QUARTERLY STATEMENT

OF THE

C.M. Life Insurance Company

TO THE

Insurance Department

OF THE

STATE OF

FOR THE QUARTER ENDED MARCH 31, 2016

LIFE AND ACCIDENT AND HEALTH

2016



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

QUARTERLY STATEMENT

AS OF MARCH 31, 2016 OF THE CONDITION AND AFFAIRS OF THE

C.M. Life Insurance Company

Output

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NA NA	AIC Group Code <u>0435</u>		Code 93432 Employer's	BID Number <u>06-1041383</u>	
Organized under the Laws of	, ,	(Prior) ecticut	, State of Domicile or Port of	Entry Connecticut	
Country of Domicile		United Stat	es of America		
Incorporated/Organized	04/25/1980		Commenced Business _	05/12/1981	
Statutory Home Office	100 Bright Meado	v Boulevard	,	Enfield , CT, US 06082	
	(Street and N	umber)	(City o	or Town, State, Country and Zip Code)	
Main Administrative Office		1295 S	tate Street		
	Springfield , MA, US 01111	(Street a	and Number)	413-788-8411	
(City o	r Town, State, Country and Zip	Code)		Area Code) (Telephone Number)	
Mail Address	1295 State Stree	t		Springfield , MA, US 01111	
	(Street and Number or P		(City o	or Town, State, Country and Zip Code)	
Primary Location of Books an	d Records	1295 \$	State Street		
•			ind Number)		
(City o	Springfield , MA, US 01111 r Town, State, Country and Zip (Code)		413-788-8411 Area Code) (Telephone Number)	
, ,		,	•	, (<u> </u>	
Internet Website Address		www.mas	ssmutual.com		
Statutory Statement Contact	Tamm	/ A. Peatman (Name)	_ ,	413-744-6327 (Area Code) (Telephone Number)	
	tpeatman@massmutual.com	(Name)		413-226-4086	
	(E-mail Address)			(FAX Number)	
		OFF	FICERS		
President and Chief		_	_		
Executive Officer Secretary	-		I reasurer _ Appointed Actuary	Todd Garett Picken Douglas Wright Taylor	
Secretary	i la Dellise i	lanagan	Appointed Actuary _	Douglas Wilght Faylor	
	Executive Vice President and ancial Officer	Mark Douglas Roellig, I	THER Executive Vice President and ral Counsel	Michael Robert Fanning, Executive Vice Presid	ent
Melvin Timothy Corbett	Executive Vice President				
	randall - Chairman glas Roellig		OR TRUSTEES Robert Fanning	Michael Thomas Rollings	
State of	Massachusetts	SS:			
County of	Hampden				
all of the herein described as statement, together with relat condition and affairs of the sa in accordance with the NAIC rules or regulations require respectively. Furthermore, the	ssets were the absolute proper ed exhibits, schedules and expl id reporting entity as of the report Annual Statement Instructions differences in reporting not re the scope of this attestation by the	y of the said reporting ent anations therein contained, ortring period stated above, and Accounting Practices elated to accounting practine described officers also	ity, free and clear from any lien annexed or referred to, is a full and of its income and deduction: and Procedures manual except ices and procedures, according includes the related corresponding	porting entity, and that on the reporting period stated s or claims thereon, except as herein stated, and the and true statement of all the assets and liabilities and s therefrom for the period ended, and have been cor to the extent that: (1) state law may differ; or, (2) the g to the best of their information, knowledge and ng electronic filing with the NAIC, when required, the y be requested by various regulators in lieu of or in a	hat this d of the npleted at state belief, at is an
Roger William (President and Chief E			se Flanagan cretary	Todd Garett Picken Treasurer	
Subscribed and sworn to befo			a. Is this an original filin b. If no, 1. State the amendm 2. Date filed	nent number	

3. Number of pages attached......

ASSETS

		Current Statement Date 4				
		1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	December 31 Prior Year Net Admitted Assets	
1.	Bonds	4,358,584,320		4,358,584,320	4,200,759,587	
2.	Stocks:					
	2.1 Preferred stocks	27,748,637		27,748,637	29,785,890	
	2.2 Common stocks	246,313,844		246,313,844	240,271,380	
3.	Mortgage loans on real estate:					
	3.1 First liens	994,656,730		994,656,730	985,850,414	
	3.2 Other than first liens					
4.	Real estate:					
	4.1 Properties occupied by the company (less \$ encumbrances)					
	4.2 Properties held for the production of income (less summarized encumbrances)					
	4.3 Properties held for sale (less \$encumbrances)					
5.	Cash (\$(11,113,436)), cash equivalents					
0.	(\$237,373,350) and short-term					
	investments (\$16,945,830)	243 205 744		243,205,744	313,892,618	
6.	Contract loans (including \$ premium notes)				153,507,054	
7.	Derivatives				554,289,493	
8.	Other invested assets	, ,			231,074,425	
9.	Receivables for securities				193,089,510	
10.	Securities lending reinvested collateral assets					
11.	Aggregate write-ins for invested assets					
	Subtotals, cash and invested assets (Lines 1 to 11)			7,384,635,360	6.902.520.371	
	Title plants less \$ charged off (for Title insurers				,002,020,01	
	only)					
14.	Investment income due and accrued			91,771,048		
	Premiums and considerations:					
	15.1 Uncollected premiums and agents' balances in the course of collection	152.152	2.137	150.015	362.655	
	15.2 Deferred premiums, agents' balances and installments booked but	······ , ·	, .	,	,	
	deferred and not yet due (including \$					
	earned but unbilled premiums)	(19,401,644)		(19,401,644)	(24,603,077)	
	15.3 Accrued retrospective premiums (\$, , , ,		, , , ,	. , , ,	
	contracts subject to redetermination (\$)					
16.	Reinsurance:					
	16.1 Amounts recoverable from reinsurers	34,402,383		34,402,383	34,440,633	
	16.2 Funds held by or deposited with reinsured companies					
	16.3 Other amounts receivable under reinsurance contracts			5,318,954	5,890,811	
17.	Amounts receivable relating to uninsured plans					
	Current federal and foreign income tax recoverable and interest thereon					
18.2	Net deferred tax asset	106, 155, 962	59,502,831	46,653,131	38,660,258	
	Guaranty funds receivable or on deposit			1,061,253	1,091,153	
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			267,075		
24.	Health care (\$) and other amounts receivable					
25.	Aggregate write-ins for other than invested assets			58,542	65,960	
26.	Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)			7,544,916,117		
27.	From Separate Accounts, Segregated Accounts and Protected Cell Accounts	1,699,033,536		1,699,033,536	1,743,773,804	
28.	Total (Lines 26 and 27)	9,318,382,673	74,433,020	9,243,949,653	8,803,148,061	
	DETAILS OF WRITE-INS					
1101.						
1102.						
1103.						
1198.	Summary of remaining write-ins for Line 11 from overflow page					
1199.	Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)					
2501.	Miscellaneous	61,486	2,944	58,542	65,960	
2502.	Cash advanced to agents	14,489,565	14,489,565			
2503.						
2598.	Summary of remaining write-ins for Line 25 from overflow page					
2599.	Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	14,551,051	14,492,509	58,542	65,960	

LIABILITIES, SURPLUS AND OTHER FUNDS

	LIADILITIES, SURPLUS AND OTHER PO	JINDO	
		1 Current	2 December 31
		Statement Date	Prior Year
1.	Aggregate reserve for life contracts \$4,426,934,053 less \$ included in Line 6.3		
	(including \$ Modco Reserve)		
	Aggregate reserve for accident and health contracts (including \$		
	Liability for deposit-type contracts (including \$ Modco Reserve)	68,204,907	66,349,658
4.	Contract claims:	44 500 070	00 740 474
	4.1 Life		
_	4.2 Accident and health		
	Policyholders' dividends \$ and coupons \$ due and unpaid		
6.	Provision for policyholders' dividends and coupons payable in following calendar year - estimated amounts:		
	6.1 Dividends apportioned for payment (including \$ Modco)		
	6.2 Dividends not yet apportioned (including \$ Modco)		
7.	Amount provisionally held for deferred dividend policies not included in Line 6		
	Premiums and annuity considerations for life and accident and health contracts received in advance less		
0.	\$discount; including \$accident and health premiums	15 161	9 542
a	Contract liabilities not included elsewhere:		
٥.	9.1 Surrender values on canceled contracts		
	9.2 Provision for experience rating refunds, including the liability of \$ accident and health		
	experience rating refunds of which \$ is for medical loss ratio rebate per the Public Health		
	Service Act		
	9.3 Other amounts payable on reinsurance, including \$ assumed and \$		
	ceded		
	9.4 Interest Maintenance Reserve		
10.	Commissions to agents due or accrued-life and annuity contracts \$, accident and health		
	\$ and deposit-type contract funds \$		
11.	Commissions and expense allowances payable on reinsurance assumed		
12.	General expenses due or accrued		99
13.	Transfers to Separate Accounts due or accrued (net) (including \$(6,364,950) accrued for expense		
	allowances recognized in reserves, net of reinsured allowances)	(6,540,007)	(6,378,270)
14.	Taxes, licenses and fees due or accrued, excluding federal income taxes	1,611,704	1,666,603
15.1	Current federal and foreign income taxes, including \$(19,546,274) on realized capital gains (losses)	14,228,038	1,680,003
15.2	Net deferred tax liability		
16.	Unearned investment income		
	Amounts withheld or retained by company as agent or trustee		
	Amounts held for agents' account, including \$ agents' credit balances		
	Remittances and items not allocated	9,707,576	16,789,216
20.	Net adjustment in assets and liabilities due to foreign exchange rates		
21.	Liability for benefits for employees and agents if not included above		
	Borrowed money \$ and interest thereon \$		
	Dividends to stockholders declared and unpaid	-	
24.	Miscellaneous liabilities: 24.01 Asset valuation reserve	72 500 086	76 605 723
	24.01 Asset valuation reserve 24.02 Reinsurance in unauthorized and certified (\$		
	24.03 Funds held under reinsurance treaties with unauthorized and certified (\$		
	24.04 Payable to parent, subsidiaries and affiliates	12 017 817	12 964 316
	24.05 Drafts outstanding		
	24.06 Liability for amounts held under uninsured plans		
	24.07 Funds held under coinsurance		
	24.08 Derivatives		
	24.09 Payable for securities		
	24.10 Payable for securities lending		
	24.11 Capital notes \$ and interest thereon \$		
25.	Aggregate write-ins for liabilities	528,810,584	456,076,187
26.	Total liabilities excluding Separate Accounts business (Lines 1 to 25)	6,074,198,523	5,663,382,361
27.	From Separate Accounts Statement	1,699,033,536	1,743,773,804
28.	Total liabilities (Lines 26 and 27)	7,773,232,059	7,407,156,165
29.	Common capital stock	2,500,000	2,500,000
30.	Preferred capital stock		
31.	Aggregate write-ins for other than special surplus funds		
32.	Surplus notes		
	Gross paid in and contributed surplus		
34.	Aggregate write-ins for special surplus funds		
	Unassigned funds (surplus)	1,017,941,386	943,215,688
36.	Less treasury stock, at cost:		
	36.1 shares common (value included in Line 29 \$)		
07	36.2 shares preferred (value included in Line 30 \$		1,393,491,896
	Surplus (Total Lines 31+32+33+34+35-36) (including \$		1,395,491,896
38. 39.	Totals of Lines 29, 30 and 37	9,243,949,653	8,803,148,061
აჟ.	DETAILS OF WRITE-INS	3,240,343,003	0,000,140,001
2501.	Repurchase agreements	227 7/12 70/	240,061,261
2501.	Derivative collateral		123,407,731
2502. 2503.	Derivative interest liability		90,476,218
2598.	Summary of remaining write-ins for Line 25 from overflow page		
2599. 2599.	Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	528.810.585	456,076,187
3101.	Totals (Lines 2501 tillough 2500 pius 2500)(Line 25 above)	. , ,	
3101.			
3103.			
3198.	Summary of remaining write-ins for Line 31 from overflow page		
3199.	Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)		
3401.			
3402.			
3403.			
3498.	Summary of remaining write-ins for Line 34 from overflow page		
3499.	Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)		
			

SUMMARY OF OPERATIONS

		1	2	3
		Current Year	Prior Year	Prior Year Ended
		To Date	To Date	December 31
1.	Premiums and annuity considerations for life and accident and health contracts	77,517,898	75,142,331	295,074,858
2.	Considerations for supplementary contracts with life contingencies	213,717	175,038	963,210
3.		71,235,204		319,424,215
4.	Amortization of Interest Maintenance Reserve (IMR)	4,437,829	4,738,970	16,889,854
5.	Separate Accounts net gain from operations excluding unrealized gains or losses			
6.	Commissions and expense allowances on reinsurance ceded	4,666,694	4,874,381	19,219,798
7.	Reserve adjustments on reinsurance ceded			
8.	Miscellaneous Income:			
	8.1 Income from fees associated with investment management, administration and contract			
	guarantees from Separate Accounts		10,262,757	40,646,903
	8.2 Charges and fees for deposit-type contracts			
	8.3 Aggregate write-ins for miscellaneous income		620,784	2,255,559
	Totals (Lines 1 to 8.3)	168, 178, 789	170,098,042	694,474,397
10.	Death benefits	20,347,785	35,660,467	125 , 126 ,832
11.	Matured endowments (excluding guaranteed annual pure endowments)			150,071
12.	Annuity benefits	27,568,689	32,074,858	105,113,608
13.	Disability benefits and benefits under accident and health contracts	103,060	101,844	472,645
14.	Coupons, guaranteed annual pure endowments and similar benefits			
15.	Surrender benefits and withdrawals for life contracts	87,718,281	110,218,747	432,793,229
16.	Group conversions			
17.	Interest and adjustments on contract or deposit-type contract funds	522,804	1 , 128 , 458	3,817,967
18.	Payments on supplementary contracts with life contingencies	209,648	196,027	997,900
19.	Increase in aggregate reserves for life and accident and health contracts	(10, 156, 403)	(38,832,814)	(98,895,610)
20.	Totals (Lines 10 to 19)		140,547,587	569,576,642
21.	Commissions on premiums, annuity considerations, and deposit-type contract funds (direct		. ,	, ,
	business only)	8,122,477	5,606,887	22,170,398
22.	Commissions and expense allowances on reinsurance assumed			
23.	General insurance expenses	7,269,590	6,364,229	26,027,407
24.	Insurance taxes, licenses and fees, excluding federal income taxes	3, 169, 117	3,280,605	9,374,106
25.	Increase in loading on deferred and uncollected premiums	3,593,783	(219,474)	3,274,342
26.	Net transfers to or (from) Separate Accounts net of reinsurance		(22, 116, 135)	(98,962,978)
27.	Aggregate write-ins for deductions	217,809	242,504	2,720,006
28.	Totals (Lines 20 to 27)	128,092,265	133,706,203	534,179,923
29.	Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus	120,002,200	100,700,200	304, 173,320
29.	Line 28)	40,086,524	36,391,839	160,294,474
20	,	40,000,324		100,234,474
30.	Dividends to policyholders			
31.		40,086,524	36,391,839	160,294,474
20	minus Line 30)	9,620,010	9,811,102	160,294,474
32.	Federal and foreign income taxes incurred (excluding tax on capital gains)	3,020,010	3,011,102	37,307,077
33.	Net gain from operations after dividends to policyholders and federal income taxes and before	30,466,514	26.580.737	122,307,397
24	realized capital gains or (losses) (Line 31 minus Line 32)		20,300,737	122,301,331
34.	Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital			
	gains tax of \$	(2.445.000)	2 554 042	(4.760.005)
	transferred to the IMR)	(3,415,999)	3,551,012	(4,760,985)
35.	Net income (Line 33 plus Line 34)	27,050,515	30,131,749	117,546,412
	CAPITAL AND SURPLUS ACCOUNT			
36.	Capital and surplus, December 31, prior year	1,395,991,896	1,304,753,908	1,304,753,908
37.	Net income (Line 35)	27,050,515	30,131,749	117,546,412
38.	Change in net unrealized capital gains (losses) less capital gains tax of \$	28,624,636	42,482,171	6,693,361
39.	Change in net unrealized foreign exchange capital gain (loss)	2,826,683	(11,970,339)	(13, 102, 993)
40.	Change in net deferred income tax		5.604.232	17,976,348
41.	Change in nonadmitted assets			
	Change in liability for reinsurance in unauthorized and certified companies			
43.	Change in reserve on account of change in valuation basis, (increase) or decrease			
	Change in asset valuation reserve			
44.				
45.	Change in treasury stock			
46.	Surplus (contributed to) withdrawn from Separate Accounts during period			
47.	Other changes in surplus in Separate Accounts Statement			
48.	Change in surplus notes			
49.	Cumulative effect of changes in accounting principles			
50.	Capital changes:			
1	50.1 Paid in			
1				
1	50.3 Transferred to surplus	ļ		
51.	Surplus adjustment:			
1	51.1 Paid in			
1	,			
1	51.3 Transferred from capital			
1	51.4 Change in surplus as a result of reinsurance			
52.	Dividends to stockholders			
	Aggregate write-ins for gains and losses in surplus	(4,297,273)	(764,078)	(5,110,562)
	Net change in capital and surplus for the year (Lines 37 through 53)	74,725,698	74,773,577	91,237,988
55.	Capital and surplus, as of statement date (Lines 36 + 54)	1,470,717,594	1,379,527,485	1,395,991,896
55.	DETAILS OF WRITE-INS	1,710,111,004	1,010,021,400	1,000,001,000
08 201	Administrative fee and other income	599,945	620,784	2,255,559
		· · · · · · · · · · · · · · · · · · ·	,	
	Summary of remaining write-ins for Line 8.3 from overflow page	FOO OAF		
	Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	599,945	620,784	2,255,559
2701.	Miscellaneous charges to operations	217,809	242,504	2,720,006
2702.				
	Summary of remaining write-ins for Line 27 from overflow page			
	Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	217,809	242,504	2,720,006
	Other changes in surplus	(4,297,273)		
			(704,070)	(0,110,302)
	Summary of remaining write-ins for Line 53 from overflow page		/704 070	/F 440 F00\
5399.	Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	(4,297,273)	(764,078)	(5,110,562)

CASH FLOW

		1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
	Cash from Operations	10 54.0	10 5410	Docombol of
1. Pre	emiums collected net of reinsurance	69,077,134	69,241,936	288,474,765
2. Net	t investment income	85,668,039	81,858,135	318,233,642
3. Mis	cellaneous income	10,975,910	15,179,006	60,044,191
4. Tot	al (Lines 1 to 3)	165,721,083	166,279,077	666,752,598
5. Ber	nefit and loss related payments	147,142,960	171,701,653	670,578,755
6. Net	t transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(20,432,637)	(22, 103, 344)	(100,382,264
7. Cor	mmissions, expenses paid and aggregate write-ins for deductions	19,008,545	16,102,783	57,849,185
8. Divi	idends paid to policyholders			
9. Fed	deral and foreign income taxes paid (recovered) net of \$			
ga	ains (losses)	1,647,382	8,992,668	63,857,803
10. Tot	al (Lines 5 through 9)	147,366,250	174,693,760	691,903,479
11. Net	t cash from operations (Line 4 minus Line 10)	18,354,833	(8,414,683)	(25, 150, 88
	Cash from Investments			
12. Pro	oceeds from investments sold, matured or repaid:			
	1 Bonds	103,874,877	122,962,175	708,035,969
	2 Stocks		1,016,982	, ,
	3 Mortgage loans		24,674,319	
			25,454,652	
	5 Other invested assets		10,222,721	52,247,054
	6 Net gains or (losses) on cash, cash equivalents and short-term investments		, ,	
	7 Miscellaneous proceeds	(18, 162)	(67,576,506)	(9,445,557
	8 Total investment proceeds (Lines 12.1 to 12.7)		116,446,623	945,142,513
	st of investments acquired (long-term only):		110,440,020	940, 142,010
		000 704 040	100 050 000	044 474 700
			199,356,600	
	2 Stocks		2,476,782	
	3 Mortgage loans		35,821,090	, ,
	4 Real estate		23,294,896	67 007 000
				67,297,239
	6 Miscellaneous applications	(15,060,919)	(13,600,558)	3,222,433
	7 Total investments acquired (Lines 13.1 to 13.6)		247,348,810	894,838,421
	t increase (or decrease) in contract loans and premium notes	731,627	3,564,860	6,653,290
15. Net	t cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(142,408,112)	(134,467,047)	43,650,802
	Cash from Financing and Miscellaneous Sources			
	sh provided (applied): 1 Surplus notes, capital notes			
	2 Capital and paid in surplus, less treasury stock			
	3 Borrowed funds			
	4 Net deposits on deposit-type contracts and other insurance liabilities		6 553 946	8 817 674
	5 Dividends to stockholders		3,000,010	
	6 Other cash provided (applied)		131,288,767	81,453,611
	t cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5	31,731,370	101,200,707	01,400,01
	us Line 16.6)	53,366,405	137,842,713	90,271,285
1	RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18. Net	t change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)	(70,686,874)	(5,039,017)	108,771,206
19. Cas	sh, cash equivalents and short-term investments:			
19.	1 Beginning of year	313,892,618	205, 121,412	205, 121, 412
19.	2 End of period (Line 18 plus Line 19.1)	243,205,744	200,082,395	313,892,618
	emental disclosures of cash flow information for non-cash transactions: Bond conversions and refinancing	10.520 642	839,055	12,318,88
20.0002.	Interest capitalization for long-term debt	274,486	3,529	3,609
	Net investment income payment in-kind bonds	, .	25,293 1,403,462	225,842 60,158,74
20.0005. l	Dividend reinvestment	72,100	227,395	
20.0006.	Stock conversions		465,562	465,562

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

		CONTRACTS	2	3
		Current Year	∠ Prior Year	Prior Year Ended
		To Date	To Date	December 31
1.	Industrial life			
2.	Ordinary life insurance	60 338 010	5/ 672 //7	225 377 038
۷.	Ordinary life insurance		, 470, 447	220,011,900
		FC 000 F70	EO EO4 E40	000 445 400
3.	Ordinary individual annuities		59,501,519	232,445, 182
4.	Credit life (group and individual)			
5.	Group life insurance	16,025	(60,270)	658,951
6.	Group annuities			
7.	A & H - group			
8.	A & H - credit (group and individual)			
0.	(group and markets)			
9.	A & H - other			
3.	A & IT - OUIGI			
40				
10.	Aggregate of all other lines of business			
		447.045.544	114 110 000	450, 400, 074
11.	Subtotal		114,113,696	458,482,071
12.	Deposit-type contracts	-		
13.	Total	117,045,511	114,113,696	458,482,071
	DETAILS OF WRITE-INS			
1001				
1002.				
1002.				
1000				
1003.		† 		
1098.	Summary of remaining write-ins for Line 10 from overflow page			
1099.	Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

TABLE OF CONTENTS

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

Note 1 - Summary of Significant Accounting Policies and Going Concern

a. Accounting practices:

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

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

	State of		
	Domicile	2016	2015
NET INCOME	,		
(1) State basis (Page 4, Line 35, Columns 1 & 3)	CT	\$ 27,050,515	\$ 117,546,412
(2) State prescribed practices that increase (decrease) NAIC SAP	-	-	=
(3) State permitted practices that increase (decrease) NAIC SAP	-	-	-
(4) NAIC SAP (1-2-3=4)	CT	\$ 27,050,515	\$ 117,546,412
SURPLUS			
(5) State basis (Page 3, Line 38, Columns 1 & 2)	CT	\$ 1,470,717,594	\$ 1,395,991,896
(6) State prescribed practices that increase (decrease) NAIC SAP	-	-	-
(7) State permitted practices that increase (decrease) NAIC SAP	-	<u>-</u>	<u>-</u>
(8) NAIC SAP (5-6-7=8)	CT	\$ 1,470,717,594	\$ 1,395,991,896
(7) State permitted practices that increase (decrease) NAIC SAP	- CT	\$ 1,470,717,594	\$ 1,395,991,896

- b. Use of estimates in the preparation of the financial statements No change
- c. Accounting policy:
 - (1-5) No change
 - (6) For fixed income securities that do not have a fixed schedule of payments, such as asset-backed securities, mortgage-backed securities, including residential mortgage-backed securities and commercial mortgage-backed securities, and structured securities, including collateralized debt obligations, amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies for each type of security.

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

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

(7-14) No change

d. Going concern - No change

Note 2 - Accounting Changes and Corrections of Errors

a. For the three months ended March 31, 2016, corrections of prior year errors were recorded in shareholders' equity, net of tax:

	(Decrease) Increase to:						
	Prior Year		C	Current Year		Liability	
	1	Net Income		Surplus	Balances		
Federal income tax receivable	\$	(3,572,808)	\$	(3,572,808)	\$	3,572,808	
Total	\$	(3,572,808)	\$	(3,572,808)	\$_	3,572,808	

For the three months ended March 31, 2015, the Company did not recorded any corrections of prior year errors.

b. Adoption of new accounting standards - No change

Note 3 - Business Combinations and Goodwill - No change

Note 4 - Discontinued Operations - No change

Note 5 - Investments

- a. Mortgage loans, including mezzanine real estate loans No change
- b. Debt restructuring No change
- c. Reverse mortgages No change
- d. Loan-backed and structured securities:
 - (1) Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.

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

			(1)	(2)			(3)		
			Amortized		Da	OTTI	70d		
			Cost Basis			cogniz in Loss			
		ł	Before	(2a		(21			Fair Value
			OTTI	Inter		,	n-interest		1-(2a+2b)
			0111	11101	001	110	T III.COTOOL		1 (24 25)
OTT	I recognized in the first quarter								
a.	Intent to sell	\$	-	\$	-	\$	-	\$	-
b.	Inability or lack of intent to retain the investment								
	in the security for a period of time sufficient to								
	recover the amortized cost basis	_	6,298,495				205,853	_	6,092,642
C.	Total first quarter	\$	6,298,495	\$		\$	205,853	\$	6,092,642
ОТТ	TI recognized in the second quarter								
d.	Intent to sell	\$	_	¢		•		•	_
e.	Inability or lack of intent to retain the investment	Ψ		Ψ		Ψ		Ψ	_
0.	in the security for a period of time sufficient to								
	recover the amortized cost basis		-		_		_		_
f.	Total second quarter	\$	-	\$	-	\$	-	\$	_
		_							
OTT	T recognized in the third quarter								
g.	Intent to sell	\$	-	\$	-	\$	-	\$	-
h.	Inability or lack of intent to retain the investment								
	in the security for a period of time sufficient to								
i.	recover the amortized cost basis Total third guarter	\$		\$		\$		\$	
1.	Total tillio quartel	φ		Φ	<u> </u>	Φ		φ	
ОТТ	TI recognized in the fourth quarter								
j.	Intent to sell	\$	-	\$	-	\$	-	\$	-
k.	Inability or lack of intent to retain the investment								
	in the security for a period of time sufficient to								
	recover the amortized cost basis	_							
I.	Total fourth quarter	\$		\$		\$		\$	
	Appual Aggregate Total			Φ.		<u> </u>	205.052		
m.	Annual Aggregate Total			Ф		\$	205,853		

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

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

CUSIP	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
17307GKZ0	\$ 17,903.02	\$ 17,705.13	\$ (197.89)	\$ 17,705.13	\$ 17,515.05	March 31, 2016
466247BC6	11,073.23	10,764.75	(308.48)	10,764.75	11,021.10	March 31, 2016
57643QAE5	1,132,020.12	1,126,990.80	(5,029.32)	1,126,990.80	1,113,396.93	March 31, 2016
589929N38	87,839.88	86,926.62	(913.26)	86,926.62	84,991.61	March 31, 2016
77277LAF4	2,827,410.80	2,713,282.44	(114,128.36)	2,713,282.44	3,779,630.10	March 31, 2016
77277LAH0	142,013.05	136,445.82	(5,567.23)	136,445.82	364,192.00	March 31, 2016
77277LAJ6	2,010,905.24	1,932,085.89	(78,819.35)	1,932,085.89	2,378,401.38	March 31, 2016
9292276K7	69,330.02	68,440.97	(889.05)	68,440.97	68,312.96	March 31, 2016
Totals	\$ 6,298,495.36	\$ 6,092,642.42	\$ (205,852.94)	\$ 6,092,642.42	\$ 7,817,461.13	

(4) As of March 31, 2016, the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:

a. The aggregate amount of unrealized losses:

1.	Less than 12 months	\$	(9,443,712)
2.	12 months or longer	\$	(10,074,120)
Th	e aggregate related fair value of securities with unrealized los	sses:	

 1. Less than 12 months
 \$ 265,511,904

 2. 12 months or longer
 \$ 252,656,310

(5) No change

- e. Repurchase agreements:
 - (1-2) No change
 - (3) The Company does not have any securities lending transactions administered by an affiliated agent.
 - (4-6) No change

- f. Real estate No change
- g. Low income housing tax credit properties No change
- h. Restricted assets No change
- i. Working capital finance investments The Company did not invest in working capital finance investments.
- j. Offsetting and netting of assets and liabilities The Company reports derivative and repurchase agreement assets and liabilities as gross in the financial statements without offsetting.
- k. Structured notes No change

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

Note 7 - Investment Income - No change

Note 8 - Derivative Instruments - No change

Note 9 - Income Taxes - No change

Note 10 - Information Concerning Parent, Subsidiaries and Affiliates

a-I. No change

Note 11 - Debt

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

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

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

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

Note 14 - Liabilities, Contingencies and Assessments

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

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

f. Regulatory matters:

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

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

Note 15 - Leases - No change

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

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

- a. Transfers of receivables reported as sales No change
- b. Transfer and Servicing of Financial Assets:
 - (1) No change
 - (2) The Company did not have any servicing assets or liabilities in 2016 or 2015.
 - (3) No change
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2016 or 2015.
 - (5-7) No change
- c. Wash sales:
 - (1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio.
 - (2) The Company did not sell any securities with the NAIC Designation 3 or below through the first quarter ended March 31, 2016 that were reacquired within 30 days of the sale date.

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

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

Note 20 - Fair Value Measurements

- a. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The authoritative guidance around fair value establishes a measurement framework that includes a hierarchy used to classify the inputs used in measuring fair value. The hierarchy prioritizes the inputs to valuation techniques into three levels. Each level reflects a unique description of the inputs that are significant to the fair value measurements. The levels of the fair value hierarchy are as follows:
 - Level 1 Observable inputs in the form of quoted prices for identical instruments in active markets.
 - Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be derived from observable market data for substantially the full term of the assets or liabilities.

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

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

The Company has established and maintains policies and guidelines that govern its valuation methodologies and their consistent application. These policies and guidelines address the use of inputs, price source hierarchies and provide controls around the valuation processes. These controls include appropriate review and analysis of prices against market activity or indicators for 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:

	March 31, 2016					
	Level 1	Level 2	Level 3	Total		
Financial assets:						
Bonds:						
Industrial and miscellaneous	\$ -	\$ 586,949	\$ 1,376,404	\$ 1,963,353		
Parent, subsidiaries and affiliates	-	6,955,197	5,235,488	12,190,685		
Preferred stocks	-	-	330,669	330,669		
Common stock - subsidiary and affiliate	7,020,455	-	-	7,020,455		
Common stock - unaffiliated	39,417	-	2,081,586	2,121,003		
Separate account assets	1,699,033,496	40	-	1,699,033,536		
Derivatives:						
Interest rate swaps	-	799,641,307	-	799,641,307		
Options	-	54,621,222	-	54,621,222		
Currency swaps	-	28,875,166	-	28,875,166		
Forward contracts	-	539,254	-	539,254		
Total financial assets carried				_		
at fair value	\$ 1,706,093,368	\$ 891,219,135	\$ 9,024,147	\$ 2,606,336,650		
Financial liabilities:						
Derivatives:						
Interest rate swaps	\$ -	\$ 805,268,403	\$ -	\$ 805,268,403		
Currency swaps	-	2,663,551	-	2,663,551		
Forward contracts	-	2,357,190	-	2,357,190		
Credit default swaps		106,321		106,321		
Total financial liabilities carried at fair value	o	¢ 910 205 465	c	¢ 940 205 465		
at fall value	φ -	\$ 810,395,465	\$ -	\$ 810,395,465		

In 2016, there were no significant transfers between Level 1 and Level 2.

	December 31, 2015								
	Level 1		Level 2		Level 3		Total		
Financial assets:									
Bonds:									
Industrial and miscellaneous	\$	- \$	314,988	\$	173,966	\$	488,954		
Parent, subsidiaries and affiliates		-	3,227,889		4,998,577		8,226,466		
Preferred stocks	657,200)	-		270,437		927,637		
Common stock - subsidiary and affiliate	6,724,098	3	-		-		6,724,098		
Common stock - unaffiliated	36,723	3	-		2,209,554		2,246,277		
Separate account assets	1,743,773,762	2	42		-		1,743,773,804		
Derivatives:									
Interest rate swaps		-	473,619,823		-		473,619,823		
Options		-	47,485,448		-		47,485,448		
Currency swaps		-	31,504,627		-		31,504,627		
Forward contracts		-	1,679,595		-		1,679,595		
Total financial assets carried									
at fair value	\$ 1,751,191,783	3 \$	557,832,412	\$	7,652,534	\$	2,316,676,729		
Financial liabilities:									
Derivatives:									
Interest rate swaps	\$	- \$	512,772,306	\$	-	\$	512,772,306		
Currency swaps		-	244,236		-		244,236		
Forward contracts		_	663,662		-		663,662		
Credit default swaps		-	126,309		-		126,309		
Total financial liabilities carried									
at fair value	\$	- \$	513,806,513	\$	_	\$	513,806,513		

In 2015, there were no significant transfers between Level 1 and Level 2.

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

	Balance					(Losses)	(Losses)								Balance
	as of	Tran	sfers ⁽	(1)		Gains in	Gains in								as of
	 01/01/2016	In		Out		Net Income	Surplus	F	Purchases	Issuances	Sales		Settlements	0	3/31/2016
Financial assets:															
Bonds:															
Industrial and miscellaneous	\$ 173,966	\$ 2,000,000	\$		-	\$ (400,000)	\$ (397,562)	\$	-	\$ -	\$	-	\$ -	\$	1,376,404
Parent, subsidiaries and affiliates	4,998,577	-			-	(90,030)	236,911		-	7,083,186		-	(6,993,156)		5,235,488
Preferred stocks	270,437	60,739			-	-	(507)		-	-		-	-		330,669
Common stocks - unaffiliated	2,209,554	-				(69,722)	(196,783)		138,537	-		-	-		2,081,586
Total financial assets	\$ 7,652,534	\$ 2,060,739	\$		_	\$ (559,752)	\$ (357,941)	\$	138,537	\$ 7,083,186	\$	-	\$ (6,993,156)	\$	9,024,147

⁽¹⁾ Transfers include assets that are either no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but change in lower of cost or market carrying basis.

	Balance as of 01/01/2015	In	Transfer	s ⁽¹⁾ Out	Gains (Losses) in Net Income	(Losses) Gains in Surplus	Purchases	ls	ssuances	Sales	Settlements	Balance as of 12/31/2015
Financial assets:												
Bonds:												
Industrial and miscellaneous	\$ 2,529,139	\$	- :	\$ (652,868)	\$ (1,704,449)	\$ -	\$	- \$	2,145	\$ (1)	\$ -	\$ 173,966
Parent, subsidiaries and affiliates	9,092,047		-	(3,163,816)	-	(567,665)		-	-	-	(361,989)	4,998,577
Preferred stock	388,490		-	(131,575)	-	13,522		-	-	-	-	270,437
Common stock - unaffiliated	2,277,509		-	-	1,241,704	(637,429)	602,156	3	-	(1,273,687)	(699)	2,209,554
Total financial assets	\$ 14,287,185	\$	- :	\$ (3,948,259)	\$ (462,745)	\$ (1,191,572)	\$ 602,156	6 \$	2,145	\$ (1,273,688)	\$ (362,688)	\$ 7,652,534

¹⁾ Transfers include assets that are either no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but change in lower of cost or market carrying basis.

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. There are no financial assets or liabilities classified as Level 3 in 2016 and 2015.

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:

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

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

- 5. Derivative assets and liabilities fair value disclosures on a gross basis are included in paragraph 1 above. Since there are no derivative assets or liabilities classified in Level 3, the reconciliation disclosures required under paragraphs 2 through 4 are not applicable.
- b. The Company provides additional fair value information in Note 21.

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

March 31, 2016

	Aggregate	Admitted		· · ·		Not Practicable (Carrying
	Fair Value	Assets	Level 1	Level 2	Level 3	Value)
Financial assets: Bonds:						
U. S. government and agencies	\$ 294,096,086	\$ 271,767,236	\$ -	\$ 294,096,086	\$ -	\$ -
All other governments	1,461,741	1,447,202	-	1,461,741	-	-
States, territories and possessions	38,203,224	34,034,089	-	38,203,224	-	-
Political subdivisions	16,959,135	15,235,324	-	16,959,135	-	-
Special revenue	146,999,163	130,156,350	-	146,684,013	315,150	-
Industrial and miscellaneous	3,661,889,055	3,542,567,940	-	1,991,787,601	1,670,101,454	-
Parent, subsidiaries and affiliates	376,126,845	363,376,179	-	52,968,062	323,158,783	-
Preferred stocks	28,513,354	27,748,637	16,639,108	-	11,874,246	-
Common stock - subsidiary and affiliate ⁽¹⁾	7,020,455	7,020,455	7,020,455	-	-	-
Common stock - unaffiliated	2,121,003	2,121,003	39,417	-	2,081,586	-
Mortgage loans - commercial	843,880,900	809,652,424	-	-	843,880,900	-
Mortgage loans - residential	183,674,679	185,004,306	-	-	183,674,679	-
Cash, cash equivalents and						
short-term investments	243,205,744	243,205,744	(11,113,436)	254,319,180	-	-
Separate account assets	1,699,033,536	1,699,033,536	1,699,033,496	40	-	-
Derivatives:						
Interest rate swaps	799,641,307	799,641,307	-	799,641,307	-	-
Options	54,621,222	54,621,222	-	54,621,222	-	-
Currency swaps	28,875,166	28,875,166	-	28,875,166	-	-
Forward contracts	539,254	539,254	-	539,254	-	-
Financial liabilities:						
Repurchase agreements	237,425,000	237,425,000	-	237,425,000	-	-
Individual annuity contracts	3,736,725,332	3,139,986,801	-	-	3,736,725,332	-
Supplementary contracts	56,377,344	55,819,152	-	-	56,377,344	-
Derivatives:						
Interest rate swaps	805,268,403	805,268,403	-	805,268,403	-	-
Currency swaps	2,663,551	2,663,551	-	2,663,551	-	-
Forward contracts	2,357,190	2,357,190	-	2,357,190	-	-
Credit default swaps	106,321	106,321	-	106,321	-	-

⁽¹⁾ Common stocks - affiliates do not include Bay State Life Insurance Company (Bay State), which had a statutory carrying value of \$237,172,386.

			December 3	31, 2015		
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Not Practicable (Carrying Value)
Financial assets:						
Bonds:						
U. S. government and agencies	\$ 290,270,392	\$ 271,721,796	\$ -	\$ 290,270,392	\$ -	\$ -
All other governments	1,420,408	1,454,610	-	1,420,408	-	-
States, territories and possessions	37,266,027	34,063,501	-	37,266,027	-	-
Political subdivisions	16,310,060	15,077,200	-	16,310,060	-	-
Special revenue	143,989,183	130,701,271	-	143,684,953	304,230	-
Industrial and miscellaneous	3,459,331,502	3,417,093,434	-	1,905,329,960	1,554,001,542	-
Parent, subsidiaries and affiliates	342,999,811	330,647,775	-	48,114,734	294,885,077	-
Preferred stocks	30,136,092	29,785,890	16,095,768	-	14,040,324	-
Common stock - subsidiary and affiliate ⁻¹	6,724,098	6,724,098	6,724,098	-	-	-
Common stock - unaffiliated	2,246,277	2,246,277	36,723	-	2,209,554	-
Mortgage loans - commercial	829,154,329	804,172,567	-	-	829,154,329	-
Mortgage loans - residential	177,946,297	181,677,847	-	-	177,946,297	-
Cash, cash equivalents and						
short-term investments	313,892,618	313,892,618	23,604,457	290,288,161	-	-
Separate account assets	1,743,773,804	1,743,773,804	1,743,773,762	42	-	-
Derivatives:						
Interest rate swaps	473,619,823	473,619,823	-	473,619,823	-	-
Options	47,485,448	47,485,448	-	47,485,448	-	-
Currency swaps	31,504,627	31,504,627	-	31,504,627	-	-
Forward contracts	1,679,595	1,679,595	-	1,679,595	-	-
Financial liabilities:						
Repurchase agreements	239,843,750	239,843,750	-	239,843,750	-	-
Individual annuity contracts	3,646,488,219	3,145,004,421	-	-	3,646,488,219	-
Supplementary contracts	54,823,610	54,280,802	-	-	54,823,610	-
Derivatives:						
Interest rate swaps	512,772,306	512,772,306	-	512,772,306	-	-
Currency swaps	244,236	244,236	-	244,236	-	-
Forward contracts	663,662	663,662	-	663,662	-	-
Credit default swaps	126,309	126,309	-	126,309	-	-

⁽¹⁾ Common stocks - affiliates do not include Bay State, which had a statutory carrying value of \$231,301,005.

For the three months ended March 31, 2016, the Company had no investments where it was not practicable to estimate fair value.

- Note 21 Other Items

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

Business risks

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

Insurance and underwriting risks

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 also reinsures certain life insurance and other long-term care insurance policies to mitigate the impact of its underwriting risk.

Investment and interest rate risks

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

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

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

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

Currency exchange risk

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

Credit and other market risks

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

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

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

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

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

		Ma	arch 31, 2016		Three Months Ended March 31, 2016
	Actual		Carrying	Fair	
Alt-A:	Cost		Value	Value	OTTI
a. Residential mortgage-backed securities \$	38,859,075	\$	27,186,634	\$ 32,520,127	\$ -
b. Commercial mortgage-backed securities	-		-	-	-
c. Collateralized debt obligations	-		-	-	-
d. Structured securities	-		-	-	-
e. Equity investments in SCAs *	2,269,693		1,491,682	1,932,340	-
f. Other assets	=		=	-	=
g. Total	41,128,768	\$	28,678,316	\$ 34,452,467	\$ -

_		М	arch 31, 2016				Months End March 31, 2016	ded
	Actual	Actual Carrying			Fair			
Subprime:	Cost		Value		Value		OTTI	
a. Residential mortgage-backed securities \$	21,925,837	\$	17,816,181	\$	18,257,173	\$		-
b. Commercial mortgage-backed securities	-		-		-			-
c. Collateralized debt obligations	-		-		-			-
d. Structured securities	-		-		-			-
e. Equity investments in SCAs *	3,507,561		1,886,713		2,284,265			-
f. Other assets	=		=		=			
g. Total \$	25,433,398	\$	19,702,894	\$	20,541,438	\$		

^{*} The Company's SCA, MML Bay State Life Insurance Company ("MML Bay State"), has investments in Alt-A and subprime mortgages. These investments comprise less than 1% of the Company's invested assets.

							Year Ended
		Dec	ember 31, 201	5		Dec	ember 31, 2015
	Actual		Carrying		Fair		
Alt-A:	 Cost		Value		Value		OTTI
a. Residential mortgage-backed securities	\$ 40,982,848	\$	28,780,890	\$	34,595,206	\$	(6,257)
b. Commercial mortgage-backed securities	-		-		-		-
c. Collateralized debt obligations	-		-		-		-
d. Structured securities	-		-		-		-
e. Equity investments in SCAs *	2,337,013		1,542,651		1,965,258		-
f. Other assets	-		-		-		-
g. Total	\$ 43,319,861	\$	30,323,541	\$	36,560,464	\$	(6,257)

		Dec	ember 31, 201	5		rear Ended ember 31, 2015
_	Actual		Carrying		Fair	
Subprime:	Cost		Value		Value	OTTI
a. Residential mortgage-backed securities \$b. Commercial mortgage-backed securitiesc. Collateralized debt obligationsd. Structured securities	23,061,042	\$	18,814,560 - -	\$	19,927,273 - -	\$ (2,597) - - -
e. Equity investments in SCAs *	3,612,086		1,934,794		2,412,225	(2,337)
f. Other assets g. Total \$	26,673,128	\$	20,749,354	\$	22,339,498	\$ (4,934)

^{*} The Company's SCA, MML Bay State, has investments in Alt-A and subprime mortgages. These investments comprise less than 1% of the Company's invested assets.

Retained asset accounts – No change

Note 22 - Events Subsequent

Management of the Company has evaluated subsequent events through May 11, 2016, the date the financial statements were available to be issued.

The Company, together with its parent MassMutual, provide a revolving credit facility to MassMutual Asset Finance, LLC, an indirect subsidiary MassMutual, to finance ongoing asset purchases and refinance existing lines of credit. Effective April 1, 2016, the total borrowing capacity under this facility was increased from \$3,275,000,000 to \$4,475,000,000.

No other events have occurred subsequent to the date of the statement of financial position and before the date of evaluation that would require disclosure.

Note 23 - Reinsurance

Ceded Reinsurance Report: a.

Section 1 - General Interrogatories - No change

Section 2 - Ceded Reinsurance Report - Part A - No change

Section 3 - Ceded Reinsurance Report - Part B - No change

b-g. No change

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

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2016 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which were considered corrections of prior year errors.

Note 26 - Intercompany Pooling Arrangements - No change

Note 27 - Structured Settlements - No change

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

- Note 28 Health Care Receivables No change
- Note 29 Participating Policies No change
- Note 30 Premium Deficiency Reserves No change
- Note 31 Reserves for Life Contracts and Annuity Contracts No change
- Note 32 Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics No change
- $\underline{\textbf{Note 33 Premium and Annuity Considerations Deferred and Uncollected}} \textbf{No change}$
- Note 34 Separate Accounts No change
- Note 35 Loss/Claim Adjustment Expenses No change

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

1.1	Did the reporting entity experience any material transactions requirin Domicile, as required by the Model Act?	e of		Yes []	No [X]					
1.2	If yes, has the report been filed with the domiciliary state?					Yes []	No []			
2.1	Has any change been made during the year of this statement in the oreporting entity?					Yes []	No [X]			
2.2	If yes, date of change:				<u> </u>					
3.1	Is the reporting entity a member of an Insurance Holding Company S is an insurer? If yes, complete Schedule Y, Parts 1 and 1A.					Yes [X]	No []			
3.2	Have there been any substantial changes in the organizational chart	since the prior quarter end?				Yes []	No [X]			
3.3	If the response to 3.2 is yes, provide a brief description of those char	nges.								
4.1	Has the reporting entity been a party to a merger or consolidation du		Yes [No [X]						
4.2	If yes, provide the name of the entity, NAIC Company Code, and state ceased to exist as a result of the merger or consolidation.									
	1 Name of Entity	2 NAIC Company Code	3 State of Domicile							
5.	 If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved?Yes If yes, attach an explanation. 									
6.1	State as of what date the latest financial examination of the reporting	entity was made or is being made			<u>-</u>	12/3	1/2014			
6.2	State the as of date that the latest financial examination report becardate should be the date of the examined balance sheet and not the					12/3	1/2009			
6.3	6.3 State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date).									
6.4 6.5	By what department or departments? State of Connecticut Insurance Department Have all financial statement adjustments within the latest financial extatement filed with Departments?	xamination report been accounted for in a	subsequent financial	Y	es [X] No [] N/A []		
6.6	Have all of the recommendations within the latest financial examinat	ion report been complied with?		Υ	es [X] No [] N/A []		
7.1	Has this reporting entity had any Certificates of Authority, licenses or revoked by any governmental entity during the reporting period?					Yes [No [X]			
7.2	If yes, give full information:									
8.1	Is the company a subsidiary of a bank holding company regulated by	the Federal Reserve Board?				Yes []	No [X]			
8.2	If response to 8.1 is yes, please identify the name of the bank holding	g company.								
8.3	Is the company affiliated with one or more banks, thrifts or securities	firms?				Yes [X]	No []			
8.4	If response to 8.3 is yes, please provide below the names and location regulatory services agency [i.e. the Federal Reserve Board (FRB), Insurance Corporation (FDIC) and the Securities Exchange Commit	the Office of the Comptroller of the Curre	ncy (OCC), the Feder	al Depos						
	1	2	3	4	5	6				
	Affiliate Name Babson Capital Securities, LLC	Location (City, State) Boston, MA	FRB	OCC	FDIC	SEC				
	Baring Asset Management (Asia) Limited	Hong Kong				YES				
	Baring International Investment Limited	London, UK				YES				
	MML Distributors, LLC	Enfield, CT				YES				
	MML Investment Advisers, LLC	Enfield, CT				YES				
	MML Investors Services, LLC					YES				
	MML Strategic Distributors, LLC	Springfield, MA				YES				
	MMLISI Financial Alliances, LLC OppenheimerFunds Distributor, Inc.	Springfield, MA New York, NY				YES YES				
	Society of Grownups, LLC	Springfield, MA	······			YES				
	The MassMutual Trust Company, FSB	Enfield, CT		\/E0		IEO				
		,								

GENERAL INTERROGATORIES

9.1	3.1 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?						
	relationships;	iai ana professionai					
	(b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting	entity;					
	(c) Compliance with applicable governmental laws, rules and regulations;						
	(d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and						
	(e) Accountability for adherence to the code.						
9.11	If the response to 9.1 is No, please explain:						
9.2	Has the code of ethics for senior managers been amended?		Yes [] No [X]			
9.21	If the response to 9.2 is Yes, provide information related to amendment(s).						
9.3	Have any provisions of the code of ethics been waived for any of the specified officers?		Yes [] No [X]			
9.31	If the response to 9.3 is Yes, provide the nature of any waiver(s).						
	FINANCIAL						
	INVACORE						
10.1	Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement?						
10.2	If yes, indicate any amounts receivable from parent included in the Page 2 amount:	\$ <u>.</u> .		0			
	INVESTMENT						
11 1	Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or other	wise made available for					
	use by another person? (Exclude securities under securities lending agreements.)		Yes [X]] No []			
11.2	If yes, give full and complete information relating thereto:						
	Repurchase agreements, Letter stock or securities restricted as to sale - excluding FHLB Capital Stock, On deposit w	ith states and Pledged					
12.	as collateral - excluding collateral pledged to an FHLB. Amount of real estate and mortgages held in other invested assets in Schedule BA:	¢		02 172 160			
13.	Amount of real estate and mortgages held in other invested assets in Schedule BA. Amount of real estate and mortgages held in short-term investments:						
14.1	Does the reporting entity have any investments in parent, subsidiaries and affiliates?						
14.2	If yes, please complete the following:		100 [N]] 140 []			
		1		2			
		Prior Year-End		ent Quarter			
		Book/Adjusted		k/Adjusted			
1/1 01	Bonds	Carrying Value		rying Value 363,569,047			
	Preferred Stock \$						
	Common Stock \$			237, 172, 386			
	Short-Term Investments \$			201 , 112 , 000			
	Mortgage Loans on Real Estate\$						
14.26	All Other	134.084.774		125,457,046			
14.27	Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)\$	696,035,212		726, 198, 479			
14.28	Total Investment in Parent included in Lines 14.21 to 14.26 above\$						
15 1	Has the reporting entity entered into any hedging transactions reported on Schedule DB?		Vac [Y ·	1 No [1			
15.2	If yes, has a comprehensive description of the hedging program been made available to the domiciliary state?		γ _ο ς [Υ]	I No []			
	If no attach a description with this statement		ico [A]	1 140 []			

GENERAL INTERROGATORIES

16.	For the reporting entity's security le	nding program, state the amount of the	e following a	s of the current s	statement date:		
	16.1 Total fair valu	e of reinvested collateral assets report	ed on Sched	dule DL, Parts 1 a	and 2	.\$	
					hedule DL, Parts 1 and 2		
					·		
17. 17.1	offices, vaults or safety deposit bo custodial agreement with a qualifie Outsourcing of Critical Functions,	xes, were all stocks, bonds and other sed bank or trust company in accordance	securities, ov ce with Secti of the NAIC	wned throughout ion 1, III - Genera Financial Condit	al Examination Considerations, F. tion Examiners Handbook?	Yes	[X] No []
		1			2		
	Name of	Custodian(s)	000 ₩+ 0		Custodian Address York, NY 10001		
					19th Floor, New York, NY 10005		
					Kansas City, MO 64105		
	State Street Grobal Services		OO 1 1 CHIIISY	Ivalita Avellue, i	(ansas orty, wo 04100		
17.2	For all agreements that do not com location and a complete explanation		Financial Co	ndition Examiner	rs Handbook, provide the name,		
	1 2 Name(s) Location(s)				3		
	Name(s)	Location(s)			Complete Explanation(s)		
17.3 17.4	Have there been any changes, including the service of the service	thereto:	s) identified		e current quarter?	Yes	[] No [X]
	1	2	_	3	4		
	Old Custodian	New Custodian	Da	te of Change	Reason		
17.5		kers/dealers or individuals acting on b ity to make investments on behalf of th			ave access to the investment accounts,		
	1	2			3		
	Central Registration Depository	Name(s) Babson Capital Management, LLC		4500 H : 01	Address		
	Ιυουυο	Babson Capital Management, LLC		lovel 20	eet, Springfield, MA 01115		
					nsdale Street, Melbourne		
	162754	IFM Investors Pty Ltd					
18.1	Have all the filing requirements of the	he Purposes and Procedures Manual o	of the NAIC I	Investment Analy	sis Office been followed?	Yes	[] No [X]

18.1 Flave an trie iming requirements of the Purposes and Procedures Manual.
At 3/31/2016, 52 issues for 41 issuers did not meet the filing requirements of the Purposes and Procedures Manual.
The majority of these issues currently lack one or more of the following: Valid cusip/PPN, audited financials and/or executed legal documentation. Exceptions totaled \$39,810,282 or 0.86% of all assets.

GENERAL INTERROGATORIES

PART 2 - LIFE & HEALTH

1.	Report the statement value of mortgage loans at the end of this reporting period for the following categories:	1 Amount
	1.1 Long-Term Mortgages In Good Standing	Amount
	1.11 Farm Mortgages	3
	1.12 Residential Mortgages	185,004,306
	1.13 Commercial Mortgages	809,652,424
	1.14 Total Mortgages in Good Standing	994,656,730
	1.2 Long-Term Mortgages In Good Standing with Restructured Terms	
	1.21 Total Mortgages in Good Standing with Restructured Terms	8
	1.3 Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months	
	1.31 Farm Mortgages	S
	1.32 Residential Mortgages	3
	1.33 Commercial Mortgages	3
	1.34 Total Mortgages with Interest Overdue more than Three Months	3
	1.4 Long-Term Mortgage Loans in Process of Foreclosure	
	1.41 Farm Mortgages	3
	1.42 Residential Mortgages	
	1.43 Commercial Mortgages	
	1.44 Total Mortgages in Process of Foreclosure	
	1.44 Total Worlgages III Frocess of Foreclosure	.
.5	Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)	994,656,730
.6	Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter	
	1.61 Farm Mortgages	3
	1.62 Residential Mortgages	3
	1.63 Commercial Mortgages	3
	1.64 Total Mortgages Foreclosed and Transferred to Real Estate	S
2.	Operating Percentages:	
	2.1 A&H loss percent	%
	2.2 A&H cost containment percent	%
	2.3 A&H expense percent excluding cost containment expenses	%
3.1	Do you act as a custodian for health savings accounts?	Yes [] No [X]
3.2	If yes, please provide the amount of custodial funds held as of the reporting date	S
3.3	Do you act as an administrator for health savings accounts?	. Yes [] No [X]

3.4 If yes, please provide the balance of the funds administered as of the reporting date _______\$

SCHEDULE S - CEDED REINSURANCE

			Snowing .	All New Reinsurance Treaties - Current Year to Da	ate		
1	2	3	4	5 6	7	8	9
							Effective
						Certified	Date of
NAIC				Ty e of		Reinsurer	Certified
Company	ID	Effective		D mick ry Reins		Rating	Reinsurer
Company Code	Number	Date	Name of Reinsurer	Ju sdicti v C ed	Type of Reinsurer	(1 through 6)	Rating

SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories Direct Business Only Life Contracts Accident and Health Insurance Premiums, Including Policy, Membership Total Deposit-Type Contracts Active Life Insurance Annuity Other Columns States, Etc Considerations and Other Fees Considerations 559.083 815.452 Alabama AL .256.369 Alaska 12,763 .2,100 1,044.362 3. Arizona ΑZ 914 311 .130.051 4. AR ..112.680 .32.433 .145.113 Arkansas 3,136,022 California 6,352,482 9.488.504 6. Colorado CO .979.262 1 215 266 .2.194.528 1.356.759 2.592.120 Connecticut CT .1.235.361 8. Delaware DE 176,422 146.085 322.507 9 District of Columbia DC 521.581 .2.380 523 961 2.310.330 10. Florida FL 6.856.334 9.166.664 GΑ 1,457,828 1,033,886 2,491,714 Georgia 11. 1,143,657 12. Hawaii н 582 901 560 756 13. Idaho. ID 109.778 .102.691 212.469 1,777,548 2,504,399 4,281,947 14. Illinois IL 1,571,126 Indiana 15 INI 605 594 965 532 16. lowa. IΑ .392.473 145.848 538 321 17. KS 345,848 793,474 1,139,322 Kansas 18. Kentucky ΚY .330.882 .71,592 402.474 19. Louisiana LA 406 029 2 577 439 2 983 468 ME .54,347 220,919 20. Maine. .166,572 21. MD 2.153.650 429,423 2,583,073 Maryland 22 Massachusetts MA 1 344 534 5 561 749 6 906 283 MI 1,139,542 3,426,678 4,566,220 23. Michigan MN 1,292,026 2,491,398 24 Minnesota .1,199,372 25. Mississippi MS 624 231 338 947 963 178 МО 3.133.923 3.901.996 26. Missouri. .768.073 МТ 27 .135,080 208,070 343, 150 28. Nebraska NE 364 531 212 741 577 272 NV .484.879 .75.034 559.913 29. Nevada. 1,017,608 New Hampshire NH .342,777 1,360,385 New Jersey 2.156.844 31. NJ 3 090 514 5 247 358 32. New Mexico NM .89.175 ..87.474 ..176.649 NY 1.380.555 42.753 1.423.308 34 North Carolina NC 2.332.318 902 896 .3,235,214 35. North Dakota ND ...7.046 .31.641 .38.687 ОН 1,306,334 1.532.981 2,839,315 37. Oklahoma ΟK .583.525 201.322 784.847 OR 38. Oregon. .313.767 .610.531 .924.298 Pennsylvania 39. РΑ 2,300,347 5,105,530 7.405.877 1,159,549 40. Rhode Island RI 251.107 1 410 656 41. South Carolina SC 1.050.243 .545.964 .1.596.207 South Dakota 42 SD .28,741 2,000 .30,741 43. Tennessee ΤN 1.155.128 1.805.216 2.960.344

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Washington

Wisconsin

Wyoming

Puerto Rico

Guam

Canada.

Subtotal

West Virginia

American Samoa

U.S. Virgin Islands

Northern Mariana Islands

Aggregate Other Aliens ...

additions and annuities

Totals (Direct Business)...

Less Reinsurance Ceded

DETAILS OF WRITE-INS ZZZ Other Alien

Totals (All Business)

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58998)(Line 58 above)

Plus Reinsurance Assumed

or premium paying period....

Reporting entity contributions for employee benefits

Dividends or refunds applied to purchase paid-up

Dividends or refunds applied to shorten endowment

Premium or annuity considerations waived under disability or other contract provisions.....

Totals (All Business) less Reinsurance Ceded

Summary of remaining write-ins for Line 58 from

Summary of remaining write-ins for Line 94 from

Totals (Lines 9401 through 9403 plus 9498)(Line

Totals (Lines 58001 through 58003 plus

Aggregate or other amounts not allocable by State

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⁹⁴ above) XXX (L) Licensed or Chartered - Licensed Insurance Carrier or Domiciled RRG; (R) Registered - Non-domiciled RRGs; (Q) Qualified - Qualified or Accredited Reinsurer; (E) Eligible - Reporting Entities eligible or approved to write Surplus Lines in the state; (N) None of the above - Not allowed to write business in the state (a) Insert the number of L responses except for Canada and Other Alien.

PART 1 – ORGANIZATIONAL CHART

04-1590850

Massachusetts

	Federal Tax ID	NAIC Co Code	State of Domicile
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Mezzanine Investor, LLC	06-1041383		Delaware
CML Mezzanine Investor L, LLC	06-1041383		Delaware
CML Mezzanine Investor III, LLC	06-1041383		Delaware
CML Re Finance LLC	06-1041383		Delaware
CML Special Situations Investor LLC	None		Delaware
MML Mezzanine İnvestor L, LLC	04-1590850		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Special Situations Investor LLC	None		Delaware
Timberland Forest Holding LLC	47-5322979		Delaware
Lyme Adirondack Forest Company, LLC	None		Delaware
Lyme Adirondack Timber Sales, Inc.	20-5305426		New York
Lyme Adirondack Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
WP-SC, LLC*	26-4441097		Delaware
MSP-SC, LLC	04-1590850		Delaware
Country Club Office Plaza LLC*	27-1435692		Delaware
Fern Street LLC	37-1732913		Delaware
MassMutual Retirement Services, LLC	04-1590850		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Mezzanine Investor, LLC	04-1590850		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MMC Equipment Finance LLC	04-1590850		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2009-A	27-1379258		Delaware
MMAF Equipment Finance LLC 2011-A	45-2589019		Delaware
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MSC Holding Company, LLC	45-4376777		Delaware
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MassMutual Holding LLC	04-2854319		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures LLC	47-1296410		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware

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

MML Investors Services, LLC

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
MassMutual International LLC	04-3313782		Delaware
MassMutual Asia Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Asia Investors Ltd.	None		Hong Kong, Special Administrative Region of China
MassMutual Guardian Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Insurance Consultants Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Services Limited	None		Hong Kong, Special Administrative Region of China
MassMutual Trustees Limited	None		Hong Kong, Special Administrative Region of China
Protective Capital (International) Limited	98-0610331		Hong Kong, Special Administrative Region of China
MassMutual Life Insurance Company	None		Japan
MassMutual Internacional (Chile) SpA	98-1033127		Chile
MM Asset Management Holding LLC	45-4000072		Delaware
Babson Capital Management LLC	51-0504477		Delaware
Babson Capital Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
Babson Capital Securities LLC	04-3238351		Delaware
Babson Capital Guernsey Limited	98-0437588		Guernsey
Babson Capital Management (UK) Limited	98-0432153		United Kingdom
Babson GPC GP S.à.r.l.	None		Luxembourg
Almack Mezzanine GP III Limited	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Almack Mezzanine Fund II Limited	None		United Kingdom
Babson Capital Global Advisors Limited	98-1012393		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Babson European Direct Lending 1 GP LLP	None		United Kingdom
Babson Capital Management (Japan) KK	None		Japan
Cornerstone Real Estate Advisers LLC	55-0878489		Delaware
Cornerstone Real Estate Advisers Inc.	04-3238351		California
Cornerstone Real Estate Advisers Japan K.K.	None		Japan
Cornerstone Real Estate UK Holdings Limited	None		Delaware
CREAE AIFM LLP	None		United Kingdom
Cornerstone Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Cornerstone Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Cornerstone Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Cornerstone Real Estate Advisers GmbH	98-1194368		Germany
Babson Capital Management (Australia) Holding Company Pty Ltd.	None		Australia
Babson Capital Management (Australia) Pty Ltd.	98-0457456		Australia

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Babson Capital Cornerstone Asia Limited	None		Hong Kong, Special Administrative Region of China
Wood Creek Capital Management LLC	04-1590850		Delaware
Wood Creek Index Company, LLC	26-3115362		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Alchemy Copyrights, LLC.	47-2642354		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Teaktree Acquisition, LLC	None		Delaware
U.S. Buyer Broadcasting, LLC	47-1855920		Delaware
Tamiami Citrus, LLC	None		Delaware
Solar Acquisition Holding, LLC	None		Delaware
U.S. Pharmaceuticals Holdings II, LLC	47-5436800		Delaware
Sweet Tree Holdings 1, LLC	46-3123110		Delaware
VGS Acquisition Holding, LLC	None		Delaware
U.S. WIG Holdings, LP	46-1500495		Delaware
WC Aircraft Holdings US II, LLC	46-3378584		Delaware
Wood Creek Aircraft Holding I, LP	None		Cayman Islands
Babson Capital Floating Rate Income Fund Management, LLC	04-1590850		Delaware
Babson Capital Core Fixed Income Management LLC	27-3523916		Delaware
Babson Capital Total Return Management LLC	27-3524203		Delaware
Babson CLO Investment Partners GP, LLC	None		Delaware
Babson Global Loan Feeder Management, LLC	None		Delaware
Babson TERO Management LLC	None		Delaware
Babson Investment Grade CLO Debt Management LLC	None		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
SDCOS Management LLC	04-1590850		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Loan Strategies Management LLC	04-1590850		Delaware
Mezzco LLC	04-1590850		Delaware
Mezzco II LLC	02-0767001		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia LLC	90-0666326		Delaware
Mezzco Australia II LLC	None		Delaware
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

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

OFF Global Trust Company 13-3459790 Now York Harband'view Asset Management Corporation 22-2407140 New York Trinity Investment Management Corporation 25-1951632 Pennsylvania OFF SeePlah, Inc. Shareholder Services, Inc. None Pennsylvania OFF SeePlah, Inc. None Pennsylvania OFF Clobal Asset Management Solutions, LLC None Pennsylvania OFF Clobal Asset Management Solutions, LLC None Pennsylvania OFF Private Investments Inc. OFF Private Investment In		Federal Tax ID	NAIC Co Code	State of Domicile
Harbout/view Asset Management Corporation 22-4697140 New York	OFI Global Trust Company	13-3459790		New York
Trinity Investment Management Corporation				
OFI Steel arth, Inc. 84-1128397 Delaware Shareholder Services, Inc. 84-106811 Colorado VTI. Associates, LLC None Pennsylvania OFI Global Asset Management, Inc. 84-0765063 Delaware OFI Private Investments Inc. 62-1210532 New York Tremont Group Holdings, Inc. 66-112864 New York Tremont GP, LLC 66-112864 Connecticut Tremont (BP, LLC 20-8215352 Delaware Settlement Agent LLC 90-0874510 Delaware Settlement Agent LLC 94-159085 Delaware MassMutual Bairing Bloiding LEC 41-590850 Delaware MassMutual Bloillings (Bermuda) Limited None Bermuda MassMutual Bloillings (Bermuda) Limited 8-0241935 United Kingdom Bairing Asset Management Limited 98-0341935 United Kingdom Bairing Asset Management Management Holdings 98-0457328 United Kingdom Bairing Asset Management Managem				
VTL Associates, LLC None Pennsylvania OFI Global Asset Management Solutions, LLC Noe Pennsylvania OFI Global Asset Management, Inc. 94-0769063 Delaware OFI Private Investments Inc. 62-1210532 New York Tremont Group Holdings, Inc. 62-1210532 New York Tremont GP, LLC 66-121864 Connecticut Extellment Agent LLC 90-0874510 Delaware Settlement Agent LLC 90-0874510 Delaware Temont (Bermuda) Limited None Bermuda MassMutual Boldings (Bermuda) Limited 98-0241935 Massachusetts MassMutual Floring International Investment Limited 98-0241935 Massachusetts Baring Asset Management Limited 98-0241935 United Kingdom Baring International Investment Limited 98-0241935 United Kingdom Baring Asset Management (Wildings Limited 98-0457358 United Kingdom Baring Asset Management (Wildings Limited 98-0457365 Bermuda Baring Asset Management (milding Limited 98-0457365 Bermuda Baring Asset Management (milding Limited </td <td></td> <td>84-1128397</td> <td></td> <td>Delaware</td>		84-1128397		Delaware
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OFI Clobal Asset Management, Inc. OFI Private Investments Inc. Tremont Group Holdings, Inc. Tremont Group Holdings, Inc. Tremont GP, LLC Tremont GP, LLC Settlement Agent LLC Settlement Agent LLC Settlement Agent LLC Settlement Agent LLC None Bermuda Limited None Bermuda Limited MassMutual Baring Holding LLC MassMutual Baring Holding LLC MassMutual Baring Holding LLC MassMutual Holdings (Bermuda) Limited MassMutual Holdings (Bermuda) Limited MassMutual Holdings (Bermuda) Limited None Baring Asset Management Limited MassMutual Holdings (Bermuda) Limited MassMutual Holdings (Bermuda) Limited Baring International Investment Management Man	VTL Associates, LLC	None		Pennsylvania
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Baring Asset Management (Japan) Limited 98-0236449 Japan Baring Asset Management (Australia) Pty Limited 98-0457456 Australia Baring International Fund Managers (Ireland) Limited 98-0524272 Ireland Baring Asset Management Switzerland Sàrl None Switzerland Baring SICE (Taiwan) Limited 98-0457707 Taiwan ROC Baring France SAS 98-0497550 France Baring Fund Managers Limited 98-0457586 United Kingdom Baring Pension Trustees Limited 98-0457574 United Kingdom Baring Investment Services Limited 98-0457578 United Kingdom				C C 1
Baring Asset Management (Australia) Pty Limited Baring International Fund Managers (Ireland) Limited Baring Asset Management Switzerland Sarl Baring SICE (Taiwan) Limited Baring France SAS Baring Fund Managers Limited Baring Fund Managers Limited Baring Pension Trustees Limited Baring Investment Services Limited Baring Investment Services Limited Baring Investment Services Limited Baring Investment Services Limited Baring Pension Trustees Limited Baring Investment Services Limited				
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Baring Asset Management Switzerland Sàrl None Switzerland Baring SICE (Taiwan) Limited 98-0457707 Taiwan ROC Baring France SAS 98-0497550 France Baring Fund Managers Limited 98-0457586 United Kingdom Baring Pension Trustees Limited 98-045754 United Kingdom Baring Investment Services Limited 98-045758 United Kingdom				
Baring SICE (Taiwan) Limited 98-0457707 Taiwan ROC Baring France SAS 98-0497550 France Baring Fund Managers Limited 98-0457586 United Kingdom Baring Pension Trustees Limited 98-045754 United Kingdom Baring Investment Services Limited 98-0457578 United Kingdom				
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				
Baring Fund Managers Limited 98-0457586 United Kingdom Baring Pension Trustees Limited 98-0457574 United Kingdom Baring Investment Services Limited 98-0457578 United Kingdom United Kingdom				
Baring Pension Trustees Limited 98-0457574 United Kingdom Baring Investment Services Limited 98-0457578 United Kingdom United Kingdom				
Baring Investment Services Limited 98-0457578 United Kingdom		, , , , , , , , , , ,		e e e e e e e e e e e e e e e e e e e
Dating investments (OK) Limited				
First Mercantile Trust Company 62-0951563 Tennessee				
Haven Life Insurance Agency, LLC 46-2252944 Delaware				
MML Management Corporation 40-2252944 Massachusetts Massachusetts				
MassMutual International Holding MSC, Inc. 04-3548444 Massachusetts				

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Society of Grownups, LLC	47-1466022		Massachusetts
MML Mezzanine Investor II. LLC	04-1590850		Delaware
MML Mezzanine Investor III. LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
MML Re Finance LLC	04-1590850		Delaware
Other Affiliates & Funds:			
Invicta Advisors LLC	56-2574604		Delaware
Jefferies Finance LLC*	27-0105644		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	04-1590850		Delaware
300 South Tryon LLC	04-1590850		Delaware
54 West Capital LLC	20-3887968		Delaware
Alexandria Towers Investors LLC	16-1720387		Delaware
Almack Mezzanine Fund I LP*	None		United Kingdom
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Almack Mezzanine Fund III LP*	None		United Kingdom
Babson Capital Emerging Markets Corporate Bond Fund	None		Ireland
Babson Capital Emerging Markets Local Debt Fund	None		Ireland
Babson Capital European High Yield Bond Fund	None		Ireland
Babson Capital Global Special Situations Credit Fund 1	None		Ireland
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital High Yield LLC*	55-0886109		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Babson CLO Ltd. 2007-I	None		Cayman Islands
Babson CLO Ltd. 2011-I	None		Cayman Islands
Babson CLO Ltd. 2012-I	None		Cayman Islands
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2013-II	98-1128827		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2014-II	None		Cayman Islands
Babson CLO Ltd. 2014-III	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Babson Capital Global Credit Fund (Lux) SCSp, SIACV-SIF	None		Luxembourg

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Babson Investment Grade CLO Debt Fund LP	47-3971963		Delaware
Babson Mezzanine Realty Investors I*	20-4570515		Delaware
Babson Mezzanine Realty Investors II	24-1446970		Delaware
Baring Emerging Market Corp Debt Fund	None		Ireland
Baring Focused EAFE Equity Fund	11-3789446		Delaware
Baring Global Dynamic Asset Allocation Fund	30-0607379		Delaware
Baring International Small Cap Equity Fund	26-4142796		Delaware
Benton Street Partners I, L.P.*	98-0536233		Cayman Islands
Benton Street Partners II, L.P.*	98-0536199		Cayman Islands
Connecticut Valley Structured Credit CDO II, Ltd.	None		Cayman Islands
Connecticut Valley Structured Credit CDO III, Ltd.	None		Cayman Islands
Cambridge Hotel, LLC	06-1614196		Delaware
Cheyenne Mountain Resort LLC	04-1590850		Delaware
Cornerstone Core Fund SCSCp	None		Luxembourg
Cornerstone Core Mortgage Venture I LP	27-1701622		Delaware
Cornerstone Enhanced Mortgage Fund I LP	45-3751572		Delaware
Cornerstone Global Real Estate LP*	20-8730751		Delaware
Cornerstone High Yield Venture LP	36-4770946		Delaware
Cornerstone Hotel Income and Equity Fund II LP	26-1828760		Delaware
Cornerstone/LAZ Parking Fund LP	46-5437441		Delaware
Cornerstone Partners IV LLC	71-0908077		Delaware
Cornerstone Patriot Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Duchess VI CLO B.V.	None		United Kingdom
Duchess VII CLO B.V.	None		United Kingdom
E-Wise Land Venture LLC	20-3887968		Delaware
Gateway Mezzanine Partners I, L.P.*	80-0691253		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
Kazwell Realty Partners LLC	20-3887968		Delaware
King Alexander LLC	45-3754085		Delaware
Marco Hotel LLC	46-4255307		Delaware
MMI/BDI Riverside Mt. Vernon LLC	26-2704765		Delaware
MML O'Hare Hotel LLC	26-3799762		Delaware
Oakley Grove Development LLC	20-3887968		Delaware
Old Pasco Properties LLC	20-3887968		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Riva Portland LLC	30-0713071		Delaware
Rockall CLO B.V.	None		United Kingdom
Rockville Town Center LLC	54-2055778		Virginia

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

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Sapphire Valley CDO I, Ltd.	None		Cayman Islands
SDCOS L.P.	74-3182902		Delaware
Seattle 1415 Hotel Owner LLC	46-5491311		Delaware
Sedona TFMP Land LLC	04-1590850		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
South Myrtle Monrovia MM LLC	04-1590850		Delaware
South Pasco Properties LLC	20-3887968		Delaware
Tower Square Capital Partners, L.P.*	04-3722906		Delaware
Tower Square Capital Partners II, L.P.*	30-0336246		Delaware
Tower Square Capital Partners II-A, L.P.*	32-0160190		Delaware
Tower Square Capital Partners III, L.P.*	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Tower Square Capital Partners IV-A, L.P.	80-0920367		Delaware
West 46 th Street Hotel LLC	05-1590850		Delaware
Whately CDO, Ltd.	None		Cayman Islands
Wood Creek Multi Asset Fund, L.P.	20-4981369		Delaware
Babson Affiliates & Funds:			
Babson Capital Emerging Markets Debt Blended Total Return Fund	None		Ireland
Babson Capital Emerging Markets Debt Short Duration Fund	None		Ireland
Babson Capital Emerging Markets Sovereign Debt Fund	None		Ireland
Babson Capital Floating Rate Income Fund, L.P.	27-3330830		Delaware
Babson Capital Global Investment Funds plc	None		Ireland
Babson Capital Global Investment Fund 2 plc	None		Ireland
Babson Capital Global Investment Grade Corporate Plus Fund	None		Ireland
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Babson Capital Senior CLO Debt Fund	None		Ireland
Babson Emerging Markets Debt Blended Total Return Fund	47-3758432		Massachusetts
Babson Emerging Markets Local Currency Debt Fund	47-3774453		Massachusetts
Babson Global High Yield Bond Fund	47-3790192		Massachusetts
Babson Global Income Opportunities Credit Fund	46-3119764		Massachusetts
Babson Total Return Bond Fund	47-3734770		Massachusetts
Babson US High Yield Fund	47-3801860		Massachusetts
Gateway Mezzanine Partners I Trust	None		Australia
Great Lakes II LLC*	71-1018134		Delaware
Great Lakes LLC*	56-2505390		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Somerset Special Opportunities Master Fund LP	None		Cayman Islands
Wood Creek Venture Fund LLC	04-1590850		Delaware
Baring Affiliates & Funds:			
Baring Greater China Equity Fund	None		Hong Kong

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

	Federal Tax ID	NAIC Co Code State of Domicile
Cornerstone Affiliates & Funds:		
12-18 West 55th Street Predevelopment, LLC*	20-2548283	Delaware
50 Liberty LLC*	36-4823011	Delaware
One Harbor Shore LLC*	80-0948028	Delaware
2 Harbor Shore Member LLC*	46-4803557	Delaware
21 West 86 LLC*	45-5257904	Delaware
AT Mid-Atlantic Office Portfolio LLC*	45-2779931	Delaware
CHC/RFP VI Core LLC	04-1590850	Delaware
Cornerstone Fort Pierce Development LLC*	56-2630592	Delaware
Cornerstone Permanent Mortgage Fund	45-2632610	Delaware
CREA 330 Third LLC*	46-5001122	Delaware
CREA FMF Nashville LLC	46-4367364	Delaware
CREA/LYON West Gateway, LLC*	26-2399532	Delaware
CREA Madison Member LLC	81-0890084	Delaware
CREA/PPC Venture LLC*	20-0348173	Delaware
Fallon Cornerstone One MPD LLC*	26-1611591	Delaware
Farringdon London Holdings LLC*	46-3880526	Delaware
Fan Pier Development LLC*	20-3347091	Delaware
Infinity SCD Ltd.	None	United Kingdom
Johnston Groves LLC	20-4819358	Delaware
MMI/Hines Harrison LLC*	46-5347643	Delaware
MM Woodfield Martingale LLC*	46-4077059	Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None	Delaware
Sawgrass Village Shopping Center LLC*	27-2977720	Delaware
Ten Fan Pier Boulevard LLC*	None	Delaware
Twenty Two Liberty LLC*	35-2484550	Massachusetts
UK LIW Manager LLC	45-4606547	Delaware
UK LIW Member LLC	45-4606547	Delaware
Washington Gateway Apartments Venture LLC*	45-5401109	Delaware
Waterford Development Associates	20-2970495	Delaware
Waterloo London Holdings LLC	47-1993493	Delaware
WeHo Domain LLC*	46-3122029	Delaware
Willowwod Lakeside Master LLC	81-1552222	Delaware
Ygnatio Valley Funding	20-5481477	Delaware
MassMutual Premier Funds:		
MassMutual Barings Dynamic Allocation Fund	45-3168892	Massachusetts
MassMutual Premier Focused International Fund	02-0754273	Massachusetts
MassMutual Premier Main Street Fund	51-0529328	Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251	Massachusetts
MassMutual Premier Value Fund	04-3277550	Massachusetts

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

	Federal Tax ID	NAIC Co Code	State of Domicile
MassMutual Select Funds:			
MassMutual Select Diversified International Fund	14-1980900		Massachusetts
MassMutual Select Diversified Value Fund	01-0821120		Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593		Massachusetts
MassMutual Select Large Cap Value Fund	04-3513019		Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935		Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954		Massachusetts
MassMutual Select Small Company Value Fund	04-3584140		Massachusetts
MML Series Investment Funds:			
MML Series International Equity Fund	46-4257056		Massachusetts
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233		Massachusetts
MML Series II Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MML Series II Special Situations Fund	47-3559064		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
MassMutual RetireSMART Conservative Fund	45-1618155		Massachusetts
MassMutual RetireSMART Growth Fund	45-1618222		Massachusetts
MassMutual RetireSMART Moderate Fund	45-1618262		Massachusetts
MassMutual RetireSMART Moderate Growth Fund	45-1618046		Massachusetts
Oppenheimer Funds:			
Oppenheimer Global High Yield Fund	45-3417590		Delaware
Oppenheimer Global Multi-Asset Growth Fund	47-3676235		Delaware
Oppenheimer Global Multi-Asset Income Fund	47-1714929		Delaware
Oppenheimer Global Real Estate Fund*	46-1604428		Delaware
Oppenheimer Real Estate Fund	22-3849391		Massachusetts
Oppenheimer Small Cap Value Fund	47-4835759		Delaware
Oppenheimer SteelPath Panoramic Fund	47-3987967		Delaware

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

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

				FAI	11 17	- DEIAIL	. OF INSURANCI	L ! !\	JLDII	1G COMPANT				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
											Type	If		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation-		Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
Couc	Group Hame	Outc	Transci	HOOD	Oiix	momationary	Massachusetts Mutual Life Insurance	tion	Littly	Massachusetts Mutual Life Insurance	Other)	lage	Entity(ics)/i crson(s)	
0435	Massachusetts Mut Life Ins Co	65935	04-1590850 .	3848388	0000225602		Company (MMLIC)	MA	UDP	Company	Ownership	100.000	MMLIC	
9430	mus Life ins co	00930	04-1090600 .	3040300	0000223002		Company (wwL1C)	MA		Massachusetts Mutual Life Insurance	owner strip	100.000	. INMLIG	
0435	CM Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	RE	Company	Ownership	100.000	MMLIC	
0435		93432	43-0581430 .		0000924777		MML Bay State Life Insurance Company	CT	NIA	C.M. Life Insurance Company	Ownership.		MMLIC	
	MML Baystate Life Ins Co	/0416			. 0000924777			DE				100.000	MMLIC	
0000			06-1041383 .				CML Mezzanine Investor, LLC		NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC	
0000			06-1041383 .				CML Mezzanine Investor L, LLC	DE		C.M. Life Insurance Company	Ownership	100.000		
0000			06-1041383				CML Mezzanine Investor III, LLC	DE		C.M. Life Insurance Company	Ownership	100.000	MMLIC	
0000			06-1041383 .				CML Re Finance LLC	DE		C.M. Life Insurance Company	Ownership	100.000	MMLIC	
0000							CML Special Situations Investor LLC	DE	NI A	C.M. Life Insurance Company	Ownership	100.000	MMLIC	
			l							Massachusetts Mutual Life Insurance				
0000			04-1590850 .				MML Mezzanine Investor L, LLC	DE	NI A	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000							MML Special Situations Investor LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Company	Ownership	95.000	MML1C	
0000			47-5322979				Timberland Forest Holding LLC	DE	NIAN	C.M. Life Insurance Company	Ownership	5.000	MMLIC	
0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Wood Creek Capital Management LLC	Management	.	MML1C	
0000							Lyme Adirondack Forest Company, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership.	100.000	MMLIC	
0000			20-5305426				Lyme Adirondack Timber Sales, Inc.	NY	NIA	Timberland Forest Holding LLC	Ownership.	100.000	MMLIC	
0000							Lyme Adirondack Timberlands I, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership.	100.000	MMLIC	-
0000							Lyme Adirondack Timberlands II, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership.	100.000	MMLIC	
0000							Lymo Autronauck Timberrands III, LEO			Massachusetts Mutual Life Insurance	owner strip		WILLIO	
0000			04-1590850 .				Berkshire Way LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			04 1030000 .				Derksitite way LLO			Massachusetts Mutual Life Insurance	owner strip	100.000		
0000			26-4441097				WP-SC, LLC	DE	NIA	Company	Ownership	81.400	MMLIC	
0000			26-4441097				WP-SC, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	18.600	MMLIC	
0000			20-444 1097				WP-50, LLC		NIA	Massachusetts Mutual Life Insurance	Owner sn i p	18.000	NIML C	
0000			04-1590850				MSP-SC. LLC	DE	NIA		0	100.000	MMLIC	
0000			04-1590850 .				MSP-SC, LLC	be	NIA	Company	Ownership	100.000	MMLIC	
0000			07 4405000				0 1 011 011	DE		Massachusetts Mutual Life Insurance	0 1:	00 400		
0000			27-1435692 .				Country Club Office Plaza LLC	DE	NIA	Company	Ownership	88.100	MMLIC	
0000			27-1435692				Country Club Office Plaza LLC	DE	NIA	C.M. Life Insurance Company	Ownership	11.900	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			37-1732913		-		Fern Street LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
			l							Massachusetts Mutual Life Insurance				
0000			04-1590850 .				MassMutual Retirement Services, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			04-3356880 .		. 0000943903		MML Distributors LLC	AM	NIA	Company	Ownership	99.000	MMLIC	
0000			04-3356880 .		. 0000943903		MML Distributors LLC	MA	NIA	MassMutual Holding LLC	Ownership	1.000	MMLIC	
			1							Massachusetts Mutual Life Insurance				
0000							MML Investment Advisers, LLC	DE	NIA	Company	Ownership	_100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000	.]		04-1590850 .				MML Mezzanine Investor, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
			1				, , , , , , , , , , , , , , , , , , , ,			Massachusetts Mutual Life Insurance	,			
0000			46-3238013 .				MML Strategic Distributors, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
			0200010							Massachusetts Mutual Life Insurance				
0000			06-1563535 .	2881445	0001103653		The MassMutual Trust Company, FSB	CT	NIA	Company	Ownership	100.000	MMLIC	
					550 1 100000		macomataar rraot company, rob			Massachusetts Mutual Life Insurance				-
0000			04-1590850 .				MMC Equipment Finance LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000		-	26-0073611				MassMutual Asset Finance LLC	DE	NIA	MMC Equipment Finance LLC	Ownership.	99.600	MMLIC	-
0000		-	26-0073611 .				MassMutual Asset Finance LLC	DE		C.M. Life Insurance Company	Ownership	0.400	MMI IC	-
טטטע		.	20-00/3011.		·	L	massmutual Asset Fillance LLC	VE	NIA	U.M. LITE THEM AND COMPANY	UWITET STITP	0.400	INMLIO	<u>,. </u>

SCHEDULE Y

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
											Type	If		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation	-	Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.Ś. or	Parent, Subsidiaries	Loca-	Reportin	g Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000			27-1379258			· · · · · · · · · · · · · · · · · · ·	MMAF Equipment Finance LLC 2009-A	DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC	
0000			45-2589019				MMAF Equipment Finance LLC 2011-A	DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC	
							MML Private Placement Investment Company I,			Massachusetts Mutual Life Insurance	,			
0000			04-1590850				LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance		-		
0000			45-2738137				Pioneers Gate LLC	DE	NIA	Company	Ownership.	100.000	MMLIC	
										Massachusetts Mutual Life Insurance	·			
0000			45-4376777				MSC Holding Company, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			04-3341767				MassMutual Holding MSC, Inc.	MA	NIA	MSC Holding Company, LLC	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			04-2854319	2392316			MassMutual Holding LLC	DE	NIA	Company	Ownership	100.000	MML IC	
0000			06-1597528				MassMutual Assignment Company	NC	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
0000			04-1590850		0001399869		MassMutual Capital Partners LLC	DE	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC	
0000			47-1296410				MassMutual Ventures LLC	DE	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC	
0000			04-1590850				MM Rothesay Holdco US LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
0000			04-1590850		0000701059		MML Investors Services, LLC	MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
0000			04-1590850				MML Insurance Agency, LLC	MA	NIA	MML Investors Services, LLC	Ownership	100.000	MMLIC	
0000			41-2011634		0001456663		MMLISI Financial Alliances, LLC	DE	NIA	MML Investors Services, LLC	Ownership	51.000	MMLIC	
0000			04-3313782				MassMutual International LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
0000							MassMutual Asia Limited	HKG	I A	MassMutual International LLC	Ownership	100.000	MMLIC	
0000							MassMutual Asia Investors Ltd.	HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC	
0000							MassMutual Guardian Limited	.HKG	NIA	MassMutual Asia Limited	Ownership.	100.000	MMLIC	
0000							MassMutual Insurance Consultants Limited	_HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC	
0000							MassMutual Services Limited	HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC	
0000							MassMutual Trustees Limited	_HKG	NIA	MassMutual Asia Limited	Ownership	80.000	MMLIC	
							Protective Capital (International) Limited				·			
0000			98-0610331				, , , , , , , , , , , , , , , , , , , ,	HKG	NIA	MassMutual Asia Limited	Ownership	100.000	MMLIC	
0000							MassMutual Life Insurance Company	JPN	IA	MassMutual International LLC	Ownership	100.000	MMLIC	
0000			98-1033127				MassMutual Internacional (Chile) SpA	CHL	NIA	MassMutual International LLC	Ownership	100.000	MMLIC	
0000			45-4000072 .				MM Asset Management Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC	
0000			51-0504477		0000009015		Babson Capital Management LLC	DE	NIA	MassMutual Asset Management Holding LLC	Ownership	100.000	MMLIC	
0000			80-0875475				Babson Capital Finance LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000							BCF Europe Funding Limited	JRL	NIA	Babson Capital Finance LLC	Ownership	100.000	MMLIC	
0000							BCF Senior Funding LLC	DE	NIA	Babson Capital Finance LLC	Ownership	100.000	MMLIC	
0000			04-3238351		0000930012		Babson Capital Securities LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			98-0437588 .				Babson Capital Guernsey Limited	GGY	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			98-0432153				Babson Capital Mangement (UK) Limited	GBR	NIA	Babson Capital Guernsey Limited	Ownership	100.000		
0000							Babson GPC GP S.à.r.I	LUX	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Almack Mezzanine GP III Limited	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Almack Holding Partnership GP Limited	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Almack Mezzanine Fund Limited	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Almack Mezzanine Fund II Limited	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000			98-1012393				Babson Capital Global Advisors Limited	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000		
0000							BCGSS 2 GP LLP	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Babson European Direct Lending 1 GP LLP	GBR	NIA	Babson Capital Europe Limited	Ownership	100.000	MMLIC	
0000							Babson Capital Management (Japan) KK	JPN	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			55-0878489 .	3456895	0001379495		Cornerstone Real Estate Advisers LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			04-3238351	3456895	0001011148		Cornerstone Real Estate Advisers Inc.	CA	NIA	Cornerstone Real Estate Advisers LLC	Ownership	100.000	MMLIC	
							Cornerstone Real Estate Advisers Japan							
0000						l	K.K.	_JPN	NIA	Cornerstone Real Estate Advisers LLC	Ownership	100.000	MMLIC	

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											(Ownership,	is		
						Name of Securities			Relation-		Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
							Cornerstone Real Estate UK Holdings	l						
0000							Limited	DE	NIA	Cornerstone Real Estate Advisers LLC	Ownership	100.000	- MMLIC	
0000							CREAE AIFM LLP	GBR	NIA	Cornerstone Real Estate Advisers LLC	Ownership	100.000	MMLIC	
0000			98-0654401				Cornerstone Real Estate Advisers	GBR	NIA	Cornerstone Real Estate UK Holdings	0	100.000	MILIC	
0000			98-0654401 .				(Continental Europe) Limited	BK	NIA	Limited	Ownership	100.000	MMLIC	
0000			98-0654388 .				LLP	GBR	NIA	Limited	Ownership	100.000	MMLIC	
0000			30-0034300 .				Cornerstone Real Estate Advisers Europe	nuuv	NIA	Cornerstone Real Estate UK Holdings	Owner Strip	100.000		
0000			98-0654412				Finance IIP	GBR	NIA	Limited	Ownership	100.000	MML1C	
		-	00 000 11 12 .				TIMETOV EEI	الالا		Cornerstone Real Estate UK Holdings	υπιοι 3πτρ			
0000			98-1194368 .				Cornerstone Real Estate Advisers GmbH	DEU	NIA	Limited	Ownership	100.000	MMLIC	
							Babson Capital Management (Australia)]	
0000							Holding Company Pty Ltd.	AUS	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
							Babson Capital Management (Australia) Pty			Babson Capital Australia Holding Company				
0000			98-0457456 _				Ltd	AUS	NIA	Pty Ltd.	Ownership	100.000	MMLIC	
0000							Babson Capital Cornerstone Asia Limited	HKG	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			04-1590850				Wood Creek Capital Management LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			26-3115362 .				Wood Creek Index Company, LLC	DE	NIA	Wood Creek Capital Management LLC	Ownership	100.000	MMLIC	
0000			47-2642354 .				Alchemy Copyrights, LLC.	DE	NIA	MassMutual Holding LLC	Ownership	15.200	MMLIC	
0000			47-2642354 .				Alchemy Copyrights, LLC.	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
0000			47-3055009 .				Milestone Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership	18.300	MMLIC	
0000			47-3055009 .				Milestone Acquisition Holding, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			46-5460309 . 46-5460309				Red Lake Ventures, LLC	DE	NIA	Company	Ownership	31.500		
0000			46-5460309				Hed Lake ventures, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
0000			46-3123110 .				Sweet Tree Holdings 1, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	16. 100	MMLIC	
0000			46-3123110 .				Sweet Tree Holdings 1, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence	10. 100	MMLIC	
0000		-	70-012011U .				Oweet Hee Holdings I, LLC	∪⊏	N I M	Massachusetts Mutual Life Insurance	IIII I UCIICC	-	WINLIO	
0000							Tamiami Citurus, LLC	DE	NIA	Company	Ownership.	15.700	MMLIC	
0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership.	14.700	MMLIC	
0000							Teaktree Acquisition, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
										Massachusetts Mutual Life Insurance				
0000							U.S. Buyer Broadcasting, LLC	DE	NIA	Company	Ownership	12.700	MMLIC	
0000							U.S. Buyer Broadcasting, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
0000			46-1500495 .				U.S. WIG Holdings, LP	DE	NIA	MassMutual Holding LLC	Ownership	11.700		
0000			46-1500495 .				U.S. WIG Holdings, LP	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
										Massachusetts Mutual Life Insurance			l	
0000		-	20-2970495 .				US Pharmaceutical Holdings II, LLC	DE	NIA	Company	Ownership	32.600		
0000		-	20-2970495 .				US Pharmaceutical Holdings II, LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
0000							Calam Association Halding 11.0	DE	ALL A	Massachusetts Mutual Life Insurance	O	20, 200	184 10	
0000		- [Solar Acquisition Holding, LLC	DE	NIA	Company	Ownership	39.200		
0000		- [Solar Acquisition Holding, LLCVGS Acquisition Holding, LLC	DE	NIA NIA	Wood Creek Capital Management LLC	Management	42.600		
0000		- [VGS Acquisition Holding, LLCVGS Acquisition Holding, LLC	DE	NIA NIA	Wood Creek Capital Management LLC	Ownership	42.000	MMLIC	
0000		-					VOO ACQUISITION HOTOTHY, LLC	VE	NIA	Massachusetts Mutual Life Insurance	manayement		WWILTO	
0000			46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Company	Ownership		MMLIC	
0000		-	46-3378584				WC Aircraft Holdings US II, LLC	DE	NIA	Wood Creek Capital Management LLC	Management	11 .000	MMLIC	
_5500			10 00/0004				The Art of art floratings oo fr, LLO			Massachusetts Mutual Life Insurance	managomorit			
0000							Wood Creek Aircraft Holding I, LP	CYM	NIA	Company	Ownership	12.100	MMLIC	
0000		-					Wood Creek Aircraft Holding I, LP	CYM	NIA	Wood Creek Capital Management LLC	Management.		MMLIC	

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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
Oouc	Group Marrie	Outc	TVUITIDEI	HOOD	Oiix	intomationary	Babson Capital Floating Rate Income Fund	tion	Littly	(Ivanic of Entity/1 closely)	Other)	iage	Entity(ics)/1 crson(s)	+
0000			04-1590850		0001501011		Management, LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
			104-1090000		0001301011		Babson Capital Core Fixed Income			Dabson Capital Management LLC	Owner Strip		NWLIC	·
0000			27-3523916		0001503878		Management LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			21-3323910		0001303676		Babson Capital Total Return Management LLC	VE	NIA	Dabson Capital Management LLC	Owner Strip			
0000			27-3524203		0001503879		Danson Capital Total Neturn Management LLC	DE	NIA	Babson Capital Management LLC	Ownership.	100.000	MMLIC	
0000			21-3524203		0001003879		Babson CLO Investment Partners GP, LLC	DE	NIA NIA	Babson Capital Management LLC	Ownership.	100.000	MMLIC	
0000								DE			Ownership	100.000	MMLIC	
		-	-				Babson Global Loan Feeder Management, LLC		NIA	Babson Capital Management LLC			MMLIC	
0000		-					Babson TERO Management LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000		
0000		1					Babson Investment Grade CLO Debt Management	סר	NIZ 4	Debene On Hall Manage 1110	O manuful	400 000	MM 10	
0000		-	00 0500000				LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000		-	. 98-0536233				Benton Street Advisors, Inc.	CYM	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			. 04-1590850				SDCOS Management LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			. 04-1590850				Great Lakes III GP, LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			04-1590850				Loan Strategies Management LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			04-1590850				Mezzco LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			02-0767001				Mezzco II LLC	DE	NIA	Babson Capital Management LLC	Ownership	98.400	MMLIC	
0000			41-2280126				Mezzco III LLC	DE	NI A	Babson Capital Management LLC	Ownership	99.300		
0000			80-0920285				Mezzco IV LLC	DE	NI A	Babson Capital Management LLC	Ownership	99.300		
0000			90-0666326				Mezzco Australia LLC	DE	NI A	Babson Capital Management LLC	Ownership	72.000	MMLIC	
0000							Mezzco Australia II LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000		
							Somerset Special Opportunities Management							
0000			04-1590850				LLC	DE	NIA	Babson Capital Management LLC	Ownership	100.000	MMLIC	
0000			84-1149206	2897101			Oppenheimer Acquisition Corp	DE	NIA	MassMutual Asset Management Holding LLC _	Ownership	95.500	MMLIC	
0000			13-2527171	2679183	0000820031		OppenheimerFunds, Inc.	CO	NIA	Oppenheimer Acquisition Corp.	Ownership	100.000	MMLIC	
0000			13-2953455		0000276541		OppenheimerFunds Distributor, Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
0000			84-1106295				Oppenheimer Real Asset Management, Inc	DE	NIA	OppenheimerFunds, Inc	Ownership	100.000	MMLIC	
0000			13-4160541	3458125	0001179479		OFI Global Institutional, Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
										OFI Institutional Asset Management, Inc.				
0000			13-3459790	2914875			OFI Global Trust Company	NY	NIA		Ownership	100.000	MMLIC	
							, .			OFI Institutional Asset Management, Inc.				
0000			22-2697140				HarbourView Asset Management Corporation	NY	NIA		Ownership	100.000	MMLIC	
										OFI Institutional Asset Management, Inc.				
0000		.	25-1951632	.	0000099782		Trinity Investment Management Corporation .	PA	NIA		Ownership	100.000	MMLIC	
0000		.	84-1128397		0000857468		OFI SteelPath, Inc.	DE	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
0000			84-1066811		0000276398		Shareholder Services, Inc.	CO	NIA	OppenheimerFunds, Inc.	Ownership	100.000	MMLIC	
0000			l				VTL Associates , LLC	PA	NIA	OppenheimerFunds, Inc.	Ownership.	100.000	MMLIC	
0000							Index Management Solutions, LLC	PA	NIA	OppenheimerFunds, Inc.	Ownership.	100.000	MMLIC	
0000			84-0765063		0001041674		OFI Global Asset Management, Inc.	DE	NIA	OppenheimerFunds. Inc.	Ownership	100.000	MMLIC	
0000			91-2036414		0001179480		OFI Private Investments Inc.	NY	NIA	OppenheimerFunds, Inc.	Ownership.	100.000	MMLIC	
0000			62-1210532	1			Tremont Group Holdings, Inc.	NY	NIA	Oppenheimer Acquisition Corp.	Ownership	.100.000	MMLIC	
0000			06-1121864		0000764139		Tremont Partners, LLC	CT	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC	
0000		1	20-8215352	1			Tremont GP, LLC	DE	NIA	Tremont Group Holdings, Inc.	Ownership.	.100.000	MMI IC	
0000		1	90-0874510	1			Settlement Agent LLC	DE	NIA	Tremont Group Holdings, Inc.	Ownership	100.000	MMLIC	
0000			30 001 70 10	1			Tremont (Bermuda) Limited	BMU	NIA	Tremont Group Holdings, Inc.	Ownership.	100.000	MMLIC	
0000		-	04-1590850	1			MassMutual Baring Holding LLC	DE	NIA	MassMutual Asset Management Holding LLC .	Ownership.	100.000	MMLIC	
0000		-	98-0241935	2363071	0000932463		Baring North America LLC	MA	NIA	MassMutual Baring Holding LLC	Ownership.	100.000	MMLIC	
0000		-	. 00 024 1000		0000002400		MassMutual Holdings (Bermuda) Limited	MA BMU	NIA	MassMutual Baring Holding LLC	Ownership	.100.000	MMLIC	
0000		-	98-0241935	1			Baring Asset Management Limited	GBR	NIA	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC	
0000		-	98-0457328		0001568131		Baring International Investment Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	
		-	_ 30-043/328	-	1010010101		paring international investment Limited	חטע	IN I A	Dai mg ASSEL Management Limited	OWING 1 911 1 P	. 100.000		

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		NIAIO				Exchange	N	Domi-	ship		Management,	ship		
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Group	Oursell Name	Company	ID Normale and	Federal	Olle	(U.S. or	Parent, Subsidiaries Or Affiliates	Loca-	Reporting		Influence,	Percen-	Ultimate Controlling	*
Code	Group Name	Code	Number	RSSD	CIK	International)		tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	
0000			00 0457507				Baring International Investment Management	ODD	ALLA	Desire Acced Nonconstallinited	0	100,000	100	
0000			98-0457587 .				Holdings	GBR	NI A	Baring Asset Management Limited	Ownership	100.000	MMLIC	
0000			98-0457576				Baring Asset Management UK Holdings Limited	GBR	NILA	Baring International Investment	O	100.000	MMLIC	
0000			. 98-045/5/6 .				Limited	GBK	NIA	Management Holdings	Ownership			
0000			98-0465031				Baring Asset Management GmbH	DEU	NIA	Baring Asset Management UK Holdings	O	100 000	MMLIC	
0000			98-0463031.				Baring Asset Management (Asia) Holdings	DEU	NIA	Limited	Ownership	100.000	MMLIC	
0000			00 0504074				Limited	LIVO	NILA	Baring Asset Management UK Holdings	O	100,000	MMLIC	
0000			98-0524271 .				-·····	HKG	NIA	Limited	Ownership	100.000	- WWIL I U	
0000			98-0457465				Baring International Fund Managers (Bermuda) Limited	BMU	NIA	Baring Asset Management (Asia) Holdings Limited	O	100.000	MMLIC	
0000			90-045/405 .				(bermuda) Limited		NI A		Ownership	. 100.000		
0000			00 0457400				Daving Asset Management (Asia) Limited	LIKO	NILA	Baring Asset Management (Asia) Holdings	O	100,000	MMLIC	
0000			98-0457463 .				Baring Asset Management (Asia) Limited	HKG KOR	NIA	Limited	Ownership	100.000	MMLIC	
0000							Baring Asset Management Korea Limited	NUH	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	WWLIC	
0000			00.0000440				Desire Assat Housework (In an Ulinited	IDAI	NILA	Baring Asset Management (Asia) Holdings	0	100 000	MMLIC	
0000			98-0236449 .				Baring Asset Management (Japan) Limited	JPN	NIA	Limited	Ownership	100.000		
0000			00 0457450				Baring Asset Management (Australia) Pty	4110	NILA	Baring Asset Management (Asia) Holdings	0	100 000	MMLIC	
0000			98-0457456 .				Limited	AUS	NIA	Limited	Ownership	100.000		
0000			00 0504070				Baring International Fund Managers	LDI		Baring Asset Management UK Holdings		400 000	144.10	
0000			98-0524272 .				(Ireland) Limited	JRL	NIA	Limited	Ownership	100.000	MMLIC	
0000							Desire Assat Hereard O its along O're	OLIE	NILA	Baring Asset Management UK Holdings	0	100 000	10.10	
0000							Baring Asset Management Switzerland Sàrl	CHE	NIA	Limited	Ownership	100.000	MMLIC	
0000			00 0457707				Position OLOF (Tail and Limited	TUAL	NILA	Baring Asset Management UK Holdings Limited	0	100 000	10.10	
0000			98-0457707 .				Baring SICE (Taiwan) Limited	JWN	NIA		Ownership	100.000	MMLIC	
0000			98-0497550				Daning France CAC	FRA	NII A	Baring Asset Management UK Holdings	O	100.000	MMLIC	
0000			98-0497550 <u>.</u> 98-0457586 <u>.</u>				Baring France SAS		NIA	Limited	Ownership		MMLIC	
0000							Baring Fund Managers Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	
0000			98-0457574 ₋ 98-0457578 ₋				Baring Pension Trustees Limited	GBR GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	
0000			. 98-045/5/8 .				Baring Investment Services Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	
0000			62-0951563	1160004	0001259664		Baring Investments (UK) Limited First Mercantile Trust Company	TN	NIA NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	
0000			. 62-0951563 . . 46-2252944 .	1160004	. 0001239004		Haven Life Insurance Agency, LLC	DE	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC	
0000			04-2443240					MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	
0000			. 04-2443240 .				MML Management Corporation MassMutual International Holding MSC, Inc.	MA	NIA	massimutudi notutiig LLC	Owner Strip		. WWIL I U	
0000			04-3548444				massmutual international notuing MSC, Inc.	MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC	
0000			47-1466022				Society of Grownups, LLC	MA	NIA	MassMutual Holding LLC	Ownership		MMLIC	
0000			41-1400022 .				Society of Grownups, LLC	MA	NIA	Massachusetts Mutual Life Insurance	OWITE STITP	. 100.000	WWILL TO	
0000			04-1590850 .				MML Mezzanine Investor II, LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC	
0000			. 04-1080000 .				WIVIL WEZZAITHE THVESTOT IT, LLC		NIA	Massachusetts Mutual Life Insurance	Owner Strip	. 100.000	WWILTO	
0000			04-1590850 .				MML Mezzanine Investor III, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			. 04-1090800 .				www. wezzamme mivestor iii, LLC	UE	NIA	Massachusetts Mutual Life Insurance	OWITER STEEP		INMILIO	
0000			27-3576835				MassMutual External Benefits Group LLC	DE	NIA		Ownership	. 100.000	MMLIC	
0000							massmutual external benefits Group LLC		NIA	CompanyMassachusetts Mutual Life Insurance	Ownership	. 100.000	- WWIL I U	
0000			04-1590850				MML Re Finance LLC	DE	NII A		Ownership	100 000	MMLIC	
			. 04-1590850 .				MIVIL HE FINANCE LLU	JUE	NIA	Company	Ownership	100.000		
0000			EC 0574004				Inviete Advisers IIC	DE.	NII A		Ownership	100 000	MM IC	
0000			. 56-2574604 .				Invicta Advisors LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			07 0105644				lefferies Firence III C	DE	NILA	Massachusetts Mutual Life Insurance	O	4E 000	MMLIC	
0000			. 27-0105644 . 27-0105644				Jefferies Finance LLC	DE	NIA	Company	Ownership	45.000	MMLIC	1
0000			. 21-0105644 .				Jefferies Finance LLC	UE	NIA	Babson Capital Management LLC	Ownership	5.000	. NWLIC	
0000			04 1500050		0000067460		MM Drivete Equity Ford Investor 110	DE	NII A		Ownership	100 000	MAIL LC	
0000		-	04-1590850		0000067160		MML Private Equity Fund Investor LLC		NIA	Company	Ownership	100.000	MMLIC	
0000			04-1590850				MM Private Equity Intercontinental LLC	DE	NIA	MML Private Equity Fund Investor LLC	Ownership	100.000		

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
											Type	If		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation-		Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000	Group Hamo	0000		1.002	0	momanionary	G17a.co			Massachusetts Mutual Life Insurance		lago		_
0000			. 04-1590850 .				100 w. 3rd Street LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
			101 1000000 1				100 W. Old Otlook EEO			Massachusetts Mutual Life Insurance	owner entry			
0000			04-1590850				300 South Tryon Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			. 04 1000000 .				ooo oodtii ii yon notei EEO			Massachusetts Mutual Life Insurance	- Owner Strip		WINE TO	
0000			04-1590850				300 South Tryon LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			. 04 1000000 .				000 Godin Tryon EEG	UL		Massachusetts Mutual Life Insurance	Owner Strip		WINE TO	
0000			20-3887968				54 West Capital LLC	DE	NIA	Company	Ownership	. 100.000	MMLIC	
0000		l					07 11031 Vapitai LLO	UL		Massachusetts Mutual Life Insurance	Omici Sirip			
0000			16-1720387				Alexandria Towers Investors LLC	DE	NIA	Company	Ownership	. 100.000	MMLIC	
0000			. 10-1/2038/ .				ATEXAMULTA TOWERS THVESTORS LLC	VE	IN I A	Massachusetts Mutual Life Insurance	Owner Strip.		I INMIL TO	
0000]		1			Almack Mezzanine Fund LP	GBR	NIA	Company	Ownership	34.600	MMLIC	
0000							Almack Mezzanine Fund LP	GBR	NIA	C.M. Life Insurance Company	Ownership	5.300	MMLIC	
0000							Almack Mezzanine Fund LP	GBR	NIA		Management	5.300	MMLIC	
0000							Almack Mezzanine Fund i LP	Hatu	NIA	Babson Capital Europe Limited	management		- MMLIC	
0000							Alasada Nassasia a Frank III III II assassas d I B	GBR	ALL A		0	72.900	MMLIC	
							Almack Mezzanine Fund II Unleveraged LP		NIA	Company	Ownership	/2.900		
0000							Almack Mezzanine Fund II Unleveraged LP	GBR	NIA	Babson Capital Europe Limited	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			-				Almack Mezzanine Fund III LP	GBR	NI A	Company	Ownership	34.200		
0000							Almack Mezzanine Fund III LP	GBR	NIA	C.M. Life Insurance Company	Ownership	3.800	. MMLIC	
0000							Almack Mezzanine Fund III LP	GBR	NIA	Babson Capital Europe Limited	Management		MMLIC	
							Babson Capital Emerging Markets Corporate			Massachusetts Mutual Life Insurance				
0000							Bond Fund	JRL	NIA	Company	Ownership	97.900		
							Babson Capital Emerging Markets Corporate							
0000							Bond Fund	JRL	NIA	Babson Capital Management LLC	Management		. MMLIC	
							Babson Capital Emerging Markets Local Debt			Massachusetts Mutual Life Insurance				
0000			-				Fund	JRL	NI A	Company	Ownership	64.900		
							Babson Capital Emerging Markets Local Debt							
0000							Fund	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
							Babson Capital European High Yield Bond			Massachusetts Mutual Life Insurance				
0000							Fund	JRL	NIA	Company	Ownership	79.300	. MMLIC	
							Babson Capital European High Yield Bond				l			
0000							Fund	JRL	NIA	Babson Capital Management LLC	Management		. MMLIC	
							Babson Capital Global Special Situations			Massachusetts Mutual Life Insurance		40.005		
0000			-				Credit Fund 1	JRL	NI A	Company	Ownership	46.800		
		1					Babson Capital Global Special Situations							
0000			-				Credit Fund 1	JRL	NI A	Babson Capital Management LLC	Management		MMLIC	
							Babson Capital Global Special Situation			Massachusetts Mutual Life Insurance				
0000			. 98-1206017 .				Credit Fund 2	DE	NIA	Company	Ownership	24.400	MMLIC	
		1					Babson Capital Global Special Situation							
0000			98-1206017				Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	1.600	_ MMLIC	
		1					Babson Capital Global Special Situation							
0000			. 98-1206017 .				Credit Fund 2	DE	NIA	Babson Capital Management LLC	Management		- MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 55-0886109 .		0001321302		Babson Capital High Yield LLC	DE	NI A	Company	Ownership	88.200	MMLIC	
0000			. 55-0886109 .		0001321302		Babson Capital High Yield LLC	DE	NI A	C.M. Life Insurance Company	Ownership	11.800	MMLIC	
0000			. 55-0886109 .		0001321302		Babson Capital High Yield LLC	DE	NIA	Babson Capital Management LLC	Management		. MMLIC	
		1								Massachusetts Mutual Life Insurance				
0000			. 37-1506417 .				Babson Capital Loan Strategies Fund, L.P.	DE	NIA	Company	Ownership	78.700	MMLIC	
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	C.M. Life Insurance Company	Ownership	3.900	. MMLIC	
0000		 	37-1506417 .				Babson Capital Loan Strategies Fund, L.P	DE	NI A	Babson Capital Management LLC	Management		MMLIC	

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											Туре	If		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation	-	Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting		Influence,	Percen-		
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000					-		Babson CLO Ltd. 2007-I	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	4
0000					-		Babson CLO Ltd. 2011-I	CYM	NIA	Babson Capital Management LLC	Influence	-	MML IC	
0000							Babson CLO Ltd. 2012-1	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000					-		Babson CLO Ltd. 2012-II	CYM	NIA	Babson Capital Management LLC Babson Capital Management LLC	Influence		MMLIC	
0000			98-1128827				Babson CLO Ltd. 2013-1	CYM	NIA NIA	Babson Capital Management LLC	Influence		MMLIC	8
0000			90-1120021				Babson CLO Ltd. 2013-11	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	22
0000							Babson CLO Ltd. 2014-1	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	9
0000		-	1	1	-		Babson CLO Ltd. 2014-11	CYM	NIA	Babson Capital Management LLC	Influence	-	MMLIC	تو
0000			1				Babson CLO Ltd. 2015-1	CYM	NIA	Babson Capital Management LLC	Influence	-	MMLIC	10
0000]	_		Babson CLO Ltd. 2015-II	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	11
0000							Babson CLO Ltd. 2016-1	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000							Babson Euro CLO 2014-I BV	_NLD	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000							Babson Euro CLO 2014-II BV	NLD	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000							Babson Euro CLO 2015-I BV	NLD	NIA	Babson Capital Management LLC	Influence		MMLIC	
							Babson Global Credit Fund (Lux) SCSp,			Massachusetts Mutual Life Insurance				
0000							SIACV-SIF	LUX	NIA	Company	Ownership	26.300	MMLIC	
							Babson Global Credit Fund (Lux) SCSp,							
0000							SIACV-SIF	LUX	NI A	Babson Capital Management LLC	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE	NIA	Company	Ownership	93.300	MMLIC	
0000			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE DE	NIA	C.M. Life Insurance Company	Ownership	6.700	MMLIC	
0000			47-3971963				Babson Investment Grade CLO Debt Fund LP	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
0000			20-4570515		0001362970		Babson Mezzanine Realty Investors I	DE	NIA	Company Company	Ownership	37.000	MMLIC	
0000		-	20-4570515		0001362970		Babson Mezzanine Realty Investors I	DE	NIA	C.M. Life Insurance Company	Ownership	1.900	MMLIC	
0000			. 20-4570515		0001362970		Babson Mezzanine Realty Investors I	DE	NIA	Cornerstone Real Estate Advisers LLC	Management	1.900	MMLIC	
0000			20 43/03/3		. 0001302370		Dabson wezzamne nearty mvestors i		INI /\	Massachusetts Mutual Life Insurance	management		INMETO	
0000			24-1446970		. 0001362970		Babson Mezzanine Realty Investors II	DE	NIA	Company	Ownership	0.000	MMLIC	
0000		-	24-1446970		0001362970		Babson Mezzanine Realty Investors II	DE	NIA	Cornerstone Real Estate Advisers LLC	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000							Baring Emerging Market Corp Debt Fund	JRL	NIA	Company	Ownership	87.000	MMLIC	
0000							Baring Emerging Market Corp Debt Fund	JRL	NIA	Baring Asset Management Limited	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 11-3789446		.		Baring Focused EAFE Equity Fund	DE	NIA	Company	Ownership	52.400	MMLIC	
0000		-	. 11–3789446	-	-		Baring Focused EAFE Equity Fund	DE	NI A	Baring Asset Management Limited	Management		MMLIC	
							Baring Global Dynamic Asset Allocation			Massachusetts Mutual Life Insurance				
0000			30-0607379	-	. 0001497049 .		Fund	DE	NIA	Company	Ownership	27.000	MMLIC	
0000			00 0007070		0004407040		Baring Global Dynamic Asset Allocation	DE	NILA	Design Assat Management Limit 1	Manager and A		MMLIC	
0000			. 30-0607379		. 0001497049		FundBaring International Small Cap Equity Fund	DE	NIA	Baring Asset Management Limited Massachusetts Mutual Life Insurance	Management		[MMLIC	
0000			26-4142796				Dailing International Small Cap Equity Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	48.100	MMLIC	
0000		-	20-4142/90	1	-		Baring International Small Cap Equity Fund	∪⊏		Company	owner strip	40. 100		
0000			26-4142796				baring international Small cap Equity Fund	DE	NIA	Baring Asset Management Limited	Management		MMLIC	
0000		-	98-0536233				Benton Street Partners I, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership	98.000	MMLIC	
0000		-	98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Babson Capital Management LLC	Management		MMLIC	
0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	C.M. Life Insurance Company	Ownership.	0.100	MMLIC	
								· · · · · · · · · · · · · · · · · · ·		Massachusetts Mutual Life Insurance				
0000			98-0536233				Benton Street Partners I, L.P.	CYM	NIA	Company	Ownership	0.800	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			98-0536199		.		Benton Street Partners II, L.P.	CYM	NIA	Company	Ownership	33.300	MMLIC	3

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1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership,	13 If Control	14	15
						Name of Securities			Relation-		Board,	is Owner-		
						Exchange		Domi-	Relation- ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to			Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Attorney-in-Fact, Influence,	Provide Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000	Group Name	Code	98-0536199	NOOD	OIK	international)	Benton Street Partners II, L.P.	CYM	NIA	MassMutual Capital Partners LLC	Ownership	4.800	MMLIC	
0000			98-0536199		-		Benton Street Partners II. L.P.	CYM	NIA	Babson Capital Management LLC	Management	4.000	MMLIC	
0000			90-0000199 .				Denton Street Farthers 11, L.F.	VIVL	NI A	Massachusetts Mutual Life Insurance	Management			,
0000			06-1614196				Cambridge Hotel, LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			. 00-1014190 .				Cambi ruge rioter, ELC		NI A	Massachusetts Mutual Life Insurance	Owner Strip	. 100.000		
0000			04-1590850				Cheyenne Mountain Resort LLC	DE	NIA	Company	Ownership.	100.000	MMLIC	
0000			. 04-1390630 .				Connecticut Valley Structured Credit CDO	UE	NI A	Company	Owner strip			
0000							II. Ltd.	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	5
0000							Connecticut Valley Structured Credit CDO	WI.U		Babson capital management LLC	TITI Tuence			
0000					1		III, Ltd	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000				1			Cornerstone Core Fund SCSCp	LUX	NIA	MassMutual Holding LLC	Ownership	93.900	MMLIC	
0000					-		Cornerstone Core Fund SCSCp	LUX	NIA	C.M. Life Insurance Company	Ownership	6.000	MMLIC	
0000						***************************************	Cornerstone Core Fund SCSCp	LUX	NIA	Cornerstone Real Estate Advisers LLC	Management	0.000	MMLIC	
0000						***************************************	Corner stone core i una cocop	LUX		Massachusetts Mutual Life Insurance	management			
0000			27-1701622		. 0001481752 .		Cornerstone Core Mortgage Venture LP	DE	NIA	Company	Ownership	50.000	MMLIC	
0000			27-1701622		0001481752		Cornerstone Core Mortgage Venture I LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management	0.000	MMLIC	
0000			21-1101022		. 10001401732 .		Cornerstone core mortgage venture i Li			Massachusetts Mutual Life Insurance	management			
0000			45-3751572		. 0001534877 .		Cornerstone Enhanced Mortgage Fund I LP	DE	NIA	Company	Ownership	15.600		
0000			45-3751572		. 0001534877 .		Cornerstone Enhanced Mortgage Fund LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management		MMLIC	
0000			40-3/3/3/2 .		. 0001334677 .		Corner Storie Enhanced mortgage Fund i LF	UE	NIA	Massachusetts Mutual Life Insurance	_ management			
0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	Company	Ownership	92.300		
0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	C.M. Life Insurance Company	Ownership.	7.600	MMLIC	
0000			20-8730751				Cornerstone Global Real Estate LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management_		MMLIC	
0000			. 20-0/30/31 .				Cornerstone Grobal hear Estate LF	UE	NIA	Massachusetts Mutual Life Insurance	_ management			
0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Company	Ownership	50.000	MMLIC	
0000			36-4770946		0001590049		Cornerstone High Yield Venture LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management	۵۰۰،۰۰۰	MMLIC	
0000			. 30-4770340 .		. 10001330043 .		Cornerstone Hotel Income & Equity Fund II		NI /\	Massachusetts Mutual Life Insurance	- management		WWL 10	
0000			26-1828760		0001423638		IP	DE	NIA	Company	Ownership	15.600	MMLIC	
0000			. 20-1020700 .		. 1000 1423030 .		Cornerstone Hotel Income & Equity Fund II		NI A	Company	Owner Sirrp	13.000		,
0000			26-1828760		0001423638		IP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management		MMLIC	
0000			20 1020/00 .		. 0001720000 .		LI	UE	NI/A	Massachusetts Mutual Life Insurance	_ management			
0000			71-0908077		1		Cornerstone Partners IV LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			20-5578089		-		Cornerstone Patriot Fund LP	DE	NIA	MassMutual Holding LLC	Ownership	10.200	MMLIC	
0000			20-5578089		-		Cornerstone Patriot Fund LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management	10.200	MMLIC	
0000			20 00100000		·		OUTHOR STORE FATE FOR FULLY LF			Massachusetts Mutual Life Insurance	- management			
0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Company	Ownership	12.700	MMLIC	
0000			27-0547156				Cornerstone Real Estate Fund VIII LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management	. 12.700	MMLIC	
0000			21 0041 100 .				OUTHOR STORIE HEAT ESTATE FURIN VIII EF	UL		Massachusetts Mutual Life Insurance	- managoniont			
0000			46-5432619		1		Cornerstone Real Estate Fund X LP	DE	NIA	Company	Ownership.	26.900	MMLIC	
0000			46-5432619		-		Cornerstone Real Estate Fund X LP	DE	NIA	C.M. Life Insurance Company	Ownership	3.000	MMLIC	
0000			46-5432619		-		Cornerstone Real Estate Fund X LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management		MMLIC	
			. 10 0702013				Some Stone near Estate Fullu A El			Massachusetts Mutual Life Insurance	- managomont			
0000			46-5437441		1		Cornerstone/LAZ Parking Fund LP	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			46-5437441				Cornerstone/LAZ Parking Fund LP	DE	NIA	Cornerstone Real Estate Advisers LLC	Management		MMLIC	
0000			. 14410-0-0-1	3981641			Duchess VI CLO B.V.	GBR	NIA	Babson Capital Management LLC	Influence		MMLIC	
0000				4007502	-		Duchess VII CLO B.V.	GBR	NIA	Babson Capital Management LLC	Influence	-	MMLIC	
0000				507 502			DUGINGS VII OLO D.V.		INI /\	Massachusetts Mutual Life Insurance	THI TUCHOG			
0000			20-3887968		1		E-Wise Land Venture LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			20 0001 300		-		E 1130 Lanu Venture LLO	UE	NI/A	Massachusetts Mutual Life Insurance	omici sirip			
0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P.	DE	NIA	Company	Ownership	78.100	MMLIC	
0000			80-0691253		. 0001517196 .		Gateway Mezzanine Partners I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	9.700	MMLIC	
UUUU		.	. ᲡᲡᲡ-ᲡᲡᲧ 12ᲔᲐ .	.	. 1000131/190 .	.	TUGITERAY WELLANTINE FAILURIS I, L.F		LIN I M	LITE INSULATIVE COMPANY	O WIND I 2111D	. ७./७७	[WWILL I V	

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											Туре	lf		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation-		Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
_		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group	<u> </u>	Company	. ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000			80-0691253		0001517196		Gateway Mezzanine Partners I, L.P	DE	NIA	MassMutual Holding LLC	Ownership	12.200	- MMLIC	
0000			. 80-0691253 .		0001517196		Gateway Mezzanine Partners I, L.P	DE	NIA	Babson Capital Management LLC	Management		. MMLIC	
0000			90-0991195		0001597511		Cataman Magazaira Dantasaa II ID	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	35.700	MMLIC	
0000			. 90-0991195 . . 90-0991195 .		0001597511		Gateway Mezzanine Partners II LP Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC	
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	MassMutual Holding LLC	Ownership	5.200	MMLIC	
0000			. 90-0991195 . . 90-0991195 .		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Babson Capital Management LLC	Management.	5.200	MMLIC	
0000			30 0331133 .		0001037511		dateway wezzaiiile i ai theis ii Li			Massachusetts Mutual Life Insurance	- management			
0000			. 37-1708623 .		0001565779		Great Lakes III, L.P.	DE	NIA	Company	Ownership	35.700	MML1C	
0000			37-1708623		0001565779		Great Lakes III. L.P.	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
					200 1000/ 10		a. oa. Euroo III, E.I.			Massachusetts Mutual Life Insurance		-		
0000			. 20-3887968 .				Kazwell Realty Partners LLC	DE	NIA	Company	Ownership	100.000	MML1C	
										Massachusetts Mutual Life Insurance				
0000			45-3754085 .				King Alexander LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance	·			
0000			46-4255307				Marco Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			26-2704765				MMI/BDI Riverside Mt. Vernon LLC	DE	NI A	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 26-3799762 .				MML O'Hare Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 20-3887968 .				Oakley Grove Development LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 20-3887968 .				Old Pasco Properties LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
			==							Massachusetts Mutual Life Insurance				
0000			. 75–2901061 .				Reston Arboretum LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			30-0713071				Riva Portland LLC	DE	NILA		0	100.000	104 10	
0000			. 30-0/130/1 .				Rockall CLO B.V.	GBR	NIA NIA	CompanyBabson Capital Management LLC	OwnershipInfluence.	100.000	MMLIC	
0000							nockail old b.v.	dbn	NIA	Massachusetts Mutual Life Insurance	Initiaerice		INMLIC	
0000			54-2055778				Rockville Town Center LLC	VA	NIA	Company	Ownership.	100.000	MMLIC	
0000			. 04 2000//0 .				Sapphire Valley CDO I, Ltd.	CYM	NIA	Babson Capital Management LLC	Influence		MMLIC	6
0000										Massachusetts Mutual Life Insurance				
0000			74-3182902				SDCOS L.P.	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			74-3182902				SDCOS L.P.	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			46-5491311 .				Seattle 1415 Hotel Owner LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance	,			
0000			. 04-1590850 .				Sedona TFMP Land LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			20-8856877 .		0001409910		Somerset Special Opportunities Fund L.	PDE	NIA	Company	Ownership	62.400	MMLIC	
0000			20-8856877 .		0001409910		Somerset Special Opportunities Fund L.		NIA	C.M. Life Insurance Company	Ownership	2.900	. MMLIC	
0000			. 20-8856877 .		0001409910		Somerset Special Opportunities Fund L.	PDE	NIA	Babson Capital Management LLC	Management		MMLIC	
l										Massachusetts Mutual Life Insurance		1		
0000			. 04-1590850 .				South Myrtle Monrovia MM LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			00 0007000				0 11 5 5 7 11 11 11			Massachusetts Mutual Life Insurance		400 000	IIII 10	
0000			. 20-3887968 .				South Pasco Properties LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			20 0000040		0001045070		Taman Course Comity Double on 11 1 2	DE	NII A	Massachusetts Mutual Life Insurance	O	OF 700	IMILIC	
0000			30-0336246		0001345379 0001345379		Tower Square Capital Partners II, L.P.	DE	NIA	Company	Ownership	25.700	MMLIC	
0000			30-0336246				Tower Square Capital Partners II, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	4.500		
0000			30-0336246	.	0001345379		Tower Square Capital Partners II, L.P.	DE	NI A	Babson Capital Management LLC	Management		MMLIC	

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		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000			30-0336246		0001345379		Tower Square Capital Partners II, L.P	DE	NIA	MassMutual Holding LLC	Ownership	2.600	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 32-0160190 . 32-0160190 .				Tower Square Capital Partners II-A, L.P	DE	NIA NIA	Company	Ownership	85.000	MMLIC	
0000			. 32-0160190 .				Tower Square Capital Partners II-A, L.P Tower Square Capital Partners II-A, L.P	DE	NIA NIA	C.M. Life Insurance Company	OwnershipManagement	15.000	MMLIC	
0000			41-2280127		0001447547		Tower Square Capital Partners II-A, L.P	DE	NIA NIA	Babson Capital Management LLC	Management Management		MMLIC	
0000			41-2280127		0001447547		Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership	21.900	MMLIC	
0000			41 2200121		0001447547		Tower oquare capital raithers iii, L.i	DL		Massachusetts Mutual Life Insurance	Owner strip	21.300		
0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P	DE	NIA	Company	Ownership	96.200	MMLIC	
0000			41-2280129		0001447548		Tower Square Capital Partners IIIA, L.P	DE	NIA	Babson Capital Management LLC	Management	50.200	MMLIC	
0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P	DE	NIA	MassMutual Holding LLC	Ownership	21.300	MMLIC	
0000			80-0920367		0001598727		Tower Square Capital Partners IV-A, L.P	DE		Babson Capital Management LLC	Management		MMLIC	-
										Massachusetts Mutual Life Insurance				
0000			. 04-3722906 .		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Company	Ownership	36.200	MMLIC	
0000			. 04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	C.M. Life Insurance Company	0wnership	0.600	MMLIC	
0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
0000			04-3722906		0001228752		Tower Square Capital Partners, L.P.	DE	NIA	MassMutual Holding LLC	Ownership	3.600	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 04-1590850 .				West 46th Street Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC	
0000							Whately CDO, Ltd.	CYM	NI A	Babson Capital Management LLC	Influence		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 20-4981369 .		0001371601		Wood Creek Multi Asset Fund, L.P.	DE	NIA	Company	Ownership	100.000	MMLIC	
0000			. 20-4981369 .		0001371601		Wood Creek Multi Asset Fund, L.P.	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
0000							Babson Capital Emerging Markets Debt	IDI	MILA	Debene On the Liver control of the	Management		1841.10	
0000							Blended Total Return Fund	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
0000							Babson Capital Emerging Markets Debt Short Duration Fund	IRL	NIA	Dahaan Carital Managanant II C	Management		MMLIC	
0000							Babson Capital Emerging Markets Sovereign	J KL	NIA	Babson Capital Management LLC	management		MMLIC	
0000							Debt Fund	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
,0000							Babson Capital Floating Rate Income Fund,	JnL	NIA	Dabson Capital management LLC	management		WILLO	
0000			27-3330830		0001521404		L.P.	DE	NIA	MassMutual Holding LLC	Ownership	0.000	MMLIC	
0000			27 0000000 .		0001021404		Babson Capital Floating Rate Income Fund,			masswardar nordring LLO	owner strip.	0.000	WILL TO	
0000			27-3330830		0001521404		L.P.	DE	NIA	Babson Capital Management LLC	Management		MMLIC	
							Babson Capital Loan Strategies Master Fund			Daboon oup tu managoment 220				-
0000							LP	CYM	NIA	Babson Capital Management LLC	Management			
							Babson Capital Global Investment Funds plc			Massachusetts Mutual Life Insurance				
0000					0001502146			JRL	NIA	Company	Ownership	0.300	MMLIC	
							Babson Capital Global Investment Fund 2			Massachusetts Mutual Life Insurance	·			
0000					0001582591		plc	JRL	NIA	Company	Ownership	0.000	MMLIC	
							Babson Capital Global Investment Fund 2							
0000					0001582591		plc	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
							Babson Capital Global Investment Grade							
0000							Corporate Plus Fund	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
0000				-			Babson Capital Senior CLO Debt Fund	JRL	NIA	Babson Capital Management LLC	Management		MMLIC	
							Babson Emerging Markets Debt Blended Total	l			l			
0000			. 47–3758432 .				Return Fund	MA	NIA	Babson Capital Management LLC	Management		MMLIC	
0000			47 0774450				Babson Emerging Markets Local Currency		NII A	Behavior Or Stall Many	W		100	
0000			. 47–3774453				Debt FundBabson Global Income Opportunities Credit	MA	NIA	Babson Capital Management LLC	Management		MMLIC	-
0000			46-3119764				Fund	MA	NIA	Babson Capital Management LLC	Management_		MMLIC	
0000		-	. 46-3119764 . 47-3790192 .					MA MA				-	MMLIC	-
			4/-3/90192.		<u> </u>		Babson Global High Yield Bond Fund	MA	NIA	Babson Capital Management LLC	Management	<u>. </u>	MML I U	

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						Exchange		Domi-	ship		Management,	ship		
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
0000			47-3734770				Babson Total Return Bond Fund	MA	NIA	Babson Capital Management LLC	Management	10.91		+
0000			47-3801860 .				Babson US High Yield Fund	MA		Babson Capital Management LLC	Management		MMLIC	.
0000			. 11 0001000 :				Gateway Mezzanine Partners Trust	AUS		Babson Capital Management LLC	Management		MMLIC	.
							datonay mozzamio i ai moro i i i aot i i i i aot			Massachusetts Mutual Life Insurance		-		,
0000			71-1018134				Great Lakes II LLC	DE	NIA	Company	Ownership.	11.200	MMLIC	
0000			71–1018134				Great Lakes II LLC	DE		C.M. Life Insurance Company	Ownership.	1.000	MMLIC	
							or out Euroo II EEO			Massachusetts Mutual Life Insurance	omici di i p		mile 10	
0000			56-2505390				Great Lakes LLC	DE	NIA	Company	Ownership	4.400	MMLIC	
0000			56-2505390				Great Lakes LLC	DE		C.M. Life Insurance Company	Ownership	0.500	MMLIC	
0000			46-2344300 .				Intermodal Holdings II LLC	DE	NIA	Wood Creek Capital Management LLC	Influence		MMLIC	
5000			. 10 2044000 .				Somerset Special Opportunities Master Fund			mood or ook oup rear management LEO	11111401100			.
0000							I P	CYM	NIA	Babson Capital Management LLC	Management		MMLIC	
0000										Massachusetts Mutual Life Insurance	munugolilottt	-		
0000			04-1590850 .				Wood Creek Venture Fund LLC	DE	NIA	Company	Ownership	60.000	MMLIC	
0000			. 04 1000000 .				Baring Greater China Equity Fund	HKG		Baring Asset Management Limited	Management		MMLIC	
0000							12-18 West 55th Street Predevelopment, LLC	III\U		Massachusetts Mutual Life Insurance	management			
0000			20-2548283				12-10 West Soth Street Fredeveropment, LLC	DE	NIA	Company	Ownership	_88.200	MMLIC	
0000			20 2040200 .				12-18 West 55th Street Predevelopment, LLC			Company	Owner Sirry			
0000			20-2548283				12-10 Hest 35th Street Fredeveropment, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	7.700	MMLIC	
0000			20 2040200 .						INI /\	Massachusetts Mutual Life Insurance	Owner Sirrp		INMETO	
0000			46-4803557 .				2 Harbor Shore Member LLC	DE	NIA	Company	Ownership.	91.000	MMLIC	
0000			46-4803557				2 Harbor Shore Member LLC	DE		C.M. Life Insurance Company	Ownership.	9.000	MMLIC	
0000			. 40-4000001 .				2 Harbor Shore Welliber LLC	UE	NI A	Massachusetts Mutual Life Insurance	Owner strip	9.000		
0000			36-4823011				50 Liberty LLC	DE	NIA	Company	Ownership	91.000	MMLIC	
0000			36-4823011				50 Liberty LLC	DE DE		C.M. Life Insurance Company	Ownership	9.000	MMLIC	-
0000			. 00 4020011 .				So Liberty LLO			Massachusetts Mutual Life Insurance	Owner Sirrp			
0000			80-0948028				One Harbor Shore LLC	DE	NIA	Company	Ownership	91.000	MMLIC	
0000			80-0948028				One Harbor Shore LLC	DE		C.M. Life Insurance Company	Ownership	9.000	MMLIC	
0000			. 00-0940020 .				One harbor shore LLC	VE	N I A	Massachusetts Mutual Life Insurance	Owner strip	9.000		-
0000			45-5257904 .				21 West 86 LLC	DE	NIA	Company	Ownership	91.200	MMLIC	
0000			45-5257904				21 West 86 LLC	DE		C.M. Life Insurance Company	Ownership.	4.800	MMLIC	
0000			40 020/304 .				21 West 60 EE0	DL		Massachusetts Mutual Life Insurance	Owner Sirrp	4.000	WML10	
0000			45-2779931				AT Mid-Atlantic Office Portfolio LLC	DE	NIA	Company	Ownership	_90.000	MMLIC	
0000			45-2779931 .				AT Mid-Atlantic Office Portfolio LLC	DE		C.M. Life Insurance Company	Ownership.	10.000	MMLIC	
0000			-10-2113331.				AT WILL ACTAIN TO OTHER POLITION OF LECT.	VE		Massachusetts Mutual Life Insurance	Omilia 3111p			.
0000			04-1590850		1		CHC/RFP VI Core LLC	DE	NIA	Company	Ownership	100.000		
0000			. 04-1030030 .				OHO/HIT VI OUTE LLO	UE	NI M	Massachusetts Mutual Life Insurance	Owner 3111p			.
0000			56-2630592 .		1		Cornerstone Fort Pierce Development LLC	DE	NIA	Company	Ownership	83.900	MMLIC	
0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE		C.M. Life Insurance Company	Ownership.	6.100	MMLIC	
0000			. 00 2000032 .				OUTHER STORE FOR ETTER OF DEVELOPMENT LEC	∪∟		Massachusetts Mutual Life Insurance	omioi sirip	0. 100	WINE V	
0000			45-2632610				Cornerstone Permanent Mortgage Fund	DE	NIA	Company	Ownership	100.000	MMLIC	
0000							Some of the maneric more transport und			Massachusetts Mutual Life Insurance	oo.			.
0000			46-5001122 .		1		CREA 330 Third LLC	DE	NIA	Company	Ownership	92.000	MMLIC	
0000			46-5001122 .				CREA 330 Third LLC	DE	NIA	C.M. Life Insurance Company	Ownership	8.000	MMLIC	.
0000			0-0001122 .				VILA OOV IIII U LLO			Massachusetts Mutual Life Insurance	omioi omp	0.000	WINE V	-
0000			46-4367364		1		CREA FMF Nashville LLC	DE	NIA	Company	Ownership	100.000		
0000			0 -00/004 .				VILEN I WE INCOMPTITE LED		NI //	Massachusetts Mutual Life Insurance	omici 3111p			
0000			26-2399532		1		CREA/LYON West Gateway, LLC	DE	NIA	Company	Ownership	54.000	MMLIC	
0000			26-2399532 .				CREA/LYON West Gateway, LLC	DE		C.M. Life Insurance Company	Ownership	6.000	MMLIC	.
0000			81-0890084				CREA Madison Member LLC	DE		C.M. Life Insurance Company	Ownership	100.000	MMLIC	.
0000		1	0 0000004				OHEN MAGISON MONDO LLO	UL		IO.m. LITO HIGH AND COMPANY	viiiivi JII I P	1100.000		- 1

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		NAIC			if Pu	ublicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting		Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK In	ternational)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
										Massachusetts Mutual Life Insurance				
0000			20-0348173				CREA/PPC Venture LLC	DE	NI A	Company	Ownership	93.400	MMLIC	
0000			. 20-0348173 .	-			CREA/PPC Venture LLC	DE	NI A	C.M. Life Insurance Company	Ownership	6.600	MMLIC	
							- · · · · · · · · · · · · · · · · · · ·			Massachusetts Mutual Life Insurance				
0000			. 26-1611591	. 3956836			Fallon Cornerstone One MPD LLC	DE	NI A	Company	Ownership	55.300	MMLIC	
0000			. 26-1611591 .	. 3956836			Fallon Cornerstone One MPD LLC	DE	NI A	C.M. Life Insurance Company	Ownership	5.500	MMLIC	
0000			00 0047004				For Disa Double most 110	סר	NII A	Massachusetts Mutual Life Insurance	0	04 000	MMLIC	
0000		-	20-3347091	-			Fan Pier Development LLC	DE	NIA	Company	Ownership	91.000	MMLIC	
0000		-	20-3347091	1			Fan Pier Development LLC	VE	NIA		Ownership	9.000	MMLIU	
0000			46-3880526	1			Forringdon London Holdings II.C	DE	NIA		Ownership	94.500	MMLIC	
0000			. 46-3880526 . . 46-3880526 .	-			Farringdon London Holdings LLC	DE	NIA	Company	Ownership	5.500		
0000			. 40-3880326 .				Farringdon London Holdings LLC	VE	NI A	Massachusetts Mutual Life Insurance	Ownership	3.300	MMLIC	
0000				1			Infinity SCD Ltd	GBR	NIA	Company	Ownership.	4.200	MMLIC	
0000							minity SOD Liu	חחמה	N I M	Massachusetts Mutual Life Insurance	Owner Strip	4.200	INMILIO	
0000			20-4819358				Johnston Groves LLC	DE	NIA	Company	Ownership	57.200	MMLIC	
0000			_ 20-4013000 .	1			OUIIIS COIT OF OVES LLO	UE	NI /\	Massachusetts Mutual Life Insurance	United SITIP	200	WWWL TV	
0000			46-5347643	1			MMI/Hines Harrison LLC	DE	NIA	Company	Ownership	92.000	MMLIC	
0000			46-5347643	1			MMI/Hines Harrison LLC	DE	NIA	C.M. Life Insurance Company	Ownership	8.000	MMLIC	
0000							mmil/iiiioo ilaii iouii LLU			Massachusetts Mutual Life Insurance	σπιστ σπτρ			
0000			. 46-4077059	1			MM Woodfield Martingale LLC	DE	NIA	Company	Ownership	80.400	MMLIC	
0000			46-4077059	1			MM Woodfield Martingale LLC	DE	NIA	C.M. Life Insurance Company	Ownership.	19.600	MMLIC	
				1			Salomon Brothers Commercial Mortgage Trust							
0000]			2001-MM	DE	NIA	Cornerstone Real Estate Advisers LLC	Influence		MMLIC	
										Massachusetts Mutual Life Insurance				
0000		.	27-2977720	.]			Sawgrass Village Shopping Center LLC	DE	NIA	Company	Ownership	84.200	MMLIC	.
0000		.	27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	C.M. Life Insurance Company	Ownership	15.800	MMLIC	
							, •			Massachusetts Mutual Life Insurance				
0000							Ten Fan Pier Boulevard LLC	DE	NIA	Company	Ownership	91.000		
0000							Ten Fan Pier Boulevard LLC	DE	NIA	C.M. Life Insurance Company	Ownership	9.000	MMLIC	
				1						Massachusetts Mutual Life Insurance				
0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Company	Ownership	91.000	MMLIC	
0000		.	35-2484550	-			Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership	9.000	MMLIC	.
				1						Massachusetts Mutual Life Insurance				
0000		.	. 45-4606547 .	-			UK LIW Manager LLC	DE	NI A	Company	Ownership	1.000	MML IC	.
			45 40	1						Massachusetts Mutual Life Insurance				
0000			. 45-4606547 .	-			UK LIW Member LLC	DE	NI A	Company	Ownership	99.000	MMLIC	
0000			45 5401100	1			Westington Outs at the U.S. Company	DE	N	Massachusetts Mutual Life Insurance	O manufact	00 400	188 10	
0000			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Company	Ownership	90.400	MMLIC	
0000			45-5401109				Washington Gateway Apartments Venture LLC .	DE	NIA	C.M. Life Insurance Company	Ownership	4.800	MMLIC	.
0000			20-2970495	1			Waterford Development Associates	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MMLIC	
0000		-	_ 20-29/0495 .				waterioru Development Associates	VE	NIA	Massachusetts Mutual Life Insurance	Ownership		MML I U	-
0000			47-1993493	1			Waterloo London Holdings LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000		
0000			. 47-1993493	1			water 100 London Hordings LLC	VE	NI A	Massachusetts Mutual Life Insurance	Uwrier Stilp	. 100.000	MML I U	
0000			46-3122029	1			WeHo Domain LLC	DE	NIA	Company	Ownership	86.000	MMLIC	
0000			46-3122029	1			WeHo Domain LLC	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC	
0000			. 70 0 122029 .	1			TICHO DOMATH LLO	UE	NI/\	Massachusetts Mutual Life Insurance	omici sirip	17.000		
0000			81-1552222	1			Willowwood Lakeside Master LLC	DE	NIA	Company	Ownership	50.000	MMLIC	
0000							millionmood Eunoside musici ELO			Massachusetts Mutual Life Insurance	- Carrier Girip			
0000			20-5481477	1			Ygnatio Valley Funding	DE	NIA	Company	Ownership	90.000	MMLIC	
0000				-			righter varies runding		INI/N	Oompurij	v v v v v v v v v	.		.

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Group Code	Group Name	Company Code	Number	Federal RSSD	CIK	International)	Or Affiliates	Loca- tion	Reporting Entity	Directly Controlled by (Name of Entity/Person)	Influence, Other)	Percen- tage	Ultimate Controlling Entity(ies)/Person(s)	*
Code	Gloup Name	Code	Number	NOOD	CIIX	international)	MassMutual Barings Dynamic Allocation Fund	tion	Littly	Massachusetts Mutual Life Insurance	Other)	lage	Littly(les)/Ferson(s)	
0000			45-3168892 .			nn	massmutual barrings bynamic Arrocation Fund	MA	NIA	Company	Ownership	93.800	MML IC	
0000			45 5 100032 .			UQ		III/\	INI /\	Massachusetts Mutual Life Insurance	Owner Sirrp.		WILL TO	
0000			51-0529328		0000927972 0	00	MassMutual Premier Main Street Fund	MA	NIA	Company	Ownership	40.500	MMLIC	
						· · · · · · · · · · · · · · · · · · ·	MassMutual Premier Strategic Emerging			Massachusetts Mutual Life Insurance				
0000			. 26-3229251 .		0000927972 0	00	Markets Fund	MA	NIA	Company	Ownership	30.700	MMLIC	
										Massachusetts Mutual Life Insurance	·			
0000			04-3277550		0000927972 0	OQ	MassMutual Premier Value Fund	MA	NIA	Company	Ownership	97.800	MMLIC	
							MassMutual Select Diversified			Massachusetts Mutual Life Insurance				
0000			14-1980900 .		0000916053 (00	International Fund	MA	NI A	Company	Ownership	61.400	MMLIC	
1			1		1					Massachusetts Mutual Life Insurance				
0000			01-0821120 .		0000916053 0	DQ	MassMutual Select Diversified Value Fund	MA	NI A	Company	Ownership	30.400	MMLIC	
0000			04 0540500		0000040050	20				Massachusetts Mutual Life Insurance		47.000	188 10	
0000			04–3512593 .		0000916053 0	UU	MassMutual Select Fundamental Growth Fund	MA	NIA	Company	Ownership	17.900	MMLIC	
0000			04-3513019		0000916053	00	North tool Octob Long Or Valor Front	MA	NIA	Massachusetts Mutual Life Insurance	0	99.900	MMLIC	
0000			04-3513019 .		0000910053 (UU	MassMutual Select Large Cap Value Fund	MA	NIA	Company	Ownership	99.900	MMLIC	
0000			42-1710935 .		0000916053 (00	MassMutual Select Mid-Cap Value Fund	MA	NIA	Company	Ownership	99.800	MML1C	
0000			42-1/10933 .		0000910055	υ u	MassMutual Select Small Capital Value	NA	NI A	Massachusetts Mutual Life Insurance	Owner Strip	99.000	MMLTC	
0000			02-0769954 .		0000916053 0	nn	Equity Fund	MA	NIA	Company	Ownership	38.600	MMLIC	
0000			02 0/00004 .		00000 10000	ou	MassMutual Select Small Company Value Fund			Massachusetts Mutual Life Insurance	- Owner Sirip		WILL TO	
0000			04-3584140		0000916053 0	00	macomataar ooroot omarr oompany varao rana	MA	NIA	Company	Ownership.	83.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			46-4257056 .		0000067160		MML Series International Equity Fund	MA	NIA	Company	Ownership	5.700	MMLIC	
										Massachusetts Mutual Life Insurance	·			
0000			47-3517233		0001317146		MML Series II Asset Momentum Fund	MA	NI A	Company	Ownership	98.200	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			47-3529636 .		0001317146		MML Series II Dynamic Bond Fund	MA	NI A	Company	Ownership	7.300	MMLIC	
			.= .=							Massachusetts Mutual Life Insurance				
0000			47–3544629 .		0001317146		MML Series II Equity Rotation Fund	MA	NIA	Company	Ownership	99.600	MMLIC	
0000			47-3559064		0001317146		MML Series II Special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	99.200	MMLIC	
0000			+1-3339004 .		000 13 17 140		minic delies il opecial situations rund	M	NIN	Massachusetts Mutual Life Insurance	Omited 2011h		WINE 0	
0000			46-3289207		0000916053		MassMutual RetireSMART 2055 Fund	MA	NIA	Company	Ownership	29.900	MMLIC	
			+0 0203201 .		55005 10000		massimatual lictificommili 2000 Fullu	m/L		Massachusetts Mutual Life Insurance	Omited Still p			
0000			47-5326235 .		0000916053		MassMutual RetireSMART 2060 Fund	MA	NIA	Company	Ownership	100.000	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			45-1618155 .		0000916053		MassMutual RetireSMART Conservative Fund	MA	NIA	Company	Ownership	99.900	MMLIC	
										Massachusetts Mutual Life Insurance				
0000			. 45-1618222 .		0000916053		MassMutual RetireSMART Growth Fund	MA	NIA	Company	Ownership	99.900	MMLIC	
					1					Massachusetts Mutual Life Insurance				
0000			45-1618262		0000916053		MassMutual RetireSMART Moderate Fund	MA	NIA	Company	Ownership	99.900	MMLIC	
0000			45 40 100 15		0000045555		MassMutual RetireSMART Moderate Growth			Massachusetts Mutual Life Insurance		00.000	188.10	
0000			45-1618046 .		0000916053		Fund	MA	NIA	Company	Ownership	99.900	MMLIC	
0000			45–3417590 .		0001530245		Oppenheimer Global High Yield Fund	DE	NI A	OppenheimerFunds, Inc	Management		MMLIC	
0000			. 46-1604428 .		0001562689		Oppenheimer Global Real Estate Fund	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	43.700	MMLIC	
0000			46-1604428 .		0001562689		Oppenheimer Global Real Estate Fund	DE	NIA	C.M. Life Insurance Company	Ownership	3.500	MMLIC	
0000			46-1604428 .		0001562689		Oppenheimer Global Real Estate Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	
					550 1002000		Oppenheimer Global Multi-Asset Growth Fund			opposition and, mo.				
0000			47-3676235				Treatment of the state of the s	DE	NIA	OppenheimerFunds, Inc.	Management			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
											Type	lf		
											of Control	Control		
											(Ownership,	is		
						Name of Securities			Relation-		Board,	Owner-		
						Exchange		Domi-	ship		Management,	ship		
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		
Group		Company	ID	Federal		(U.S. or		Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	*
							Oppenheimer Global Multi-Asset Income Fund							
0000			47-1714929 .					DE		OppenheimerFunds, Inc.	Management		MMLIC	
										Massachusetts Mutual Life Insurance				
0000			22-3849391 .		0001163166		Oppenheimer Real Estate Fund	MA	NIA	Company	Ownership	49.600	MMLIC	
0000			47-4835759 .				Oppenheimer Small Cap Value Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	
0000			47-3987967 .				Oppenheimer SteelPath Panoramic Fund	DE	NIA	OppenheimerFunds, Inc.	Management		MMLIC	

Explanation
d debt of Jefferies Finance LLC
L.P.
s Fund, L.P.
d Credit CDO III, Ltd.
es Fund, L.P
s Fund, L.P.
L

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

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

		Response
1.	Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2.	Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3.	Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
4.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
5.	Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC?	NO
6.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
7.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
	Explanation:	
1.	Not required.	
2.	Not required.	
3.	Not required.	

4. Not required.

Not required.

Not required.

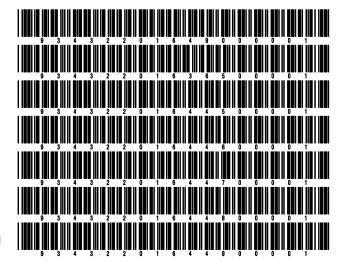
7. Not required.

Bar Code:

1. Trusteed Surplus Statement [Document Identifier 490]

2. Medicare Part D Coverage Supplement [Document Identifier 365]

- Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
- Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]
- Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
- Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
- Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]



OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Liabilities Line 25

Addition	ai write-ins for Liabilities Line 25		
		1	2
		Current	December 31
		Statement Date	Prior Year
2504.	Funds awaiting escheat	2,198,403	2,021,208
2505.	Miscellaneous liabilities	47,352	109,769
2597.	Summary of remaining write-ins for Line 25 from overflow page	2,245,755	2,130,977

SCHEDULE A - VERIFICATION

Real Estate

		1	2
			Prior Year Ended
		Year to Date	December 31
1.	Book/adjusted carrying value, December 31 of prior year		24, 171,011
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition		
	2.2 Additional investment made after acquisition		
3.	Current year change in encumbrances		
4.	Total gain (loss) on disposals		1,283,641
5.	Deduct amounts received on disposals		25,454,652
6.	Total foreign exchange change in book/adjusted carrying value		
7.	Deduct current year's other than temporary impairment recognized		
8.	Deduct current year's depreciation		
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)		
10.	Deduct total nonadmitted amounts		
11.	Statement value at end of current period (Line 9 minus Line 10)		

SCHEDULE B - VERIFICATION

Mortgage Loans

		1	2
			Prior Year Ended
		Year to Date	December 31
1.	Book value/recorded investment excluding accrued interest, December 31 of prior year	985,850,414	944,390,174
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition	35,086,744	197,025,939
	2.2 Additional investment made after acquisition	2,036,832	13,013,121
3.	2.1 Actual cost at time of acquisition 2.2 Additional investment made after acquisition Capitalized deferred interest and other	255,708	1,306,342
4.	Accrual of discount	32,117	142,846
5.	Unrealized valuation increase (decrease)		
6.	Total gain (loss) on disposals Deduct amounts received on disposals	(17,766)	38,512
7.	Deduct amounts received on disposals	28,659,377	163,526,790
8.	Deduct amortization of premium and mortgage interest points and commitment fees	113,572	491,226
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest	945,551	(6,048,504)
10.	Deduct current year's other than temporary impairment recognized		
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	995,416,651	985,850,414
12.	Total valuation allowance	(759,921)	
13.	Subtotal (Line 11 plus Line 12)		
14.	Deduct total nonadmitted amounts		
15.	Statement value at end of current period (Line 13 minus Line 14)	994,656,730	985,850,414

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

	Other Long-Term Invested Assets		
		1	2
			Prior Year Ended
		Year to Date	December 31
1.	Book/adjusted carrying value, December 31 of prior year	234, 145, 696	232,592,855
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition	27,056	31,676,417
	2.2 Additional investment made after acquisition	8,658,557	35,620,821
3.	Capitalized deferred interest and other		
4.	Accrual of discount		
5.	Unrealized valuation increase (decrease)	843,637	11,656,939
6.	Total gain (loss) on disposals		(191,956
7.	Unrealized valuation increase (decrease) Total gain (loss) on disposals Deduct amounts received on disposals Deduct amortization of premium and depreciation	17,580,523	76,071,913
8.	Deduct amortization of premium and depreciation	2,135	9,406
9.	Total foreign exchange change in book/adjusted carrying value	103,975	(917,373
10.	Deduct current year's other than temporary impairment recognized		210,688
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	226,196,263	234, 145, 696
12.	Deduct total nonadmitted amounts		3,071,271
13.	Statement value at end of current period (Line 11 minus Line 12)	225,767,615	231,074,425

SCHEDULE D - VERIFICATION

Bonds and Stocks

		1	2
			Prior Year Ended
		Year to Date	December 31
1.	Book/adjusted carrying value of bonds and stocks, December 31 of prior year	4,470,816,857	4,555,765,734
2.	Cost of bonds and stocks acquired	277,018,270	687,541,645
3.	Accrual of discount		16,536,408
4.	Unrealized valuation increase (decrease)	4,903,148	17, 166, 311
5.	Total gain (loss) on disposals		
6.	Deduct consideration for bonds and stocks disposed of		
7.	Deduct amortization of premium		
8.	Total foreign exchange change in book/adjusted carrying value	3,373,511	(13, 183, 986)
9.	Deduct current year's other than temporary impairment recognized	3,753,268	13,635,228
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)	4,632,646,801	4,470,816,857

SCHEDULE D - PART 1B

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

	1	2	3	4	5	6	7	8
	Book/Adjusted		5		Book/Adjusted	Book/Adjusted	Book/Adjusted	Book/Adjusted
	Carrying Value Beginning	Acquisitions During	Dispositions During	Non-Trading Activity During	Carrying Value End of	Carrying Value End of	Carrying Value End of	Carrying Value December 31
NAIC Designation	of Current Quarter	Current Quarter	Current Quarter	Current Quarter	First Quarter	Second Quarter	Third Quarter	Prior Year
BONDS								
BONDS								
	2.136.035.988	150.372.581	47.693.174	F F00 407	0.044.004.000			0 400 005 000
1. NAIC 1 (a)	, , , , , , , , , , , , , , , , , , , ,	, , , , ,	, ,	, ,	2,244,221,882			2,136,035,988
2. NAIC 2 (a)		1,713,445,233	1,723,410,927	` ' ' '	1,836,522,624			1,881,471,817
3. NAIC 3 (a)		19,152,208	16,761,425	, ,	230,756,584			217,547,321
4. NAIC 4 (a)	205,206,344	30, 160, 478	10,060,093	3,730,465	229,037,194			205,206,344
5. NAIC 5 (a)	34,583,610	5,202,389	1,917,294	10,624,827	48,493,532			34,583,610
6. NAIC 6 (a)	16,202,669	4,808,315	2,596,287	5,456,988	23,871,684			16,202,669
7. Total Bonds	4,491,047,748	1,923,141,204	1,802,439,200	1,153,748	4,612,903,500			4,491,047,748
PREFERRED STOCK								
THE EMILE GROOK								
8. NAIC 1	11,700,000	798.080	2,300,000		10,198,080			11,700,000
9. NAIC 2	, ,	1,091,311	1,924,842		8, 168, 920			9,042,542
		911.644	1,693,328	` ′ ′	6, 125, 843			
10. NAIC 3	, ,	,	, ,	,	, ,			6,871,807
11. NAIC 4		1,455,674	383,581	,	2,786,630			1,701,871
12. NAIC 5				(507)	469 , 164			469,671
13. NAIC 6								
14. Total Preferred Stock	29,785,891	4,256,709	6,301,751	7,788	27,748,637			29,785,891
15. Total Bonds and Preferred Stock	4,520,833,639	1,927,397,913	1,808,740,951	1,161,536	4,640,652,137			4,520,833,639

NAIC 4 \$; NAIC 5 \$.....; NAIC 6 \$.....

SCHEDULE DA - PART 1

Short-Term Investments

	1 Book/Adjusted Carrying Value	2 Par Value	3 Actual Cost	4 Interest Collected Year-to-Date	5 Paid for Accrued Interest Year-to-Date
9199999 Totals	16,945,830	XXX	16,925,264		

SCHEDULE DA - VERIFICATION

Short-Term Investments

		1	2
		Year To Date	Prior Year Ended December 31
1.	Book/adjusted carrying value, December 31 of prior year		26,472,927
2.	Cost of short-term investments acquired	16,925,264	47,025,310
3.	Accrual of discount	20,566	92,070
4.	Unrealized valuation increase (decrease)		
5.	Total gain (loss) on disposals		661
6.	Deduct consideration received on disposals		73,590,968
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)	16,945,830	
11.	Deduct total nonadmitted amounts		
12.	Statement value at end of current period (Line 10 minus Line 11)	16,945,830	

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1.	Book/Adjusted Carrying Value, December 31, prior year (Line 9, prior year)	40,482,980
2.	Cost Paid/(Consideration Received) on additions	
3.	Unrealized Valuation increase/(decrease)	36,470,434
4.	Total gain (loss) on termination recognized	3,356,889
5.	Considerations received/(paid) on terminations	7,028,819
6.	Amortization	
7.	Adjustment to the Book/Adjusted Carrying Value of hedged item	
8.	Total foreign exchange change in Book/Adjusted Carrying Value	
9.	Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4-5+6+7+8)	73,281,484
10.	Deduct nonadmitted assets	
11.	Statement value at end of current period (Line 9 minus Line 10)	73,281,484

	SCHEDULE DB - PART Futures Cor		RIFICATIO	N	
1.	Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)				
2.	Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cu	mulative Cash Cha	nge column)		
3.1	Add:				
	Change in variation margin on open contracts - Highly Effective Hedges				
	3.11 Section 1, Column 15, current year to date minus				
	3.12 Section 1, Column 15, prior year				
	Change in variation margin on open contracts - All Other				
	3.13 Section 1, Column 18, current year to date minus	(5,249,828)			
	3.14 Section 1, Column 18, prior year	3,130,702	(8,380,530)	(8,380,530)	
3.2	Add:				
	Change in adjustment to basis of hedged item				
	3.21 Section 1, Column 17, current year to date minus				
	3.22 Section 1, Column 17, prior year				
	Change in amount recognized				
	3.23 Section 1, Column 19, current year to date minus				
	3.24 Section 1, Column 19, prior year	3,130,702	(8,380,530)	(8,380,530)	
3.3	Subtotal (Line 3.1 minus Line 3.2)				
4.1	Cumulative variation margin on terminated contracts during the year		60,877,316		
4.2	Less:				
	4.21 Amount used to adjust basis of hedged item				
	4.22 Amount recognized	57,746,614	57,746,614		
4.3	Subtotal (Line 4.1 minus Line 4.2)				3, 130, 702
5.	Dispositions gains (losses) on contracts terminated in prior year:				
	5.1 Total gain (loss) recognized for terminations in prior year				
	5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year \dots				(3, 130, 702)
6.	Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)				
7.	Deduct total nonadmitted amounts				
8.	Statement value at end of current period (Line 6 minus Line 7)				

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open $N\ O\ N\ E$

Schedule DB-Part C-Section 2-Reconciliation of Replication (Synthetic Asset) Transactions Open $N\ O\ N\ E$

SCHEDULE DB - VERIFICATION

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

	Book/Adjusted Carrying		Value Check
1.	Part A, Section 1, Column 14	73,281,484	
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance		
3.	Total (Line 1 plus Line 2)		73,281,484
4.	Part D, Section 1, Column 5		
5.	Part D, Section 1, Column 6	(810,395,465)	
6.	Total (Line 3 minus Line 4 minus Line 5)	<u></u>	
		Fair Value Ch	eck
7.	Part A, Section 1, Column 16	73,281,484	
8.	Part B, Section 1, Column 13		
9.	Total (Line 7 plus Line 8)		73,281,484
10.	Part D, Section 1, Column 8	883,676,949	
11.	Part D, Section 1, Column 9	(810,395,465)	
12	Total (Line 9 minus Line 10 minus Line 11)		
		Potential Exposure	e Check
13.	Part A, Section 1, Column 21	203,718,388	
14.	Part B, Section 1, Column 20	10,989,800	
15.	Part D, Section 1, Column 11	214,708,188	
16.	Total (Line 13 plus Line 14 minus Line 15)		

SCHEDULE E - VERIFICATION

(Cash Equivalents)

		1	2
		Year To Date	Prior Year Ended December 31
1.	Book/adjusted carrying value, December 31 of prior year	290,288,161	173,465,084
2.	Cost of cash equivalents acquired	1,633,665,016	6,071,788,210
3.	Accrual of discount	582,341	987,249
4.	Unrealized valuation increase (decrease)		
5.	Total gain (loss) on disposals	(1,904)	3,373
6.	Deduct consideration received on disposals	1,687,160,264	5,955,955,755
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)	237,373,350	290,288,161
11.	Deduct total nonadmitted amounts		
12.	Statement value at end of current period (Line 10 minus Line 11)	237,373,350	290,288,161