

LIFE, ACCIDENT AND HEALTH COMPANIES/FRATERNAL BENEFIT SOCIETIES - ASSOCIATION EDITION

QUARTERLY STATEMENT

AS OF JUNE 30, 2021

C.M. Life Insurance Company

NAI			pany Code 93432			6-1041383
Organized under the Laws of	(Current)	Prior)	, State of Domicile			
Country of Domicile			States of America	-		
Licensed as business type:	Lif		h [X] Fraternal Benefit Sc	cieties []		
Incorporated/Organized		-,		Business		05/12/1981
Statutory Home Office	100 Bright Meadov (Street and No		,		Enfield, CT, US vn. State. Cour	06082 Itry and Zip Code)
Main Administrative Office	(,	NOE Otata Otra at	(,	,,	,
Main Administrative Office			95 State Street reet and Number)			
	Springfield, MA, US 01111		,		413-788-84	
(City or	Town, State, Country and Zip C	code)		(Area (Code) (Telepho	one Number)
Mail Address	1295 State Street		,	Spi	ringfield, MA, L	JS 01111
	(Street and Number or P	O. Box)		(City or Tow	vn, State, Coun	try and Zip Code)
Primary Location of Books and	Records	1	295 State Street			
		(Sti	eet and Number)			
(City or	Springfield, MA, US 01111 Town, State, Country and Zip (code)		(Area (413-788-84 Code) (Telepho	
		,		()		
Internet Website Address		WWV	v.massmutual.com			
Statutory Statement Contact	Trevor	Nade Gordon	,		617-69	95-4321
		(Name)		(A	, (lephone Number)
	tgordon@MassMutual.com (E-mail Address)		,		413-226-40 (FAX Numb	
	()				(
			OFFICERS			
President and Chief Executive Officer	Roger William	Crandall	т	easurer	-	Fodd Garett Picken
Secretary				Actuary		Vy Quoc Ho
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Elizabeth Ward Chicares E	executive Vice President and		OTHER			
	ncial Officer	Michael Robert F	anning, Executive Vice Pre	sident	Melvin Timoth	y Corbett, Executive Vice President
			ORS OR TRUSTEES			
Roger William Cr	andall - Chairman		nael Robert Fanning		El	izabeth Ward Chicares
Michael Jam	es O'Connor					
State of	Massachusetts	SS:				
County of	Hampden					
all of the herein described as statement, together with relate condition and affairs of the sai in accordance with the NAIC / rules or regulations require of respectively. Furthermore, the	sets were the absolute propert d exhibits, schedules and expla d reporting entity as of the report Annual Statement Instructions differences in reporting not re e scope of this attestation by the	y of the said reportin nations therein conta rting period stated ab and Accounting Pract lated to accounting e described officers	g entity, free and clear froi ined, annexed or referred t ove, and of its income and ices and Procedures manu practices and procedures, also includes the related co	n any liens or o o, is a full and tr deductions ther al except to the according to t prresponding ele	claims thereon, rue statement of refrom for the p e extent that: (1 the best of the ectronic filing w	at on the reporting period stated above, except as herein stated, and that this of all the assets and liabilities and of the eriod ended, and have been completed state law may differ; or, (2) that state eir information, knowledge and belief, ith the NAIC, when required, that is an arious regulators in lieu of or in addition
Roger William C	randall	Akir	itokunbo Akinbajo			Todd Garett Picken

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

Current Statement Date 4 December 31 Net Admitted Assets Prior Year Net Nonadmitted Assets Admitted Assets Assets (Cols. 1 - 2) 3,686,464,257 3.686.464.257 4.068.995.047 1. Bonds 2 Stocks: 2.1 Preferred stocks6.968.7226,968,722 ...5.124.491 .318.986.314 .318.986.314 299.648.072 2.2 Common stocks 3. Mortgage loans on real estate: .942,315,558 ...942,315,558 .943, 137, 341 3.1 First liens 3.2 Other than first liens... 4. Real estate: 4.1 Properties occupied by the company (less \$ encumbrances) ... 4.2 Properties held for the production of income (less \$ encumbrances) .. 4.3 Properties held for sale (less \$ encumbrances) 5. Cash (\$71,922,214), cash equivalents 738 701 563 738,701,563 334 630 925 Contract loans (including \$ 146.604.376 152.715.610 146.604.376 6. premium notes) ... Derivatives. 732,046,988 732,046,988 960,380,010 7. 8. Other invested assets ... 176.549.501 .370,689 176.178.812 163.882.941 Receivables for securities293,248,803 .366,532,079 9 10. Securities lending reinvested collateral assets ... 11. Aggregate write-ins for invested assets ... 7,041,515,393 7,295,046,516 12. Subtotals, cash and invested assets (Lines 1 to 11) ... 7,041,886,082 .370,689 13. Title plants less \$ charged off (for Title insurers only)105,020,000 105,020,000 113,850,227 14. Investment income due and accrued 15 Premiums and considerations: 15.1 Uncollected premiums and agents' balances in the course of collection .107.179 .296.393 15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$(15,882,176) ..(15,882,176) ...(12,326,329) earned but unbilled premiums) ... 15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$ 16. Reinsurance: 28,720,808 28.720.808 25.117.816 16.1 Amounts recoverable from reinsurers 16.2 Funds held by or deposited with reinsured companies 5.217.534 16.3 Other amounts receivable under reinsurance contracts4,851,428 ...4,851,428 17. Amounts receivable relating to uninsured plans ... 18.1 Current federal and foreign income tax recoverable and interest thereon ... 10.406.520 10.406.520 5.970.673 40.509.623 .9.082.500 .31.427.122 4.135.672 18.2 Net deferred tax asset 19. Guaranty funds receivable or on deposit630,000 .630,000 .650,728 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 affiliates331.663 .331.663 .309.750 24. Health care (\$) and other amounts receivable159,273 ..83,29475,979 ..447,121 Aggregate write-ins for other than invested assets. 25. 26. Total assets excluding Separate Accounts, Segregated Accounts and 7,216,740,400 .9,536,483 7,207,203,917 7,438,716,101 Protected Cell Accounts (Lines 12 to 25) From Separate Accounts, Segregated Accounts and Protected Cell 27. 2,099,796,982 2,099,796,982 1,972,434,996 Accounts Total (Lines 26 and 27) 9,316,537,382 9,536,483 9,307,000,898 9,411,151,097 28 **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. .83,294 Cash advances to agents .83,294 75.979 447.121 2502. Miscellaneous other assets 75.979 2503. 2598. Summary of remaining write-ins for Line 25 from overflow page . 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 159,273 83,294 75,979 447,121

ASSETS

LIABILITIES, SURPLUS AND OTHER FUNDS

		1 Current Statement Date	2 December 31 Prior Year
	Aggregate reserve for life contracts \$		
3.	Liability for deposit-type contracts (including \$		
4.	Contract claims: 4.1 Life		
5.	4.2 Accident and health		
5.	and unpaid		
6.	Provision for policyholders' dividends, refunds to members and coupons payable in following calendar year - estimated amounts:		
	6.1 Policyholders' dividends and refunds to members apportioned for payment (including \$		
	6.2 Policyholders' dividends and refunds to members not yet apportioned (including \$		
7.	Amount provisionally held for deferred dividend policies not included in Line 6		
8. 9.	Premiums and annuity considerations for life and accident and health contracts received in advance less \$discount; including Contract liabilities not included elsewhere:		
	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		
	ceded		
10.	9.4 Interest Maintenance Reserve		
11.	Commissions and expense allowances payable on reinsurance assumed		
12. 13.	General expenses due or accrued Transfers to Separate Accounts due or accrued (net) (including \$(3,318,504) accrued for expense		
	allowances recognized in reserves, net of reinsured allowances)		
14. 15.1	Taxes, licenses and fees due or accrued, excluding federal income taxes Current federal and foreign income taxes, including \$		
15.2	Net deferred tax liability		
16. 17.	Unearned investment income Amounts withheld or retained by reporting entity as agent or trustee		
18.	Amounts held for agents' account, including \$ agents' credit balances		
19. 20.	Remittances and items not allocated Net adjustment in assets and liabilities due to foreign exchange rates		
21.	Liability for benefits for employees and agents if not included above		
22. 23.	Borrowed money \$ and interest thereon \$		
24.	Miscellaneous liabilities: 24.01 Asset valuation reserve		
	24.02 Reinsurance in unauthorized and certified (\$		
	24.04 Payable to parent, subsidiaries and affiliates		
	24.05 Drafts outstanding		
	24.07 Funds held under coinsurance		
	24.08 Derivatives		941,323,191 139,520
	24.10 Payable for securities lending		
25.	24.11 Capital notes \$ and interest thereon \$	339, 129, 173	378,203,026
26.	Total liabilities excluding Separate Accounts business (Lines 1 to 25)	5,369,945,296	5,699,956,983
27. 28.	From Separate Accounts Statement		1,972,434,996 7,672,391,979
20. 29.	Common capital stock		2,500,000
30.	Preferred capital stock		
31. 32.	Aggregate write-ins for other than special surplus funds Surplus notes		
33. 34	Gross paid in and contributed surplus		
34. 35.	Aggregate write-ins for special surplus funds Unassigned funds (surplus)	1,384,482,413	
36.	Less treasury stock, at cost:		
	36.1 shares common (value included in Line 29 \$		
37.	Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement)	1,834,758,621	1,736,259,118
38. 39.	Totals of Lines 29, 30 and 37 Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	1,837,258,621 9,307,000,898	1,738,759,118 9,411,151,097
	DETAILS OF WRITE-INS		
2501. 2502.			248,551,088 126,060,423
2503.	Funds awaiting escheat and other miscellaneous		3,591,515
2598. 2599.	Summary of remaining write-ins for Line 25 from overflow page Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	339,129,173	378,203,026
3101.			
3102. 3103.			
3198.	Summary of remaining write-ins for Line 31 from overflow page		
3199.	Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)		
3401. 3402.			
3403.			
3498.	Summary of remaining write-ins for Line 34 from overflow page		

SUMMARY OF OPERATIONS

r				<u>^</u>
		1 Current Veer	2 Prior Year	3 Dries Vees Ended
		Current Year To Date	To Date	Prior Year Ended December 31
	Densities and the first of the first factor is a state of the test in the state of the state of the state of the			
1.	Premiums and annuity considerations for life and accident and health contracts		- , , -	
2.	Considerations for supplementary contracts with life contingencies		1,475,718	2,866,483
3.	Net investment income			
4.	Amortization of Interest Maintenance Reserve (IMR)	1,771,450		3, 146, 616
5.	Separate Accounts net gain from operations excluding unrealized gains or losses			
6.	Commissions and expense allowances on reinsurance ceded			
7.	Reserve adjustments on reinsurance ceded			
8.	Miscellaneous Income:			
0.	8.1 Income from fees associated with investment management, administration and contract			
	guarantees from Separate Accounts.	19 443 446	17 860 324	36 681 510
	8.2 Charges and fees for deposit-type contracts			
	8.3 Aggregate write-ins for miscellaneous income	, ,	778,504	2,178,571
9.	Totals (Lines 1 to 8.3)		303,254,268	656,798,778
10.	Death benefits			
11.	Matured endowments (excluding guaranteed annual pure endowments)			· · ·
12.	Annuity benefits			
	Disability benefits and benefits under accident and health contracts	270 515		
13.				
14.	Coupons, guaranteed annual pure endowments and similar benefits			
15.	Surrender benefits and withdrawals for life contracts			
16.	Group conversions			
17.	Interest and adjustments on contract or deposit-type contract funds	1,708,847	1,218,460	
18.	Payments on supplementary contracts with life contingencies	1 254 293	1,045,784	1.935.433
10.	Increase in aggregate reserves for life and accident and health contracts	(11,619,076)	(2,644,653)	(36,735,295)
-	increase in aggregate reserves for the and accident and health contracts			, , , ,
20.	Totals (Lines 10 to 19)			
21.	Commissions on premiums, annuity considerations, and deposit-type contract funds (direct			
1	business only)			
22.	Commissions and expense allowances on reinsurance assumed			
23.	General insurance expenses and fraternal expenses			
24.	Insurance taxes, licenses and fees, excluding federal income taxes	5 932 831		
	Increase in loading on deferred and uncollected premiums	271 005		
25.	Not transferre to an (form) Ore such a formation of a final sector			
26.	Net transfers to or (from) Separate Accounts net of reinsurance			(122,032,452)
27.	Aggregate write-ins for deductions		(2,822,236)	(5,174,737)
28.	Totals (Lines 20 to 27)	245,900,602	273,967,181	540,305,635
29.	Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus			
20.	Line 28)	62 696 793	29 287 087	116 493 143
20	Dividends to policyholders and refunds to members			
30.		i		
31.	Net gain from operations after dividends to policyholders, refunds to members and before federal	00,000,700	00 007 007	110 100 110
	income taxes (Line 29 minus Line 30)			
32.	Federal and foreign income taxes incurred (excluding tax on capital gains)	11,740,276	1,157,210	7,761,377
33.	Net gain from operations after dividends to policyholders, refunds to members and federal income			
	taxes and before realized capital gains or (losses) (Line 31 minus Line 32)			
34.	Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital	, , ,		, ,
01.	gains tax of \$			
		(0.011.000)	7 454 104	(6 600 000)
	transferred to the IMR)		7,454,194	(6,689,033)
35.	Net income (Line 33 plus Line 34)	41,145,229	35,584,071	102,042,733
	CAPITAL AND SURPLUS ACCOUNT			
36.	Capital and surplus, December 31, prior year	1,738,759,118	1,735,037,570	1,735,037,566
	Not income (i income)			
37.	Net income (Line 35)			
38.	Change in net unrealized capital gains (losses) less capital gains tax of \$			
39.	Change in net unrealized foreign exchange capital gain (loss)		(16,742,851)	
40.	Change in net deferred income tax			(27, 115, 261)
41.	Change in nonadmitted assets			
42.	Change in liability for reinsurance in unauthorized and certified companies			
	Change in nability for remissionance in unautionized and certine (companies			2 500 000
43.	Change in reserve on account of change in valuation basis, (increase) or decrease	(4.045.540)		
44.	Change in asset valuation reserve			3,753,298
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			
40.	Cumulative effect of changes in accounting principles			
50.	Capital changes:			
1	50.1 Paid in			
1	50.2 Transferred from surplus (Stock Dividend)			
1	50.3 Transferred to surplus	L		
51.	·			
	51.1 Paid in			
1	51.2 Transferred to capital (Stock Dividend)			
1				
1	51.3 Transferred from capital			
1	51.4 Change in surplus as a result of reinsurance			
52.	Dividends to stockholders		(173,000,000)	(173,000,000)
53.	Aggregate write-ins for gains and losses in surplus		(3,336,727)	(6,674,750)
		98,499,503	9,434,142	3,721,553
5/				
54.	Net change in capital and surplus for the year (Lines 37 through 53)	, ,		1 /00 /60 440
54. 55.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54)	1,837,258,621	1,744,471,712	1,738,759,118
55.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS	1,837,258,621	1,744,471,712	
55. 08.301	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing	1,837,258,621	1,744,471,712	
55. 08.301	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS	1,837,258,621	1,744,471,712	
55. 08.301 08.302	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous	1,837,258,621	1,744,471,712 	2, 178, 571
55. 08.301 08.302 08.303	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscellaneous	1,837,258,621	1,744,471,712 	2,178,571
55. 08.301 08.302 08.303 08.398	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue shar ing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page	1,837,258,621	1,744,471,712 	2,178,571
55. 08.301 08.302 08.303 08.398 08.399	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	1,837,258,621 1,167,092 1,167,092	1,744,471,712 	2,178,571
55. 08.301 08.302 08.303 08.398 08.399 2701.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue shar ing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment	1,837,258,621 	1,744,471,712 	2,178,571 2,178,571 (6,673,456)
55. 08.301 08.302 08.303 08.398 08.399 2701.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue shar ing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment	1,837,258,621 	1,744,471,712 	2,178,571
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456)
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 795,626 (17,122) 778,504 (3,336,727) 514,491	2,178,571 2,178,571 (6,673,456) 1,498,719
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703. 2798.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703. 2798. 2799.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscellaneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscellaneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	1,837,258,621 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737)
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703. 2798. 2799.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page	1,837,258,621 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737)
55. 08.301 08.302 08.303 08.399 2701. 2702. 2703. 2798. 2799. 5301.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscellaneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscellaneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737) (6,674,750)
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703. 2798. 2799. 5301. 5302.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue shar ing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) Reinsurance ceded adjustment	1,837,258,621 1,167,092 1,167,092 (3,088,536) (2,319,241) (3,088,536)	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737) (6,674,750)
55. 08.301 08.302 08.303 08.398 08.399 2701. 2702. 2703. 2798. 2799. 5301. 5302. 5303.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) Reinsurance ceded adjustment	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737) (6,674,750)
55. 08.301 08.302 08.303 08.399 2701. 2702. 2703. 2798. 2799. 5301. 5302. 5303. 5398.	Net change in capital and surplus for the year (Lines 37 through 53) Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS Revenue sharing Miscel laneous Summary of remaining write-ins for Line 8.3 from overflow page Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Reinsurance ceded adjustment Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) Reinsurance ceded adjustment	1,837,258,621 1,167,092 1,167,092 (3,088,536) 	1,744,471,712 	2,178,571 2,178,571 (6,673,456) 1,498,719 (5,174,737) (6,674,750)

CASH FLOW

	CASITILOW		2	3
		Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
	Cash from Operations			
1.	Premiums collected net of reinsurance			
2.	Net investment income			
3.	Miscellaneous income	46,632,288	47,421,007	101,461,92
4.	Total (Lines 1 to 3)	321,925,113	301,635,111	643,819,34
5.	Benefit and loss related payments			
6.	Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	(73,652,551)	(53,677,500).	(122,202,79
7.	Commissions, expenses paid and aggregate write-ins for deductions			
8.	Dividends paid to policyholders			
9.	Federal and foreign income taxes paid (recovered) net of \$9,185,372 tax on capital			
	gains (losses)	19,356,031	260,000	14,852,93
10.	Total (Lines 5 through 9)	271,651,015	263,819,714	602,087,12
11.	Net cash from operations (Line 4 minus Line 10)	50,274,098	37,815,397	41,732,22
	Cash from Investments			
12.	Proceeds from investments sold, matured or repaid:			
	12.1 Bonds			
	12.2 Stocks		2,274,952	
	12.3 Mortgage loans			
	12.4 Real estate			
	12.5 Other invested assets		5,173,827	
	12.6 Net gains or (losses) on cash, cash equivalents and short-term investments		(386,735).	
	12.7 Miscellaneous proceeds	6,870,610	89,833,016	59,990,62
	12.8 Total investment proceeds (Lines 12.1 to 12.7)			
13.	Cost of investments acquired (long-term only):			
	13.1 Bonds	198,763,108		
	13.2 Stocks			
	13.3 Mortgage loans	40,793,578		
	13.4 Real estate			
	13.5 Other invested assets			
	13.6 Miscellaneous applications	(33,736,837)	(18,798,167)	5,221,18
	13.7 Total investments acquired (Lines 13.1 to 13.6)	219,321,502	848,633,980	1,053,437,79
14.	Net increase (or decrease) in contract loans and premium notes	(6,124,188)	1,239,871	1,858,1
15.	Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	423,602,573	(308,464,789)	(186,901,3
	Cash from Financing and Miscellaneous Sources			
16.	Cash provided (applied):			
	16.1 Surplus notes, capital notes			
	16.2 Capital and paid in surplus, less treasury stock			
	16.3 Borrowed funds			
	16.4 Net deposits on deposit-type contracts and other insurance liabilities		(10,907,607).	(17,648,36
	16.5 Dividends to stockholders			
	16.6 Other cash provided (applied)	(76,081,956)	252,118,270	207,323,30
17.	Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	(69,806,033)	241,210,663	16,674,94
		(00,000,000)	241,210,000	10,014,0
4.5	RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS	404 070 000	(00 400 700)	(100 101 1
18.	Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)		(29,438,729).	(128,494,1
19.	Cash, cash equivalents and short-term investments:			
	19.1 Beginning of year			
	19.2 End of period (Line 18 plus Line 19.1)	738,701,563	433,686,331	334,630,9
o <u>te:</u> S	upplemental disclosures of cash flow information for non-cash transactions:			
20.00	D1. Bond conversions and refinancing			
			270,788 1,378,754	
				6,303,3

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

	DIRECT PREMIUMS AND DEPOSIT-TIPE C			
		1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1.	Industrial life			
2.	Ordinary life insurance			
3.	Ordinary individual annuities			
4.	Credit life (group and individual)			
5.	Group life insurance			
6.	Group annuities			
7.	A & H - group			
8.	A & H - credit (group and individual)			
9.	A & H - other			
10.	Aggregate of all other lines of business			
11.	Subtotal (Lines 1 through 10)			1,080,354,780
12.	Fraternal (Fraternal Benefit Societies Only)			
13.	Subtotal (Lines 11 through 12)			1,080,354,780
14.	Deposit-type contracts			
15.	Total (Lines 13 and 14)	475,711,308	499,385,259	1,080,354,780
	DETAILS OF WRITE-INS			
1001.				
1002.				
1003.				
1098.	Summary of remaining write-ins for Line 10 from overflow page			
1099.	Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)			

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

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

		F/S	F/S		
	SSAP #	Page	Line #	2021	2020
NET INCOME					
(1) State basis (Page 4, Line 35, Columns 1 & 3)	XXX	XXX	XXX	\$ 41,145,229	\$ 102,042,733
(2) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(3) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A		-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$ 41,145,229	\$ 102,042,733
SURPLUS					
(5) State basis (Page 3, Line 38, Columns 1 & 2)	XXX	XXX	XXX	\$ 1,837,258,621	\$ 1,738,759,118
(6) State prescribed practices that increase/(decrease) NAIC	N/A	N/A	N/A	-	-
(7) State permitted practices that increase/(decrease) NAIC	N/A	N/A	N/A		-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$ 1,837,258,621	\$ 1,738,759,118

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

Accounting policy: C.

а.

- (1) No change
- Bonds are generally valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds, which are in or near default, and certain residential mortgage-backed securities (RMBS) and commercial mortgagebacked securities (CMBS), which are rated by outside modelers, which are carried at the lower of amortized cost or fair value. NAIC ratings are applied to bonds and other securities. Categories 1 and 2 are considered investment grade, while Categories 3 through 6 are considered below investment grade. Bond transactions are recorded on a trade date basis, except for private placement bonds, which are recorded on the funding date.

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

- (3-5) No change
- (6) For loan-backed and structured securities, such as asset-backed securities, mortgage-backed securities, including RMBS and CMBS, and structured securities, including collateralized debt obligations, amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies.

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

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

(7-14) No change

Going concern: d.

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

Note 2 – Accounting Changes and Corrections of Errors

- a. For the six months ended June 30, 2021 and 2020, the Company did not record any corrections of prior years' errors.
- b. Adoption of new accounting standards:

In July 2020, the NAIC adopted modifications to Statements of Statutory Accounting Principles (SSAP) No. 26R, Bonds, effective January 1, 2021. The modifications apply similar reporting for gains or losses due to a tender offer as previously adopted for calls. The difference between consideration and par is recognized as net investment income, while any difference between book value and par is recognized as realized gain or loss. The modifications did not have a material effect on the Company's financial statements.

In July 2020, the NAIC adopted modifications to SSAP No. 32, Preferred Stock, effective January 1, 2021. The modifications define carrying value of redeemable preferred stock as amortized cost for NAIC 1-3 designations, the lower of amortized cost or fair value for NAIC 4-6 designations, and new fair value measurement for perpetual and mandatorily convertible preferred stock. They clarify when failure to meet certain dividends or redemption payments could trigger an impairment assessment that preferred shares issued by joint ventures are included in the scope of this guidance, and clarifies scope related to sinking fund schedules, mandatory conversions, and various other features. They also clarify fair value would be capped by any currently effective call price. The revisions impacted the Company's current unaffiliated and affiliated perpetual preferred stock investments. The modifications did not have a material effect on the Company's financial statements.

In March 2021, the NAIC adopted modifications to SSAP No. 26R, Bonds, effective January 1, 2021. The modifications expand the called bond disclosures to also include bonds terminated early through a tender offer. The modifications did not have a material effect on the Company's financial statements.

In March 2021, the NAIC adopted modifications to SSAP No. 26R, Bonds, effective January 1, 2021. The modifications clarify that perpetual bonds are within scope. Perpetual bonds shall be reported at fair value regardless of NAIC designation, not to exceed any current effective call price. For perpetual bonds with an effective call option, any applicable premium shall be amortized to the next effective call date. For perpetual bonds purchased at a discount, any applicable discount shall be accreted utilizing the yield-to-worst concept. The modifications did not have a material effect on the Company's financial statements.

Note 3 - Business Combinations and Goodwill - No change

Note 4 - Discontinued Operations - No change

Note 5 – Investments

d.

a. Mortgage loans, including mezzanine real estate loans - No change

b. Debt restructuring - No change

c. Reverse mortgages - No change

Loan-backed 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 other-than-temporary impairments (OTTI) classified on the following bases for recognizing OTTI:

		_							
			(1)			(2)			(3)
						OTTI			
			Amortized			ecogniz			
			Cost Basis			in Loss	;		
			Before	(2	2a)	(2t			Fair Value
			OTTI	Inte	erest	Nor	n-interest		1-(2a+2b)
OT	TI 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		580,686		-		39,102		541,584
c.	Total first quarter	\$	580,686	\$	-	\$	39,102	\$	541,584
	TI recognized in the second quarter								
d.	Intent to sell	\$	-	\$	-	\$	-	\$	-
e.	Inability or lack of intent to retain the investment								
	in the security for a period of time sufficient to								
	recover the amortized cost basis		1,130,186		-		110,396		1,019,790
f.	Total second quarter	\$	1,130,186	\$	-	\$	110,396	\$	1,019,790
<u>от</u>									
	TI recognized in the third quarter	^		^		^		^	
g.	Intent to sell	\$	-	\$	-	\$	-	\$	-
h.	Inability or lack of intent to retain the investment								
	in the security for a period of time sufficient to recover the amortized cost basis								
			-	-	-	-		-	-
i.	Total third quarter	\$	-	\$	-	\$	-	\$	-
OT	TI recognized in the fourth quarter								
j.	Intent to sell	\$	_	\$	_	\$	_	¢	_
J. k.	Inability or lack of intent to retain the investment	Ψ	-	Ψ	-	Ψ	-	Ψ	-
к.	in the security for a period of time sufficient to								
	recover the amortized cost basis								
		\$		\$	-	\$		\$	
Ι.	Total fourth quarter	φ	-	φ	-	φ	-	φ	-
m	Appual aggregate total			¢		¢	140 409		
m.	Annual aggregate total			\$	-	\$	149,498		

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	A	Amortized Cost after OTTI	Fair Value at Time of OTTI	Date of Financial Instrument Where Reported
05535DCF9	\$ 366,060	\$ 359,326	\$ (6,734)	\$	359,326	\$ 379,719	March 31, 2021
61750FAE0	37,595	36,005	(1,590)		36,005	32,295	March 31, 2021
22540V3F7	33,589	2,981	(30,608)		2,981	940	March 31, 2021
41161PWB5	143,442	143,272	(170)		143,272	126,338	March 31, 2021
040104TG6	24,495	18,486	(6,009)		18,486	21,692	June 30, 2021
05535DCF9	345,984	310,936	(35,048)		310,936	374,083	June 30, 2021
40431KAE0	260,175	258,699	(1,476)		258,699	302,426	June 30, 2021
61750FAE0	35,830	34,510	(1,320)		34,510	31,864	June 30, 2021
05535DAN4	221,083	165,572	(55,511)		165,572	181,999	June 30, 2021
45660LYW3	83,910	82,457	(1,453)		82,457	81,083	June 30, 2021
79548KXQ6	20,469	15,048	(5,421)		15,048	15,063	June 30, 2021
41161PWB5	138,240	134,082	(4,158)		134,082	120,457	June 30, 2021
Totals	\$ 1,710,872	\$ 1,561,374	\$ (149,498)	\$	1,561,374	\$ 1,667,959	

(4) As of June 30, 2021, 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	\$	(803,795)
	2. 12 months or longer	\$	(2,131,182)
b.	The aggregate related fair value of securities with unrealized lo	sses:	
	1. Less than 12 months	\$	34,113,235
	2. 12 months or longer	\$	54,973,918

- (5) No change
- e. Dollar repurchase agreements and/or securities lending transactions: The Company did not have any dollar repurchase agreements and/or securities lending transactions as of June 30, 2021.
- f. Repurchase agreements transactions accounted for as secured borrowing:
 (1) The Company did not have any repurchase agreements as of June 30, 2021.
- g. Reverse repurchase agreements transactions accounted for as secured borrowing: The Company did not have any reverse repurchase agreements transactions accounted for as secured borrowing as of June 30, 2021.
- h. Repurchase agreements transactions accounted for as a sale: The Company did not have any repurchase agreements transactions accounted for as a sale as of June 30, 2021.
- i. Reverse repurchase agreements transactions accounted for as a sale: The Company did not have any reverse repurchase agreements transactions accounted for as a sale as of June 30, 2021.
- j. Real estate No change
- k. Low-income housing tax credit No change
- I. Restricted assets No change
- m. Working capital finance investments: The Company did not invest in working capital finance investments as of June 30, 2021.
- n. 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 as of June 30, 2021.
- o. 5GI Securities:

Investment	Number of 5G	I Securities	Aggregate	BACV	Aggregate Fair Value		
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year	
(1) Bonds - AC	31	36	\$29,305,555	\$36,072,048	\$30,229,739	\$36,898,121	
(2) LB&SS - AC	-	1	-	2,156,857	-	2,102,076	
(3) Preferred Stock - AC	1	4	21,746	2,059,699	22,167	3,746,517	
(4) Preferred Stock - FV	2		3,976,732		3,976,732		
(5) Total (1+2+3+4)	34	41	\$33,304,033	\$40,288,604	\$34,228,638	\$42,746,714	

AC - Amortized Cost FV - Fair Value

p. Short sales - The Company does not engage in short sale transactions.

q. Prepayment penalty and acceleration fees:

	 Six Months Ended June 30, 2021							
	 General Account	Separate Account						
1. Number of CUSIPS	9	N/A						
2. Aggregate amount of investment income	\$ 386,207	N/A						

r. Reporting entity's share of cash pool by asset type:

	Asset Type	Percent Share
(1)	Cash	10 %
(2)	Cash equivalents	57 %
(3)	Short-term investments	33_%
(4)	Total	100 %

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

Note 7 - Investment Income - No change

Note 8 – Derivative Instruments

a. The Company did not have any deferred derivative premium payments under SSAP No. 86.

b. The Company did not account for any derivatives under SSAP No. 108.

Note 9 - Income Taxes - No change

Note 10 - Information Concerning Parent, Subsidiaries and Affiliates - No change

<u> Note 11 – Debt</u>

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

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, Dividend Restrictions and Quasi-Reorganizations

(1-3) 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. Joint and several liabilities No change
- f. All other contingencies:

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

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

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 2021 or 2020.
 - (3) No change
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2021 or 2020.
 - (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, or unrated, through the six months ended June 30, 2021 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

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

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

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

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

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

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

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

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

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

-				June 30, 2021				
	Level 1		Level 2	Level 3	Net Asset (NAV)			Total
- Financial assets:	Lever		Level Z	Level 3	(NAV)			TOLAI
Bonds:								
ndustrial and miscellaneous	\$-	\$	2,107,627	\$ 12,731,503	\$	- :	\$	14,839,130
Preferred stocks	-		-	4,066,856		-		4,066,856
Common stock - subsidiary and								
affiliates	19,074,575		-	3,425,807		-		22,500,382
Common stock - unaffiliated	1,712,617		-	7,249,886		-		8,962,503
Derivatives:			050 470 004					050 470 004
Interest rate swaps	-		652,478,601	-		-		652,478,601
Options	-		31,459,563	-		-		31,459,563
Currency swaps	-		20,544,013	-		-		20,544,013
Forward contracts Financial futures	- 23,326,663		4,238,146	-		-		4,238,146 23,326,663
Separate account assets	2,099,796,982		-	-		-		2,099,796,982
Total financial assets carried	2,000,100,002							2,000,100,002
at fair value	\$ 2,143,910,837	\$	710,827,950	\$ 27,474,052	\$	- :	\$	2,882,212,839
=							-	
Financial liabilities:								
Repurchase agreements								
Derivatives: Interest rate swaps	\$ -	\$	674,879,093	\$-	\$		\$	674,879,093
Options	φ - -	φ	11,372,606	φ - -	φ		φ	11,372,606
Currency swaps	-		13,714,390	-		-		13,714,390
Forward contracts	-		609,167	-		-		609,167
Financial futures	39,727		-	-		-		39,727
Total financial liabilities carried								
at fair value	\$ 39,727	\$	700,575,256	\$ -	\$	- :	\$	700,614,983
	Level 1		Level 2	Level 3	Net Asset Va (NAV)	alue		Total
Financial assets:	Level 1		Level 2	Level 5				TOtal
Bonds:								
Industrial and miscellaneous	\$-	\$	2,087,299	* 40 000 4 7 4				\$ 12,117,77
				\$ 100304/1	\$	-		144,68
Uratorrad stacks	·		2,007,299	\$ 10,030,471	\$	-		144.00
Preferred stocks	-		- 2,007,299	\$ 10,030,471 144,687	\$	-		,
Preferred stocks Common stock - subsidiary and affiliates	- 18,052,922				\$	-		
Common stock - subsidiary and affiliates	- 18,052,922			144,687 1,911,823	\$	-		19,964,74
Common stock - subsidiary and affiliates Common stock - unaffiliated	-			144,687	\$	- - -		19,964,74
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives:	- 18,052,922		-	144,687 1,911,823	\$	- - -		19,964,74 5,173,80
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps	- 18,052,922		- - 901,970,495	144,687 1,911,823	\$			19,964,74 5,173,80 901,970,49
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options	- 18,052,922		- - 901,970,495 39,230,827	144,687 1,911,823	\$	-		19,964,744 5,173,80 901,970,494 39,230,82
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps	- 18,052,922		- - 901,970,495 39,230,827 18,455,577	144,687 1,911,823	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts	- 18,052,922 506,060 - - - -		- 901,970,495 39,230,827 18,455,577 723,111	144,687 1,911,823	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets	- 18,052,922		- - 901,970,495 39,230,827 18,455,577	144,687 1,911,823	\$			19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried	- 18,052,922 506,060 - - - 1,972,434,991		- 901,970,495 39,230,827 18,455,577 723,111 6	144,687 1,911,823 4,667,741 - - - -	\$	-		19,964,743 5,173,80 901,970,493 39,230,82 18,455,57 723,11 1,972,434,99
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets	- 18,052,922 506,060 - - - -		- 901,970,495 39,230,827 18,455,577 723,111	144,687 1,911,823	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$2,970,216,010
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried	- 18,052,922 506,060 - - - 1,972,434,991		- 901,970,495 39,230,827 18,455,577 723,111 6	144,687 1,911,823 4,667,741 - - - -				19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried	- 18,052,922 506,060 - - - 1,972,434,991		- 901,970,495 39,230,827 18,455,577 723,111 6	144,687 1,911,823 4,667,741 - - - -				19,964,744 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried at fair value	- 18,052,922 506,060 - - - 1,972,434,991		- 901,970,495 39,230,827 18,455,577 723,111 6	144,687 1,911,823 4,667,741 - - - -		-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Separate account assets Total financial assets carried at fair value	- 18,052,922 506,060 - - - 1,972,434,991		- 901,970,495 39,230,827 18,455,577 723,111 6	144,687 1,911,823 4,667,741 - - - -		-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$2,970,216,01
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives:	- 18,052,922 506,060 - - 1,972,434,991 \$ 1,990,993,973	\$	- 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$2,970,216,01 \$890,142,84
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives: Interest rate swaps	- 18,052,922 506,060 - - 1,972,434,991 \$ 1,990,993,973	\$	- - 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315 890,142,842	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$ 2,970,216,01 \$ 890,142,84 11,219,53
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives: Interest rate swaps Options Currency swaps	- 18,052,922 506,060 - - 1,972,434,991 \$ 1,990,993,973	\$	- 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315 890,142,842 11,219,532 22,936,951	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$ 2,970,216,01 \$ 890,142,84 11,219,53 22,936,95
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives: Interest rate swaps Options Currency swaps Forward contracts	- 18,052,922 506,060 1,972,434,991 \$ 1,990,993,973 \$	\$	- 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315 890,142,842 11,219,532	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$ 2,970,216,01 \$ 890,142,84 11,219,53 22,936,95 6,634,76
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives: Interest rate swaps Options Currency swaps Forward contracts Financial futures - long positions	- 18,052,922 506,060 - - 1,972,434,991 \$ 1,990,993,973	\$	- 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315 890,142,842 11,219,532 22,936,951	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$ 2,970,216,01 \$ 890,142,84 11,219,53 22,936,95 6,634,76
Common stock - subsidiary and affiliates Common stock - unaffiliated Derivatives: Interest rate swaps Options Currency swaps Forward contracts Separate account assets Separate account assets Total financial assets carried at fair value Financial liabilities: Derivatives: Interest rate swaps Options Currency swaps Forward contracts	- 18,052,922 506,060 1,972,434,991 \$ 1,990,993,973 \$	\$	- 901,970,495 39,230,827 18,455,577 723,111 6 962,467,315 890,142,842 11,219,532 22,936,951	144,687 1,911,823 4,667,741 - - - - - \$ 16,754,722	\$	-		19,964,74 5,173,80 901,970,49 39,230,82 18,455,57 723,11 1,972,434,99 \$2,970,216,01

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

	Balance as of 03/31/2021	Trar In	nsfers ⁽¹	Out		Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	1	ssuances	Sales	٤	Settlements	Balance as of 06/30/2021
Financial assets:														
Bonds:														
Industrial and miscellaneous	\$ 8,413,184	\$ 5,300,102	\$		-	\$ (1,409,375)	\$ 725,815	\$ 109,011	\$	104,180	\$ (511,414)	\$	-	\$ 12,731,503
Preferred stocks	60,189	3,720,271			-	-	286,396	-		-	-		-	4,066,856
Common stocks - affiliated	3,084,775	-			-	-	58,640	282,392		-	-		-	3,425,807
Common stocks - unaffiliated	 4,998,976	-			-	(122,323)	2,432,809	3,311		-	(27,505)		(35,382)	 7,249,886
Total financial assets	\$ 16.557.124	\$ 9.020.373	\$		-	\$ (1.531.698)	\$ 3.503.660	\$ 394.714	\$	104.180	\$ (538.919)	\$	(35,382)	\$ 27.474.052

(1) Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis.

		Balance as of 01/01/2020	Tran In	sfers ⁽¹	Out	Gains Losses) in let Income	(Gains Losses) in Surplus	F	Purchases	ŀ	ssuances	Sales	S	ettlements	Balance as of 12/31/2020
Financial assets:																
Bonds:																
Industrial and miscellaneous	\$	9,295,673	\$ 1,453,252	\$	(6,381)	\$ (41,374)	\$	(1,348,764)	\$	483,852	\$	581,942	\$ -	\$	(387,729)	\$ 10,030,471
Preferred stock		148,754	6,944		-	-		(231,466)		26,487		193,968	-		-	144,687
Common stock - affiliated		-	-		-	-		36,573		1,875,250		-	-		-	1,911,823
Common stock - unaffiliated		3,529,294	179,950		-	1,996,546		(550,950)		395,832		2,946,406	(109,554)		(3,719,783)	4,667,741
Total financial assets	s	12.973.721	\$ 1.640.146	\$	(6.381)	\$ 1.955.172	\$	(2.094.607)	\$	2.781.421	\$	3.722.316	\$ (109.554)	\$	(4.107.512)	\$ 16.754.722

(1) Level 3 transfers include assets that are consistently carried at fair value but have had a level change, are no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but a change in the lower of cost or market carrying basis.

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

(4) Valuation Techniques and Inputs

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

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

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

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

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

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

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

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

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

			June	e 30, 2021			
-						Net	Not
						Asset	Practicable
	Aggregate	Admitted				Value	(Carrying
_	Fair Value	Assets	Level 1	Level 2	Level 3	(NAV)	Value)
Financial assets:							
Bonds:							
U. S. government and agencies	\$ 3,093,567	\$ 3,089,264	\$-	\$ 3,093,567	\$-	\$-	\$
All other governments	1,415,468	1,275,720	-	1,415,468	-	-	
States, territories and possessions	18,954,372	14,475,633	-	18,954,372	-	-	
Political subdivisions	18,753,695	15,713,287	-	18,753,695	-	-	
Special revenue	127,953,817	106,699,448	-	127,953,817	-	-	
Industrial and miscellaneous	3,740,464,810	3,397,217,160	-	1,882,716,734	1,857,748,076	-	
Parent, subsidiaries and affiliates	149,499,353	147,993,743	-	-	149,499,353	-	
Preferred stocks	8,203,848	6,968,722	-	-	8,203,848	-	
Common stock - subsidiary and affiliates ⁽¹⁾	22,500,382	22,500,382	19,074,575	-	3,425,807	-	
Common stock - unaffiliated	8,962,503	8,962,503	1,712,617	-	7,249,886	-	
Mortgage loans - commercial	811,447,094	772,657,643	-	-	811,447,094	-	
Mortgage loans - residential	170,952,548	169,657,915	-	-	170,952,548	-	
Cash, cash equivalents and							
short-term investments	738,701,563	738,701,563	71,922,214	666,779,349	-	-	
Derivatives:							
Interest rate swaps	652,478,601	652,478,601	-	652,478,601	-	-	
Options	31,459,563	31,459,563	-	31,459,563	-	-	
Currency swaps	20,544,013	20,544,013	-	20,544,013	-	-	
Forward contracts	4,238,146	4,238,146	-	4,238,146	-	-	
Financial futures	23,326,663	23,326,663	23,326,663	-	-	-	
Separate account assets	2,099,796,982	2,099,796,982	2,099,796,982	-	-	-	
Financial liabilities:							
Individual annuity contracts	3,619,118,729	3,013,831,250	-	-	3,619,118,729	-	
Supplementary contracts	68,326,882	67,650,378	-	-	68,326,882	-	
Derivatives:					. ,		
Interest rate swaps	674,879,093	674,879,093	-	674,879,093	-	-	
Options	11,372,606	11,372,606	-	11,372,606	-	-	
Currency swaps	13,714,390	13,714,390	-	13,714,390	-	-	
Forward contracts	609,167	609,167	-	609,167	-	-	
Financial futures	39,727	39,727	39,727	,			

⁽¹⁾Common stock - subsidiary and affiliates does not include MML Bay State Life Insurance Company (MML Bay State), which had a statutory carrying value of \$287,523,429.

			Decem	ber 31, 2020			
	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Not Practicable (Carrying Value)
Financial assets:							
Bonds:							
U.S. government and agencies	\$ 3,332,349	\$ 3,312,933	\$-	\$ 3,332,349	\$-	\$-	\$-
All other governments	1,468,821	1,293,348	-	1,468,821	-	-	-
States, territories and possessions	24,951,323	20,670,918	-	24,951,323	-	-	-
Political subdivisions	19,078,079	15,742,773	-	19,078,079	-	-	-
Special revenue	129,364,635	107,479,759	-	129,364,635	-	-	-
Industrial and miscellaneous	4,163,096,352	3,753,102,973	-	2,221,865,258	1,941,231,094	-	-
Parent, subsidiaries and affiliates	174,254,207	167,392,343	-	-	174,254,207	-	-
Preferred stocks	7,127,824	5,281,629	-	-	7,127,824	-	-
Common stock - subsidiary and affiliates ⁽¹⁾	19,964,745	19,964,745	18,052,922	-	1,911,823	-	-
Common stock - unaffiliated	5,173,801	5,173,801	506,060	-	4,667,741	-	-
Mortgage loans - commercial	827,389,040	788,133,560	-	-	827,389,040	-	-
Mortgage loans - residential	156,235,686	155,003,780	-	-	156,235,686	-	-
Cash, cash equivalents and							
short-term investments	334,630,926	334,630,926	37,396,640	297,234,286	-	-	-
Derivatives:							
Interest rate swaps	901,970,495	901,970,495	-	901,970,495	-	-	-
Options	39,230,827	39,230,827	-	39,230,827	-	-	-
Currency swaps	18,455,576	18,455,576	-	18,455,576	-	-	-
Forward contracts	723,111	723,111	-	723,111	-	-	-
Separate account assets	1,972,434,997	1,972,434,997	1,972,434,991	6	-	-	-
Financial liabilities:							
Individual annuity contracts	3,746,378,339	3,003,895,771	-	-	3,746,378,339	-	-
Supplementary contracts	63,221,459	62,595,504	-	-	63,221,459	-	-
Derivatives:							
Interest rate swaps	890,142,842	890,142,842	-	890,142,842	-	-	-
Options	11,219,532	11,219,532	-	11,219,532	-	-	-
Currency swaps	22,936,951	22,936,951	-	22,936,951	-	-	-
Forward contracts	6,634,766	6,634,766	-	6,634,766	-	-	-
Financial futures	10,389,101	10,389,101	10,389,101	-	-	-	-

⁽¹⁾Common stock - subsidiary and affiliates does not include MML Bay State, which had a statutory carrying value of \$274,509,526.

d. As of June 30, 2021 and December 31, 2020, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

c.

a. Unusual or infrequent items - No change

- b. Troubled debt restructuring No change
 - 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 2020 Annual Statement.

Insurance and underwriting risks

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

Investment and interest rate risks

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

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

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

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

Currency exchange risk

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

Credit and other market risks

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

Stressed conditions, volatility and disruptions in global capital markets or in particular markets or financial asset classes can have an adverse effect on the Company, in part because the Company has a large investment portfolio and assets supporting the Company's insurance liabilities are sensitive to changing market factors. Global market factors, including interest rates, credit spread 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.

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.

The spread of the coronavirus, causing increased cases of COVID-19, around the world in 2020 has caused significant volatility in U.S. and international markets. There is significant uncertainty around the breadth and duration of business disruptions related to COVID-19, as well as its impact on the U.S. and international economies. At this time, the Company is not able to reliably estimate the length and severity of the COVID-19 public health crises and, as such, cannot quantify its impact on the financial results, liquidity and capital resources and its operations in future periods.

Political Uncertainties

Political events, domestically or internationally, may directly or indirectly trigger or exacerbate risks related to product offerings, profitability, or any of the risk factors described above. Whether those underlying risk factors are driven by politics or not, the Company's dynamic approach to managing risks enables management to identify risks, internally and externally, develop mitigation plans, and respond to risks in an attempt to proactively reduce the potential impact of each underlying risk factor on the Company.

- d. Business interruption insurance recoveries No change
- e. State transferrable tax credits No change
- f. Subprime mortgage related risk exposure:
 - No change
 No change
 - (3) Direct exposure through other investments:

			Siz	x Months Ended			
-		Jı			June 30, 2021		
	Actual		Carrying		Fair		
Alt-A:	Cost		Value		Value		ΟΤΤΙ
a. Residential mortgage-backed securities \$	11,988,973	\$	13,872,260	\$	14,917,135	\$	97,320
b. Commercial mortgage-backed securities	-		-		-		-
c. Collateralized debt obligations	-		-		-		-
d. Structured securities	-		-		-		-
e. Equity investments in SCAs * \$	404,401	\$	490,996	\$	556,936	\$	-
f. Other assets	-		-		-		-
g. Total \$	12,393,374	\$	14,363,256	\$	15,474,071	\$	97,320

* The Company's Subsidiary and Controlled Affiliate (SCA), MML Bay State, has investments in Alt-A and subprime mortgages. These investments comprise less than 1% of the Company's invested assets.

NOTES TO FINANCIAL STATEMENTS

		Dece		ear Ended mber 31, 2020		
	Actual		Carrying		Fair	
Alt-A:	Cost		Value		Value	OTTI
 a. Residential mortgage-backed securities \$ b. Commercial mortgage-backed securities 	13,521,194 -	\$	15,561,519 -	\$	16,529,223 -	\$ 59,717
c. Collateralized debt obligations	-		-		-	-
d. Structured securities	-		-		-	-
e. Equity investments in SCAs *	443,488		560,994		648,451	-
f. Other assets	-		-		-	-
g. Total <u>\$</u>	13,964,682	\$	16,122,513	\$	17,177,674	\$ 59,717

* 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.

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

g. Retained asset accounts - No change

Note 22 - Events Subsequent

Management of the Company has evaluated subsequent events through August 12, 2021, the date the financial statements were available to be issued to state regulators and subsequently on the Company's website. No events have occurred subsequent to the date of the financial statements.

Note 23 - Reinsurance - No change

Note 24 – Retrospectively Rated Contracts and Contracts Subject to Redetermination

a – d. No change

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

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2021 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which considered corrections of prior year errors.

Note 26 - Intercompany Pooling Arrangements - No change

- Note 27 Structured Settlements No change
- Note 28 Health Care Receivables No change
- Note 29 Participating Policies No change
- Note 30 Premium Deficiency Reserves No change

Note 31 - Reserves for Life Contracts and Annuity Contracts - No change

Note 32 - Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics - No change

Note 33 - Analysis of Life Actuarial Reserves by Withdrawal Characteristics - No change

Note 34 - Premium and Annuity Considerations Deferred and Uncollected - No change

Note 35 - Separate Accounts - No change

Note 36 - Loss/Claim Adjustment Expenses - No change

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

1.1	Did the reporting entity experience any material transactions requiring the filing of Dis Domicile, as required by the Model Act?			Yes [] No [X]
1.2	If yes, has the report been filed with the domiciliary state?			Yes [] No []
2.1	Has any change been made during the year of this statement in the charter, by-laws, reporting entity?	articles of incorporation,	or deed of settlement of the	e Yes [] No [X]
2.2	If yes, date of change:			
3.1	Is the reporting entity a member of an Insurance Holding Company System consistin is an insurer? If yes, complete Schedule Y, Parts 1 and 1A.			
3.2	Have there been any substantial changes in the organizational chart since the prior of	uarter end?		Yes [X] No []
3.3	If the response to 3.2 is yes, provide a brief description of those changes. GALIC acquisition			
3.4	Is the reporting entity publicly traded or a member of a publicly traded group?			Yes [] No [X]
3.5	If the response to 3.4 is yes, provide the CIK (Central Index Key) code issued by the	SEC for the entity/group		·······
4.1	Has the reporting entity been a party to a merger or consolidation during the period c If yes, complete and file the merger history data file with the NAIC.	overed by this statement	?	Yes [] No [X]
4.2	If yes, provide the name of the entity, NAIC Company Code, and state of domicile (us ceased to exist as a result of the merger or consolidation.	se two letter state abbrev	iation) for any entity that ha	8
	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 ad in-fact, or similar agreement, have there been any significant changes regarding the If yes, attach an explanation.	ministrator(s), managing terms of the agreement of	general agent(s), attorney- or principals involved?	.Yes [] No [X] N/A []
6.1	State as of what date the latest financial examination of the reporting entity was mad	e or is being made		
6.2	State the as of date that the latest financial examination report became available from date should be the date of the examined balance sheet and not the date the report w			
6.3	State as of what date the latest financial examination report became available to oth the reporting entity. This is the release date or completion date of the examination re date).	port and not the date of t	he examination (balance sh	eet
6.4	By what department or departments?			
	State of Connecticut Insurance Department			
6.5	Have all financial statement adjustments within the latest financial examination report statement filed with Departments?			Yes [] No [] N/A [X]
6.6	Have all of the recommendations within the latest financial examination report been	complied with?		Yes [X] No [] N/A []
7.1	Has this reporting entity had any Certificates of Authority, licenses or registrations (in revoked by any governmental entity during the reporting period?			
7.2	If yes, give full information:			
8.1	Is the company a subsidiary of a bank holding company regulated by the Federal Re	serve Board?		Yes [] No [X]
8.2	If response to 8.1 is yes, please identify the name of the bank holding company.			
8.3	Is the company affiliated with one or more banks, thrifts or securities firms?			

8.4 If response to 8.3 is yes, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC) and the Securities Exchange Commission (SEC)] and identify the affiliate's primary federal regulator.

1	2	3	4	5	6
Affiliate Name	Location (City, State)	FRB	000	FDIC	SEC
Barings LLC	Charlotte, NC				YES
Baring International Investment Limited	London, UK				YES
Barings Securities LLC	Charlotte, NC				YES
MML Distributors, LLC	Springfield, MA				YES
MML Investment Advisers, LLC	Enfield, CT				YES
MML Investors Services, LLC	Springfield, MA				YES
MML Strategic Distributors, LLC	Springfield, MA				YES
The MassMutual Trust Company, OCC	Enfield, CT		YES		
Flourish Financial LLC	New York, NY				YES

GENERAL INTERROGATORIES

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

INVESTMENT

Yes [X] No []

..\$

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: ...

11.1	Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or other use by another person? (Exclude securities under securities lending agreements.)	wise made available for	Yes [X] No []
11.2	If yes, give full and complete information relating thereto:			
	Letter stock or securities restricted as to sale - excluding deposit with states			
12.	Amount of real estate and mortgages held in other invested assets in Schedule BA:	\$,522
13.	Amount of real estate and mortgages held in short-term investments:	\$,
14.1	Does the reporting entity have any investments in parent, subsidiaries and affiliates?		Yes [X] No [1
14.2	If yes, please complete the following:			-
		1	2	
		Prior Year-End	Current Quar	
		Book/Adjusted	Book/Adjuste	
44.04	Bonds	Carrying Value	Carrying Valu	
			\$147,993	
	Preferred Stock		\$	
	Common Stock	,,.	\$,
	Short-Term Investments		\$	
	Mortgage Loans on Real Estate		\$	
	All Other		\$	
14.27	Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)\$ Total Investment in Parent included in Lines 14.21 to 14.26 above\$		\$543,886	
14.20			\$	
15.1	Has the reporting entity entered into any hedging transactions reported on Schedule DB?		Vec [Y] No [1
15.2	If yes, has a comprehensive description of the hedging program been made available to the domiciliary state?	کمو (1
10.2	If no, attach a description with this statement.	100 [
16.	For the reporting entity's security lending program, state the amount of the following as of the current statement date:			
	16.1 Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2.	\$		
	16.2 Total book adjusted/carrying value of reinvested collateral assets reported on Schedule DL, Part	s 1 and 2\$		
	16.3 Total payable for securities lending reported on the liability page.			
		Ψ		

GENERAL INTERROGATORIES

Excluding items in Schedule E - Part 3 - Special Deposits, real estate, mortgage loans and investments held physically in the reporting entity's offices, vaults or safety deposit boxes, were all stocks, bonds and other securities, owned throughout the current year held pursuant to a custodial agreement with a qualified bank or trust company in accordance with Section 1, III - General Examination Considerations, F. 17. Outsourcing of Critical Functions, Custodial or Safekeeping Agreements of the NAIC Financial Condition Examiners Handbook, complete the following: For all agreements that comply with the requirements of the NAIC Financial Condition Examiners Handbook, complete the following: 17.1

Yes [X] No []

1	2
Name of Custodian(s)	Custodian Address
Citibank, N.A.	333 West 34th Street, New York, NY 10001
JP Morgan Chase Bank N.A.	1 Chase Manhattan Plaza, 19th Floor, New York, NY 10005
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105
Citibank, N.A.	

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

1	2	3		
Name(s)	Location(s)	Complete Explanation(s)		
	[
Have there been any changes, including	g name changes, in the custodian(s) ide	entified in 17.1 during the current quarter?	Yes [] No [X]

If yes, give full information relating thereto: 17.4

17.3

5 5			
1	2	3	4
Old Custodian	New Custodian	Date of Change	Reason

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

1	2
Name of Firm or Individual	Affiliation
Barings LLC	Α
IFM Investors Pty Ltd	U

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

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

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

	1	2	3	4	5
					Investment
					Management
	Central Registration				Agreement
	Depository Number		Legal Entity Identifier (LEI)	Registered With	(IMA) Filed
	106006	Barings LLC	MMPERQOMXYENC8A2G084	SEC	
	162754	IFM Investors Pty Ltd	MMPERQOMXYENC8A2G084	SEC	NO
5.1	Have all the filing regu	uirements of the Purposes and Procedures Manual of the NAIC In	nvestment Analysis Office been	followed?	Voc [] No [
	If no, list exceptions:	allements of the Fulposes and Frocedules Manual of the NAIC II	Investment Analysis Onice been		
). Z		s for 4 issuers did not meet the filing requirements of the Purpose	and Braceduree Manual Th	a majority of these	
		one or more of the following: Valid cusip/PPN, audited financials			
		The of those of the following. Valid cusip/FFTN, addited intancials	and/or executed legal document	nation.	
	Exception Totaled \$87	16,262 or 0.02% of all assets			
9.	By self-designating 50	BI securities, the reporting entity is certifying the following elemer	nts for each self-designated 5GI	security:	
•	, , ,	necessary to permit a full credit analysis of the security does no	0		
	security is not				
		or is current on all contracted interest and principal payments.			
	•	s an actual expectation of ultimate payment of all contracted inter	rest and principal.		
		ty self-designated 5GI securities?			Yes [X] No [
20.	By self-designating Pl	_GI securities, the reporting entity is certifying the following eleme	ents of each self-designated PL	GI security:	
	 The security wa 	s purchased prior to January 1, 2018.			
	b. The reporting er	ntity is holding capital commensurate with the NAIC Designation	reported for the security.		
	c. The NAIC Desig	gnation was derived from the credit rating assigned by an NAIC C	CRP in its legal capacity as a NI	RSRO which is shown	
	on a current priv	vate letter rating held by the insurer and available for examination	n by state insurance regulators.		
	d. The reporting er	ntity is not permitted to share this credit rating of the PL security	with the SVO.		
	Has the reporting entit	ty self-designated PLGI securities?			Yes [] No [)
1.	By assigning FE to a s	Schedule BA non-registered private fund, the reporting entity is c	ertifying the following elements	of each self-designated	
	FE fund:				
	a. The shares wer	e purchased prior to January 1, 2019.			
	b. The reporting er	ntity is holding capital commensurate with the NAIC Designation	reported for the security.		
	c. The security had	d a public credit rating(s) with annual surveillance assigned by ar	NAIC CRP in its legal capacity	as an NRSRO prior to	
	January 1, 2019				
	d. The fund only o	r predominantly holds bonds in its portfolio.			
	e. The current rep	orted NAIC Designation was derived from the public credit rating	(s) with annual surveillance ass	igned by an NAIC CRP	
		city as an NRSRO.			
	f The public credit	t rating(s) with annual surveillance assigned by an NAIC CRP ha	s not lansed		

f. The public credit rating(s) with annual surveillance assigned by an NAIC CRP has not lapsed.

Has the reporting entity assigned FE to Schedule BA non-registered private funds that complied with the above criteria? Yes [] No [X]

GENERAL INTERROGATORIES

PART 2 - LIFE AND ACCIDENT AND HEALTH COMPANIES/FRATERNAL BENEFIT SOCIETIES

1.	d Accident Health Companies/Fraternal Benefit Societies: Report the statement value of mortgage loans at the end of this reporting period for the following categories:	1 Amount
	1.1 Long-Term Mortgages In Good Standing	
	1.11 Farm Mortgages	\$
	1.12 Residential Mortgages	.\$
	1.13 Commercial Mortgages	.\$
	1.14 Total Mortgages in Good Standing	\$942,315,558
	1.2 Long-Term Mortgages In Good Standing with Restructured Terms	
	1.21 Total Mortgages in Good Standing with Restructured Terms	.\$
	1.3 Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months	
	1.31 Farm Mortgages	\$
	1.32 Residential Mortgages	\$
	1.33 Commercial Mortgages	\$
	1.34 Total Mortgages with Interest Overdue more than Three Months	\$
	1.4 Long-Term Mortgage Loans in Process of Foreclosure	
	1.41 Farm Mortgages	\$
	1.42 Residential Mortgages	\$
	1.43 Commercial Mortgages	\$
	1.44 Total Mortgages in Process of Foreclosure	\$
1.5	Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)	
1.6	Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter	
	1.61 Farm Mortgages	\$
	1.62 Residential Mortgages	
	1.63 Commercial Mortgages	
	1.64 Total Mortgages Foreclosed and Transferred to Real Estate	
2		ν <u></u>
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?	
3.2	If yes, please provide the amount of custodial funds held as of the reporting date	
3.3	Do you act as an administrator for health savings accounts?	
3.4	If yes, please provide the balance of the funds administered as of the reporting date	
4.	Is the reporting entity licensed or chartered, registered, qualified, eligible or writing business in at least two states?	Yes [X] No []
4.1	If no, does the reporting entity assume reinsurance business that covers risks residing in at least one state other than the state of domicile of the reporting entity?	Yes [] No []
Fraterr 5.1	hal Benefit Societies Only: In all cases where the reporting entity has assumed accident and health risks from another company, provisions should be made in this statement on account of such reinsurances for reserve equal to that which the original company would have been required to establish had it retained the risks. Has this been done?	Yes [] No [] N/A [
5.2	If no, explain:	
6.1	Does the reporting entity have outstanding assessments in the form of liens against policy benefits that have increased surplus?	
6.2	If yes, what is the date(s) of the original lien and the total outstanding balance of liens that remain in surplus?	

Date	Outstanding Lien Amount

SCHEDULE S - CEDED REINSURANCE

Showing All New Reinsurance Treaties - Current Year to Date

1	2	3	4	5	6	7	8	9	10
									Effective
								Certified	Date of
NAIC					Type of	Type of Business		Reinsurer	Certified
Company	ID	Effective		Domiciliary	Reinsurance	Business		Rating	Reinsurer
Code	Number	Date	Name of Reinsurer	Jurisdiction	Ceded	Ceded	Type of Reinsurer	(1 through 6)	Rating
65935	04-1590850	12/31/2020	Massachusetts Mutual Life Insurance Co. (MM2O)	MA	OTH/ I	A	Authorized.		
74900	63-0483783	01/15/2021	Partner Re (PRK5)	AR	YRT/1	0L	Authorized		
74900	63-0483783	01/15/2021	Partner Re (PRK6)	AR	YRT/1	0L	Authorized		
74900	63-0483783	01/15/2021	Partner Re (PRK7)	AR	YRT/1	0L	Authorized		
	13-3126819	01/15/2021	SCOR Global Life USA Reins Co (SUK5)	DE	YRT/1	0L	Authorized		
	13-3126819	01/15/2021	SCOR Global Life USA Reins Co (SUK6)	DE	YRT/1	0L	Authorized		
97071	13-3126819	01/15/2021	SCOR Global Life USA Reins Co (SUK7)	DE	YRT/1	0L	Authorized		

STATEMENT AS OF JUNE 30, 2021 OF THE C.M. Life Insurance Company SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

	Current Year To Date - Allocated by States and Territories Direct Business Only								
		1		ntracts	4	5	6	7	
			2	3	Accident and Health Insurance				
		A			Premiums.				
		Active Status	Life Insurance	Annuity	Including Policy, Membership	Other	Total Columns	Deposit-Type	
1.	States, Etc. Alabama	(a)	Premiums	Considerations	and Other Fees	Considerations	2 Through 5	Contracts	
1. 2.	Alaska AK	L		6,109,401 1,235,569			7, 103,837		
3.	Arizona	L	1,609,277				4, 186, 830		
4.	Arkansas AR	L		1,580,947			1,826,116		
5.	California CA	Ł							
6. 7.	Colorado CO Connecticut CT	L		6, 160, 349 			7,002,226		
8.	Delaware	L					4,875,888		
9.	District of Columbia DC	L					1,712,956		
10.	Florida	L	9,730,483	23 , 154 , 138					
11. 12.	Georgia		1,933,171 	9,428,938 1,174,998			11,362,109		
12.	Idaho ID			1,750,000			1,919,540		
14.	Illinois IL	Ē	2,532,382						
15.	Indiana IN	L	1,357,179	7,067,909			8,425,088		
16.	lowa IA			2,061,044			2,583,312		
17. 18.	Kansas KS Kentucky KY	L		2,505,202 1,334,805			3,133,792		
19.	Louisiana I A	L	607,196						
20.	Maine	L		1,728,663			1,919,099		
21.	Maryland MD	L	3,761,037	5,797,013			9,558,050		
22. 23.	Massachusetts MA Michigan MI	L	2,219,077						
23. 24.	Minnesota MI	L	1,941,687	14,342,956 4,929,949					
25.	Mississippi MS	L	1,094,897				3, 119, 573		
26.	Missouri MO	L	1,036,544	6,979,256					
27.	Montana MT	Ł							
28. 29.	Nebraska NE Nevada NV	L					1,068,085 1,350,700		
30.	New Hampshire NH	L					4,037,659		
31.	New Jersey	L							
32.	New Mexico NM	L		1,078,616			1,254,150		
33. 34.	New York NY North Carolina NC	N	2,914,391						
34. 35.	North DakotaND	LL	3,247,032	14,711,151 2,827,443					
36.	Ohio OH	L	2,253,161				14,857,704		
37.	Oklahoma OK	L		2,336,484			3,228,644		
38.	Oregon OR			1,846,107			2,243,232		
39. 40.	Pennsylvania PA Rhode Island RI	L	4,304,446 				50,365,611 3,566,619		
41.	South Carolina	L	1,506,148	5, 105, 467			6,611,615		
42.	South Dakota	LL.		1,289,903			1,325,988		
43.	Tennessee TN	L	1,684,448	9,033,592			10,718,040		
44.	Texas		5,890,472						
45. 46.	Utah UT Vermont VT	L					1,659,382 1,700,861		
47.	Virginia	L	2,614,073						
48.	Washington WA	L	1, 130, 090	3,287,531			4,417,621		
49.	West Virginia WV			1,857,852			2, 147, 541		
50. 51.	Wisconsin WI Wyoming WY	LL		7,690,059 15,400			8,616,611 77,200		
52.	American Samoa AS	L	01,800						
53.	Guam GU	N.							
54.	Puerto Rico PR	L	1,694,165	1,322,423			3,016,588		
55. 56	U.S. Virgin Islands	N.							
56. 57.	Northern Mariana Islands MP Canada CAN	NN	.6,504						
58.	Aggregate Other Aliens OT	XXX							
59.	Subtotal	XXX							
90.	Reporting entity contributions for employee benefit	s XXX							
91.	plans Dividends or refunds applied to purchase paid-up								
	additions and annuities	XXX							
92.	Dividends or refunds applied to shorten endowmer or premium paying period	t XXX							
93.	Premium or annuity considerations waived under								
~	disability or other contract provisions								
94. 95.	Aggregate or other amounts not allocable by State Totals (Direct Business)								
95. 96.	Plus Reinsurance Assumed								
97	Totals (All Business)								
98.	Less Reinsurance Ceded	XXX							
99.	Totals (All Business) less Reinsurance Ceded DETAILS OF WRITE-INS	XXX	26,728,829	116,661,703			143,390,532		
58001	ZZZ Other Alien		33.630				33,630		
58002.		XXX							
58003.		XXX							
58998.	Summary of remaining write-ins for Line 58 from	\\\\\\							
58999.	overflow page Totals (Lines 58001 through 58003 plus	XXX							
	58998)(Line 58 above)	XXX	33,630				33,630		
9401. 0402									
9402. 9403.		XXX XXX							
9403. 9498.	Summary of remaining write-ins for Line 94 from		[
	overflow page								
9499.	Totals (Lines 9401 through 9403 plus 9498)(Line 94 above)	XXX							
(a) Active	e Status Counts:								

L - Licensed or Chartered - Licensed Insurance carrier or domiciled RRG.....
 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......

.....6

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

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

	<u>Federal Tax ID</u>	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 III, LLC	06-1041383		Delaware
CML Special Situations Investor LLC	None		Delaware
CML Global Capabilities LLC	None		Delaware
MM Global Capabilities I LLC	None		Delaware
MassMutual Global Business Services India LLP	None		India
MM Global Capabilities (Netherlands) B.V.	None		Netherlands
MassMutual Global Business Services Romania S.R.L.	None		Romania
MM Global Capabilities I I LLC	None		Delaware
MM Global Capabilities I II LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
New Haven Holdco 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 Timberlands I, LLC	None		Delaware
Lyme Adirondack Timberlands II, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Private Equity Funds LLC	04-1590850		Delaware
MassMutual Private Equity Funds Subsidiary LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
ITPS Holding LLC	None		Delaware
HITPS LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
Jefferies Finance LLC	27-0105644		Delaware
APEX Credit Partners LLC	None		Delaware
Jefferies Credit Partners LLC	None		Delaware
Jefferies Credit Management LLC	None		Delaware
Jefferies Private Credit GP LLC	None		Maryland
Jefferies Private Credit Fund LP	None		Delaware
Jefferies Private Credit BDC Inc.	None		Delaware
JFIN GP Adviser LLC	None		Delaware

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

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
JFIN Fund III LLC	None		Delaware
JFIN Fund VI LLC	None		Delaware
JFIN Asset Management LLC	None		Delaware
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
Jefferies Direct Lending Fund C LP	None		Delaware
Jefferies DLF C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund C SPE LLC	None		Delaware
JFIN Revolver Holdings LLC	None		Delaware
JFIN Revolver Holdings II LLC	None		Delaware
JFIN Co-Issuer Corporation	None		Delaware
JFIN Europe GP, S.a.r.l.	None		Luxembourg
Jefferies Finance Europe, S.L.P.	None		Luxembourg
Jefferies Finance Europe, SCSp	None		Luxembourg
Jefferies Finance Business Credit LLC	None		Delaware
JFIN Business Credit Fund I LLC	None		Delaware
JFIN High Yield Investments LLC	None		Delaware
JFIN LC Fund LLC	None		Delaware
JFIN CLO 2012 Ltd.	None		Cayman Islands
JFIN CLO 2013 Ltd.	None		Cayman Islands
JFIN CLO 2014 Ltd.	None		Cayman Islands
JFIN CLO 2014-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2017-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2018 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2019-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2020 Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2021-III Ltd.	None		Delaware
JFIN Revolver Fund, L.P.	None		Delaware
JFIN Revolver Funding 2021 Ltd.	None		Delaware
Apex Credit CLO 2015-II Ltd.*	None		Cayman Islands
Apex Credit CLO 2016 Ltd.	None		Cayman Islands
Apex Credit CLO 2017 Ltd.	None		Cayman Islands
Apex Credit CLO 2017-II Ltd.	None		Cayman Islands
Glidepath Holdings Inc.	86-2294635		Delaware
Great American Life Insurance Company	13-1935920	63312	Ohio
AAG Insurance Agency, LLC	31-1422717		Kentucky

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
Great American Advisors, LLC	31-1395344		Ohio
Manhattan National Holding, LLC	26-3260520		Ohio
Manhattan National Life Insurance Company	45-0252531	67083	Ohio
MassMutual Mortgage Lending LLC	None		Delaware
MM Copper Hill Road LLC	04-1590850		Delaware
MM Investment Holding	None		Cayman Islands
MassMutual Asset Finance LLC*	26-0073611		Delaware
MMAF Equipment Finance LLC 2013-A	90-1005837		Delaware
MMAF Equipment Finance LLC 2014-A	36-4785301		Delaware
MMAF Equipment Finance LLC 2015-A	38-3969560		Delaware
MMAF Equipment Finance LLC 2016-A	32-0489588		Delaware
MMAF Equipment Finance LLC 2017-A	35-2590691		Delaware
MMAF Equipment Finance LLC 2017-B	32-0546197		Delaware
MMAF Equipment Finance LLC 2018-A	82-5335801		Delaware
MMAF Equipment Finance LLC 2019-A	83-3722640		Delaware
MMAF Equipment Finance LLC 2019-B	None		Delaware
MMAF Equipment Finance LLC 2021-A	None		Delaware
Rozier LLC	None		Delaware
MML Management Corporation	04-2443240		Massachusetts
MassMutual International Holding MSC, Inc.	04-3548444		Massachusetts
MassMutual Holding MSC, Inc.	04-3341767		Massachusetts
MML CM LLC	None		Delaware
Blueprint Income LLC	None		New York
Flourish Digital Assets LLC	None		Delaware
Flourish Financial LLC	None		Delaware
Flourish Technologies LLC	None		Delaware
MML Distributors LLC*	04-3356880		Massachusetts
MML Investment Advisers, LLC	None		Delaware
MML Strategic Distributors, LLC	46-3238013		Delaware
The MassMutual Trust Company, FSB	06-1563535		Connecticut
MML Private Placement Investment Company I, LLC	04-1590850		Delaware
MML Private Equity Fund Investor LLC	04-1590850		Delaware
MM Private Equity Intercontinental LLC	04-1590850		Delaware
Pioneers Gate LLC	45-2738137		Delaware
MassMutual Holding LLC	04-2854319		Delaware
Fern Street LLC	37-1732913		Delaware
Sleeper Street LLC	None		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
MassMutual Assignment Company	06-1597528		North Carolina

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
MassMutual Capital Partners LLC	04-1590850		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Athens Fund Management LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures Southeast Asia II LLC	None		Delaware
MassMutual Ventures UK LLC	None		Delaware
MassMutual Ventures US I LLC	47-1296410		Delaware
MassMutual Ventures US II LLC	None		Delaware
MassMutual Ventures US III LLC	None		Delaware
Open Alternatives LLC	None		Delaware
MM Catalyst Fund LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
Rothesay Limited	None		United Kingdom
Rothesay Life Plc	None		United Kingdom
Rothesay Assurance Limited	None		United Kingdom
Rothesay MA No.1 Limited	None		United Kingdom
Rothesay MA No.2 Limited	None		United Kingdom
Rothesay MA No.3 Limited	None		United Kingdom
Rothesay MA No.4 Limited	None		United Kingdom
LT Mortgage Finance Limited	None		United Kingdom
Rothesay Property Partnership 1 LLP	None		United Kingdom
Rothesay Foundation	None		United Kingdom
Rothesay Pensions Management Limited	None		United Kingdom
Rothesay Asset Management UK Limited	None		United Kingdom
Rothesay Asset Management US LLC	None		Delaware
MML Investors Services, LLC	04-1590850		Massachusetts
MML Insurance Agency, LLC	04-1590850		Massachusetts
MMLISI Financial Alliances, LLC	41-2011634		Delaware
LifeScore Labs, LLC	47-1466022		Massachusetts
MM Asset Management Holding LLC	45-4000072		Delaware
Barings LLC	51-0504477		Delaware
Baring Asset Management (Asia) Holdings Limited	98-0524271		Hong Kong, Special Administrative Region of China
Baring International Fund Managers (Bermuda) Limited	98-0457465		Bermuda
Baring Asset Management (Asia) Limited	98-0457463		Hong Kong, Special Administrative Region of China
Baring Asset Management Korea Limited	None		Korea
Barings Investment Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Barings Overseas Investment Fund Management (Shanghai) Limited	None		Hong Kong, Special Administrative Region of China
Baring SICE (Taiwan) Limited	98-0457707		Taiwan ROC

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

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Barings Singapore Pte. Ltd.	None		Singapore
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	98-0457456		Australia
Barings Finance LLC	80-0875475		Delaware
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Securities LLC	04-3238351		Delaware
Barings Guernsey Limited	98-0437588		Guernsey
Barings Europe Limited	None		United Kingdom
Barings Asset Management Spain SL	None		Spain
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Finland Oy	None		Finland
Barings Netherlands B.V.	None		Netherlands
Barings Real Estate UK Holdings Limited	None		Delaware
BREAE AIFM LLP	None		United Kingdom
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		United Kingdom
Barings Real Estate Advisers Europe Finance LLP	98-0654412		United Kingdom
Barings Real Estate GmbH	98-1194368		Germany
Baring Asset Management Limited	98-0241935		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Barings Global Advisors Limited	98-1012393		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Baring Asset Management UK Holdings Limited	98-0457576		United Kingdom
Baring Asset Management GmbH	98-0465031		Germany
Baring International Fund Managers (Ireland) Limited	98-0524272		Ireland
Baring Asset Management Switzerland Sarl	None		Switzerland
Baring France SAS	98-0497550		France
Baring Fund Managers Limited	98-0457586		United Kingdom
BCGSS 2 GP LLP	None		United Kingdom
Baring Pension Trustees Limited	98-0457574		United Kingdom
Baring Investment Services Limited	98-0457578		United Kingdom
Barings Core Fund Feeder I GP S.à.r.l.	None		Luxembourg
Barings Investment Fund (LUX) GP S.à r.l.	None		Luxembourg
Barings BME GP S.à.r.l.	None		United Kingdom
Barings GPC GP S.à.r.l.	None		Luxembourg
Barings European Core Property Fund GP Sà.r.l	None		United Kingdom

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Umbrella Fund (LUX) GP S.à.r.l.	None		Luxembourg
GPLF4(S) GP S.à r.l	None		Luxembourg
PREIF Holdings Limited Partnership	None		United Kingdom
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
Newpoint Real Estate Capital	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC*	81-4258759		Delaware
Aland Royalty Holdings LP	None		Delaware
Intermodal Holding II LLC	46-2344300		Delaware
Milestone Acquisition Holding, LLC.	47-3055009		Delaware
Novation Companies, Inc.	None		Maryland
Red Lake Ventures, LLC	46-5460309		Delaware
Remington L & W Holdings LLC*	81-4065378		Connecticut
Tamiami Citrus, LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
Techquity, LP	None		Delaware
Validus Holding Company LLC	46-0687392		Delaware
Validus Pharmaceuticals LLC	None		Delaware
VGS Acquisition Holding, LLC	None		Delaware
Aland Royalty GP, LLC	None		Delaware
Alaska Future Fund GP, LLC	None		Delaware
BAI Funds SLP, LLC	None		Delaware
BAI GP, LLC	None		Delaware
Barings Alternative Investments SLP, LLC	None		Delaware
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings Investment Series LLC	None		Delaware
Barings Capital Investment LLC	None		Maryland
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		Delaware
Barings ABIF SLP, LLC	None		Delaware
Barings CLO Investment Partners GP, LLC	None		Delaware
Barings Core Property Fund GP LLC	None		Delaware
Barings Direct Lending GP Ltd.	None		Cayman Islands
Barings Emerging Generation Fund LP	84-3784245		Delaware
Barings Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings GPSF	None		Delaware

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund Management II, LLC	None		Delaware
Barings Private Credit Corporation	None		Maryland
Barings Small Business Fund LLC	84-5063008		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BRECS VII GP LLC	None		Delaware
CCM Fund I REIT Manager LLC	None		Delaware
CEMF I GP LLC	None		Delaware
CHY Venture GP LLC	None		Delaware
CREF X GP LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Loan Strategies Management LLC	04-1590850		Delaware
Mezzco III LLC	41-2280126		Delaware
Mezzco IV LLC	80-0920285		Delaware
Mezzco Australia II LLC	None		Delaware
RECSA-NY GP LLC	None		Delaware
SBNP SIA II LLC	None		Delaware
SBNP SIA III LLC	None		Delaware
Somerset Special Opportunities Management LLC	04-1590850		Delaware
Amherst Long Term Holdings, LLC	None		Delaware
MassMutual International LLC	04-3313782		Delaware
MassMutual Solutions LLC	None		Delaware
Haven Technologies Asia Limited	None		Hong Kong
Yunfeng Financial Group Limited	None		Hong Kong
MassMutual Asia Limited (SPV)	None		Hong Kong
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, LLC	04-1590850		Delaware
MassMutual External Benefits Group LLC	27-3576835		Delaware
Other Affiliates & Funds:			
100 w. 3 rd Street LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
2160 Grand Manager LLC	04-1590850		Delaware
300 South Tryon LLC	04-1590850		Delaware
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Barings Affordable Housing Mortgage Fund I LLC	82-3468147		Delaware
Barings Affordable Housing Mortgage Fund II LLC	61-1902329		Delaware
Barings Affordable Housing Mortgage Fund III LLC	85-3036663		Delaware
Barings Asset-Based Income Fund (US) LP	36-4868350		Delaware
Barings Emerging Markets Corporate Bond Fund	None		Ireland

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

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Barings European Real Estate Debt Income Fund	None		Luxembourg
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
Babson CLO Ltd. 2012-II	None		Cayman Islands
Babson CLO Ltd. 2013-I	None		Cayman Islands
Babson CLO Ltd. 2014-I	None		Cayman Islands
Babson CLO Ltd. 2015-I	None		Cayman Islands
Babson CLO Ltd. 2015-II	None		Cayman Islands
Babson CLO Ltd. 2016-I	None		Cayman Islands
Babson CLO Ltd. 2016-II	None		Cayman Islands
Barings CLO Ltd. 2017-I	None		Cayman Islands
Barings CLO 2018-III	None		Cayman Islands
Barings CLO 2018-IV	None		Cayman Islands
Barings CLO 2019-II	98-1473665		Cayman Islands
Barings CLO 2019-III	None		Cayman Islands
Barings CLO 2019-IV	None		Cayman Islands
Barings CLO 2020-I	None		Cayman Islands
Barings CLO 2020-II	None		Cayman Islands
Barings CLO 2020-III	None		Cayman Islands
Barings CLO 2020-IV	None		Cayman Islands
Barings CLO 2021-1	ZJX0JI.99999.SL.13	6	Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Babson Euro CLO 2016-I BV	None		Netherlands
Barings Euro CLO 2019-I	3603726ОН		Ireland
Barings Euro CLO 2019-II	None		Ireland
Barings Euro CLO 2020-I DAC	None		Ireland
Barings Euro CLO 2021-I DAC	3715576VH		Ireland
Barings Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Global Inv. Grade Strat Fund	None		Ireland
Barings Global Private Loan Fund	None		Luxembourg
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings Global Special Situations Credit 4 Delaware*	85-1465973		Delaware
Barings Global Special Situations Credit 4 LUX*	98-1570693		Luxembourg
Barings Middle Market CLO 2017-I Ltd & LLC	None		Cayman Islands
Barings Middle Market CLO 2018-I	None		Cayman Islands
Barings Middle Market CLO 2019-I	None		Cayman Islands

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code	State of Domicile
Barings North American Private Loan Fund LP	38-4010344		Delaware
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Euro Value Add II (BREEVA II)*	K15Q2K.99999.SL.4	442	Luxembourg
Barings Real Estate European Value Add I SCSp*	None		United Kingdom
Barings Real Estate Debt Income Fund LP*	85-3449260		Delaware
Braemar Energy Ventures I, L.P. *	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Benchmark 2018-B2 Mortgage Trust	38-4059932		New York
Benchmark 2018-B4	None		New York
Benchmark 2018-B8	38-4096530		New York
Braselton Point LLC	04-1590850		Delaware
Barings Core Property Fund LP	20-5578089		Delaware
Cornerstone Real Estate Fund VIII LP	27-0547156		Delaware
Cornerstone Real Estate Fund X LP	46-5432619		Delaware
Cornerstone Permanent Mortgage Fund III LLC	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV LLC	61-1793735		Massachusetts
GASL Holdings, LLC	82-2932156		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-404	1012	New York
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
KKR-MM Vector LP	82-1512591		Delaware
Marco Hotel LLC	46-4255307		Delaware
Miami Douglas One GP LLC*	04-1590850		Delaware
Miami Douglas Two GP LLC*	04-1590850		Delaware
Miami Douglas One LP*	04-1590850		Delaware
Miami Douglas Two LP*	04-1590850		Delaware
MM BIG Peninsula Co-Invest Member LLC	04-1590850		Massachusetts
NYDIG Digital Assets Fund II LP	85-3886824		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
MM CM Holding LLC	None		Delaware
MM Debt Participations LLC	81-3000420		Delaware
RB Apartments LLC	82-4411267		Delaware
Reston Arboretum LLC	75-2901061		Delaware
Rockville Town Center LLC	54-2055778		Virginia
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
SouthPointe Industrial LLC	04-1590850		Delaware
Ten Fan Pier Boulevard LLC	35-2553915		Delaware
Tower Square Capital Partners III, L.P.	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware

PART 1 – ORGANIZATIONAL CHART

	Federal Tax ID NAIC Co Code	State of Domicile
Trailside MM Member LLC*	04-1590850	Delaware
Washington Gateway Two LLC*	83-1325764	Delaware
Washington Gateway Three LLC*	32-0574045	Delaware
West 46 th Street Hotel LLC	05-1590850	Delaware
Barings Affiliates & Funds:		
Babson Capital Loan Strategies Master Fund LP	None	Cayman Islands
Barings China Aggregate Bond Private Securities Investment Fund	None	Peoples Republic of China
Barings European Growth Trust Fund	HU7DQI.00015.SF.826	United Kingdom
Barings Global High Yield Fund	47-3790192	Massachusetts
CCIC Fund	None	Peoples Republic of China
Great Lakes II LLC*	71-1018134	Delaware
Wood Creek Venture Fund LLC	04-1590850	Delaware
Barings Real Estate Affiliates & Funds:		
50 Liberty LLC*	36-4823011	Delaware
Barings California Mortgage Fund IV	None	California
Barings Hotel Opportunity Venture	87-0977058	Delaware
Barings Umbrella Fund LUX SCSp SICAV RAIF*	None	Luxembourg
Calgary Railway Holding LLC*	82-2285211	Delaware
Combrook PRS Holdings LLC	82-3307907	Delaware
Comerstone California Mortgage Fund I LLC	95-4207717	California
Cornerstone California Mortgage Fund II LLC	95-4207717	California
Comerstone California Mortgage Fund III LLC	95-4207717	California
Cornerstone Fort Pierce Development LLC*	56-2630592	Delaware
Cornerstone Permanent Mortgage Fund	45-2632610	Massachusetts
Cornerstone Permanent Mortgage Fund II	61-1750537	Massachusetts
Cornerstone Permanent Mortgage Fund III	35-2531693	Massachusetts
Cornerstone Permanent Mortgage Fund IV	61-1793735	Massachusetts
CREA/PPC Venture LLC	20-0348173	Delaware
CREA Madison Member LLC	81-0890084	Delaware
Danville Riverwalk Venture, LLC	82-2783393	Delaware
Fan Pier Development LLC*	20-3347091	Delaware
GIA EU Holdings LLC	04-1590850	Delaware
Landmark Manchester Holdings LLC	81-5360103	Delaware
MM Island Member LLC	04-1590850	Delaware
NoHo West Venture LLC	83-0881588	Delaware
One Harbor Shore LLC*	80-0948028	Delaware
PACO France Logistics LLC	04-1590850	Delaware
Portland 400 Sixth Manager LLC	82-3393166	Delaware
Raleigh Crossing Phase I Holdings LLC	None	Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM Sawgrass Village Shopping Center LLC*	None 27-2977720	Delaware Delaware
Sawgrass vinage Snopping Center LLC"	21-2911120	Delaware

PART 1 – ORGANIZATIONAL CHART

	<u>Federal Tax ID</u>	NAIC Co Code State of Domicile
STOA Holding LLC	None	Delaware
Three PW Office Holding LLC	81-5273574	Delaware
Twenty Two Liberty LLC*	35-2484550	Massachusetts
Unna, Dortmund Holding LLC	82-3250684	Delaware
Washington Gateway Apartments Venture LLC*	45-5401109	Delaware
MassMutual Premier Funds:		
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 Select Funds:		
MassMutual Select Diversified Value Fund	01-0821120	Massachusetts
MassMutual Select Fundamental Growth Fund	04-3512593	Massachusetts
MassMutual Select Mid-Cap Value Fund	42-1710935	Massachusetts
MassMutual Select Small Capital Value Equity Fund	02-0769954	Massachusetts
MassMutual Select Small Company Value Fund	04-3584140	Massachusetts
MassMutual Select T. Rowe Price Retirement 2005 Fund	82-3347422	Massachusetts
MassMutual Select T. Rowe Price Retirement 2010 Fund	82-3355639	Massachusetts
MassMutual Select T. Rowe Price Retirement 2015 Fund	82-3382389	Massachusetts
MassMutual Select T. Rowe Price Retirement 2020 Fund	82-3396442	Massachusetts
MassMutual Select T. Rowe Price Retirement 2025 Fund	82-3417420	Massachusetts
MassMutual Select T. Rowe Price Retirement 2030 Fund	82-3430358	Massachusetts
MassMutual Select T. Rowe Price Retirement 2035 Fund	82-3439837	Massachusetts
MassMutual Select T. Rowe Price Retirement 2040 Fund	82-3451779	Massachusetts
MassMutual Select T. Rowe Price Retirement 2045 Fund	82-3472295	Massachusetts
MassMutual Select T. Rowe Price Retirement 2050 Fund	82-3481715	Massachusetts
MassMutual Select T. Rowe Price Retirement 2055 Fund	82-3502011	Massachusetts
MassMutual Select T. Rowe Price Retirement 2060 Fund	82-3525148	Massachusetts
MassMutual Select T. Rowe Price Retirement Balanced Fund	82-3533944	Massachusetts
MML Series Investment Funds:	16 1257056	M 1 4
MML Series International Equity Fund MML Series Investment Funds II:	46-4257056	Massachusetts
MML Series II Vestilient Funds II: MML Series II Asset Momentum Fund	47-3517233	Massachusetts
MML Series II Asset Mollentum Pund MML Series II Dynamic Bond Fund	47-3529636	Massachusetts
MML Series II Equity Rotation Fund	47-3529030	Massachusetts
MML Series II Special Situations Fund	47-3559064	Massachusetts
MassMutual RetireSMART Funds:	47-3539004	Wassachuseus
MassMutual RetireSMART 2035 Fund	27-1933380	Massachusetts
MassMutual RetireSMART 2055 Fund	27-1935380	Massachusetts
MassMutual RetireSMART 2055 Fund	46-3289207	Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235	Massachusetts
MassMutual 20/80 Allocation Fund	45-1618155	Massachusetts

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

	<u>Federal Tax ID</u> <u>NAIC Co C</u>	ode State of Domicile
MassMutual 80/20 Allocation Fund	45-1618222	Massachusetts
MassMutual RetireSMART In Retirement Fund	03-0532464	Massachusetts
MassMutual 40/60 Allocation Fund	45-1618262	Massachusetts
MassMutual 60/40 Allocation Fund	45-1618046	Massachusetts

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		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code		Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
Coue	Gloup Name	Code	Number	ROOD	CIR	international)	Massachusetts Mutual Life Insurance Company	liun	Linuty	Massachusetts Mutual Life Insurance	Other)	laye		(1/1)	
0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388			(MMLIC)	MA	UDP.		0	100,000	MMLIC		
	Massachusetts mut Life ins co	00930	. 04-1590850	. 3848388			(MMLIC)	MA		Company Massachusetts Mutual Life Insurance	Ownership		. MMLIC		
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0435 0435	Massachusetts Mut Life Ins Co Massachusetts Mut Life Ins Co	93432 70416	. 06-1041383 43-0581430				C.M. Life Insurance Company MML Bay State Life Insurance Company	CT CT	RE I A	Company C.M. Life Insurance Company	Ownership Ownership		MMLIC		
0435	Massachusetts mut Life ins co	/04 16	43-0581430								Ownership		MMLIC		
			. 06-1041383				CML Mezzanine Investor III, LLC CML Special Situations Investor LLC		DS	C.M. Life Insurance Company C.M. Life Insurance Company			MMLIC		
							UML Special Situations Investor LLC	DE	DS		Ownership		. MMLIC		
0000				1			ONE Clabel Comphilitics 110	DE	DS	Massachusetts Mutual Life Insurance	Ownership	100,000	MMLIC		
							CML Global Capabilities LLC	VE	บจ	Company	owner snip		. MWLIC		· · · · · · · · · · · · · · · · · · ·
0000				1			MM Clabel Carebilities 1110	DE	DO	Massachusetts Mutual Life Insurance	Quananah i a	100.000	MMLIC		
0000							MM Global Capabilities LLC	VE	DS	Company	Ownership		. MWLIC		· · · · · · · · · · · · · · · · · · ·
0000				1			MassMutual Global Business Services India		D2	Massachusetts Mutual Life Insurance	0	100,000			
0000							LLP	IND	DS	Company	Ownership		. MMLIC		· · · · · · · · · · · · · · · · · · ·
0000				1					50	Massachusetts Mutual Life Insurance		100.000			
0000							MM Global Capabilities (Netherlands) B.V MassMutual Global Business Services Romania	NLD	DS	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000							S.R.L	ROU	DS	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities II LLC	DE	DS	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities III LLC	DE	DS	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM/Barings Multifamily TEBS 2020 LLC	DE	NIA	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000			. 04–1590850				New Haven Holdco LLC	DE	NIA	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MML Special Situations Investor LLC	DE	NIA	Company	Ownership		MMLIC		
			17 5000070							Massachusetts Mutual Life Insurance					
0000			47-5322979 47-5322979				Timberland Forest Holding LLC	DE	NIA	Company	Ownership		. MMLIC		
0000			47-5322979				Timber land Forest Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.000	MMLIC		
0000			. 47-5322979				Timberland Forest Holding LLC	DE	NIA	Wood Creek Capital Management LLC	Management	400,000	MMLIC		
0000							Lyme Adirondack Forest Company, LLC	DE	NIA	Timberland Forest Holding LLC	Ownership		. MMLIC		
0000							Lyme Adirondack Timberlands I, LLC	DE DE	NIA	Timberland Forest Holding LLC	Ownership.		. MMLIC		
							Lyme Adirondack Timberlands II, LLC	UE	NIA	Timberland Forest Holding LLC	Ownership		. MMLIC		
0000		1	04 4500050	1			Destabling Way 110	DE	NUA	Massachusetts Mutual Life Insurance	0	100,000	188.10		
0000			. 04–1590850				Berkshire Way LLC	VE	NIA	Company	Ownership		. MMLIC		· · · · · · · · · · · · · · · · · · ·
0000			04 4500050	1				DE		Massachusetts Mutual Life Insurance	0	100,000			
0000			. 04–1590850				MSP-SC, LLC	DE	NIA	Company	Ownership		. MMLIC		· · · · · · · · · · · · · · · · · · ·
0000				1				DF		Massachusetts Mutual Life Insurance		400.000			
0000							EM Opportunities LLC	DE	NIA	Company	Ownership		. MMLIC		
0000				1				VТ		Massachusetts Mutual Life Insurance		100.000			
0000							MassMutual MCAM Insurance Company, Inc	VT	NIA	Company	Ownership		. MMLIC		
0000		1	04 4500050	1				DE		Massachusetts Mutual Life Insurance		100,000			
0000			. 04-1590850				Insurance Road LLC	DE	NIA	Company	Ownership		. MMLIC		
0000			04-1590850				MassMutual Trad Private Equity LLC	DE DE	NIA	Insurance Road LLC	Ownership		. MMLIC		
0000			. 04–1590850				MassMutual Private Equity Funds LLC	UE	NIA	MassMutual Trad Private Equity LLC	Ownership		. MMLIC		
0000		1	04 4500050	1			MassMutual Private Equity Funds Subsidiary	DE				100,000			
0000			. 04-1590850					DE	NIA	MassMutual Private Equity Funds LLC	Ownership		. MMLIC		
0000			04-1590850				MassMutual Intellectual Property LLC	DE	NIA	Insurance Road LLC	Ownership		. MMLIC		
0000							Trad Investments I LLC	DE	NIA	Insurance Road LLC	Ownership		. MMLIC		
0000		1		1				DF		Massachusetts Mutual Life Insurance		100,000			
0000							ITPSHolding LLC	DE	NIA	Company	Ownership		. MMLIC		
0000							HITPS LLC	DE	NIA	ITPS Holding LLC	Ownership		. MMLIC		

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										Massachusetts Mutual Life Insurance					1 1
0000			27-0105644				Jefferies Finance LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					,
0000			86-2294635				Glidepath Holdings Inc.	DE	NIA	Company	Ownership	100.000	MMLIC		1 1
	Massachusetts Mut Life Ins Co		13-1935920				Great American Life Insurance Company	OH.	IA	Glidepath Holdings Inc.	Ownership	100.000	MMLIC		
			31-1422717				AAG Insurance Agency, LLC	КҮ	NIA	Great American Life Insurance Company	Ownership.		MMLIC		
	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	NI	IA	Great American Life Insurance Company	Ownership Ownership	100.000	MILIC		
	Massachusetts mut Life ins co												MMLIC		
0000			31-1395344				Great American Advisors, LLC	0H	NIA	Great American Life Insurance Company	Ownership				
0000			26-3260520				Manhattan National Holding, LLC	OH	NIA	Great American Life Insurance Company	Ownership		MMLIC		
0000	Massachusetts Mut Life Ins Co		45-0252531				Manhattan National Life Insurance Company	0H	IA	Manhattan National Holding, LLC	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					- I - I
0000							MassMutual Mortgage Lending LLC	DE	NIA	Company	Ownership		MMLIC		
0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		- I - I
							Jefferies Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		
							Jefferies Credit Management LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
							Jefferies Private Credit GP LLC	DE	NIA	Jefferies Credit Management LLC	Ownership.		MMLIC		
		•••••					Jefferies Private Credit Fund LP	DE	NIA	Jefferies Private Credit GP LLC	Ownership		MMLIC		
							Jefferies Private Credit BDC Inc.			Jefferies Finance LLC			MINIETC		
		•••••							NIA		Ownership				
							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Fund III LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Fund VI LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Asset Management LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFAM GP LLC	DE	NIA	JFIN Asset Management, LLC	Ownership		MMLIC		
0000							JFAM GP LP	DE	NIA	JFIN Asset Management, LLC	Ownership	100,000	MMLIC		
0000							Jefferies Direct Lending Fund C LP	DE	NIA	JFIN Asset Management, LLC	Ownership		MMLIC		1
							Jefferies DLF C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund C LLC	Ownership	100.000	MMLIC		
							Jefferies Direct Lending Fund C SPE LLC	DE	NIA	Jefferies DLF C Holdings LLC	Ownership		MMLIC		
							JFIN Revolver Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership Ownership	100.000	MILIC		
							JFIN Revolver Holdings II LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Europe GP, S.a.r.I.	LUX	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							Jefferies Finance Europe, S.L.P.	LUX	NIA	JFIN Europe GP, S.a.r.I.	Ownership		MMLIC		
0000							Jefferies Finance Europe, SCSp	LUX	NIA	JFIN Europe GP, S.a.r.I.	Ownership		MMLIC		
0000							Jefferies Finance Business Credit LLC	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Business Credit Fund I LLC	DE	NIA.	Jefferies Finance LLC	Ownership.		MMLIC		
0000							JFIN High Yield Investments LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership.		MMLIC		
0000							JFIN CLO 2012 Ltd.		NIA	Jefferies Finance LLC	Ownership		MILIC		
0000							JFIN CLO 2012 Ltd	CYM	NIA.	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN CLO 2014-11 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		··[·····]
							JFIN CLO 2015 Ltd.	<u>C</u> YM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership		MMLIC		
0000							JFIN Revolver CLO 2014 Ltd	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Revolver CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Revolver CLO 2017-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		
							JFIN Revolver CLO 2017-III Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		1
							JFIN Revolver CLO 2018 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MULIC		1
							JFIN Revolver CLO 2019 Ltd.	CYM	NIA.	Jefferies Finance LLC	Ownership		MMLIC		
0000							JFIN Revolver CLO 2019 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership Ownership	100.000	MMLIC		
							JFIN Revolver CLO 2020 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Revolver CLO 2021-11 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		MMLIC		
							JFIN Revolver CLO 2021-III Ltd	DE DE	NIA	Jefferies Finance LLC	Ownership		MMLIC		
0000		1	1	1	1	1	JFIN Revolver Fund. L.P.	DE	NIA	Jefferies Finance LLC	Ownership		MMLIC	1	1 1
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0000							JFIN Revolver Funding 2021 Ltd.	DE	NIA	Jefferies Finance LLC	Ownership.		MMLIC		I

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Group		Company ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence.	Percen-	Ultimate Controlling	quired?	,
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0000						Apex Credit CLO 2015-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership				
0000						Apex Credit CLO 2015-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership				
0000						Apex Credit CLO 2016 Ltd.	<u>C</u> YM	NIA	Jefferies Finance LLC	Ownership		. MMLIC		
0000						Apex Credit CLO 2017 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership		. MMLIC		
0000						Apex Credit CLO 2017-II Ltd	CYM	NIA	Jefferies Finance LLC	Ownership		MILIC		
									Massachusetts Mutual Life Insurance					
0000		04–1590850				MM Copper Hill Road LLC	DE	NIA	Company	Ownership		MMLIC		
									Massachusetts Mutual Life Insurance					
						MM Investment Holding	CYM	NIA	Company	Ownership		MMLIC		
		26-0073611				MassMutual Asset Finance LLC	DE	NIA	MM Investment Holding	Ownership		MMLIC		
		26-0073611				MassMutual Asset Finance LLC	DE	NIA.	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
		90-1005837		1		MMAF Equipment Finance LLC 2013-A		NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		1
						MMAF Equipment Finance LLC 2013-A		NIA	MassMutual Asset Finance LLC	Ownership.		MWLIC		
						MMAF Equipment Finance LLC 2014-A	DE DE	NIA	MassMutual Asset Finance LLC	Ownership		MIC		1
						MMAF Equipment Finance LLC 2015-A MMAF Equipment Finance LLC 2016-A	DE	NIA NIA	MassMutual Asset Finance LLC MassMutual Asset Finance LLC	Ownership		MMLIC		
								NIA NIA						
						MMAF Equipment Finance LLC 2017-A	DE		MassMutual Asset Finance LLC	Ownership		. MMLIC		
		32–0546197				MMAF Equipment Finance LLC 2017-B	DE	NIA	MassMutual Asset Finance LLC	Ownership		. MMLIC		
0000		82–5335801				MMAF Equipment Finance LLC 2018-A	DE	NIA	MassMutual Asset Finance LLC	Ownership		. MMLIC		
		83–3722640				MMAF Equipment Finance LLC 2019-A	DE	NIA	MassMutual Asset Finance LLC	Ownership		. MMLIC		
0000						MMAF Equipment Finance LLC 2019-B	DE	NIA	MassMutual Asset Finance LLC	Ownership		. MMLIC		
0000						MMAF Equipment Finance LLC 2021-A	DE	NIA	MassMutual Asset Finance LLC	Ownership		MMLIC		
0000						Rozier LLC	DE	NIA	MassMutual Asset Finance LLC	Ownership		MMLIC		
						MML Management Corporation	MA	NIA	MM Investment Holding	Ownership		MMLIC	Y	
0000		04-3548444				MassMutual International Holding MSC, Inc	MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
						MassMutual Holding MSC, Inc.		NIA	MML Management Corporation	Ownership	100.000	MMLIC		
						indomitiati intrating moo, the compared to the second se			Massachusetts Mutual Life Insurance					
						MML CM LLC	DE	NIA	Company	Ownership	100.000	MIC		
0000						Blueprint Income LLC	NY	NIA	MML CM LLC	Ownership	100.000	MMLIC		
0000						Flourish Digital Assets LLC	DE	NIA	MML CM LLC	Ownership.		MMLIC		
0000						Flourish Financial LLC	DE	NIA	MML CM LLC	Ownership.		MMLIC		
						Flourish Technologies LLC	DE	NIA	MML CM LLC			MIC		
						Flourish lechnologies LLC	UE	NIA		Ownership		. MMLIC		
									Massachusetts Mutual Life Insurance			188.10		
						MML Distributors LLC	MA	NIA	Company	Ownership		. MILIC		
0000		04–3356880				MML Distributors LLC	MA	NIA	MassMutual Holding LLC	Ownership		. MMLIC		
							1		Massachusetts Mutual Life Insurance					1
0000						MML Investment Advisers, LLC	DE	NIA	Company	Ownership		. MMLIC		
							1		Massachusetts Mutual Life Insurance					1
		46-3238013				MML Strategic Distributors, LLC	DE	NIA	Company	Ownership		MMLIC		
						• · ·			Massachusetts Mutual Life Insurance					
0000		06-1563535	2881445			The MassMutual Trust Company, FSB	CT	NIA	Company	Ownership	100.000	MMLIC	Y	
				1		MML Private Placement Investment Company I,		[Massachusetts Mutual Life Insurance			1		1
		04-1590850				IIC	DE	NIA	Company	Ownership		MIC		
0000						LLV			Massachusetts Mutual Life Insurance	owner on p.				1
		04-1590850				MML Private Equity Fund Investor LLC	DF	NIA	Company	Ownership.		MILIC	1	
							DE							
0000						MML Private Equity Fund Investor LLC	DE	NIA	Baring Asset Management Limited	Management	400 000	. MMLIC		
0000		04–1590850				MM Private Equity Intercontinental LLC	DE	NIA	MML Private Equity Fund Investor LLC	Ownership		. MMLIC		
									Massachusetts Mutual Life Insurance					
0000		45–2738137				Pioneers Gate LLC	DE	NIA	Company	Ownership		. MMLIC		
							1		Massachusetts Mutual Life Insurance					
		04–2854319	2392316			MassMutual Holding LLC	DE	NIA	Company	Ownership		MMLIC	Y	
		06-1597528				MassMutual Assignment Company	NC	NIA	MassMutual Holding LLC	Ownership		MMLIC		
		37-1732913				Fern Street LLC		NIA	MassMutual Holding LLC	Ownership		MMLIC	l	
						Sleeper Street LLC	DE DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
0000		46-2252944				Haven Life Insurance Agency, LLC		NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
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						Name of Securities		D	Relation-		Board,	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
-		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Grou		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	e Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000			04-1590850				MassMutual Capital Partners LLC	DE	NIA	MassMutual Holding LLC	Ownership		MMLIC		
0000							MassMutual Ventures Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
0000							Athens Fund Management LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000							Crane Venture Partners LLP	GBR	NIA	MassMutual Ventures Holding LLC	Ownership		MMLIC		
0000							MassMutual Ventures Management LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
							MassMutual Ventures SEA Management Private								1
0000							Limited	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		·
0000							MassMutual Ventures Southeast Asia LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership		MMLIC		
0000							MassMutual Ventures Southeast Asia II LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000			17 1000110				MassMutual Ventures UK LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000			47-1296410				MassMutual Ventures US LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership		MLIC		····· ·····
0000							MassMutual Ventures US II LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		·····
0000							MassMutual Ventures US III LLC	DE DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000							Open Alternatives LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance			188.10		1
0000			04-1590850				MM Rothesay Holdco US LLC	DE	NIA	Company	. Ownership	100.000	MMLIC		·····
0000							Rothesay Limited	GBR	NIA	MM Rothesay Holdco US LLC	Ownership	100.000	MMLIC		·
0000							Rothesay Life Plc	GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
0000							Rothesay Assurance Limited	GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		[
0000							Rothesay MA No.1 Limited	GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
0000							Rothesay MA No.2 Limited	GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		·····
0000							Rothesay MA No.3 Limited	GBR	NIA	Rothesay Life PLC	Ownership	100.000	MMLIC		
0000							Rothesay MA No.4 Limited	GBR	NIA	Rothesay Life PLC	Ownership				·····
0000		••••••					LT Mortgage Finance Limited	GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		·····
0000							Rothesay Property Partnership 1 LLP	GBR	NIA	Rothesay Limited	0wnership	100.000	MMLIC		·····
							Rothesay Foundation	GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		·····
0000							Rothesay Pensions Management Limited	GBR	NIA	Rothesay Limited	Ownership Ownership	100.000 100.000	MMLIC		(
0000							Rothesay Asset Management UK Limited Rothesay Asset Management US LLC	GBR	NIA	Rothesay Limited Rothesay Asset Management UK Limited	Ownership.		MMLIC		(l
0000							MM Catalyst Fund LLC		NIA NIA	MassMutual Holding LLC	Ownership				·
0000			47-1466022				LifeScore Labs. LLC	DE	NIA	MassMutual Holding LLC	Owner ship				
			47-1466022 04-1590850				ML Investors Services. LLC	MA MA	NIA	MassMutual Holding LLC	Owner ship	100.000	MMLIC		
0000			04-1590850				MML Investors services, LLC	MA	NIA.	MML Investors Services. LLC	Owner ship				
			41-2011634				MMLISI Financial Alliances, LLC		NIA	MML Investors Services, LLC	Owner ship	100.000	MMLIC		
0000			41-2011634				MM Asset Management Holding LLC		NIA.	MANL Investors Services, LLC	Ownership		MMLIC		
0000			45-4000072 51-0504477				Barings LLC		NIA NIA	MassMutual Holding LLC	Ownership				
			J1-0J04477				Baring Asset Management (Asia) Holdings	VE	NIA	massimutual Asset management norunny LLC					
0000			98-0524271				Limited	HKG	NIA	Barings LLC	Ownership		MMLIC		, I
			30-0324271				Baring International Fund Managers (Bermuda)		NIA	Baring Asset Management (Asia) Holdings					
0000			98-0457465				Limited		NIA	Limited	Ownership		MMLIC		, I
			30-0437403				LIIII (CU		NIA	Baring Asset Management (Asia) Holdings					
0000			98-0457463				Baring Asset Management (Asia) Limited	HKG	NIA	Limited	Ownership		MMLIC		, I
0000			30-0407403				Baring Asset Management Korea Limited	KOR	NIA.	Baring Asset Management (Asia) Limited	Owner ship	100.000	MMLIC		
							Barings Investment Management (Shanghai)			Dar my ASSET management (ASTA) LIMITED	owner antp		LIV		
0000							Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		, I
							Barings Overseas Investment Fund Management			Dar my ASSET management (ASTA) LIMITED	owner antp		LIV		
0000							(Shanghai) Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC		, I
							(onungnut) Eliintou			Baring Asset Management (Asia) Holdings	. I owner amp				
0000			98-0457707				Baring SICE (Taiwan) Limited		NIA	Limited	Ownership	100.000	MIC		, I
			30 0401101				Daring orde (Tarman) Ennited			Baring Asset Management (Asia) Holdings	owner antp		mmLIV		
0000							Barings Singapore Pte. Ltd.	SGP	NIA	Limited	Ownership	100.000	MIC		, I
							bai ingo oingaporo i to. Ltu.			Baring Asset Management (Asia) Holdings					
0000			98-0236449				Barings Japan Limited	JPN	NIA.	Limited	Ownership		MIC		, I
			00 0200443				but mgo vapan chintou			E.m. rou			mmLIV	1	

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	2	5	4	5	0	I	0	9	10	11	Type	If	14	15	10
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											(Ownership,	is		ls an	
						Name of Securities			Relation-		Board,	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	,
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000	oroup Hamo	0000	Number	TROOD	OIIX	internationaly		don	Entity	Baring Asset Management (Asia) Holdings	Other)	lage			
0000							Barings Australia Holding Company Pty Ltd	AUS	NIA	Limited	Ownership	100.000	MMLIC		
			98-0457456				Barings Australia Pty Ltd	AUS		Baring Australia Holding Company Pty Ltd.	Ownership	100.000	MWLIC		
			80-0875475				Barings Finance LLC	DE		Baring Australia Holding Company Pty Ltd Barings LLC	Ownership		MWLIC		
0000			00-06/04/0				BCF Europe Funding Limited			Barings Finance LLC			MMLIC		
0000										Barings Finance LLC	Ownership		MWLIC		
							BCF Senior Funding LLC	DE	NIA	Barings Finance LLC	Ownership				
0000							BCF Senior Funding I Designated Activity	101				400,000	MILIC		
							Company	IRL	NIA	Barings Finance LLC	Ownership				
0000	-		04-3238351				Barings Securities LLC	DE	NIA	Barings LLC	Ownership				
			98-0437588				Barings Guernsey Limited	GGY		Barings LLC	Ownership				
0000	-						Barings Europe Limited	GBR	NIA	Barings Guernsey Limited	Ownership				
0000							Barings Asset Management Spain SL	ESP		Barings Europe Limited	Ownership				
							Barings Italy S.r.I.	ITA		Barings Europe Limited	Ownership				
0000							Barings Sweden AB	SWE		Barings Europe Limited	Ownership		MMLIC		
							Barings Finland Oy	FIN		Barings Europe Limited	Ownership		MMLIC		
0000							Barings Netherlands B.V.	NLD	NIA	Barings Europe Limited	Ownership		MMLIC		
0000							Barings Real Estate UK Holdings Limited	DE		Barings Europe Limited	Ownership				
0000							BREAE AIFM LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership				
							Barings Real Estate Advisers (Continental								
0000			98-0654401				Europe) Limited	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership		MMLIC		
			98-0654388				Barings Real Estate Advisers Europe LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership		MMLIC		
							Barings Real Estate Advisers Europe Finance			° °	·				
0000			98-0654412				LLP .	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership.		MMLIC		
0000			98-1194368				Barings Real Estate GmbH	DEU		Barings Real Estate UK Holdings Limited	Owner ship	100.000	MMLIC		
			98-0241935				Baring Asset Management Limited	GBR	NIA	MassMutual Holdings (Bermuda) Limited	Ownership	100.000	MMLIC		
0000							Barings European Direct Lending 1 GP LLP	GBR		Baring Asset Management Limited	Ownership	100.000	MMLIC		
			98-1012393				Barings Global Advisors Limited	GBR		Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000			98-0457328				Baring International Investment Limited	GBR		Baring Asset Management Limited	Ownership		MMLIC		
			30 043/020				Baring International Investment Management			bar mg Asset management Eninted	owner amp				
0000			98-0457587				Holdings	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
			30-043/30/				norunigs			Baring International Investment Management	owner sinp				
0000			98-0457576				Baring Asset Management UK Holdings Limited .	GBR	NIA	Holdings	Ownership	100.000	MMLIC		
			30-043/3/0				barning Asset management on norunings Limited .	ubn	NIA	Baring Asset Management UK Holdings Limited	owner simp				
0000			98-0465031				Baring Assat Management Cubl	DELL	NIA	baring Asset wanagement ok Hordings Limited	Ownership		MMLIC		
			98-0465031				Baring Asset Management GmbH	DEU	NIA		Ownership				
0000			98-0524272				Baring International Fund Managers (Ireland) Limited	IDI	NIA	Baring Asset Management UK Holdings Limited	0	100.000	MILIC		
			98-0524272					IRL	NIA		Ownership		MWLTC		
								o		Baring Asset Management UK Holdings Limited			188.10		
							Baring Asset Management Switzerland Sàrl	CHE	NIA		Ownership		MMLIC		
										Baring Asset Management UK Holdings Limited					
			98-0497550				Baring France SAS	FRA	NIA		Ownership				
0000			98-0457586				Baring Fund Managers Limited	GBR	NIA	Baring Asset Management Limited	Ownership		MMLIC		
0000							BCGSS 2 GP LLP	GBR		Baring Fund Managers Limited	Ownership		MMLIC		
			98-0457574				Baring Pension Trustees Limited	GBR		Baring Asset Management Limited	Ownership		MMLIC		
			98-0457578				Baring Investment Services Limited	GBR		Baring Asset Management Limited	Ownership		MMLIC		
0000							Barings Core Fund Feeder GP S.à.r.l	LUX	NIA	Baring Asset Management Limited	Ownership		MMLIC		
0000							Barings BME GP S.à.r.l.	GBR		Baring Asset Management Limited	Ownership				
							Barings GPC GP S.à. r.l	LUX		Baring Asset Management Limited	Ownership				
							Barings European Core Property Fund GP Sàrl .	GBR	NIA	Baring Asset Management Limited	Ownership				
							Barings Investment Fund (LUX) GP S.à. r.I	LUX		Baring Asset Management Limited	Ownership		MMLIC		
							Barings Umbrella Fund (LUX) GP S.à.r.l.	LUX		Baring Asset Management Limited	Ownership		MMLIC		
							GPLF4(S) GP S.à r.l	LUX		Baring Asset Management Limited	Ownership.	100.000	MMLIC		
							PREIF Holdings Limited Partnership	GBR	NIA	Baring Asset Management Limited	Ownership		MMLIC		
0000			98-0432153				Barings (U.K.) Limited	GBR		Barings Guernsey Limited	Ownership	100.000	MMLIC		1
0000							Newpoint Real Estate Capital	DE		Barings LLC	Ownership	100.000	MMLIC		
							nonpornt noar Lotato Dapitar	<i>V</i> L	nin	Dui mgo LLO	owner on the		miller V		

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											(Ownership,	is		ls an	
						Name of Securities			Relation-		Board,	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000			04-3238351	3456895	-	,	Barings Real Estate Advisers Inc.	CA	NIA	Barings Real Estate Advisers LLC	Ownership		WILIC	. /	
										Massachusetts Mutual Life Insurance					
0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			81-2244465				Chassis Acquisition Holding LLC	DE	NIA	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			81-4258759				CRA Aircraft Holding LLC	DE	NIA	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Company	Ownership		MMLIC		
0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance		10.005	100 10	1	
			46-2344300				Intermodal Holdings II LLC	DE	NIA	Company	Ownership		MMLIC		
			47-3055009 47-3055009				Milestone Acquisition Holding, LLC.	DE DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		· · · · · · · · · · · · ·
			47-3055009				Milestone Acquisition Holding, LLC.	DE	NIA	Barings LLC	Influence		MMLIC		
							Nevetien Companies Inc.	MD	NIA	Massachusetts Mutual Life Insurance Company	Ownership.		MMLIC		
							Novation Companies, Inc.	ND	NIA	Massachusetts Mutual Life Insurance	Ownersnip		MMLIC	•••••	
			46-5460309				Red Lake Ventures, LLC	DE	NIA	Company	Ownership/Influence		MMLIC		
			46-5460309				Red Lake Ventures, LLC	DE		Barings LLC	Influence		MMLIC		
			40-5400509				neu Lake ventures, LLC	UE		Massachusetts Mutual Life Insurance	IIII Tuelice		WWLIC		
			81-4065378				Reminaton L & W Holdings LLC	CT	NIA	Company	Ownership/Influence		MMLIC		
0000			81-4065378				Remington L & W Holdings LLC	CT		Barings LLC	Influence		MMLIC		
			01 1000010							Massachusetts Mutual Life Insurance					
0000							Tamiami Citurus, LLC	DE	NIA	Company	Ownership		MMLIC		
							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		
							Teaktree Acquisition, LLC	DE	NIA	Barings LLC	Influence.		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Techquity, LP	DE	NIA	Company	Ownership		MMLIC		
							Techquity, LP	DE		Barings LLC	Influence		MMLIC		
0000			46-0687392				Validus Holdings Company LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Validus Pharmaceuticals LLC	DE	NIA	Company	Ownership/Influence		MMLIC		
							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		
							VGS Acquisition Holding, LLC	DE		Barings LLC	Management	100,000	MMLIC		
							Aland Royalty GP, LLC	DE		Barings LLC	Ownership		MMLIC		
							Alaska Future Fund GP, LLC BAI GP. LLC	DE		Barings LLC Barings LLC	Ownership Ownership		MMLIC		
							BAT GP, LLC BAT Funds SLP. LLC	DE		Barings LLC Barings LLC	Ownership		MMLIC		
							Baring Asset-Based Income Fund (US) GP, LLC .	DE		Barings LLC Barings LLC	Ownership		MMLIC		1
							Barings Investment Series LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Capital Investment LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Emerging Generation Fund GP, LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Global Investment Funds (U.S.)								Τ
			04-1590850				Management LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
							Barings ABIF SLP, LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings CLO Investment Partners GP, LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Core Property Fund GP LLC	DE		Barings LLC	Ownership		MMLIC		
							Barings Direct Lending GP Ltd	CYM	NIA	Barings LLC	Ownership		MMLIC		
							-			Massachusetts Mutual Life Insurance	· ·				
			84-3784245				Barings Emerging Generation Fund LP	DE DE	NIA	Company	Ownership		MMLIC		
			84-3784245				Barings Emerging Generation Fund LP	DE	NIA	Barings LLC	Management		MMLIC		
							Barings Global Energy Infrastructure	1							
		1	1	1		1	Advisors, LLC	DE	NIA	Barings LLC	Ownership.		MMLIC	1	1

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											(Ownership,	is		ls an	
									Deletion						
						Name of Securities			Relation-		Board,	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	auired?	,
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)			(Y/N)	*
Code	Group Name	Code	Inumber	K99D	CIK	international)		tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(1/N)	
							Barings North American Private Loan Fund								
							Management, LLC	DE	NIA	Barings LLC	Ownership		. MMLIC		
							Barings North American Private Loan Fund								
							Management II, LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000							Barings Global Real Assets Fund GP, LLC	DE.	NIA	Barings LLC	Ownership	100.000	MMLIC		
							Barings GPSF	DE	NIA	Barings LLC	Ownership.	100.000	MLIC		
0000							Barings Private Credit Corporation	MD	NIA	Barings LLC	Ownership.		MILIC		
							bar nigs if tvate credit corporation	mD		Massachusetts Mutual Life Insurance	owner simp				
0000			04 5000000				Designer Opell Dusinger Fund 110	DE	NIL A		0	40,000	MILIC		
0000			84-5063008				Barings Small Business Fund LLC	DE	NIA	Company	Ownership				
0000			84-5063008				Barings Small Business Fund LLC	DE	NIA	Barings LLC	Management		MMLIC		
0000			98-0536233				Benton Street Advisors, Inc.	CYM	NIA	Barings LLC	Ownership		MMLIC		
							BRECS VII GP LLC	DE	NIA	Barings LLC	Ownership				
							CCM Fund I REIT Manager LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
							CHY Venture GP LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
							CREF X GP LLC		NIA.	Barings LLC	Ownership		MILIC		
			04-1590850				Great Lakes III GP, LLC		NIA	Barings LLC	Ownership.	100.000	MILIC		
			04-1000000				Lake Jackson LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000			04-1590850				Loan Strategies Management LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000			41-2280126				Mezzco III LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
			80-0920285				Mezzco IV LLC	DE	NIA	Barings LLC	Ownership				
0000							Mezzco Australia II LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
. 0000							RECSA-NY GP LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
			04-1590850				SBNP SIA II LLC	DE	NIA	Barings LLC	Ownership		MMLIC		
0000							SBNP SIA III LLC	DE	NIA.	Barings LLC	Ownership.		MIC		
							Somerset Special Opportunities Management LL			bai niga eeo	owner arrp				
0000			04-1590850				Somerset Special Opportunities management LL		NIA	Barings LLC	Ownership		MMLIC		
			04-1590850						NIA		Uwnersnip		. MMLIC		
							.			Massachusetts Mutual Life Insurance					
0000							Amherst Long Term Holdings, LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-3313782				MassMutual International LLC	DE	NIA	Company	Ownership		MMLIC	Y	
							MassMutual Solutions LLC	DE	NIA	MassMutual International LLC	Ownership		MMLIC		
0000							Haven Technologies Asia Limited	HKG	NIA	MassMutual International LLC	Ownership	100.000	MMLIC		
							Yunfeng Financial Group Limited	HKG	NIA	MassMutual International LLC	Ownership.		MMLIC		
							MassMutual Asia Limited (SPV)	HKG	NIA	MassMutual International LLC	Ownership	100.000	MIC		
							massmutual Asia Limiteu (SIV)			Massachusetts Mutual Life Insurance	owner simp				
0000		1	04 1500050	1			MM Magganing Investor 11, 110	DF	NIT A		Ownershie	100 000			
0000			04-1590850				MML Mezzanine Investor II, LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				MML Mezzanine Investor III, LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			27-3576835				MassMutual External Benefits Group LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				100 w. 3rd Street LLC	DE	NIA	Company	Ownership		MLIC		
			04 1000000							Massachusetts Mutual Life Insurance	owner simp				
0000			04 1000000				0100 Orand Manager 11.0	DE	NIL A		0	00 100	MMLIC		
0000			04-1590850				2160 Grand Manager LLC		NIA	Company	Ownership		. MMLIC		,
										Massachusetts Mutual Life Insurance					
			82-2432216				300 South Tryon Hotel LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				300 South Tryon LLC	DE	NIA	Company	Ownership		MMLIC		
							,			Massachusetts Mutual Life Insurance					
0000		1		1		1	Almack Mezzanine Fund II Unleveraged LP		NIA	Company	Ownership/Influence		MMLIC		1
							Barings Affordable Housing Mortgage Fund I			Massachusetts Mutual Life Insurance					
0000		1		1		1	LLC	DE	NIA		Ownershie	100,000	MMLIC		1
0000									NIA	Company	Ownership		. ₩₩LIC		
1							Barings Affordable Housing Mortgage Fund I	DE	NIA	Barings LLC			MMLIC	1	
											Management				

1 Group Code 0000 0000 0000 0000	2 Group Name		4	5	6	7 Name of Securities	8	9	10	11	12 Type of Control	13 If Control	14	15	16
Code 0000 0000 0000		Company													
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Code 0000 0000 0000		Company							Relation-		Board,	Owner-		SCA	
Code 0000 0000 0000		Company				Exchange		Domi-	ship		Management,	ship		Filing	
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0000 0000 0000 0000	Group Name	Code Nu		ederal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
0000 0000 			umber F	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
0000 0000 							Barings Affordable Housing Mortgage Fund II			Massachusetts Mutual Life Insurance					
			902329				LLC	DE	NIA	Company	Ownership		MMLIC		
							Barings Affordable Housing Mortgage Fund II								
0000		61-19	902329				LLC	DE	NIA	Barings LLC	Management		MMLIC		
0000							Barings Affordable Housing Mortgage Fund III			Massachusetts Mutual Life Insurance	Ŭ				
0000		85-30	036663				LLC	DE	NIA	Company	Ownership		MMLIC		
							Barings Affordable Housing Mortgage Fund III								
		85-30	036663					DE	NIA	Barings LLC	Management		MIC		
										Massachusetts Mutual Life Insurance					
		36-49	868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Company	Ownership/Influence		MIC		
			868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	C.M. Life Insurance Company	Ownership/Influence	1.100			
			868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Barings LLC	Management		MMLIC		
							Barings Emerging Markets Corporate Bond Fund	UĽ	NIA	Massachusetts Mutual Life Insurance	และเลยอแอกาเ				
.0000							bai mgs Emerging markets Corporate Bond Fund	IRL	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence		MMLIC	1	
							Deniana Francian Madata Ora conta Dand Frant	IRL	NIA	company	ownership/inituence		. WWILTC		
0000							Barings Emerging Markets Corporate Bond Fund	IDI	NIA	Barings LLC	N		MMLIC		
								IRL	NIA		Management		MMLIC		
							Barings European Real Estate Debt Income Fund			Massachusetts Mutual Life Insurance					
0000								LUX	NIA	Company	Ownership/Influence	100.000	MMLIC		
							Barings European Real Estate Debt Income Fund								
								LUX	NIA	Barings LLC	Influence		MMLIC		
							Babson Capital Global Special Situation			Massachusetts Mutual Life Insurance					
			206017				Credit Fund 2	DE	NIA	Company	Ownership/Influence		. MMLIC		
							Babson Capital Global Special Situation								
			206017				Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	1.500	MMLIC		
							Babson Capital Global Special Situation								
			206017				Credit Fund 2	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
			506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	Company	Ownership/Influence		MMLIC		
			506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
		37-15	506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance	Ŭ				
							Barings US High Yield Bond Fund	IRL	NIA	Company	Ownership/Influence		MMLIC		
.0000							Barings US High Yield Bond Fund	IRL	NIA.	Barings LLC	Management		MMLIC		
							Babson CLO Ltd. 2013-1	CYM	NIA	Barings LLC	Influence		MIC		3
.0000							Babson CLO Ltd. 2014-1	CYM	NIA	Barings LLC	Influence		MLIC	.	2
0000						••••••	Babson CLO Ltd. 2015-1	CYM	NIA	Barings LLC	Influence		MILIC		4
							Babson CLO Ltd. 2015-11	CYM	NIA	Barings LLC	Influence		MLIC	-	5
							Babson CLO Ltd. 2016-1	CYM	NIA	Barings LLC	Influence.		MMLIC		
			····· ····				Babson CLO Ltd. 2016-1	CYM	NIA	Barings LLC	Influence.		MMLIC	·	1
						•••••	Barings CLO Ltd. 2017-1	CYM	NIA	Barings LLC	Influence.		MMLIC		
							Barings CLO 2018-111	CYM	NIA	Barings LLC	Influence.		MMLIC	-	
							Barings CLO 2018-111 Barings CLO 2018-1V	CYM	NIA	Barings LLC Barings LLC	Influence.		MMLIC		
			473665										MMLIC	-	
			4/3000				Barings CLO 2019-11	CYM	NIA	Barings LLC	Influence				
							Barings CLO 2019-111	CYM	NIA	Barings LLC	Influence		MMLIC	-	+
0000							Barings CLO 2019-IV	CYM	NIA	Barings LLC	Influence		MMLIC		
							Barings CLO 2020-1	CYM	NIA	Barings LLC	Influence		MMLIC	-	· · · · · · · · · · · · · · · · · · ·
							Barings CLO 2020-11	CYM	NIA	Barings LLC	Influence		MMLIC		
							Barings CLO 2020-III	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Barings CLO 2020-IV	CYM	NIA	Barings LLC	Influence		MMLIC		
							Barings CLO 2021-I	CYM	NIA	Barings LLC	Influence		MMLIC		
							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
							Babson Euro CLO 2014-II BV	NLD	NIA	Barings LLC	Influence		MMLIC		
							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
							Babson Euro CLO 2016-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		

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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence.	Percen-	Ultimate Controlling	quired?	
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0000			36-037260H				Barings Euro CLO 2019-I BV	IRL	NIA	Barings LLC	Influence		MMLIC		
							Barings Euro CLO 2019-II BV	IRL	NIA	Barings LLC	Influence		MMLIC		
0000							Barings Euro CLO 2020-1 DAC	IRL	NIA	Barings LLC	Influence		MMLIC		
			37-15576VH				Barings Euro CLO 2021-1 DAC	IRL		Barings LLC	Influence.		MMLIC		
							bar nigo Edro deo Eder i bito			Massachusetts Mutual Life Insurance					
0000			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Company	Ownership/Influence	99.300	MIC		
		••••••						UE					MMLIC		
0000			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Barings LLC	Management				
. 1										Massachusetts Mutual Life Insurance					
							Barings Euro Value Add II (BREEVA II)	LUX	NIA	Company	Ownership/Influence		MMLIC		
							Barings Euro Value Add II (BREEVA II)	LUX	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
0000							Barings Euro Value Add II (BREEVA II)	LUX		Barings LLC	Management		MMLIC		
							Barings Real Estate European Value Add I SCSp			Massachusetts Mutual Life Insurance		1			·····
0000							bai nys near Estate European varue Auu i Sosp	000				44 700	100 10		
0000								GBR	NIA	Company	Ownership/Influence				· · · · · · · · · · · · · · · · · · ·
. 1							Barings Real Estate European Value Add I SCSp								
								GBR	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
. 1							Barings Real Estate European Value Add I SCSp								
							3	GBR	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance	management				
0000			05 0440000					05				100,000	100 10		
0000			85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	Company	Ownership/Influence	100.000	MMLIC		
0000			85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	C.M. Life Insurance Company	Ownership		. MMLIC		
			85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	Barings LLC	Management		MMLIC		
0000			82-5330194				Barings Global Em. Markets Equity Fund	NC	NIA	Barings LLC	Management		MMLIC		
. 1							Barings Global Energy Infrastructure Fund I			Massachusetts Mutual Life Insurance	Ū.				
0000			98-1332384				LP	CYM	NIA	Company	Ownership/Influence	99.200	MMLIC		
			30-1332304							company	ownership/initidence				
							Barings Global Energy Infrastructure Fund I	0.01					188.10		
0000			98-1332384				LP	CYM		Baring Asset Management Limited	Management		. MMLIC		
							Barings Global Dividends Champion Fund	IRL		Barings LLC	Management		MMLIC		
0000							Barings Global Inv. Grade Strat Fund	IRL	NIA	Barings LLC	Management		MMLIC		
. 1										Massachusetts Mutual Life Insurance	Ū.				
							Barings Global Private Loan Fund	LUX	NIA	Company	Ownership/Influence		MMLIC		
							Barings Global Private Loan Fund	LUX	NIA	Barings LLC	Management.		MILIC		
		••••••					barings grobal Private Loan Fund	LUX	NIA		management		. WWLIG		
										Massachusetts Mutual Life Insurance		10			
0000			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	Company	Ownership/Influence		. MMLIC		
0000			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	C.M. Life Insurance Company	Ownership	7.500	MMLIC		
			82-3867745				Barings Global Real Assets Fund LP	DE	NIA	Barings LLC	Management		MMLIC		
							Barings Global Special Situations Credit Fund			Massachusetts Mutual Life Insurance	-				
							3	IRL	NIA	Company	Ownership/Influence		MMLIC		1
							Devinge Clebel Createl Citystians Ordit 4			Massachusetts Mutual Life Insurance	owner amp/ minuence				
0000							Barings Global Special Situations Credit 4	DF				07.000	148.10		1
							Delaware	DE	NIA	Company	Ownership		. MMLIC		
ļ							Barings Global Special Situations Credit 4								1
							Delaware	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
							Barings Global Special Situations Credit 4								1
.0000							Delaware	DE	NIA	Barings LLC	Management		MMLIC		
							Barings Global Special Situations Credit 4			Massachusetts Mutual Life Insurance		1			
0000							LUX		NIA		Ownership	17.400	MMLIC		1
								LUX	NIA	Company	Ownership		. MMLIC		
. 1							Barings Global Special Situations Credit 4								
							LUX	LUX	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
ļ							Barings Global Special Situations Credit 4	1	1						
0000							LUX	LUX	NIA	Barings LLC	Management		MMLIC		1
							Barings Global Special Situations Credit Fund								1
0000							Darings grouar opecial Situations credit Fund	ID	NIA	Baringe II C	Managament		MMLIC		
							3	IRL		Barings LLC	Management				
0000							Barings Middle Market CLO 2017-I Ltd & LLC	CYM		Barings LLC	Influence		MMLIC		
0000							Barings Middle Market CLO 2018-1	CYM		Barings LLC	Influence		MMLIC		
0000							Barings Middle Market CLO 2019-1	CYM	NIA	Barings LLC	Influence	1	MMLIC		

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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
										Massachusetts Mutual Life Insurance					
			38-4010344				Barings North American Private Loan Fund LP .	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			38-4010344				Barings North American Private Loan Fund LP .	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
							-			Massachusetts Mutual Life Insurance	-				
0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Braemar Energy Ventures I, L.P.	DE	NIA	Company	Ownership/Influence	89.800	MMLIC		
0000							Braemar Energy Ventures I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.300	MMLIC		
		1					Braemar Energy Ventures I, L.P.	DE	NIA	Barings LLC	Management		MMLIC		- I
0000							Barings European Core Property Fund SCSp	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	9.800	MMLIC		
0000		1					Barings European Core Property Fund SCSp	LUX	NIA	C.M. Life Insurance Company	Ownership	0.600	MMLIC		
							Barings European Core Property Fund CCOp	LUX	NIA	Barings Real Estate Advisers LLC	Management.		MMLIC		
			38-4059932				Benchmark 2018-B2 Mortgage Trust	NY	NIA	Barings Hear Estate Advisers LLC	Influence		MMLIC		
0000			00 4000002				Benchmark 2018-B4	NY	NIA	Barings LLC	Influence		MMLIC		
			38-4096530				Benchmark 2018–B8	NY	NIA	Barings LLC	Influence		MMLIC		
0000			04-1590850				Brasel ton Point LLC		NIA	Barings LLC	Ownership	100.000	MWLIC		
			20-5578089				Barings Core Property Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MWLIC		
			20-5578089				Barings Core Property Fund LP Barings Core Property Fund LP	DE	NIA	Barings Real Estate Advisers LLC					
			20-00/8089				Barings Core Property Fund LP	UE	NIA	Massachusetts Mutual Life Insurance	Management		. MMLTC		
0000			10 5100010					05				05,000	188.10		
0000 0000			46-5432619 46-5432619				Cornerstone Real Estate Fund X LP	DE DE	NIA	Company	Ownership/Influence		. MALIC		
			46-5432619				Cornerstone Real Estate Fund X LP		NIA	C.M. Life Insurance Company	Ownership				
0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	Barings Real Estate Advisers LLC	Management		. MMLIC		
										Massachusetts Mutual Life Insurance			188.10		
0000			35-2531693				Cornerstone Permanent Mortgage Fund III LLC .	MA	NIA	Company	Ownership/Influence		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000			61-1793735				Cornerstone Permanent Mortgage Fund IV LLC	MA	NIA	Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000			82-2932156				GASL Holdings, LLC	DE	NIA	Company	Ownership/Influence		. MMLIC		
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Barings LLC	. Management		. MMLIC		
		1		1						Massachusetts Mutual Life Insurance				1	
0000			37-1708623				Great Lakes III, L.P.	DE	NIA	Company	Ownership/Influence		MMLIC		
0000		.	37-1708623				Great Lakes III, L.P.	DE	NIA	Barings LLC	Management		. MMLIC		
							JPMCC Commercial Mortgage Securities Trust				1			1	
			38-4041011				2017–JP7	NY	NIA	Barings LLC	Influence		. MMLIC		
							JPMDB Commercial Mortgage Securities Trust				1			1	
			38-4032059				2017-C5	NY	NIA	Barings LLC	Influence		. MMLIC		
		1	1	1						Massachusetts Mutual Life Insurance				1	
			82-1512591				KKR-MM Vector LP	DE	NIA	Company	Ownership/Influence		MMLIC		
		1	1	1						Massachusetts Mutual Life Insurance				1	
			46-4255307				Marco Hotel LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	1			1	
	l		04-1590850				Miami Douglas One GP LLC	DE	NIA	Company	Ownership		MMLIC		
			04-1590850				Miami Douglas One GP LLC	DE	NIA	C.M. Life Insurance Company	Ownership.		MMLIC		
										Massachusetts Mutual Life Insurance					
			04-1590850				Miami Douglas Two GP LLC	DE	NIA	Company	Ownership		MMLIC		
		1	04-1590850				Miami Douglas Two GP LLC		NIA	C.M. Life Insurance Company	Ownership		MMLIC		1
		1								Massachusetts Mutual Life Insurance]		
		1	04-1590850	1			Miami Douglas One LP	DE	NIA	Company	Ownership		MMLIC	1	
0000			04-1590850				Miami Douglas One LP	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
		.	000000				miami Dugias vie Li			o.m. Life mourance company	omidi allip				

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Group		Company	ID	Federal	(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
	•								Massachusetts Mutual Life Insurance	,	Ť			
			04-1590850			Miami Douglas Two LP	DE	NIA	Company	Ownership		MMLIC		
									Massachusetts Mutual Life Insurance					
			04-1590850			MM BIG Peninsula Co-Invest Member LLC	MA	NIA	Company	Ownership		MMLIC		
0000			04-1590850			MM BIG Peninsula Co-Invest Member LLC	MA	NIA	C.M. Life Insurance Company	Ownership	3.000	MMLIC		
									Massachusetts Mutual Life Insurance					
0000			85-3886824			NYDIG Digital Assets Fund II LP	DE	NIA	Company	Ownership	100,000	MMLIC		
0000			04-1590850			Miami Douglas Two LP	DE	NIA	C.M. Life Insurance Company	Ownership	0.000	MIC		
									Massachusetts Mutual Life Insurance					
			45-3623262			HB Naples Golf Owner LLC	DE	NIA	Company	Ownership		MLIC	1	
									Massachusetts Mutual Life Insurance	P	1			
						MM CM Holding LLC	DE	NIA	Company	Ownership.		MLIC	1	
						and the second s			Massachusetts Mutual Life Insurance					
0000			81-3000420			MM Debt Participations LLC	DE	NIA	Company	Ownership/Influence		MILIC		
0000			81-3000420			MM Debt Participations LLC	DE	NIA	Barings LLC	Management		MILIC		
			01 0000420						Massachusetts Mutual Life Insurance	management				
			82-4411267			RB Apartments LLC	DE	NIA	Company	Ownership		MIC		
			02-4411207				UL		Massachusetts Mutual Life Insurance	owner simp		. WWLIC		
0000			75-2901061			Reston Arboretum LLC	DE	NIA	Company	Ownership		MMLIC		
			75-2901001				UE		Massachusetts Mutual Life Insurance	owner simp	100.000	. WWLIG		
0000			54-2055778			Rockville Town Center LLC	VA	NIA	Company	Ownership		MMLIC		
			54-2055776			ROCKVITTE TOWN CENTER LLC	VA	NIA	Massachusetts Mutual Life Insurance	owner snip	100.000	. WWILTC		
			20-8856877			Somerset Special Opportunities Fund L.P	DE	NIA	Company	Ownership/Influence		MMLIC		
			20-8856877			Somerset Special Opportunities Fund L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.900	MMLIC		
0000			04-1590850			SouthPointe Industrial LLC	DE		Barings LLC	Ownership		MMLIC		
			04-1090600			SouthPointe Industrial LLC		NIA	Massachusetts Mutual Life Insurance	owner snip	100.000	. WWILTC		
0000			35-2553915			Ten Fan Pier Boulevard LLC	DE	NIA	Company	Ownership		MMLIC		
			41-2280127			Tower Square Capital Partners III, L.P.	DE	NIA	Barings LLC	Management	100.000	MMLIC		
0000			41-2280127			Tower Square Capital Partners III, L.P.	DE	NIA	MassMutual Holding LLC	Ownership/Influence		MMLIC		
			41-2200127			Tower Square Capital Faithers III, L.F		NIA	Massachusetts Mutual Life Insurance	owner ship/ initiaence		. WWLIG		
0000			41-2280129			Tower Square Capital Partners IIIA, L.P	DE	NIA	Company	Ownership/Influence		MMLIC		
0000			41-2280129			Tower Square Capital Partners IIIA, L.P.	DE	NIA.	Barings LLC	Management		MMLIC		
			41-2200123			Tower oquare capital rathers TITA, E.I			Massachusetts Mutual Life Insurance	management.				
0000			04-1590850			Trailside MM Member LLC	DE	NIA	Company	Ownership		MMLIC		
0000			04-1590850			Trailside MM Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC	·	
			- 100000				UL		Massachusetts Mutual Life Insurance	omoranip				
			83-1325764			Washington Gateway Two LLC	DE	NIA	Company	Ownership		MMLIC	1	
			83-1325764			Washington Gateway Two LLC	DE	NIA.	C.M. Life Insurance Company	Ownership		MMLIC	• •••••	
			00-1020/04			asington valeway inv LLC			Massachusetts Mutual Life Insurance	omiorality			· [·····	1
			32-0574045			Washington Gateway Three LLC	DE	NIA	Company	Ownership		MMLIC	1	
			32-0574045			Washington Gateway Three LLC	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
			32-03/4043			Washington Gateway Innee LLC	UL		Massachusetts Mutual Life Insurance	owner ship		. WWLIG		
0000			04-1590850			West 46th Street Hotel LLC	DE	NIA	Company	Ownership		MMLIC		
			04-1090600			Babson Capital Loan Strategies Master Fund LP		NIA	company	owner ship	100.000	. WWLIG		
0000						Dauson Capital Luan Strategies Master FUNG LP	CYM	NIA	Barings LLC	Management		MMLIC	1	
						Barings China Aggregate Bond Private		NIA	Dai myo LLU	manayonollt			-	
0000						Securities Investment Fund		NIA	Barings LLC	Management	1	MMLIC	1	
						Barings European Growth Trust Fund	GBR		Barings LLC Barings LLC	Ownership/Influence	.22.500	MMLIC	• •••••	
			47-3790192			Barings Global High Yield Fund	GBR		Barings LLC Barings LLC	Ownership/Intidence Management		MMLIC	- [
			41-3190192			CCIC Fund		NIA NIA	Barings LLC	Ownership/Influence		MMLIC	-	
							CHN	NIA	Massachusetts Mutual Life Insurance	owner snip/intiuence	000	. WWLIG	•	
0000			71 1010104				DE	NILA		0	11 000	MMLIC	1	
			71-1018134			Great Lakes II LLC	DE DE	NIA	Company	Ownership		MMLIC	-	
0000			71-1018134			Great Lakes II LLC	UE	NIA	C.M. Life Insurance Company	Ownership	1.000			

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						Exchange		Domi-	ship		Management,	ship		Filing	
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
	•					, , , , , , , , , , , , , , , , , , ,				Massachusetts Mutual Life Insurance	,		• • • • • • •		
0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Company	Ownership	40.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			36-4823011				50 Liberty LLC	DE	NIA	Company	Ownership		MMLIC		
0000			36-4823011				50 Liberty LLC		NIA	C.M. Life Insurance Company	Ownership.		MILIC		
			00 4020011							Massachusetts Mutual Life Insurance	owner amp				
0000			87-0977058				Barings Hotel Opportunity Ventures	DE	NIA	Company	Ownership		MMLIC		
			01-0911030				bailings noter opportunity ventures	VE	NIA	Massachusetts Mutual Life Insurance	owner simp				
0000							Designs Orlifernia Masterna Fred IV	~	NUA		0	100,000	MMLIC		
							Barings California Mortgage Fund IV	CA	NIA	Company	Ownership	100.000			
0000				1				1.1.17		Massachusetts Mutual Life Insurance		00.400	144 10	1	
0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	LUX	NIA	Company	Ownership		MMLIC		
							Barings Umbrella Fund LUX SCSp SICAV RAIF	LUX	NIA	C.M. Life Insurance Company	Ownership	2.300	. MMLIC		
				1				1		Massachusetts Mutual Life Insurance			1	1	
0000			82-2285211				Calgary Railway Holding LLC	DE	NIA	Company	Ownership				
			82-2285211				Calgary Railway Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000			82-3307907				Cornbrook PRS Holdings LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			95-4207717				Cornerstone California Mortgage Fund LLC	CA	NIA	Company	Ownership		WILIC		
			00 1201111							Massachusetts Mutual Life Insurance	owner enrip				
			95-4207717				Cornerstone California Mortgage Fund II LLC .	CA	NIA	Company	Ownership		MMLIC		
			35-4201111				Cornerstone California Mortgage Fund III LLC	vn		Massachusetts Mutual Life Insurance	owner simp				
			95-4207717				connerstone carrionna mortgage Fund III LLC	C1	NIA		Ownership		MMLIC		
			95-420//1/					CA	NIA	Company Massachusetts Mutual Life Insurance	Ownersnip		MWLTC		
			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	Company	Ownership				
			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership		. MMLIC		
										Massachusetts Mutual Life Insurance					
0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Company	Ownership		MMLIC		
0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NI A	Barings LLC	Management		. MMLIC		
										Massachusetts Mutual Life Insurance					
			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Company	Ownership				
0000			61-1750537				Cornerstone Permanent Mortgage Fund II	MA	NIA	Barings LLC	Management		MMLIC		
		1		1						Massachusetts Mutual Life Insurance					
0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Company	Ownership		MMLIC	. 1	
			81-0890084	1			CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership.		WILIC		
										Massachusetts Mutual Life Insurance					
			20-0348173	1			CREA/PPC Venture LLC	DE	NIA	Company	Ownership		MMLIC	1	
			23 00-01/0				VIENTI V TUITUI V ELV			Massachusetts Mutual Life Insurance	omoromp				
. 0000		1	82-2783393	1			Danville Riverwalk Venture, LLC	DE	NIA	Company	Ownership.		MMLIC		
			02-2103333				Danvirre niverwark venture, LLC		NIA		omiet attip				
0000		1	00 0047004	1			Fra Dira Davida mat 110	DE	NUA	Massachusetts Mutual Life Insurance	0	00.000			1
0000			20-3347091				Fan Pier Development LLC	DE	NIA	Company	Ownership				
0000			20-3347091				Fan Pier Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	. MMLIC		
				1				1		Massachusetts Mutual Life Insurance				1	
			04-1590850				GIA EU Holdings LLC	DE	NIA	Company	Ownership		MMLIC		
		1		1						Massachusetts Mutual Life Insurance			1		1
0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Company	Ownership				
		1		1			-			Massachusetts Mutual Life Insurance					
		l	04-1590850				MM Island Member LLC	DE	NIA	Company	Ownership		MMLIC		
				1						Massachusetts Mutual Life Insurance	· · · · · ·		1		T
			83-0881588	1			NoHo West Venture LLC	DE	NIA	Company	Ownership		MMLIC	1	
										Massachusetts Mutual Life Insurance	owner on tp				
		1	80-0948028	1			One Harbor Shore LLC	DE	NIA	Company	Ownership		MMLIC		1
			80-0948028					DE DE	NIA				MMLIC		
			80-0948028				One Harbor Shore LLC		NIA	C.M. Life Insurance Company	Ownership	6.000		<u></u>	

									-						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
											Туре	lf			
											of Control	Control			
											(Ownership,	is		ls an	
						Name of Securities			Relation-		Board,	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC					Names of							5	
~						if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
										Massachusetts Mutual Life Insurance					
0000			04-1590850				PACO France Logistices LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
			82-3393166				Portland 400 Sixth Manager LLC	DE	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	enner ennp				
							Raleigh Crossing Phase Holdings LLC	DE	NIA	Company	Ownership.		MMLIC		
							Salomon Brothers Commercial Mortgage Trust			company	owner arrp.				
							2001-MM	DE	NIA	Barings Real Estate Advisers LLC	Influence		MILIC		
								VE	NIA	Massachusetts Mutual Life Insurance	IIII Iuence				
0000			07 0077700				On any William Obs. 1 Oct. 110		NI2 4		0 march i	04,000	144 10		1 1
0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	Company	Ownership		MMLIC		
0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		· ·····
										Massachusetts Mutual Life Insurance	1			1	1
							STOA Holding LLC	DE	NIA	Company	Ownership		MMLIC		. l
										Massachusetts Mutual Life Insurance	1			1	1
			81-5273574				Three PW Office Holding LLC	DE	NIA	Company	Ownership		MMLIC		<u> </u>
										Massachusetts Mutual Life Insurance					
			35-2484550				Twenty Two Liberty LLC	MA	NIA	Company	Ownership		MMLIC		
			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
			33-2404330							Massachusetts Mutual Life Insurance	owner strip.				
0000			82-3250684				Users Depterment Up I dia a 11.0	DE	NIA		0	100.000	MILIC		
			02-3200084				Unna, Dortmund Holding LLC		NIA	Company	Ownership				
										Massachusetts Mutual Life Insurance	L				
			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	Company	Ownership		MMLIC		
			45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA	C.M. Life Insurance Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance					
0000			51-0529328		0000927972	0Q	MassMutual Premier Main Street Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Premier Strategic Emerging Markets			Massachusetts Mutual Life Insurance					
0000			26-3229251		0000927972	00	Fund	MA	NIA	Company	Ownership.		MMLIC		
										Massachusetts Mutual Life Insurance					
			01-0821120		0000916053	00	MassMutual Select Diversified Value Fund	MA	NIA	Company	Ownership		MMLIC		
			01 0021120		00000100000	0 4				Massachusetts Mutual Life Insurance	owner arrp.				
			04-3512593		0000916053	00	MassMutual Select Fundamental Growth Fund	MA	NIA	Company	Ownership.	2 900	MMLIC		
			04-0012080		0000910003	····		WA	NIA	Massachusetts Mutual Life Insurance	owner sillp	2.800			
0000			40 1710005		0000010050	00	Marchistory I. Ostarat, Mid. Ost., Mature, Etc., 1	МА	NU A		0	00.000	10	1	1
0000			42-1710935		0000916053	UQ	MassMutual Select Mid-Cap Value Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Select Small Capital Value Equity			Massachusetts Mutual Life Insurance	I			1	1
0000			02-0769954		0000916053	0Q	Fund	MA	NIA	Company	Ownership		MMLIC		
										Massachusetts Mutual Life Insurance	1			1	1
0000			04-3584140		0000916053	0Q	MassMutual Select Small Company Value Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
			82-3347422		0000916053	0Q	2005 Fund	MA	NIA	Company	Ownership.		MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
.0000			82-3355639		0000916053	00	2010 Fund	MA	NIA	Company	Ownership.		MMLIC	1	
						~~	MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3382389		0000916053	00	2015 Fund	MA	NIA	Company	Ownership		MILIC	1	
			02-0002009		00009 100000	····		mA	NIA		Umilet SITIP				
0000			00.0000440		0000040050	00	MassMutual Select T. Rowe Price Retirement	MA	NI2 4	Massachusetts Mutual Life Insurance	0 mmmhi	0.000		1	
0000			82-3396442		0000916053	UQ	2020 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance				1	
0000			82-3417420		0000916053	0Q	2025 Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	1			1	1
			82-3430358		0000916053	0Q	2030 Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	1			1	
			82-3439837		0000916053	0Q	2035 Fund	MA	NIA	Company	Ownership		MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	1			1	1 1
			1	1	1	L					1	I		1	1
0000			82-3451779		0000916053	00	2040 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		

1	2	2	4	E	6	7	0	9	10	11	12	13	14	15	16
	2	3	4	5	0	1	0	9	10			15	14	15	10
											Туре				
											of Control	Control			
											(Ownership,	is		ls an	
						Name of Securities			Relation-		Board.	Owner-		SCA	
						Exchange		Domi-	ship		Management,	ship		Filing	
		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
					011/										*
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	^
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3472295		0000916053	0Q	2045 Fund	MA	NIA	Company	Ownership		. MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3481715		0000916053	0Q	2050 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3502011		0000916053	0Q	2055 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement	1		Massachusetts Mutual Life Insurance			1		
0000			82-3525148		0000916053	0Q	2060 Fund	MA	NIA	Company	Ownership				
							MassMutual Select T. Rowe Price Retirement	1		Massachusetts Mutual Life Insurance			1		
0000			82-3533944		0000916053	00	Balanced Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
										Massachusetts Mutual Life Insurance					
			46-4257056				MML Series International Equity Fund	MA	NIA	Company	Ownership.	0.000	MMLIC		
										Massachusetts Mutual Life Insurance					
			47-3517233				MML Series II Asset Momentum Fund	MA	NIA	Company	Ownership.	100.000	MMLIC		
										Massachusetts Mutual Life Insurance	owner arrp.				
0000			47-3529636				MML Series II Dynamic Bond Fund		NIA	Company	Ownership.	0.000	MMLIC		
			47 0020000				mile ocrites in bynamic bond rund			Massachusetts Mutual Life Insurance	owner antp				
. 0000			47-3544629				MML Series II Equity Rotation Fund	MA	NIA	Company	Ownership.		MMLIC		
			47-0044020				mine Serves IT Equity notation rund			Massachusetts Mutual Life Insurance	owner simp.				
0000			47-3559064				MML Series II Special Situations Fund	MA	NIA	Company	Ownership.	97.400	MMLIC		
		•••••	47-3339004				MML Serves IT special Situations Fund	MA	NIA	Massachusetts Mutual Life Insurance	owner simp				
0000			27-1933389		0000916053	00	MassMutual RetireSMART 2035 Fund	MA	NIA	Company	Ownership.	3.000	MMLIC		
		••••••	27-1933309		00009100003	0Q	Massmutual netriesmani 2035 Funu	MA	NIA	Massachusetts Mutual Life Insurance	owner simp.				
0000			27-1932769		0000916053	00	MassMutual RetireSMART 2045 Fund	MA	NIA		Ownership.	8.300	MMLIC		
			21-1932/09		56001 60000	UV	massmutual Ketiresmaki 2045 Fund	MA	NIA	Company	owner snip				
0000			40,000007		0000010050	00	MassMutual RetireSMART 2055 Fund	MA	NI 4	Massachusetts Mutual Life Insurance	0	04 000	10		
0000			46-3289207		0000916053	UV	Massmutual HetireSMARI 2055 Fund	MA	NIA	Company	Ownership		MMLIC		
0000			17 5000005		0000040050					Massachusetts Mutual Life Insurance		55 000	10		
0000			47-5326235		0000916053	UV	MassMutual RetireSMART 2060 Fund	MA	NIA	Company	Ownership		MMLIC		
			15 1010155					l		Massachusetts Mutual Life Insurance					
			45-1618155		0000916053	UQ	MassMutual 20/80 Allocation Fund	MA	NIA	Company	Ownership		. MMLIC		
								1		Massachusetts Mutual Life Insurance					
0000			45-1618222		0000916053	QQ	MassMutual 80/20 Allocation Fund	MA	NIA	Company	Ownership	0.000	. MMLIC		
								1		Massachusetts Mutual Life Insurance			1		
0000			03-0532464		0000916053	0Q	MassMutual RetireSMART In Retirement Fund	MA	NIA	Company	Ownership	1.700	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			45-1618262		0000916053	0Q	MassMutual 40/60 Allocation Fund	MA	NIA	Company	Ownership		MMLIC		
								1		Massachusetts Mutual Life Insurance			1		
			45-1618046		0000916053	00	MassMutual 60/40 Allocation Fund	MA	NIA	Company	Ownership		WILIC		
															1
						1			1	L	1	1	1		

Asterisk	Explanation
1 Massachusetts Mutual Life Insurance Company owns 14.23% of	f the affiliated debt of Jefferies Finance LLC
2 Debt investors own .6% and includes only Great Lakes III,	L.P
3 Debt investors own 9.6% and includes only Babson Capital L	.can Strategies Fund, L.P.
4 Debt investors own .5% and includes only Great Lakes III,	
5 Debt investors own .2% and includes only Great Lakes III,	
5 Debt investors own .2% and includes only Great Lakes III,	

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.

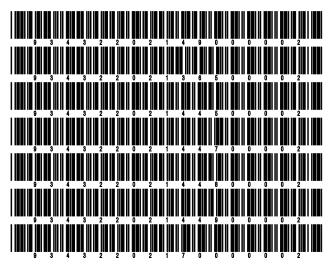
		Response
1.	Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2.	Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3.	Will the Reasonableness of Assumptions Certification required 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?	YES
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
8.	Will the Life PBR Statement of Exemption be filed with the state of domicile by July 1st and electronically with the NAIC with the second quarterly filing per the Valuation Manual (by August 15)? (2nd Quarter Only) The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter.	NO

Explanation:

- 1. Not required.
- 2. This line of business is not written by the company.
- 3. Not required.
- 5. Not required.
- 6. Not required.
- 7. Not required.
- 8. 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 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]
- 7. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]
- 8. Life PBR Statement of Exemption (2nd Quarter Only) [Document Identifier 700]



NONE

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		
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition		
	2.2 Additional investment made after acquisition		
3.	Current year change in encumbrances		
4.	Total gain (loss) on disposals		
5.	Deduct amounts received on disposals		
6.	Total foreign exchange change in book/adjusted rying		
7.	Deduct current year's other than temporary impainment 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

		1	2
			Prior Year Ended
		Year to Date	December 31
1.	Book value/recorded investment excluding accrued interest, December 31 of prior year		
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition		
	2.1 Actual cost at time of acquisition 2.2 Additional investment made after acquisition Capitalized deferred interest and other Accrual of discount	2,752,607	6, 167, 386
3.	Capitalized deferred interest and other		2,348,939
4.	Accrual of discount	(75,482)	
5.	Unrealized valuation increase (decrease)		
6.	Unrealized valuation increase (decrease)	14,644	(3,579,444)
7.	Deduct amounts received on disposals		
8.	Deduct amortization of premium and mortgage interest points and commitment fees		(248,419)
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest	1,071,960	4,950,700
10.	Deduct current year's other than temporary impairment recognized		2,995,711
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)		
12.	Total valuation allowance	(310,345)	
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)	942,315,558	943, 137, 339

SCHEDULE BA - VERIFICATION

	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		
2.	Cost of acquired:		
	2.1 Actual cost at time of acquisition	5,708,705	3,570,271
	2.1 Actual cost at time of acquisition 2.2 Additional investment made after acquisition	6,041,384	
3.	Capitalized deferred interest and other		
4.			
5.	Unrealized valuation increase (decrease)		(1,033,654)
6.	Total gain (loss) on disposals	(131,667)	1, 120, 883
7.	Deduct amounts received on disposals		
8.	Unrealized valuation increase (decrease)		
9.	Total foreign exchange change in book/adjusted carrying value	(143,710)	
10.	Deduct current year's other than temporary impairment recognized		
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)		
12.	Deduct total nonadmitted amounts		
13.	Statement value at end of current period (Line 11 minus Line 12)	176,178,812	163,882,941

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	4,373,767,610	4,131,363,369
2.	Cost of bonds and stocks acquired		1,089,776,923
3.	Accrual of discount	2,287,335	3,969,598
4.	Unrealized valuation increase (decrease)		(21,424,095)
5.	Total gain (loss) on disposals		
6.	Deduct consideration for bonds and stocks disposed of		
7.	Deduct amortization of premium		1,982,401
8.	Total foreign exchange change in book/adjusted carrying value	(6,413,558)	
9.	Deduct current year's other than temporary impairment recognized		7,757,879
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees		5,572,245
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	4,012,419,294	4,373,767,610
12.	Deduct total nonadmitted amounts		
13.	Statement value at end of current period (Line 11 minus Line 12)	4,012,419,294	4,373,767,610

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

		2	3	4	5	6	7	8
	Book/Adjusted	· · ···			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								
1. NAIC 1 (a)	2,034,190,724			(157,166,938).		1,839,528,493		2,004,575,623
2. NAIC 2 (a)	1,855,816,333	1,895,054,920	1,692,425,246					1,802,301,762
3. NAIC 3 (a)		62,164,009						
4. NAIC 4 (a)		4,590,915		(348,401)				101,001,954
5. NAIC 5 (a)		2,066,377		(1,597,757).		91,519,957		
6. NAIC 6 (a)		403,030	1,278,693	4,520,692	16,825,662	20,470,691		18,139,061
7. Total Bonds	4,266,980,943	2,443,006,650	2,361,862,975	5,118,987	4,266,980,943	4,353,243,605		4,366,229,332
PREFERRED STOCK								
8. NAIC 1								
9. NAIC 2								
10. NAIC 3						2,000,000		1,981,668
11. NAIC 4								
12. NAIC 5								2,155,841
13. NAIC 6	121,501			50,567	121,501	172,068		203,087
14. Total Preferred Stock			11,111	1,937,847	5,041,986	6,968,722		5,124,490
15. Total Bonds and Preferred Stock	4,272,022,929	2,443,006,650	2,361,874,086	7,056,834	4,272,022,929	4,360,212,327		4,371,353,822

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

SCHEDULE DA - PART 1

	Short-Te	erm Investments			
	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Actual Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
9199999 Totals	241,309,496	xxx	241,183,901		

SCHEDULE DA - VERIFICATION Short-Term Investments

	Short-renn investments		
		1	2
			Prior Year Ended
		Year To Date	December 31
1.	Book/adjusted carrying value, December 31 of prior year		
2.	Cost of short-term investments acquired	235,244,274	
3.	Accrual of discount	141,449	1,323,403
4.	Unrealized valuation increase (decrease)		
5.	Total gain (loss) on disposals	3,723	
6.	Deduct consideration received on disposals		
7.	Deduct amortization of premium		
8.	Total foreign exchange change in book/adjusted carrying value		
9.	Deduct current year's other than temporary impairment recognized		
10.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	241,309,496	
11.	Deduct total nonadmitted amounts		
12.	Statement value at end of current period (Line 10 minus Line 11)	241,309,496	99,913,683

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1.	Book/Adjusted Carrying Value, December 31, prior year (Line 10, prior year)	
2.	Cost Paid/(Consideration Received) on additions	3, 109, 394
3.	Unrealized Valuation increase/(decrease)	(20,698,918)
4.	SSAP No. 108 adjustments	
5.	Total gain (loss) on termination recognized	(6,206,829)
6.	Considerations received/(paid) on terminations	(2,495,501)
7.	Amortization	
8.	Adjustment to the Book/Adjusted Carrying Value of hedged item	
9.	Total foreign exchange change in Book/Adjusted Carrying Value	
10.	Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4+5-6+7+8+9)	8,145,068
11.	Deduct nonadmitted assets	
12.	Statement value at end of current period (Line 10 minus Line 11)	8,145,068

SCHEDULE DB - PART B - VERIFICATION

1.	Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)			 (10,389,100)
2.	Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - C	umulative Cash Char	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			
	3.14 Section 1, Column 18, prior year	(10,389,101)		
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 plus	(10,389,101)		
	3.25 SSAP No. 108 adjustments			
3.3	Subtotal (Line 3.1 minus Line 3.2)			
4.1	Cumulative variation margin on terminated contracts during the year		(87,914,483)	
4.2	Less:			
	4.21 Amount used to adjust basis of hedged item	(77,525,382)		
	4.22 Amount recognized			
	4.23 SSAP No. 108 adjustments		(77,525,382)	
4.3	Subtotal (Line 4.1 minus Line 4.2)			 (10,389,101)
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 .			
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 ${\color{black}{N \mbox{ O } N \mbox{ E }}}$

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

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			
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance			
3.	Total (Line 1 plus Line 2)		8,145,068	
4.	Part D, Section 1, Column 6			
5.	Part D, Section 1, Column 7	(700,614,983)		
6.	Total (Line 3 minus Line 4 minus Line 5)		(23,286,936)	
		Fair Value Ch	Fair Value Check	
7.	Part A, Section 1, Column 16			
8.	Part B, Section 1, Column 13			
9.	Total (Line 7 plus Line 8)	······		
10.	Part D, Section 1, Column 9			
11.	Part D, Section 1, Column 10	(700,614,983)		
12	Total (Line 9 minus Line 10 minus Line 11)			
		Potential Exposure	Potential Exposure Check	
13.	Part A, Section 1, Column 21			
14.	Part B, Section 1, Column 20			
15.	Part D, Section 1, Column 12			
16.	Total (Line 13 plus Line 14 minus Line 15)			

SCHEDULE E - PART 2 - VERIFICATION (Cash Equivalents)

	(Cash Equivalents)		
		1	2
		Year To Date	Prior Year Ended December 31
1.	Book/adjusted carrying value, December 31 of prior year		
2.	Cost of cash equivalents acquired	3,234,522,642	8,410,114,707
3.	Accrual of discount		
4.	Unrealized valuation increase (decrease)		3,564,845
5.	Total gain (loss) on disposals		
6.	Deduct consideration received on disposals	3,006,619,904	8,511,664,399
7.	Deduct amortization of premium		
8.	Total foreign exchange change in book/adjusted carrying value		
9.	Deduct current year's other than temporary impairment recognized		
10.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)		
11.	Deduct total nonadmitted amounts		
12.	Statement value at end of current period (Line 10 minus Line 11)	425,469,854	197,320,603