. COMMERCIAL PAPER	enues Bonds	12/12/2018 0	CITIGROUP GLOBAL MAR	_03/14/2019	4.969.351									0.000	3.084	N/A	ļļ	
SUNCOR ENERGY INC. COMMERCIAL PAPER			CITIGROUP GLOBAL MAR				4.388			2.000.000				0.000	3.089	N/A	[[
3299999. Subtotal - Bonds - Indus	strial and Miscellaneo	us (Unaffiliate	ed) - Issuer Obligations		6,954,699		12,414			7,000,000	6,942,285			XXX	XXX	XXX	(
3899999. Total - Industrial and Mis	scellaneous (Unaffilia	ted) Bonds			6,954,699		12,414			7,000,000	6,942,285			XXX	XXX	XXX	1	1
4899999. Total - Hybrid Securities	5	•												XXX	XXX	XXX	1	1
5599999. Total - Parent, Subsidia	ries and Affiliates Bor	nds												XXX	XXX	XXX	1	1
6099999. Subtotal - SVO Identifie	d Funds													XXX	XXX	XXX	1	1
6599999. Subtotal - Bank Loans														XXX	XXX	XXX	1	1
7799999. Total - Issuer Obligation	IS				6,954,699		12,414			7,000,000	6,942,285			XXX	XXX	XXX	i I	1
7899999. Total - Residential Morte	gage-Backed Securiti	es												XXX	XXX	XXX	1	1
7999999. Total - Commercial Mor	tgage-Backed Securit	ties												XXX	XXX	XXX	1	1
8099999. Total - Other Loan-Back		ecurities												XXX	XXX	XXX		1
8199999. Total - SVO Identified F	unds													XXX	XXX	XXX	I	· · · · · ·
8299999. Total - Bank Loans														XXX	XXX	XXX	I	·
8399999. Total Bonds					6,954,699		12,414			7,000,000	6,942,285			XXX	XXX	XXX	I	I
8699999. Total - Parent, Subsidia	ries and Affiliates									XXX				XXX	XXX	XXX	<u>ا ا</u>	I
9199999 - Totals					6,954,699		12,414			XXX	6,942,285			XXX	XXX	XXX	ا <u>ا</u>	<u> </u>

Schedule DB - Part A - Section 1 - Options, Caps, Floors, Collars, Swaps and Forwards Open **NONE**

Schedule DB - Part A - Section 2 - Options, Caps, Floors, Collars, Swaps and Forwards Terminated **NONE**

Schedule DB - Part B - Section 1 - Futures Contracts Open **NONE**

Schedule DB - Part B - Section 1B - Brokers with whom cash deposits have been made **NONE**

Schedule DB - Part B - Section 2 - Futures Contracts Terminated **NONE**

Schedule DB - Part D - Section 1 - Counterparty Exposure for Derivative Instruments Open **NONE**

Schedule DB - Part D-Section 2 - Collateral for Derivative Instruments Open - Pledged By **NONE**

Schedule DB - Part D-Section 2 - Collateral for Derivative Instruments Open - Pledged To **NONE**

> Schedule DL - Part 1 - Reinvested Collateral Assets Owned **NONE**

> Schedule DL - Part 2 - Reinvested Collateral Assets Owned **NONE**

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

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

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

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned December 31 of Current Year

	Sin			Junonit roui				
1	2	3	4	5	6	7	8	9
						Book/Adjusted	Amount of Interest	Amount Received
CUSIP	Description	Code	Date Acquired	Rate of Interest	Maturity Date	Carrying Value	Due and Accrued	During Year
	I - U.S. Government Bonds							
	I - All Other Government Bonds							
	I - U.S. States, Territories and Possessions Bonds							
2499999. Tota	I - U.S. Political Subdivisions Bonds							
3199999. Tota	I - U.S. Special Revenues Bonds							
	COX ENTERPRISES INC. COMMERCIAL PAPER			0.000 .	01/02/2019	4,299,677		
	ERAC USA FINANCE LLC COMMERCIAL PAPER			0.000	01/10/2019			
	SPECTRA ENERGY PARTNERS LP COMMERCIAL PA			0.000 . 0.000	01/15/2019 01/10/2019			
2200000 Sub	total - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations		12/20/2010	0.000	01/10/2019	18.087.965		8,889
	I - Industrial and Miscellaneous (Unaffiliated) Bonds					18,087,965		8,889
	I - Hybrid Securities					10,007,903		0,009
	I - Parent, Subsidiaries and Affiliates Bonds							
	total - SVO Identified Funds							
	total - Bank Loans							
	I - Issuer Obligations					18,087,965		8,889
	I - Residential Mortgage-Backed Securities							
	I - Commercial Mortgage-Backed Securities							
	I - Other Loan-Backed and Structured Securities							
	I - SVO Identified Funds							
8299999. Tota								
8399999. Tota	l Bonds					18,087,965		8,889
8899999 - Tota	al Cash Equivalents					18,087,965		8,889

ANNUAL STATEMENT FOR THE YEAR 2018 OF THE MML Bay State Life Insurance Company SCHEDULE E - PART 3 - SPECIAL DEPOSITS

			2	Deposit Benefit of All	Policyholders	All Other Special Deposits		
	States, Etc.	Type of Deposit	Purpose of Deposit	3 Book/Adjusted Carrying Value	4 Fair Value	5 Book/Adjusted Carrying Value	6 Fair Value	
	Alabama	AL						
2.	Alaska	AK						
3.	Arizona	AZ	LIFE INSURANCE	105 407				
4. 5	Arkansas	ARB CA			102,408			
5. 6.	California Colorado	CA						
o. 7.	Connecticut		LIFE INSURANCE		1,462,969			
7. 8.	Delaware	DE						
9.	District of Columbia							
10.	Florida							
11.	Georgia		LIFE INSURANCE					
12.	Hawaii							
13.	ldaho	ID						
14.	Illinois	JL						
15.	Indiana	IN						
16.	lowa							
17.	Kansas							
18.	Kentucky					-		
19.	Louisiana							
20.	Maine							
21.	Maryland							
22.	Massachusetts		LIFE INSURANCE			F		
23.	Michigan							
24.	Minnesota							
25.	Mississippi			4 505 047	4 400 000			
26.	Missouri		LIFE INSURANCE	1,505,817	1,462,969			
27.	Montana	MT NE						
28.	Nebraska	NE NV						
29. 30.	Nevada New Hampshire		LIFE INSURANCE					
30. 31.	New Jersey		LIFE INSURANCE		102,400			
32.	New Mexico		LIFE INSURANCE					
33.	New York	NY						
34.	North Carolina		LIFE INSURANCE					
	North Dakota							
36.								
37.	Oklahoma							
38.	Oregon							
39.	Pennsylvania							
40.	Rhode Island	RI						
41.	South Carolina	scB	LIFE INSURANCE					
42.	South Dakota	SD						
43.	Tennessee	TN						
44.	Texas	тх						
45.	Utah							
46.	Vermont							
47.	Virginia		LIFE INSURANCE	60,233				
48.	Washington							
49.	West Virginia							
50.	Wisconsin							
51.	Wyoming					-		
52.	American Samoa							
53.	Guam							
54.	Puerto Rico							
55. 56	U.S. Virgin Islands							
56. 57	Northern Mariana Islands					F		
57. 58	Aggregate Alien and Other		~~~~					
58. 59	Aggregate Alien and Other	UI XXX XXX	XXX XXX	4,250,254	4,130,450	209,756	204,81	
J9.	DETAILS OF WRITE-INS	~~~		4,200,204	4,100,400	209,700	204,0	
5001								
5898.	Summary of remaining write-ins Line 58 from overflow page		xxx					
		······································	······					

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