

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

QUARTERLY STATEMENT

AS OF SEPTEMBER 30, 2021 OF THE CONDITION AND AFFAIRS OF THE

MANHATTAN NATIONAL LIFE INSURANCE COMPANY NAIC Group Code 0435 0084 NAIC Company Code 67083 Employer's ID Number 45-0252531

Organized under the Laws of	(Current)	(Prior) Dhio	_ , State of Domicile or Port of Er	ntryOH
Country of Domicile		United State	s of America	
Licensed as business type:	L	ife, Accident and Health [X]	Fraternal Benefit Societies []	
Incorporated/Organized	12/20/1956		Commenced Business	01/04/1957
Statutory Home Office	301 East Fou	th Street	•	Cincinnati, OH, US 45202
	(Street and N	lumber)	(City or T	own, State, Country and Zip Code)
Main Administrative Office			ourth Street	
Cir	ncinnati, OH, US 45202	(Silect al	d Number)	513-357-3300
(City or Tow	n, State, Country and Zip	Code)	(Are	ea Code) (Telephone Number)
Mail Address	Post Office Box 5		<i>-</i>	Cincinnati, OH, US 45201
	(Street and Number or I	P.O. Box)	(City or 1	own, State, Country and Zip Code)
Primary Location of Books and Re	cords		ourth Street	
Cir	ncinnati, OH, US 45202	(Street ar	nd Number)	513-357-3300
	n, State, Country and Zip	Code)	(Are	a Code) (Telephone Number)
Internet Website Address		www.mass	smutual.com	
Statutory Statement Contact	Robert	Mayhew Earle II		E40 440 4705
	Nobelt	(Name)		513-412-1735 (Area Code) (Telephone Number)
	rearle@gaig.com (E-mail Address)			513-412-1673
	(L-mail Address)			(FAX Number)
			CERS	
President			Treasurer	
Secretary	John Pau	Gruber	Appointed Actuary	Dominic Joseph Moster
Adrienne Susan	Radior		HER	
Autiente ousait	bagilei	IVIICINAEI RO	bert Fanning #	Brian Patrick Sponaugle
Dominic Lusear	Rlue #		OR TRUSTEES	
Geoffrey James C			ard Chicares #arm Crandall #	Susan Marie Cicco # Michael Robert Fanning #
Paul Anthony La			cis Muething	Michael James O'Connor #
Eric William Pa	ırtlan #	Gareth Fie	elding Ross #	Arthur William Wallace III #
State of County of	Ohio Hamilton	SS:		
County of	namillon			
statement, together with related ex condition and affairs of the said rep in accordance with the NAIC Annu	were the absolute proper hibits, schedules and expl porting entity as of the rep al Statement Instructions	ty of the said reporting entity anations therein contained, a orting period stated above, an and Accounting Practices at	y, free and clear from any liens of innexed or referred to, is a full and of its income and deductions the procedures manual except to the procedures.	ting entity, and that on the reporting period stated above, r claims thereon, except as herein stated, and that this if true statement of all the assets and liabilities and of the terefrom for the period ended, and have been completed the extent that: (1) state law may differ, or, (2) that state
respectively. Furthermore, the sco	ences in reporting not re ope of this attestation by t	elated to accounting practic ne described officers also in	es and procedures, according to	the extent that. (1) state law may direr, or, (2) that state to the best of their information, knowledge and belief, electronic filing with the NAIC, when required, that is an e requested by various regulators in lieu of or in addition
- IN V	TY IV	- Fami	· 9 Lfr	Capt C.M
Mark Francis Muethii President		SHERRI L BARNES Secr	ul Gruber etary	Christopher Patrick Miliano Treasurer
Subscribed and sworn to before me	this	Notary Public State of Ohio My Comm. Expires	a. Is this an original filing? b. If no.	Yes [X] No []
day of _	Novem	nber 2029ust 9, 2025	State the amendment Date filed	
MIS	NXI	will	3. Number of pages atta	

ASSETS

	AS	SETS			
			Current Statement Date		4
		1	2	3 Net Admitted Assets	December 31 Prior Year Net
		Assets	Nonadmitted Assets	(Cols. 1 - 2)	Admitted Assets
1.	Bonds	105,580,766	0	105,580,766	108,936,961
2.	Stocks:				
	2.1 Preferred stocks			0	0
	2.2 Common stocks				0
3.	Mortgage loans on real estate:				
-	3.1 First liens			0	0
	3.2 Other than first liens.			0	0
1	Real estate:				
	4.1 Properties occupied by the company (less \$				
	encumbrances)			0	0
	•			0	
	4.2 Properties held for the production of income (less			0	0
	\$ encumbrances)			0	0
	4.3 Properties held for sale (less \$				
	encumbrances)			0	0
5.	Cash (\$903, 166), cash equivalents				
	(\$24,267,839) and short-term				
	investments (\$)	25,171,005		25,171,005	18,601,102
6.	Contract loans (including \$ premium notes)	4,919,104	0	4,919,104	5,018,848
	Derivatives				0
8.	Other invested assets				0
	Receivables for securities				0
	Securities lending reinvested collateral assets				0
	Aggregate write-ins for invested assets				0
	Subtotals, cash and invested assets (Lines 1 to 11)				132,556,911
	Title plants less \$ charged off (for Title insurers	100,700,070		100,700,070	102,000,011
	only)			0	0
	* 1				0
	Investment income due and accrued	982,231	0	982,251	1,399,352
	Premiums and considerations:			450 -550	
	15.1 Uncollected premiums and agents' balances in the course of collection	189,558		150,753	207,709
	15.2 Deferred premiums, agents' balances and installments booked but				
	deferred and not yet due (including \$				
	earned but unbilled premiums)	3,394,205	17,962	3,376,243	3,449,388
	15.3 Accrued retrospective premiums (\$				
	contracts subject to redetermination (\$			0	0
16.	Reinsurance:				
	16.1 Amounts recoverable from reinsurers	79,499	0	79,499	526,352
	16.2 Funds held by or deposited with reinsured companies			0	0
	16.3 Other amounts receivable under reinsurance contracts			0	0
17.	Amounts receivable relating to uninsured plans			0	0
	Current federal and foreign income tax recoverable and interest thereon				179,614
	Net deferred tax asset				1,211,219
	Guaranty funds receivable or on deposit				127,699
	Electronic data processing equipment and software				0
	Furniture and equipment, including health care delivery assets				
21.	(\$			0	0
22	Net adjustment in assets and liabilities due to foreign exchange rates				_
	Receivables from parent, subsidiaries and affiliates				
					· _
	Health care (\$				0
	Aggregate write-ins for other than invested assets	5,220	0	5,220	0
26.	Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	143 147 980	1 316 683	141 831 297	139 675 784
27	From Separate Accounts, Segregated Accounts and Protected Cell		1,010,000	171,001,201	100,070,707
21.	Accounts			0	0
28.	Total (Lines 26 and 27)	143, 147, 980	1,316,683		139,675,784
	DETAILS OF WRITE-INS				
1101.					
1102.					
1102.					
					۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰
	Summary of remaining write-ins for Line 11 from overflow page		0	0	0
	Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)	0	0	0	0
2501.	Miscellaneous receivable	5,220	0	5,220	0
2502.					
2503.					
2598.	Summary of remaining write-ins for Line 25 from overflow page	0	0	0	0
	Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	5,220	0	5,220	0

LIABILITIES, SURPLUS AND OTHER FUNDS

		1 Current Statement Date	2 December 31
1. /	Aggregate reserve for life contracts \$63,275,178 less \$ included in Line 6.3 (including \$	Statement Date 63 275 178	Prior Year 65 985 628
2. <i>i</i> 3. l	Liability for deposit-type contracts (including \$ Modco Reserve)	90,293	92,626
4.	Contract claims: 4.1 Life		
	4. 2 Accident and health Policyholders' dividends/refunds to members \$ and coupons \$ due		
;	and unpaid Provision for policyholders' dividends, refunds to members and coupons payable in following calendar year - estimated		0
	amounts: 6.1 Policyholders' dividends and refunds to members apportioned for payment (including \$		
,	Modco)		
(6.3 Coupons and similar benefits (including \$ Modco) Amount provisionally held for deferred dividend policies not included in Line 6		
8.	Premiums and annuity considerations for life and accident and health contracts received in advance less \$ accident and health premiums		
	Contract liabilities not included elsewhere: 9.1 Surrender values on canceled contracts		17,441
9	9.2 Provision for experience rating refunds, including the liability of \$ accident and health experience rating refunds of which \$ 0 is for medical loss ratio rebate per the Public Health Service Act		
!	9.3 Other amounts payable on reinsurance, including \$		
	ceded9.4 Interest Maintenance Reserve	3,376,521	3,642,902
10. (Commissions to agents due or accrued-life and annuity contracts \$		
	Commissions and expense allowances payable on reinsurance assumed General expenses due or accrued		
	Transfers to Separate Accounts due or accrued (net) (including \$		
14.	Taxes, licenses and fees due or accrued, excluding federal income taxes Current federal and foreign income taxes, including \$ on realized capital gains (losses)	286,815	335,392
15.2	Net deferred tax liability		
17.	Unearned investment income		16,952
18. <i>i</i> 19.	Amounts held for agents' account, including \$	423,247 1,199,696	389,257
20.	Net adjustment in assets and liabilities due to foreign exchange rates		
22. I	Borrowed money \$ and interest thereon \$ Dividends to stockholders declared and unpaid		
24.	Miscellaneous liabilities: 24.01 Asset valuation reserve		
2	24.02 Reinsurance in unauthorized and certified (\$) companies		0
:	24.04 Payable to parent, subsidiaries and affiliates	164,960	2,599
	24.05 Drafts outstanding		
	24.07 Funds held under coinsurance	0	0
	24.09 Payable for securities		
	24.11 Capital notes \$	532,460	758, 152
	Total liabilities excluding Separate Accounts business (Lines 1 to 25)	128,346,545	130,482,460
28.	Total liabilities (Lines 26 and 27) Common capital stock	128,346,545	130,482,460
30.	Preferred capital stock		
32.	Aggregate write-ins for other than special surplus funds		0
33. 34.	Gross paid in and contributed surplus	127,467,887 0	122,467,887
35.	Unassigned funds (surplus) Less treasury stock, at cost:	(116,483,135)	(115,774,563)
	36.1 shares common (value included in Line 29 \$)		
37.	Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement)	10,984,752 13,484,752	6,693,324 9,193,324
39.	Totals of Lines 29, 30 and 37	141,831,297	139,675,784
2501.	DETAILS OF WRITE-INS Unclaimed funds		758 , 152
2503.	Summary of remaining write-ins for Line 25 from overflow page		
2599.	Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	532,460	758,152
3102.			
3198.	Summary of remaining write-ins for Line 31 from overflow page	0	0
	Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)	0	0
3498.	Summary of remaining write-ins for Line 34 from overflow page Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)		

SUMMARY OF OPERATIONS

		1 Current Year	2 Prior Year	3 Prior Year Ended
		To Date	To Date	December 31
1. 2.	Premiums and annuity considerations for life and accident and health contracts			5,651,162
3.	Net investment income			3,247,689
4.	Amortization of Interest Maintenance Reserve (IMR)	266,960	290,771	387,259
5.	Separate Accounts net gain from operations excluding unrealized gains or losses Commissions and expense allowances on reinsurance ceded			
6. 7.	Reserve adjustments on reinsurance ceded		411,950	
8.	Miscellaneous Income:			
	8.1 Income from fees associated with investment management, administration and contract			0
	guarantees from Separate Accounts			
	8.3 Aggregate write-ins for miscellaneous income	0	0	0
9.	Totals (Lines 1 to 8.3)	7,207,820	7,487,417	9,832,095
10.	Death benefits	6,167,466	6,773,831	9,112,795 18,249
11. 12.	Matured endowments (excluding guaranteed annual pure endowments)	1 462 850	15,437 872 030	858,385
13.	Disability benefits and benefits under accident and health contracts			0
14.	Coupons, guaranteed annual pure endowments and similar benefits			0
15. 16.	Surrender benefits and withdrawals for life contracts Group conversions			1,543,595
17.	Interest and adjustments on contract or deposit-type contract funds			15,530
18.	Payments on supplementary contracts with life contingencies			0
19.	Increase in aggregate reserves for life and accident and health contracts	(2,712,783)	(2,639,306)	(12,082)
20. 21.	Totals (Lines 10 to 19)	6,123,998	6, 138, 8/6	11,536,4/2
21.	business only)	173,372	175,060	232,080
22.	Commissions and expense allowances on reinsurance assumed			0
23.	General insurance expenses and fraternal expenses	1,310,565	836,488	1,057,577
24. 25.	Insurance taxes, licenses and fees, excluding federal income taxes	(999)	247,395 (3 700)	372,811
26.	Net transfers to or (from) Separate Accounts net of reinsurance			0
27.	Aggregate write-ins for deductions	332,225	368,689	428,339
28.	Totals (Lines 20 to 27)	8,180,666	7,762,808	13,629,904
29.	Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	(972.846)	(275.391)	(3,797,809)
30.	Dividends to policyholders and refunds to members	16,885	17,467	23,533
31.	Net gain from operations after dividends to policyholders, refunds to members and before federal	(000 704)	(000, 050)	(0.004.040)
32.	income taxes (Line 29 minus Line 30)	(386,540)	(292,858)	(3,821,342) (446,991)
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)	(603, 191)	(45,573)	(3,374,351)
34.	Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$			
	transferred to the IMR)	(19,248)	(912,858)	(918,688)
35.	Net income (Line 33 plus Line 34)	(622,439)	(958,431)	(4,293,039)
	CAPITAL AND SURPLUS ACCOUNT			
36.	Capital and surplus, December 31, prior year	9,193,324	9,860,318	9,860,318
37. 38.	Net income (Line 35)			(4,293,039)
39.	Change in net unrealized capital gains (losses) less capital gains tax of \$\psi\$			(00,002)
40.	Change in net deferred income tax	(86,217)		
41.	Change in nonadmitted assets			
42. 43.	Change in liability for reinsurance in unauthorized and certified companies			0
44.	Change in asset valuation reserve			713,904
45.	Change in treasury stock			0
46.	Surplus (contributed to) withdrawn from Separate Accounts during period			
47. 48.	Other changes in surplus in Separate Accounts Statement Change in surplus notes			
49.	Cumulative effect of changes in accounting principles			
50.	Capital changes:			
	50.1 Paid in			
	50.2 Transferred from surplus (Stock Dividend)			
51.	Surplus adjustment:			***************************************
	51.1 Paid in	· · ·		
	51.2 Transferred to capital (Stock Dividend)			
	51.3 Transferred from capital			
52.	Dividends to stockholders			
	Aggregate write-ins for gains and losses in surplus	0	0	0
l l	Net change in capital and surplus for the year (Lines 37 through 53)	4,291,428	(366,673)	(666,994)
55.	Capital and surplus, as of statement date (Lines 36 + 54) DETAILS OF WRITE-INS	13,484,752	9,493,645	9,193,324
08.301.	DETAILS OF WATE-ING			
	Cummany of completing write ine fact in 0.2 from grantley page			
	Summary of remaining write-ins for Line 8.3 from overflow page	0	0	0
	Reinsurance administration agreement expense	332,225		428,339
2702.				7
	Summary of remaining write-ins for Line 27 from overflow page	0	0	
	Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)		- , -	,
I	Summary of remaining write-ins for Line 53 from overflow page	0	0	0 0
ააყყ.	Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	U	U	U

	OAOII LOW	1 Current Year	2 Prior Year	3 Prior Year Ended
		To Date	To Date	December 31
	Cash from Operations			
1.	Premiums collected net of reinsurance			5,701,266
2.	Net investment income	, ,		3,266,812
3.	Miscellaneous income	394,111	411,956	545,985
4.	Total (Lines 1 to 3)	7,307,921	7,797,647	9,514,063
5.	Benefit and loss related payments		, ,	, ,
6.	Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts			0
7.	Commissions, expenses paid and aggregate write-ins for deductions			1,886,274
8.	Dividends paid to policyholders	4,761	5,768	8,087
9.	Federal and foreign income taxes paid (recovered) net of \$16,013 tax on capital			
	gains (losses)	(596,543)	(445,397)	(730,390)
10.	Total (Lines 5 through 9)	8,477,418	8,262,951	12,011,296
11.	Net cash from operations (Line 4 minus Line 10)	(1,169,497)	(465,304)	(2,497,233)
	Cash from Investments			
12.	Proceeds from investments sold, matured or repaid:			
	12.1 Bonds	3,517,697	10,382,436	13,082,295
	12.2 Stocks	0	0	0
	12.3 Mortgage loans	0	0	0
	12.4 Real estate	0	0	0
	12.5 Other invested assets	0	0	0
	12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	0	89	90
	12.7 Miscellaneous proceeds	185,753	0	0
	12.8 Total investment proceeds (Lines 12.1 to 12.7)	3,703,450	10,382,525	13,082,385
13.	Cost of investments acquired (long-term only):			
	13.1 Bonds	0	0	599,906
	13.2 Stocks	0	0	0
	13.3 Mortgage loans	0	0	0
	13.4 Real estate	0	0	0
	13.5 Other invested assets	0	0	0
	13.6 Miscellaneous applications	125,000	0	0
	13.7 Total investments acquired (Lines 13.1 to 13.6)	125,000	0	599,906
14.	Net increase (or decrease) in contract loans and premium notes	(99,744)	(537,377)	(506,781)
15.	Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	3,678,194	10,919,902	12,989,260
	Cash from Financing and Miscellaneous Sources			
16.	Cash provided (applied):			
	16.1 Surplus notes, capital notes		0	0
	16.2 Capital and paid in surplus, less treasury stock			3,000,000
	16.3 Borrowed funds		0	
	16.4 Net deposits on deposit-type contracts and other insurance liabilities			
	16.5 Dividends to stockholders	0	0	0
	16.6 Other cash provided (applied)	(684,904)	(1,391,466)	(2,410,633)
17.	Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	4,061,206	(1,478,654)	443,895
	RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS			
18.	Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)	6.569.903	8.975.944	10,935,922
19.	Cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17)			10,000,022
10.	19.1 Beginning of year	18 601 102	7 665 180	7,665,180
	19.2 End of period (Line 18 plus Line 19.1)	25,171,005	16,641,124	18,601,102

Note: Supplemental disclosures of cash flow information for non-cash transactions:							
20.0001. Exchange of debt securities		292.500	292.500				
		, , , , , , , , , , , , , , , , , , , ,					

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

	DIRECT PREMIUMS AND DEPOSIT-TYPE O	ONTRACTS		
		1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1.	Industrial life			0
2.	Ordinary life insurance	9,557,156	9,589,817	12,633,848
3.	Ordinary individual annuities	113,811	91,086	101,225
4.	Credit life (group and individual)			0
5.	Group life insurance			0
6.	Group annuities			0
7.	A & H - group			0
8.	A & H - credit (group and individual)			0
9.	A & H - other	59,552	66,830	85,555
10.	Aggregate of all other lines of business	0	0	0
11.	Subtotal (Lines 1 through 10)	9,730,519	9,747,733	12,820,628
12.	Fraternal (Fraternal Benefit Societies Only)			0
13.	Subtotal (Lines 11 through 12)	9,730,519	9,747,733	12,820,628
14.	Deposit-type contracts	0	0	0
15.	Total (Lines 13 and 14)	9,730,519	9,747,733	12,820,628
	DETAILS OF WRITE-INS			
1001.				
1002.				
1003.				
1098.	Summary of remaining write-ins for Line 10 from overflow page	0	0	0
1099.	Totals (Lines 1001 through 1003 plus 1098)(Line 10 above)	0	0	0

Note 1 - Summary of Significant Accounting Policies

A. Accounting Practices

The financial statements of Manhattan National Life Insurance Company (the "Company") are presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance.

The Ohio Department of Insurance recognizes only statutory accounting practices prescribed or permitted by the State of Ohio for determining and reporting the financial condition and results of operations of an insurance company, for determining its solvency under the Ohio Insurance Law. The National Association of Insurance Commissioners' ("NAIC") Accounting Practices and Procedures manual has been adopted as a component of prescribed or permitted practices by the State of Ohio. The Company has no prescribed or permitted practices that would result in differences between NAIC Statutory Accounting Principles ("NAIC SAP") and the State of Ohio basis, as shown below:

Septe	mber 30, 2021	Dece	December 31, 2020		
\$	(622,439)	\$	(4,293,039)		
	-		-		
	-		-		
\$	(622,439)	\$	(4,293,039)		
\$	13,484,752	\$	9,193,324		
	=		=		
	-		-		
\$	13,484,752	\$	9,193,324		
	\$	\$ (622,439) - \$ 13,484,752 -	\$ (622,439) \$ \$ (622,439) \$ \$ 13,484,752 \$		

B, C & D - No significant changes.

Note 2 - Accounting Changes and Corrections of Errors

Not applicable.

Note 3 - Business Combinations and Goodwill

Not applicable.

Note 4 - Discontinued Operations

Not applicable.

Note 5 - Investments

A, B & C – No significant changes.

- D. Loan-Backed Securities
 - (1) The Company uses dealer-modeled prepayment assumptions for mortgage-backed and asset-backed securities at the date of purchase to determine the effective yields; significant changes in estimated cash flows from the original purchase assumptions are accounted for on a prospective basis.
 - (2) The Company does not currently hold any aggregate loan-backed securities with a recognized other-than-temporary impairment ("OTTI") in which the Company has the intent to sell or the inability or lack of intent to retain the investment in the security for a period of time to recover the amortized cost basis.
 - (3) The following table shows each security with a credit-related OTTI charge recognized during the period:

		Present Value	OTTI Charge			
	Amortized Cost	of Projected	Recognized in	Amortized Cost	Fair Value at	Date
CUSIP	Before OTTI	Cash Flows	Income Statement	After OTTI	Time of OTTI	Reported
126694LC0	148,515	145,126	3,389	145,126	99,647	9/30/2021

- (4) The following table shows all loan-backed securities with an unrealized loss:
 - a. The aggregate amount of unrealized losses:

1.	Less than 12 months	\$15,756
2.	12 months or longer	47,853

b. The aggregate related fair value of securities with unrealized losses:

1. Less than 12 months	\$160,085
2. 12 months or longer	242,431

- (5) Based on cash flow projections received from independent sources (which reflect loan to collateral values, subordination, vintage and geographic concentration), implied cash flows inherent in security ratings and analysis of historical payment data, management believes that the Company will recover its cost basis in all securities with unrealized losses at September 30, 2021. The Company has the intent to hold securities in an unrealized loss position until they recover in value or mature.
- E. Dollar Repurchase Agreements and/or Securities Lending Transactions Not applicable.
- F. Repurchase Agreements Transactions Accounted for as Secured Borrowing Not applicable.
- G. Reverse Repurchase Agreements Transactions Accounted for as Secured Borrowing Not applicable.
- H. Repurchase Agreements Transactions Accounted for as a Sale Not applicable.

- I. Reverse Repurchase Agreements Transactions Accounted for as a Sale Not applicable.
- J. Real Estate Not applicable.
- K. Low Income Housing Tax Credits Not applicable.
- L. Restricted Assets No significant change.
- M. Working Capital Finance Investments Not applicable.
- N. Offsetting and Netting of Assets and Liabilities Not applicable.
- O. 5GI Securities Not applicable.
- P. Short Sales Not Applicable.
- Q. Prepayment Penalty and Acceleration Fees Not applicable.
- R. Share of Cash Pool by Asset Type Not applicable.

Note 6 - Joint Ventures, Partnerships and Limited Liability Companies

Not applicable.

Note 7 - Investment Income

No significant change.

Note 8 - Derivative Instruments

Not applicable.

Note 9 - Income Taxes

No significant change.

Note 10 - Information Concerning Parent, Subsidiaries, Affiliates and Other Related Parties

A B & C

The Company is an indirect subsidiary of Glidepath Holdings, Inc., which is a subsidiary of Massachusetts Mutual Life Insurance Company ("MMLIC"); 100% of the Company's outstanding common stock is directly owned by Manhattan National Holding Corporation ("MNHC"). The Company's common stock was contributed to MNHC on September 25, 2008, from Great American Life Insurance Company ("GALIC"). See Schedule Y, Part 1, Organizational Chart.

During the period, the Company paid (received) federal income tax payments in cash to (from) GALIC:

 4/13/2021
 (\$111,606)

 4/13/2021
 (\$196,000)

 5/27/2021
 (\$164,623)

 9/17/2021
 (\$124,314)

The Company received a \$5,000,000 capital contribution from MNHC in April.

- D. The Company reported \$164,960 due to the parent and affiliated companies. The terms of the agreement require that these amounts are settled within 90 days.
- E. Management or service contracts and all cost sharing arrangements including the Company:
 - (1) The Company has an agreement with Barings (an affiliate) which provides investment advisory services to the Company.
 - (2) Certain administrative, management, accounting, data processing, collection, and investment services are provided under agreements between the Company and affiliates at charges not unfavorable to the Company or the affiliate.
- F. The Company has no material guarantees or undertakings for the benefit of an affiliate.
- G. The Company's outstanding shares are 100% owned by MNHC.
- H. The Company does not own shares of any upstream intermediate entity or its ultimate parent.
- I. The Company has no investment in a subsidiary.
- J. The Company did not recognize any impairment or write down for its investments in subsidiary, controlled or affiliated companies during the statement period.
- K. The Company has no investment in a foreign insurance subsidiary.
- L. The Company does not hold an investment in a downstream non-insurance holding company.
- M. Valuation of Subsidiary, Controlled and Affiliated Entities (excluding U.S. Insurance Entities) Not applicable.
- N. The Company has no investments in insurance subsidiary, controlled, or affiliated entities.
- O. Subsidiary, Controlled, and Affiliated Entities Loss Tracking Not applicable.

Note 11 - Debt

Not applicable.

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

A., B., C. & D.

The Company did not participate in a defined benefit plan.

E. Defined Contribution Plan

The Company participates in the retirement plans of MMLIC. MMLIC sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for its employees, agents and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$3,971,012,088 as of September 30, 2021 and \$3,862,452,761 as of December 31, 2020. The Company match for the qualified 401(k) thrift savings plan is limited to 5% of eligible W-2 compensation. GALIC's total matching thrift savings contributions included in general insurance expenses were \$2,887,087 for the nine months ended September 30, 2021 and \$2,800,054 for the year ended December 31, 2020.

- F. The Company did not participate in multiemployer plans.
- G. The Company did not participate in consolidated or holding company plans.
- H. The Company does not accrue for postemployment benefits and compensated absences.
- The Company does not apply for a subsidy under the Medicare Part D under the Medicare Modernization Act.

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

No significant change.

Note 14 - Contingencies

No significant change.

Note 15 - Leases

Not applicable.

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

Not applicable

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

The Company has no reportable transactions.

Note 18 - Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans

Not applicable.

Note 19 - Direct Premium Written/Produced by Managing General Agents/Third Party Administrators

Not applicable

Note 20 - Fair Value

Δ

(1) Fair Value Measurements at Reporting Date

The Company has categorized its assets and liabilities measured at fair value or net asset value ("NAV") into the three-level fair value hierarchy as reflected in the following table. See item (4) below for a discussion of each of these three levels.

Net Asset

	Level 1		Level 1 Level 2		Level 3		Value (NAV)		Total	
Assets at fair value				LOVOIZ						Total
Bonds:										
U.S. Government and government agencies	\$	_	\$	_	\$	-	\$	_	\$	_
States, municipalities and political subdivisions		_		_		-		-		-
Foreign government		-		-		-		-		-
Residential mortgage-backed securities		-		99,647		-		-		99,647
Commerical mortgage-backed securities		-		-		-		-		-
Asset-backed securities		-		-		-		-		-
All other bonds		-		-		-		-		-
Total bonds		-		99,647				-		99,647
Non-affiliated preferred stock		-		-		_		-		-
Non-affiliated common stock		-		-		-		-		-
Total assets accounted for at fair value/NAV	\$		\$	99,647	\$		\$		\$	99,647

- (2) The Company does not have any Level 3 securities carried at fair value.
- (3) Fair Value Recognition of Transfers between Levels

The Company recognizes and records the transfer of securities into and out of Level 3 due to changes in availability of market observable inputs. There were no Level 3 transfers during the reporting period.

(4) Inputs and Techniques Used in Estimating Fair Value

Level 1 - Quoted prices for identical assets or liabilities in active markets (markets in which transactions occur with sufficient frequency and volume to provide pricing information on an ongoing basis). The Company's Level 1 financial instruments consist primarily of publicly-traded equity securities for which quoted market prices in active markets are available.

Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar assets or liabilities in inactive markets (markets in which there are few transactions, the prices are not current, price quotations vary substantially over time or among market makers, or in which little information is released publicly); and valuations based on other significant inputs that are observable in active markets. Level 2 inputs include benchmark yields, reported trades, corroborated broker/dealer quotes, issuer spreads and benchmark securities. When non-binding broker quotes can be corroborated by comparison to similar securities priced using observable inputs, they are classified as Level 2.

Level 3 - Valuations derived from market valuation techniques generally consistent with those used to estimate the fair value of Level 2 financial instruments in which one or more significant inputs are unobservable or when the market for a security exhibits significantly less liquidity relative to markets supporting Level 2 fair value measurements. The unobservable inputs may include management's own assumptions about the assumptions market participants would use based on the best information available in the circumstances. The Company does not have any Level 3 assets or liabilities carried at fair value at September 30, 2021.

The Company's investment manager, Barings LLC ("Barings") is responsible for the valuation process and uses data from outside sources (including nationally recognized pricing services and broker/dealers) in establishing fair value. Valuation techniques utilized by pricing services and prices obtained from external sources are reviewed by Barings internal investment professionals who are familiar with the securities being priced and the markets in which they trade to ensure the fair value determination is representative of an exit price. To validate the appropriateness of the prices obtained, the investment manager considers widely published indices (as benchmarks), recent trades, changes in interest rates, general economic conditions and the credit quality of the specific issuers. In addition, Barings communicates directly with the pricing service regarding the methods and assumptions used in pricing, including verifying, on a test basis, the inputs used by the service to value specific securities.

- (5) Derivative Assets and Liabilities Not applicable.
- B. The Company has no additional fair value disclosures.
- C. The Company has categorized all the financial assets in the financial statements into the three-level fair value hierarchy as reflected in the following table. See item (4) above for a discussion of each of these three levels.

Type of Financial Instrument	Aggregate Fair Value	Admitted Assets	Level 1	Level 2	Level 3	;	Net Asse Value (NA		Practicable (Carrying Value)
Financial Assets:									
Bonds:									
U.S. Government and government agencies	\$ 5,875,280	\$ 5,669,700	\$ -	\$ 5,875,280	\$	-	\$	_	\$ -
States, municipalities and political subdivisions	23,227,613	18,696,851	_	23,227,613		-		-	-
Residential mortgage backed securities	1,081,458	990,077	-	1,081,458		-		-	-
Asset backed securities	2,751,425	2,706,696	-	2,751,425		-		-	-
All other bonds	87,392,308	77,517,442	-	87,392,308		-		-	-
Total bonds	\$ 120,328,084	\$ 105,580,766	\$ -	\$ 120,328,084	\$	-	\$	-	\$ -
Cash and cash equivalents	25,171,005	25,171,005	25,171,005	-		-		-	-
Policy loans	4,919,104	4,919,104			4,919,	104		-	
Total financial assets	\$ 150,418,193	\$ 135,670,875	\$ 25,171,005	\$120,328,084	\$ 4,919,	104	\$	=	\$ -

- D. Not Practicable to Estimate Fair Value The Company has no financial instruments that fall under this classification.
- E. NAV Practical Expedient Investments The Company has no financial investments that fall under this classification.

Note 21 - Other Items

No significant change.

Note 22 - Events Subsequent/Other Items of Note

On May 28, 2021, American Financial Group announced the closing of the sale of the Company's parent (GALIC) to Massachusetts Mutual Life Insurance Company. The sale included the Company and the parent's other insurance subsidiary.

Note 23 - Reinsurance

No significant change.

Note 24 - Retrospectively Rated Contracts & Contracts Subject to Redetermination

Not applicable

Note 25 - Change in Incurred Losses and Loss Adjustment Expenses

The Company had no changes in the provision for incurred loss or loss adjustment expenses attributable to insured events of prior years.

Note 26 - Intercompany Pooling Arrangements

Not applicable.

Note 27 - Structured Settlements

Not applicable.

Note 28 - Health Care Receivables

Not applicable

Note 29 - Participating Policies

No significant change.

Note 30 - Premium Deficiency Reserves

Not applicable.

Note 31 - Reserves for Life Contracts and Annuity Contracts

No significant change.

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

No significant change.

Note 33 - Analysis of Life Actuarial Reserves by Withdrawal Characteristics

No significant change.

Note 34 - Premiums and Annuity Considerations Deferred and Uncollected

No significant change.

Note 35 - Separate Accounts

Not applicable.

Note 36 - Loss/Claim Adjustment Expenses

Not applicable.

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

1.1	1.1 Did the reporting entity experience any material transactions requiring the filing of Disclosure of Material Transactions with the State of Domicile, as required by the Model Act?									
1.2	.2 If yes, has the report been filed with the domiciliary state?									
2.1	2.1 Has any change been made during the year of this statement in the charter, by-laws, articles of incorporation, or deed of settlement of the reporting entity?									
2.2	If yes, date of change:									
3.1	Is the reporting entity a member of an Insurance Holding Company System consisting of two or more affiliated persons, one or more of which is an insurer? If yes, complete Schedule Y, Parts 1 and 1A.									
3.2	Have there been any substantial changes in the organizational chart since the	he prior quarter end?		Yes []	No [X]					
3.3	If the response to 3.2 is yes, provide a brief description of those changes.									
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 issue	ed by the SEC for the entity/group.								
4.1	Has the reporting entity been a party to a merger or consolidation during the lf yes, complete and file the merger history data file with the NAIC.	period covered by this statement	?	Yes []	No [X]					
4.2	If yes, provide the name of the entity, NAIC Company Code, and state of do ceased to exist as a result of the merger or consolidation.	micile (use two letter state abbrevi	ation) for any entity that has							
	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 in-fact, or similar agreement, have there been any significant changes regarl fyes, attach an explanation.	-party administrator(s), managing ding the terms of the agreement o	general agent(s), attorney- r principals involved? Yes [] No [)	() N/A [
6.1	State as of what date the latest financial examination of the reporting entity	was made or is being made		12/31/2016						
6.2	State the as of date that the latest financial examination report became avaidate should be the date of the examined balance sheet and not the date the			12/3	1/2016					
6.3	State as of what date the latest financial examination report became available the reporting entity. This is the release date or completion date of the examinate).	ination report and not the date of the	ne examination (balance sheet	01/1	1/2018					
6.4	By what department or departments?									
6.5	Ohio Department of Insurance Have all financial statement adjustments within the latest financial examinat statement filed with Departments?] No [] N/A [X					
6.6	Have all of the recommendations within the latest financial examination repo	ort been complied with?	Yes [] No [] N/A [X					
7.1	Has this reporting entity had any Certificates of Authority, licenses or registrarevoked by any governmental entity during the reporting period?			Yes []	No [X]					
7.2	If yes, give full information:									
8.1	Is the company a subsidiary of a bank holding company regulated by the Fe	deral Reserve Board?		Yes []	No [X]					
8.2	If response to 8.1 is yes, please identify the name of the bank holding comp	any.								
8.3	Is the company affiliated with one or more banks, thrifts or securities firms?			Yes [X]	No []					
8.4	If response to 8.3 is yes, please provide below the names and location (city regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office Insurance Corporation (FDIC) and the Securities Exchange Commission (SI	e of the Comptroller of the Currence	cy (OCC), the Federal Deposit							
	Affiliate Name Barings LLC	Location (City, State)	3 4 5 FRB OCC FDIC	6 SEC YES						

1	2	3	4	5	6
Affiliate Name	Location (City, State)	FRB	OCC	FDIC	SEC
Barings LLC	Charlotte, NC	NO	NO	NO	YES
Great American Advisors	Cincinnati. OH	NO	NO	NO	YES
	,				

GENERAL INTERROGATORIES

9.1	similar functions) of the reporting entity subject to a code of ethics, which includes the following standards?							
	(b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporti(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	ng entity;						
9.11	(e) Accountability for adherence to the code. If the response to 9.1 is No, please explain:							
9.2 9.21	Has the code of ethics for senior managers been amended?			Yes [X] No []			
9.3 9.31	Have any provisions of the code of ethics been waived for any of the specified officers?			Yes [] No [X]			
	FINANCIAL							
10.1 10.2	Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement? If yes, indicate any amounts receivable from parent included in the Page 2 amount:							
	INVESTMENT							
	Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or oth use by another person? (Exclude securities under securities lending agreements.)			Yes [] No [X]			
12.	Amount of real estate and mortgages held in other invested assets in Schedule BA:							
13. 14.1 14.2	Amount of real estate and mortgages held in short-term investments: Does the reporting entity have any investments in parent, subsidiaries and affiliates? If yes, please complete the following:] No [X]	•		
		1 Prior Year-End Book/Adjusted Carrying Value		Boo	2 rent Quarter ok/Adjusted rrying Value			
14.21	Bonds	\$0	_ (_		_		
14.22	Preferred Stock	b0	;					
	Common Stock							
	Short-Term Investments							
	All Other							
	Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)							
14.28	Total Investment in Parent included in Lines 14.21 to 14.26 above							
15.1 15.2	Has the reporting entity entered into any hedging transactions reported on Schedule DB?]		
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, P							
	16.3 Total payable for securities lending reported on the liability page.		\$			j		

GENERAL INTERROGATORIES

17. 17.1	offices, vaults or safety custodial agreement w Outsourcing of Critical	y deposit boxes, w rith a qualified bar Functions, Custo	Special Deposits, real estate, more all stocks, bonds and other senk or trust company in accordance dial or Safekeeping Agreements or requirements of the NAIC Financia	ecurities, owne with Section of the NAIC Fin	d throughout th 1, III - General ancial Conditic	ne current year Examination Co on Examiners H	held pursuant to a onsiderations, F. landbook?	Yes	[X]	No []
		1				2					
	Bank of New York Mel	Name of Cust	odian(s)	1 Wall Street	t, New York, N	Custodian Addre Y 10286	ess				
17.2	For all agreements that location and a complete		vith the requirements of the NAIC F	inancial Cond	ition Examiner	s Handbook, pr	rovide the name,				
	1 Name(s	s)	2 Location(s)		С	3 complete Explar	nation(s)				
17.3 17.4	Have there been any of lf yes, give full information		g name changes, in the custodian(s	s) identified in	17.1 during the	e current quarte	r?	Yes	[]	No [X]
	1 Old Custo	odian	2 New Custodian	Date	3 of Change		4 Reason				
17.5	make investment decis	sions on behalf of	rivestment advisors, investment mai the reporting entity. For assets that tment accounts"; "handle securit	at are manage							
		Name of Firm	n or Individual	Affilia							
	17.5097 For those firm	ns/individuals liste	d in the table for Question 17.5, do more than 10% of the reporting er	any firms/ind				Yes	[]	No [X]
			d with the reporting entity (i.e. designt aggregate to more than 50% of the					Yes	[]	No [X]
17.6	For those firms or individual table below.	viduals listed in th	e table for 17.5 with an affiliation c	ode of "A" (aff	iliated) or "U" (unaffiliated), pro	ovide the information for th	ne			
	1		2		3	3	4		Inve: Mana	5 stment gement	
	Central Registration Depository Number		Name of Firm or Individual		Legal Entity le	dentifier (LEI)	Registered With		(IMA	ement) Filed	
	106006	•			R6ZXK501NPHXS		SEC		DS		
18.1 18.2	Have all the filing requ If no, list exceptions:		urposes and Procedures Manual o				followed?	Yes	[X]	No []
19.	a. Documentation security is not a b. Issuer or obligo c. The insurer has	necessary to peri available. r is current on all an actual expect	eporting entity is certifying the follomit a full credit analysis of the secucontracted interest and principal pation of ultimate payment of all cor 5GI securities?	urity does not e ayments. ntracted interes	exist or an NAIO	C CRP credit ra	ting for an FE or PL	Yes	[]	No [X	1
20.	a. The security was b. The reporting er c. The NAIC Desig on a current priv d. The reporting er	s purchased prior ntity is holding cap nation was derive rate letter rating ho ntity is not permitte	reporting entity is certifying the foll to January 1, 2018. iital commensurate with the NAIC I ad from the credit rating assigned beld by the insurer and available for to share this credit rating of the PLGI securities?	Designation re by an NAIC CR examination by PL security wi	ported for the s P in its legal ca by state insurar th the SVO.	security. apacity as a NR nce regulators.	RSRO which is shown	Yes	ſ	No [X	1
21.	By assigning FE to a SFE fund: a. The shares were b. The reporting or c. The security had January 1, 2019 d. The fund only or e. The current reporting its legal capace f. The public credit	Schedule BA non- e purchased prior atity is holding cap d a public credit ra predominantly ho prted NAIC Design city as an NRSRC rating(s) with ann	registered private fund, the reporting to January 1, 2019. bital commensurate with the NAIC liting(s) with annual surveillance as olds bonds in its portfolio. nation was derived from the public	ng entity is cer Designation re signed by an N credit rating(s	tifying the follow ported for the standard or	wing elements of security. Is legal capacity of the security	of each self-designated as an NRSRO prior to			No [X	

GENERAL INTERROGATORIES

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

Life and	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	Amount
	1.11 Farm Mortgages	\$
	1.12 Residential Mortgages	\$
	1.13 Commercial Mortgages	\$
	1.14 Total Mortgages in Good Standing	\$0
	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	\$0
	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	\$0
1.5	Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)	\$0
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	\$0
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	0.450 %
3.1	Do you act as a custodian for health savings accounts?	Yes [] No [X]
3.2	If yes, please provide the amount of custodial funds held as of the reporting date	\$
3.3	Do you act as an administrator for health savings accounts?	Yes [] No [X]
3.4	If yes, please provide the balance of the funds administered as of the reporting date	\$
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 []
Fratern 5.1	al 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

	Showing All New Reinsurance Treaties - Current Year to Date 1 2 3 4 9 10									
1	2	3 4	5	6	7	8	9	10		
								Effective		
							Certified	Date of		
NAIC				Type of	Type of Business		Reinsurer	Certified		
Company Code	ID	Effective	Domiciliary	Type of Reinsurance Ceded	Business		Rating	Reinsurer		
Code	Number	Date Name of Reinsurer	Jurisdiction	Ceded	Ceded	Type of Reinsurer	(1 through 6)	Rating		
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SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

		SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS Current Year To Date - Allocated by States and Territories										
				-	Direct Bus	iness Only		7				
		1	Life Co	ontracts 3	4 Accident and Health Insurance Premiums,	5	6	7				
	States, Etc.	Active Status (a)	Life Insurance Premiums	Annuity Considerations	Including Policy, Membership and Other Fees	Other Considerations	Total Columns 2 Through 5	Deposit-Type Contracts				
	AlabamaAL	L					40,147					
	Alaska AK Arizona AZ	LL	10,507				10,507					
	Arkansas AR	L	79, 105	500			79,605					
5.	California CA	L		1,291			1, 140, 595					
	Colorado CO	L	119,856	100			119,956					
	Connecticut CT	L	111,615				111,615					
	Delaware DE	ļL	34,797				34,797					
	District of Columbia	<u> </u>	5,684 509,731	651	52,204		5,684 .562,586					
	Georgia GA	I	271, 124	1.800	882		273,806					
	Hawaii HI	L	50.169	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	002							
13.	IdahoID	L	19,571				19,571					
	IllinoisIL	L	246,587	9,086			255,673					
	Indiana IN	ļ		1,470	274		368,097					
	lowa IA Kansas KS		94,581 104,747	5,870 3,629	1,316		101,766 108,375					
	Kentucky KY		111,038				111,038					
	Louisiana LA	L	152.764				152,764					
20.	Maine ME	L	47,450				47,450					
	Maryland MD	L	308,544				308,544					
	Massachusetts	L	202,617				202,617					
	Michigan MI	ļĻ	389,547	18,428	408		408,383					
	Minnesota	L		8,775 780			477,947					
	Missouri MC		275,522	7,190	605		283,318					
	Montana MT	L		, 130	500		7,053					
28.	Nebraska NE	L	49,704				49,704					
	Nevada NV	L	85,223				85,223					
	New HampshireNH	L	52,515				52,515					
	New Jersey				000		292,599					
	New Mexico	L	25,906		830		26,736					
	North CarolinaNC	N	190,057	300			190,357					
	North DakotaND	L	92,852	100			92,952					
36.	Ohio OH	L	324,307	325	194		324,826					
	Oklahoma OK	L	88,627				88,627					
	Oregon OR	L	66,094				66,094					
	Pennsylvania PA	ļ	286,999		322		287,321					
	Rhode Island		9,881 174,826	470			9,881 175,296					
	South Dakota	L	17.250	200			17,450					
	Tennessee	L	232,613	200	504		233,117					
	TexasTX	L	623,746	50	269		624,065					
	Utah UT	L		142			38,238					
	VermontVT	L					16,738					
	Virginia VA	L		4 , 180			183,120					
	Washington						100,642					
	Wisconsin WI	L		48.475	1.853		1.055.920					
	WyomingWY	LL			1,000		12,997					
	American Samoa AS	N					0					
	Guam GU	N					0					
	Puerto Rico PR	N					0					
	U.S. Virgin Islands VI	N					0					
	Northern Mariana Islands	N					0					
	Canada CA Aggregate Other Aliens OT	۱N		0	0	0	734	0				
	Subtotal	XXX		113,811	59,661	0	9,653,557	0				
	Reporting entity contributions for employee benef	ts	, ,				, 500,007					
	plans Dividends or refunds applied to purchase paid-up	XXX					0					
92.	additions and annuities Dividends or refunds applied to shorten endowme						0					
<i>3</i> Δ.	or premium paying period						0					
93.	Premium or annuity considerations waived under											
94.	disability or other contract provisions				0		205,761					
	Aggregate or other amounts not allocable by State Totals (Direct Business)			0	59,661	0	9,859,318	0 0				
	Plus Reinsurance Assumed			113,611			0					
	Totals (All Business)	XXX	9,685,845	113,811	59,661	0	9,859,318	0				
	Less Reinsurance Ceded	XXX	5,389,006	51,215	55,094		5,495,315					
	Totals (All Business) less Reinsurance Ceded	XXX	4,296,839	62,596	4,567	0	4,364,002	0				
	DETAILS OF WRITE-INS		10.000				40.040					
58001. 58002.	Other Alien						16,643					
		XXX XXX						L				
	Summary of remaining write-ins for Line 58 from			ļ		 						
	overflow page	XXX	0	0	0	0	0	0				
58999.	Totals (Lines 58001 through 58003 plus	VVV	16,643	0	0	0	16,643	0				
9401.	58998)(Line 58 above)	XXX		"	0	U	10,043	U				
		XXX		<u> </u>		 						
		XXX										
J 1 UJ.												
	Summary of remaining write-ins for Line 94 from											
9498.	overflow page	xxx	0	0	0	0	0	0				

PART 1 – ORGANIZATIONAL CHART

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

	Federal Tax ID	NAIC Co Code	State of Domicile
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Mezzanine Investor 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
JFIN Parent LLC	None		Delaware
Jefferies Finance LLC	27-0105644		Delaware
JFIN GP Adviser LLC	None		Delaware
JFIN Fund III LLC	None		Delaware
Jefferies Credit Partners LLC	None		Delaware
APEX Credit Partners LLC	None		Delaware
JFAM GP LLC	None		Delaware

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

	Federal Tax ID	NAIC Co Code	State of Domicile
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 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 Fund. L.P.	None		Delaware
JFIN Revolver Funding 2021 Ltd.	None		Delaware
JFIN Revolver Funding 2021-III Ltd.	None		Delaware
JFIN Revolver Funding 2021-IV Ltd.	None		Delaware
Apex Credit Holdings 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 CLO 2015 Ltd.	None		Cayman Islands
JFIN CLO 2015-II Ltd.	None		Cayman Islands
JFIN CLO 2016 Ltd.	None		Cayman Islands
JFIN CLO 2017 Ltd.	None		Cayman Islands
JFIN 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
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
Great American Advisors, LLC	31-1395344		Ohio

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Manhattan National Holding Corporation	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 Direct Private Investments Holding LLC	None		Delaware
MM Direct Private Investments UK Limited	None		United Kingdom
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
MassMutual Capital Partners LLC	04-1590850		Delaware

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

	Federal Tax ID	NAIC Co Code	State of Domicile
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 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 Australia Pty Ltd	None		Australia
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
Barings Singapore Pte. Ltd.	None		Singapore

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

	Federal Tax ID	NAIC Co Code	State of Domicile
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
Barings Real Estate Advisers (Continental Europe) Limited	98-0654401		United Kingdom
Barings Real Estate Advisers Europe LLP	98-0654388		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 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
Barings Umbrella Fund (LUX) GP S.à.r.l.	None		Luxembourg
GPLF4(S) GP S.à r.1	None		Luxembourg
PREIF Holdings Limited Partnership	None		United Kingdom

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Almack Holding Partnership GP Limited	None		United Kingdom
Almack Mezzanine Fund Limited	None		United Kingdom
Barings (U.K.) Limited	98-0432153		United Kingdom
BMC Holdings DE LLC	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		California
CRA Aircraft Holding LLC*	81-4258759		Delaware
Aland Royalty Holdings LP	None		Delaware
GASL Holdings LLC	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
Baring Asset-Based Income Fund (US) GP, LLC	None		Delaware
Barings CMS Fund GP, LLC	None		Delaware
Barings Hotel Opportunity Venture I GP, LLC	None		Delaware
Barings Investment Series LLC	None		Delaware
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings ERS PE Emerging Manager III GP, LLC	None		Delaware
Barings Global Investment Funds (U.S.) Management LLC	04-1590850		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
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund Management II, LLC	None		Delaware
Barings Small Business Fund LLC	84-5063008		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands

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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Small Business Fund LLC	84-5063008		Delaware
Benton Street Advisors, Inc.	98-0536233		Cayman Islands
BHOVI Incentive LLC	None		Delaware
BIG Real Estate Fund GP LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
BREDIF GP 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:	0.4.4.4.0.0.4.0		
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 36-4868350		Delaware
Barings Asset-Based Income Fund (US) LP			Delaware
Barings Emerging Markets Corporate Bond Fund	None None		Ireland
Barings European Real Estate Debt Income Fund			Luxembourg
Babson Capital Global Special Situation Credit Fund 2*	98-1206017		Delaware

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

PART 1 – ORGANIZATIONAL CHART

Federal Tax ID NAIC Co Code State of Domicile

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-I	ZJX0JI.99999.SL.136	Cayman Islands
Barings CLO 2021-II	EPXAC4.99999.SL.136 (GIIN)	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 Hotel Opportunity Venture	87-0977058	Connecticut
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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Barings Middle Market CLO Ltd 2021-I	98-1612604		Cayman Islands
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.	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
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
Eclipse Business Capital Holdings	EIN 87-1321958		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
GIA EU Holdings - Emerson JV Sarl	EIN 98-1607033		Luxembourg
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
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

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

	Federal Tax ID NAIC Co Code	State of Domicile
The second of th	41 2200120	D. I.
Tower Square Capital Partners IIIA, L.P. Trailside MM Member LLC*	41-2280129 04-1590850	Delaware Delaware
	83-1325764	Delaware Delaware
Washington Gateway Two LLC*	83-1323704 32-0574045	Delaware
Washington Gateway Three LLC* West 46 th Street Hotel LLC	32-0374043 05-1590850	Delaware Delaware
	05-1590850	Delaware
Barings Affiliates & Funds:	N	C 11 1
Babson Capital Loan Strategies Master Fund LP	None None	Cayman Islands
Barings China Aggregate Bond Private Securities Investment Fund		Peoples Republic of China
Barings European Growth Trust Fund	HU7DQI.00015.SF.826	United Kingdom Massachusetts
Barings Global High Yield Fund	47-3790192	
CCIC Fund Great Lakes II LLC*	None 71-1018134	Peoples Republic of China Delaware
Wood Creek Venture Fund LLC	04-1590850	Delaware
Barings Real Estate Affiliates & Funds:	36-4823011	Delaware
50 Liberty LLC*	30-4823011 None	California
Barings California Mortgage Fund IV	87-0977058	Delaware
Barings Hotel Opportunity Venture	87-097/038 None	
Barings Umbrella Fund LUX SCSp SICAV RAIF*	82-2285211	Luxembourg Delaware
Calgary Railway Holding LLC* Cornbrook PRS Holdings LLC	82-2283211 82-3307907	Delaware Delaware
	82-3307907 95-4207717	California
Cornerstone California Mortgage Fund I LLC Cornerstone California Mortgage Fund II LLC	95-4207717 95-4207717	California
	95-4207717 95-4207717	California
Cornerstone California Mortgage Fund III LLC	95-4207717 56-2630592	Delaware
Cornerstone Fort Pierce Development LLC*	45-2632610	Massachusetts
Cornerstone Permanent Mortgage Fund	61-1750537	Massachusetts
Cornerstone Permanent Mortgage Fund II	35-2531693	Massachusetts
Cornerstone Permanent Mortgage Fund III 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	80-0948028 04-1590850	Delaware
Pacto France Logistics LLC Portland 400 Sixth Manager LLC	82-3393166	Delaware
Raleigh Crossing Phase I Holdings LLC	82-3393100 None	Delaware Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None None	Delaware
Salomon Bromers Commercial Mortgage Trust 2001-MM	None	Delawate

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

	Federal Tax ID NA	IC Co Code State of Domicile	
Communication Changing Contact LL C*	27-2977720	Delaware	
Sawgrass Village Shopping Center LLC* 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:	43-3401109	Delawate	
MassMutual Fremier 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:	20 3227231	Mussuchuseus	
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:			
MML Series International Equity Fund	46-4257056	Massachusetts	
MML Series Investment Funds II:			
MML Series II Asset Momentum Fund	47-3517233	Massachusetts	
MML Series II Dynamic Bond Fund	47-3529636	Massachusetts	
MML Series II Equity Rotation Fund	47-3544629	Massachusetts	
MML Series II Special Situations Fund	47-3559064	Massachusetts	
MassMutual RetireSMART Funds:	27 1022200	M 1 "	
MassMutual RetireSMART 2035 Fund	27-1933380	Massachusetts	
MassMutual RetireSMART 2045 Fund	27-1932769	Massachusetts	
MassMutual RetireSMART 2055 Fund	46-3289207 47-5236235	Massachusetts	
MassMutual RetireSMART 2060 Fund	47-5326235	Massachusetts	

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

PART 1 – ORGANIZATIONAL CHART

Federal Tax ID NAIC Co Code State of Domicile

MassMutual 20/80 Allocation Fund	45-1618155	Massachusetts
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

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

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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 Company		-	Massachusetts Mutual Life Insurance					
0435	Massachusetts Mut Life Ins Co	65935	04-1590850	3848388			(MMLIC)	MA	UIP	Company	Ownership	100.000	. MMLIC		
										Massachusetts Mutual Life Insurance					
0435	Massachusetts Mut Life Ins Co	93432	06-1041383				C.M. Life Insurance Company	CT	IA	Company	Owner ship	100.000	. MMLIC		
0435	Massachusetts Mut Life Ins Co	70416	43-0581430				MML Bay State Life Insurance Company	CT	IA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
0000			06-1041383				CML Mezzanine Investor III, LLC	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	. MMLIC		
0000							CML Special Situations Investor LLC	DE	NI A	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							CML Global Capabilities LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
							MassMutual Global Business Services India			Massachusetts Mutual Life Insurance					
0000							LLP	IND	NI A	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities (Netherlands) B.V	NLD	NI A	Company	Owner ship	100.000	. MMLIC		
							MassMutual Global Business Services Romania			Massachusetts Mutual Life Insurance					
000Q							S.R.L	ROU	NI A	Company	Owner ship	100.000	. MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities II LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM Global Capabilities III LLC	DE	NI A	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MM/Barings Multifamily TEBS 2020 LLC	DE	NI A	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-1590850				New Haven Holdco LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MML Special Situations Investor LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
0000			47 5000070				T. 1 1 15 1111 110	DE	A11.A	Massachusetts Mutual Life Insurance		400 000	IIII 10		
0000			47-5322979				Timberland Forest Holding LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		
0000			47-5322979 47-5322979				Timberland Forest Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.000	MMLIC		
0000			47-5322979				Timberland Forest Holding LLC Lyme Adirondack Forest Company, LLC	DE	NIA	Wood Creek Capital Management LLC Timberland Forest Holding LLC	Management	100.000	MMLIC		
									NIA			100.000	MMLIC		
0000							Lyme Adirondack Timberlands I, LLC Lyme Adirondack Timberlands II, LLC	DE	NIA NIA	Timberland Forest Holding LLC Timberland Forest Holding LLC	Ownership	100.000	MMLIC		
							Lyme Autronaack Timberranas II, LLC	∪⊏	NIA	Massachusetts Mutual Life Insurance	Ownership		. IWWLIU		
0000			04-1590850		I		Berkshire Way LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
			04-1090000				Delikanine may LLO	∪⊏	NIA	Massachusetts Mutual Life Insurance	Owner Still		. IVEVIL I V		
0000			04-1590850		I		MSP-SC, LLC	DE	NIA		Ownership	100.000	MMLIC		
0000			U4-109U80U				mor-ou, LLU	VE	NIA	Company	Owner Strip	100.000	. WW.LIV		
0000					I		EM Opportunities LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
0000							Em Opportunities LLC	VE	NIA	Massachusetts Mutual Life Insurance	Owner Sill p	100.000	. WWILTO	[
0000					I		MassMutual MCAM Insurance Company, Inc	VT	NIA	Company	Ownership	100.000	MMLIC		
0000							massmutuar moam misurance company, mc	V 1	NI M	Massachusetts Mutual Life Insurance	Owner silly		. IVIVIL 10	[
0000			04-1590850		I		Insurance Road LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
0000			04-1590850				MassMutual Trad Private Equity LLC	DE	NIA	Insurance Road LLC	Owner ship	100.000	MMLIC	[
0000			04-1590850				MassMutual Private Equity Funds LLC	DE	NIA	MassMutual Trad Private Equity LLC	Owner ship.	100.000	MMLIC		
0000			0 - -1000000				MassMutual Private Equity Funds ELC			massmataar maa mirate Equity EEC	omici silip	100.000	. mm_10		
0000			04-1590850		1		LLC	DE	NI A	MassMutual Private Equity Funds LLC	Ownership	100.000	. MMLIC		
0000			04-1590850				MassMutual Intellectual Property LLC	DE	NIA	Insurance Road LLC	Owner ship	100.000	MMLIC		
0000							Trad Investments I LLC	DE	NIA	Insurance Road LLC	Ownership	100.000	MMLIC		
							THE THIRD I LLO			Massachusetts Mutual Life Insurance	oo.				
0000					1		ITPSHolding LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
0000							HITPS LLC	DE	NIA	ITPS Holding LLC	Ownership	100.000	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)	*
	Group Humo	0000		11005	0	to:::atio::ai/	0.7		Litty	Massachusetts Mutual Life Insurance	St. 16.7	.ugo		()	+
0000							JFIN Parent LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
0000							JEIN FAIGHT LLC	UE	NIA	Massachusetts Mutual Life Insurance	. Owner Strip	100.000	MINILIO		
0000			27-0105644				Jefferies Finance LLC	DE	NIA			50.000	MMLIC		_
0000			27-0105644				Jefferies Finance LLG	UE	NI A	Company	Ownership	000.000	. MINILIU		
										Massachusetts Mutual Life Insurance	1				
0000			86-2294635				Glidepath Holdings Inc.	DE	UIP	Company	Ownership	100.000	MMLIC		
0000	Massachusetts Mut Life Ins Co	63312	13-1935920				Great American Life Insurance Company	OH	UIP	Glidepath Holdings Inc.	Ownership	100.000	MMLIC		
0000			31-1422717				AAG Insurance Agency, LLC	KY	NIA	Great American Life Insurance Company	. Ownership	100.000	MMLIC		
0000	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	OH	IA	Great American Life Insurance Company	Ownership	100.000	MMLIC		
0000			31-1395344				Great American Advisors, LLC	OH	NIA	Great American Life Insurance Company	Ownership	100.000	MMLIC		
0000			26-3260520				Manhattan National Holding Corporation	OH	UDP	Great American Life Insurance Company	Ownership	100.000	MMLIC		
0000	Massachusetts Mut Life Ins Co	67083	45-0252531				Manhattan National Life Inusrance Company	OH	RE.	Manhattan National Holding LLC	Ownership.	100.000	MMLIC		
	21.0 1.0 00 1		1							Massachusetts Mutual Life Insurance					
0000							MassMutual Mortgage Lending LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
0000							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		
0000							JFIN GP Adviser LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							Jefferies Credit Partners LLC	DE	NI A	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							Apex Credit Partners LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
000Q							JFAM GP LLC	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
0000							JFAM GP LP	DE	NIA	Jefferies Credit Partners LLC	Ownership	100.000	MMLIC		
000Q							Jefferies Direct Lending Fund C LP	DE	NIA	Jefferies Credit Partners LLC	. Ownership	100.000	MMLIC		
0000							Jefferies DLF C Holdings LLC	DE	NIA	Jefferies Direct Lending Fund C LLC	Ownership	100.000	MMLIC		
0000						l	Jefferies Direct Lending Fund C SPE LLC	DE	NIA	Jefferies DLF C Holdings LLC	Ownership	100.000	MMLIC		
0000							JFIN Revolver Holdings LLC	DE	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		
0000							JFIN Revolver Holdings II LLC	DE	NIA	Jefferies Finance LLC	Owner ship.	100.000	MMLIC		
0000							JFIN Co-Issuer Corporation	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		1
0000							JFIN Europe GP. S.a.r.I.	LUX	NIA	Jefferies Finance LLC	Owner ship.	100.000	MMLIC		
0000							Jefferies Finance Europe, S.L.P.	LUX	NIA	JFIN Europe GP. S.a.r.I.	Ownership	100.000	MMLIC		
0000							Jefferies Finance Europe, SCSp	LUX	NIA	JFIN Europe GP. S.a.r.I.	Ownership.	100.000	MMLIC		
0000								DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
							Jefferies Finance Business Credit LLC	UE					MMLIC		
0000							JFIN Business Credit Fund I LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000			
0000							JFIN High Yield Investments LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
.0000							JFIN LC Fund LLC	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							JFIN Revolver CLO 2017 Ltd.	<u>C</u> YM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							JFIN Revolver CLO 2017-II Ltd.	CYM	NI A	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							JFIN Revolver CLO 2017-III Ltd	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC	<u>-</u>	J
0000							JFIN Revolver CLO 2018 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		
.0000		l	l	l			JFIN Revolver CLO 2019 Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		.1
.0000							JFIN Revolver CLO 2019-II Ltd.	CYM	NIA	Jefferies Finance LLC	Owner ship.	100.000	MMLIC		1
0000			1				JFIN Revolver CLO 2020 Ltd.	CYM	NIA	Jefferies Finance LLC	Owner ship.	100.000	MMLIC		
.0000			1				JFIN Revolver CLO 2021-II Ltd.	CYM	NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		1
.0000							JFIN Revolver CLO 2021-III Ltd.		NIA	Jefferies Finance LLC	Ownership.	100.000	MMLIC		1
.0000		l					JFIN Revolver CLO 2021-111 Ltd.	DE	NIA	Jefferies Finance LLC		90.000	MMLIC	··	1
								UE			Ownership			.	·
0000							JFIN Revolver Funding 2021 Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC	··	1
0000							JFIN Revolver Funding 2021 III Ltd.		NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							JFIN Revolver Funding 2021 IV Ltd	DE	NI A	Jefferies Finance LLC	Ownership	100.000	MMLIC		·
0000							JFIN Revolver Funding 2021 IV Ltd.	DE	NIA	Jefferies Finance LLC	Ownership	100.000	MMLIC		
0000							Apex Credit Holdings LLC	DE	NIA	JFIN Parent LLC	. Ownership	100.000	MMLIC		
0000							JFIN CLO 2012 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
0000		l	l	l			JFIN CLO 2013 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership.	100.000	MMLIC	[
0000							JFIN CLO 2014 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership	100.000	MMLIC		
.0000			1				JFIN CLO 2014-II Ltd.	CYM	NIA	Apex Credit Partners LLC	Owner ship.	100.000	MMLIC		1
.0000							JFIN CLO 2014-11 Etd.	CYM	NIA	Apex Credit Partners LLC	Ownership.	100.000	MMLIC		1
.0000							JFIN CLO 2015 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership		MMI IC		1
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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)	*
0000	0.0up .tu0	0000			0	torridaeriai)	JFIN CLO 2016 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership.	100.000	MMLIC	(1/11)	+
0000							JFIN CLO 2017 Ltd.	CYM	NIA	Apex Credit Partners LLC	Ownership.	100.000	MMLIC		
0000							JFIN CLO 2017 Etd.	CYM	NIA	Apex Credit Partners LLC	Owner ship	100.000	MMLIC		
							JEIN OLO 2017-11 Ltd		NIA	Massachusetts Mutual Life Insurance	Owner Strip	100.000	. MIVILIO		
0000			04-1590850				MIL On the Hill Bred II O	DE	NIA		0hi	100.000	MMLIC		
			04-1090800				MM Copper Hill Road LLC	. UE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance		400 000			
0000							MM Direct Private Investments Holding LLC	DE	NIA	Company	Ownership.	100.000	. MMLIC		
0000							MM Direct Private Investments UK Limited	GBR	NIA	MM Direct Private Investments Holding LLC .	Ownership	100.000	. MMLIC		
		1	Ì		1			1		Massachusetts Mutual Life Insurance					1
0000							MM Investment Holding	CYM	NI A	Company	Owner ship	100.000	. MMLIC		
0000		.	26-0073611				MassMutual Asset Finance LLC	DE	NIA	MM Investment Holding	Ownership	99.600	MMLIC		
0000		.	26-0073611				MassMutual Asset Finance LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
.0000		.	90-1005837	.			MMAF Equipment Finance LLC 2013-A	DE	NI A	MassMutual Asset Finance LLC	Owner ship	100.000	. MMLIC		1
.0000			36-4785301	l			MMAF Equipment Finance LLC 2014-A	DE	NIA	MassMutual Asset Finance LLC	Ownership.	100.000	MMLIC		I
0000			38-3969560				MMAF Equipment Finance LLC 2015-A	DF	NI A.	MassMutual Asset Finance LLC	Ownership.	100.000	MMLIC		
0000			32-0489588				MMAF Equipment Finance LLC 2016-A	DE	NIA	MassMutual Asset Finance LLC	Ownership.	100.000	MMLIC		
0000			35-2590691				MMAF Equipment Finance LLC 2017-A	DE	NIA	MassMutual Asset Finance LLC	Owner ship.	100.000	MMLIC		
.0000			32-0546197				MMAF Equipment Finance LLC 2017-B	DE	NIA	MassMutual Asset Finance LLC	Ownership.	100.000	MMLIC		1
0000			82-5335801				MMAF Equipment Finance LLC 2018-A	DL	NIA	MassMutual Asset Finance LLC	Owner ship.	100.000	MMLIC		
0000			83-3722640				MMAF Equipment Finance LLC 2019-A	DE	NIA	MassMutual Asset Finance LLC	Ownership.	100.000	MMLIC		
0000			03-3/22040					UE	NIA	MassMutual Asset Finance LLC		100.000	MMLIC		
							MMAF Equipment Finance LLC 2019-B	DE			Ownership				
0000							MMAF Equipment Finance LLC 2021-A	. UE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	. MMLIC		
0000							Rozier LLC	DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	. MMLIC		
0000			04-2443240				MML Management Corporation	MA	NIA	MM Investment Holding	Ownership	100.000	. MMLIC	Y	
0000			04-3548444				MassMutual International Holding MSC, Inc	MA	NIA	MML Management Corporation	Owner ship	100.000	. MMLIC		
0000			04-3341767				MassMutual Holding MSC, Inc.	MA	NIA	MML Management Corporation	Owner ship	100.000	. MMLIC		
										Massachusetts Mutual Life Insurance					
0000							MML CM LLC	DE	NIA	Company	Owner ship	100.000	. MMLIC		
0000							Blueprint Income LLC	NY	NI A	MML CM LLC	Owner ship	100.000	. MMLIC		
0000						l	Flourish Digital Assets LLC	DE	NIA	MML CM LLC	Owner ship.	100.000	MMLIC		
0000							Flourish Financial LLC	DE	NIA	MML CM LLC	Ownership.	100.000	MMLIC		
0000							Flourish Technologies LLC	DE	NIA	MML CM LLC	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-3356880				MML Distributors LLC	MA	NIA	Company	Ownership.	100.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	MA	NIA	MassMutual Holding LLC	Owner ship.	100.000	MMLIC		1
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.0000							MML Investment Advisers, LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
							minic investillent Auvisers, LLC	UE	NIA	Massachusetts Mutual Life Insurance	owner sittp		. WWILTO		1
.0000		1	46-3238013		1		MM Ctratagia Diatributana 110	DE	NIA		O-manahi-	100,000	MMLIC		1
		-	40-3238013				MML Strategic Distributors, LLC	. UE	NIA	Company	Ownership		. MWLIC		· · · · · · · · · · · · · · · · · · ·
		1			1		T. W. W. J. T. J. O. Top			Massachusetts Mutual Life Insurance	l	400 00-		.,	1
0000			06-1563535	2881445			The MassMutual Trust Company, FSB	CT	NIA	Company	Ownership	100.000	. MMLIC	Y	
							MML Private Placement Investment Company I,			Massachusetts Mutual Life Insurance					
.0000			04-1590850				LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
.0000			04-1590850				MML Private Equity Fund Investor LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
0000		.	04-1590850	.			MML Private Equity Fund Investor LLC	DE	NI A	Baring Asset Management Limited	Management		MMLIC		
0000			04-1590850				MM Private Equity Intercontinental LLC	DE	NIA	MML Private Equity Fund Investor LLC	Ownership.	100.000	MMLIC		
							. ,	1		Massachusetts Mutual Life Insurance					
0000		1	45-2738137		1		Pioneers Gate LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		1
			2,00.07							Massachusetts Mutual Life Insurance					
			04-2854319	2392316		1	MassMutual Holding LLC	DE	NIA	Company	Owner ship.	100.000	MMLIC	v	
.0000		1	06-1597528	2032010				NC	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC		1
0000		-	37-1732913				MassMutual Assignment Company Fern Street LLC	NC DE	NIA	MassMutual Holding LLC		100.000	MMLIC		
		-	31-1132913								Ownership				
.0000							Sleeper Street LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	. MMLIC		

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						Name of Securities			Relation-		Board,	Owner-		SCA	1
						Exchange		Domi	ship		Management,	ship		Filing	1
								Domi-	- 1						į ,
_		NAIC				if Publicly Traded	Names of	ciliary	to		Attorney-in-Fact,	Provide		Re-	į ,
Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	į ,
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			46-2252944				Haven Life Insurance Agency, LLC	DE	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC		
0000			04-1590850				MassMutual Capital Partners LLC	DE	NI A	MassMutual Holding LLC	Owner ship.	100.000	MMLIC		l
0000							MassMutual Ventures Holding LLC	DE	NI A	MassMutual Holding LLC	Owner ship.	100.000	MMLIC		l
0000							Athens Fund Management LLC	DE	NIA	MassMutual Ventures Holding LLC	Owner ship	100.000	MMLIC		l
0000							Crane Venture Partners LLP	GBR	NIA	MassMutual Ventures Holding LLC	Ownership	33.000	MMLIC		1
0000							MassMutual Ventures Management LLC	DE	NIA	MassMutual Ventures Holding LLC	Owner ship.	100.000	MMLIC		
							MassMutual Ventures SEA Management Private								[
0000							Limited	DE	NIA	MassMutual Ventures Holding LLC	Owner ship.	100.000	MMLIC		1 '
0000							MassMutual Ventures Southeast Asia LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000							MassMutual Ventures Southeast Asia II LLC	DE	NIA	MassMutual Ventures Holding LLC	Owner ship.	100.000	MMLIC	-	
0000							MassMutual Ventures Southeast Asia II LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC		
0000			47-1296410				MassMutual Ventures US I LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership.	100.000	MMLIC	.	
0000			71-1230410				MassMutual Ventures US 11 LLC	DE	NIA	MassMutual Ventures Holding LLC	Owner ship.	100.000	MMLIC	-	
0000		I					MassMutual Ventures US III LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership.	100.000	MMLIC	-	
0000							Open Alternatives LLC	DE	NIA	MassMutual Ventures Holding LLC	Ownership	100.000	MMLIC	-	
			04 4500050							Massachusetts Mutual Life Insurance		400 000			į ,
0000			04-1590850				MM Rothesay Holdco US LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		
0000							Rothesay Limited	GBR	NIA	MM Rothesay Holdco US LLC	Ownership	100.000	MMLIC		
0000							Rothesay Life Plc	GBR	NI A	Rothesay Limited	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	NI A	Rothesay Life PLC	Ownership	100.000	. MMLIC		
0000							Rothesay MA No.3 Limited	GBR	NI A	Rothesay Life PLC	Ownership	100.000	. MMLIC		
0000							Rothesay MA No.4 Limited	GBR	NI A	Rothesay Life PLC	Ownership	100.000	. MMLIC		
0000							LT Mortgage Finance Limited	GBR	NIA	Rothesay Limited	Ownership	100.000	MMLIC		
0000							Rothesay Property Partnership 1 LLP	GBR	NI A	Rothesay Limited	Ownership	100.000	. MMLIC		
0000							Rothesay Foundation	GBR	NIA	Rothesay Limited	Ownership.	100.000	MMLIC		
0000							Rothesay Pensions Management Limited	GBR	NIA	Rothesav Limited	Owner ship.	100.000	MMLIC		l
. 0000							Rothesay Asset Management UK Limited	GBR	NIA	Rothesay Asset Management UK Limited	Owner ship	100.000	MMLIC		[]
0000							Rothesay Asset Management Australia Pty Ltd .	AUS	NI A	Rothesay Asset Management UK Limited	Owner ship.	100.000	MMLIC		[
0000							Rothesay Asset Management US LLC	DE	NIA	Rothesay Asset Management UK Limited	Ownership	100.000	MMLIC		[
0000							MM Catalyst Fund LLC	DE	NI A.	MassMutual Holding LLC	Owner ship.	100.000	MMLIC		[
0000			47-1466022				LifeScore Labs, LLC	MA	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC		
0000			04-1590850				MML Investors Services, LLC	MA	NIA	MassMutual Holding LLC	Ownership.	100.000	MMLIC		
0000			04-1590850				MML Insurance Agency, LLC	MA	NIA	MML Investors Services. LLC	Owner ship	100.000	MMLIC		
0000			41-2011634				MMLISI Financial Alliances, LLC	DE	NIA	MML Investors Services, LLC	Ownership.	100.000	MMLIC	-	
0000			45-4000072				MM Asset Management Holding LLC	DE	NIA	MassMutual Holding LLC	Ownership	100.000	MMLIC	-	
0000		l	51-0504477				Barings LLC	DE	NIA			100.000	MMLIC	-	
			51-05044//						NIA	MassMutual Asset Management Holding LLC	Owner ship		. WIVIL I C	-	
0000		1	00 0001071				Baring Asset Management (Asia) Holdings	HKG	NI A	Di 110	0	100 000	INN 10		1
0000			98-0524271				Limited	HKU	NIA	Barings LLC	Ownership	100.000	MMLIC	-	
		1	00 0457405		I		Baring International Fund Managers (Bermuda)	D		Baring Asset Management (Asia) Holdings	l	100 005	l		1
0000			98-0457465				Limited	BMU	NIA	Limited	Owner ship	100.000	MMLIC		
		1								Baring Asset Management (Asia) Holdings	L	1	l		1
0000			98-0457463				Baring Asset Management (Asia) Limited	HKG	NIA	Limited	Ownership	100.000	MMLIC		
0000							Baring Asset Management Korea Limited	K0R	NIA	Baring Asset Management (Asia) Limited	Owner ship	100.000	. MMLIC	.	
		1					Barings Investment Management (Shanghai)					1			1
0000							Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MMLIC	. [ļ
		1					Barings Overseas Investment Fund Management					1			1
0000		l					(Shanghai) Limited	HKG	NIA	Baring Asset Management (Asia) Limited	Owner ship	100.000	. MMLIC	.	l
1				1			-			Baring Asset Management (Asia) Holdings		1			
0000		I	98-0457707	l	l		Baring SICE (Taiwan) Limited	TWN	NIA	Limited	Owner ship	100.000	MMLIC	. [l '
							5 (,			Baring Asset Management (Asia) Holdings		1			
0000		1					Barings Singapore Pte. Ltd.	\$GP	NIA	Limited	Ownership	100.000	MMLIC		1
							Dai ingo omgaporo i to. Etu.			Baring Asset Management (Asia) Holdings	0 mior on /p			-	
0000		1	98-0236449		I		Barings Japan Limited	JPN	NIA	Limited	Ownership.	100.000	MMLIC		1
			JU-UZJU44J				Dai mys Dapan Lilliteu	JFI\	NIM	LIIIII LGU	OMITCE SITTP	100.000	. ININIL I U		

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						No			D. L. C.						
						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)	*
Code	Group Name	Code	Nullibel	NOOD	CIR	international)	Of Allillates	tion	Littly		Otrier)	laye	Littity(les)/Feison(s)	(1/14)	+
										Baring Asset Management (Asia) Holdings					
0000							Barings Australia Holding Company Pty Ltd	AUS	NIA	Limited	Owner ship	100.000	MMLIC		
.0000			98-0457456				Barings Australia Pty Ltd	AUS	NIA	Baring Australia Holding Company Pty Ltd	Owner ship	100.000	MMLIC		
0000			80-0875475				Barings Finance LLC	DE	NIA	Barings LLC	Owner ship	100.000	MMLIC		
.0000							BCF Europe Funding Limited	IRL	NIA	Barings Finance LLC	Owner ship	100.000	MMLIC		
.0000							BCF Senior Funding LLC	DE	NI A	Barings Finance LLC	Ownership.	100.000	MMLIC		
							BCF Senior Funding Designated Activity			, and the second					
.0000							Company	IRL	NIA	Barings Finance LLC	Ownership.	100.000	MMLIC		
0000			04-3238351				Barings Securities LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000			98-0437588				Barings Guernsev Limited	GGY	NIA	Barings LLC	Owner ship.	100.000	MMLIC		
0000			000 0707000				Barings Europe Limited	GBR	NIA	Barings Guernsey Limited	Owner ship.	100.000	MMLIC		1
0000								ESP	NIA	Barings Europe Limited		100.000	MMLIC	-	1
							Barings Asset Management Spain SL				Ownership				
0000							Barings Italy S.r.I.	ITA	NI A	Barings Europe Limited	Owner ship	100.000	MMLIC		
0000							Barings Sweden AB	SWE	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
0000							Barings Finland Oy	FIN	NI A	Barings Europe Limited	Owner ship	100.000	MMLIC		
0000							Barings Netherlands B.V.	NLD	NI A	Barings Europe Limited	Owner ship	100.000	MMLIC		
0000							Barings Real Estate UK Holdings Limited	DE	NI A	Barings Europe Limited	Ownership	100.000	MMLIC		
							Barings Real Estate Advisers (Continental								
0000			98-0654401				Europe) Limited	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		
0000			98-0654388				Barings Real Estate Advisers Europe LLP	GBR	NIA	Barings Real Estate UK Holdings Limited	Ownership	100.000	MMLIC		1
0000			98-1194368				Barings Real Estate GmbH	DEU	NIA	Barings Real Estate UK Holdings Limited	Owner ship.		MMLIC		
0000			98-0241935				Baring Asset Management Limited	GBR	NIA	MassMutual Holdings (Bermuda) Limited	Owner ship.		MMLIC		
			90-0241933												
0000							Barings European Direct Lending 1 GP LLP	GBR	NI A	Baring Asset Management Limited	Owner ship	100.000	MMLIC		
0000			98-1012393				Barings Global Advisors Limited	GBR	NIA	Baring Asset Management Limited	Owner ship	100.000	MMLIC		
0000			98-0457328				Baring International Investment Limited	GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
							Baring International Investment Management								
0000			98-0457587				Holdings	GBR	NI A	Baring Asset Management Limited	Owner ship	100.000	MMLIC		
										Baring International Investment Management					
0000			98-0457576				Baring Asset Management UK Holdings Limited.	GBR	NIA	Holdings	Ownership	100.000	MMLIC		
										Baring Asset Management UK Holdings Limited					
0000			98-0465031				Baring Asset Management GmbH	DEU	NIA	Salving roose management on noverigo 21mm too	Ownership	100.000	MMLIC		
0000			. 30-0403031				Baring International Fund Managers (Ireland)	DL0		Baring Asset Management UK Holdings Limited	I Owner Sirrp		. INVILITO		
.0000			98-0524272				Limited	IDI	ALL A	baring Asset Management on Horumgs Emilited	Owner ship	100 000	MMLIC		
			98-0524272				Limited	IRL	NIA	5 . 4 . 4 . 4 . 4	Uwnersnip	100.000	MMLIC		
										Baring Asset Management UK Holdings Limited	1				
0000							Baring Asset Management Switzerland Sàrl	CHE	NIA		Ownership	100.000	MMLIC		
1				1	1			1		Baring Asset Management UK Holdings Limited	1		1	1	
.0000			98-0497550				Baring France SAS	FRA	NI A		Owner ship	100.000	MMLIC		
0000		.	98-0457586				Baring Fund Managers Limited	GBR	NI A	Baring Asset Management Limited	Ownership	100.000	MMLIC	.	
.0000		l					BCGSS 2 GP LLP	GBR	NI A	Baring Fund Managers Limited	Ownership.	100.000	MMLIC		
0000			98-0457578				Baring Investment Services Limited	GBR	NIA	Baring Asset Management Limited	Ownership.	100.000	MMLIC		
.0000							Barings Core Fund Feeder GP S.à.r.l.	LUX	NIA	Baring Asset Management Limited	Owner ship.	100.000	MMLIC		1
.0000							Barings BME GP S.à.r.I.	GBR	NIA	Baring Asset Management Limited	Owner ship.		MMLIC		
0000							Barings GPC GP S.à. r.I.	LUX	NIANIA	Baring Asset Management Limited	Ownership.	100.000	MMLIC	-	1
.0000								LUX					MMLIC		
							Barings European Core Property Fund GP Sàrl		NIA	Baring Asset Management Limited	Ownership	100.000			·
0000							Barings Investment Fund (LUX) GP S.à. r.I	LUX	NIA	Baring Asset Management Limited	Owner ship	100.000	MMLIC		
0000							Barings Umbrella Fund (LUX) GP S.à.r.I.	LUX	NI A	Baring Asset Management Limited	Owner ship	100.000	MMLIC		
0000							GPLF4(S) GP S.à r.I	LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC	.	
0000							PREIF Holdings Limited Partnership	GBR	NI A	Baring Asset Management Limited	Ownership	100.000	MMLIC		
0000			98-0432153				Barings (U.K.) Limited	GBR	NIA	Barings Guernsey Limited	Ownership	100.000	MMLIC	.	
0000			l	l	l		BMC Holdings DE LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC	[
0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	CA	NIA	Barings Real Estate Advisers LLC	Owner ship.	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					1
0000			81-4258759		1	1	CRA Aircraft Holding LLC	DE	NIA	Company	Ownership/Influence	40.000	MMLIC	1	1
								DE				40.000	MMI IC		1
0000			81-4258759				CRA Aircraft Holding LLC	UE	NIA	Barings LLC	Influence		MIVILIU	. [

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											Type	lf			
											of Control	Control			
											(Ownership,	is		Is 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.Š. 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)	*
Code	Group Name	Code	Number	ROOD	CIIC	international)	Of Allillates	tion	Littity	Massachusetts Mutual Life Insurance	Other)	lage	Littity(les)/i erson(s)	(1/14)	+
0000			00 0500400				Aland Baratha Haldinas IB	DE	NII A		0	00.700	MAR IO		
0000			83-0560183				Aland Royalty Holdings LP	DE	NI A	Company	Ownership	26.700	MMLIC		
0000			83-0560183				Aland Royalty Holdings LP	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
.0000			82-2932156				GASL Holdings LLC	DE	NIA	Company	Ownership	11.300	MMLIC		
										Massachusetts Mutual Life Insurance					
.0000			46-2344300				Intermodal Holdings II LLC	DE	NIA	Company	Ownership.	18.000	MMLIC		
.0000			47-3055009				Milestone Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	19.800	MMLIC		
0000			47-3055009				Milestone Acquisition Holding, LLC.	DE	NIA	Barings LLC	Influence		MMLIC		
		1								Massachusetts Mutual Life Insurance		T			1
0000						1	Novation Companies, Inc.	MD	NIA	Company	Ownership	16.500	MMLIC		
		1					noración companico, mo.			Massachusetts Mutual Life Insurance	omior sirry				1
0000		1	46 E460000		1		Ded Lake Ventures II C	חר	NI A		O	24 500	AMM 10		1
0000		-	46-5460309 46-5460309				Red Lake Ventures, LLC	DE	NIA	Company	Ownership/Influence	31.500	MMLIC		· · · · · · · · · · · · · · · · · · ·
0000			40-5460309				Red Lake Ventures, LLC	UE	NIA	Barings LLC	Influence	···· ·	MMLIC		
										Massachusetts Mutual Life Insurance					
.0000			81-4065378				Remington L & W Holdings LLC	DE	NI A	Company	Ownership/Influence	19.900	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	DE	NI A	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Tamiami Citurus, LLC	DE	NI A	Company	Ownership	15.700	MMLIC		
0000							Teaktree Acquisition, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	DE	NI A	Barings LLC	Influence.		MMLIC		
							Tourist of Addust From, ELO			Massachusetts Mutual Life Insurance	IIII uulioo		mile 10		1
0000							Techquity, LP	ne ne	NIA	Company	Ownership	15.600	MMLIC		
0000							Techquity, LP	DE	NIA	Barings LLC	Influence	13.000	MMLIC		
.0000			46-0687392				Validus Holdings Company LLC	DE		Barings LLC	Ownership.	40.400	MMLIC		
			40-008/392				validus Holdings Company LLC	UE	NIA		Uwner snip	40.400	. MIVILIC		
										Massachusetts Mutual Life Insurance					
0000							Validus Pharmaceuticals LLC	DE	NIA	Company	Ownership/Influence	70.000	MMLIC		
0000							VGS Acquisition Holding, LLC	DE	NIA	MassMutual Holding LLC	Ownership/Influence	33.300	. MMLIC		
0000							VGS Acquisition Holding, LLC	DE	NI A	Barings LLC	Management		MMLIC		
0000							Aland Royalty GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000							Alaska Future Fund GP, LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
0000							BAI GP, LLC	DE	NIA	Barings LLC	Owner ship	100.000	MMLIC		
0000							BAI Funds SLP. LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000							Baring Asset-Based Income Fund (US) GP, LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		1
0000		1					Barings CMS Fund GP, LLC		NIA	Barings LLC	Owner ship.	100.000	MMLIC		
0000		1					Barings Hotel Opportunity Venture I GP, LLC	DE DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		1
.0000		-					Barings Investment Series LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		1
.0000		-					Barings Emerging Generation Fund GP, LLC	DE	NI A	Barings LLC	Ownership	100.000	MMLIC		·
0000							Barings ERS PE Emerging Manager III GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		· · · · · · · · · · · · · · · · · · ·
						1	Barings Global Investment Funds (U.S.)					1			
.0000			04-1590850				Management LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings CLO Investment Partners GP, LLC	DE	NI A	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Core Property Fund GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000		.	l				Barings Direct Lending GP Ltd.	CYM	NIA	Barings LLC	Ownership	100.000	MMLIC		1
							J			Massachusetts Mutual Life Insurance					
0000		1	84-3784245		1		Barings Emerging Generation Fund LP	DE	NIA	Company	Ownership	66.600	. MMLIC		1
.0000		1	84-3784245				Barings Emerging Generation Fund LP	DE	NIA	Barings LLC	Management		MMLIC		1
			07-0104240				Barings Global Energy Infrastructure	UL		Dai mgs LLV	management		mmL10		
0000		1	I		1			DE	NI A	Baringa II C	O	100.000	MMLIC		1
							Advisors, LLC	UE	NIA	Barings LLC	Ownership	100.000	MINILIU		
						1	Barings North American Private Loan Fund			L			I		
0000							Management, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
		1	1		1	1	Barings North American Private Loan Fund	1							1
.0000							Management II, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000		1	1	1	1	ĺ	Barings Global Real Assets Fund GP, LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		

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						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?	
	One we Name	Code		RSSD	CIK	International)	Or Affiliates				Other)				*
Code	Group Name	Code	Number	RSSD	CIK	international)		tion	Entity	(Name of Entity/Person)		tage	Entity(ies)/Person(s)	(Y/N)	-
0000							Barings GPSF	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			. 84-5063008				Barings Small Business Fund LLC	DE	NIA	Company	Ownership	32.900	MMLIC		
0000			. 84-5063008				Barings Small Business Fund LLC	DE	NI A	Barings LLC	. Management		MMLIC		
0000			98-0536233				Benton Street Advisors, Inc.	CYM	NIA	Barings LLC	. Ownership	100.000	MMLIC		
0000							BHOVI Incentive LLC	DE	NIA	Barings LLC	. Ownership	100.000	MMLIC		
0000							BIG Real Estate Fund GP LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
0000							BRECS VII GP LLC	DE	NI A	Barings LLC	Ownership	100.000	MMLIC		
0000			.				BREDIF GP LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		[
0000							CHY Venture GP LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		[
0000		l	J				CREF X GP LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
0000			04-1590850				Great Lakes III GP, LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
0000			1				Lake Jackson LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
0000			04-1590850				Loan Strategies Management LLC	DE	NIA.	Barings LLC	Owner ship.	100.000	MMLIC		
0000			41-2280126				Mezzco III LLC	DE	NIA	Barings LLC	. Ownership.	99.300	MMLIC		
0000			80-0920285				Mezzco IV LLC	DE	NIA	Barings LLC	Owner ship.	99.300	MMLIC		
0000			. 00-0920203				Mezzco Australia II LLC	DE	NIA	Barings LLC	. Ownership.	100.000	MMLIC		
0000							RECSA-NY GP LLC	DE	NIA	Barings LLC	Ownership.	100.000	MMLIC		
								UE							
0000			. 04-1590850				SBNP SIA II LLC	DE	NIA	Barings LLC	. Ownership	100.000	MMLIC		
0000							SBNP SIA III LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
							Somerset Special Opportunities Management LLC								
0000			. 04–1590850					DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000							Amherst Long Term Holdings, LLC	DE	NIA	Company	Ownership	24.500	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			. 04-3313782				MassMutual International LLC	DE	NIA	Company	Ownership	100.000	MMLIC	Y	
0000							MassMutual Solutions LLC	DE HKG	NIA	MassMutual International LLC	. Ownership	100.000	MMLIC		
0000							Haven Technologies Asia Limited	HKG	NIA	MassMutual International LLC	Owner ship.	100.000	MMLIC		
0000							Yunfeng Financial Group Limited	HKG	NIA	MassMutual International LLC	Ownership	24.900	MMLIC		
0000							MassMutual Asia Limited (SPV)	HKG	NIA	MassMutual International LLC	Ownership.	100.000	MMLIC		
										Massachusetts Mutual Life Insurance	·				
0000			04-1590850				MML Mezzanine Investor II, LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-1590850				MML Mezzanine Investor III, LLC	DE	NIA	Company	Ownership	11.100	MMLIC		
			1					-		Massachusetts Mutual Life Insurance	7. 2 p]		
0000			27-3576835				MassMutual External Benefits Group LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			. 04-1590850				100 w. 3rd Street LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
0000							100 W. OIG OLICEL LLU	VE		Massachusetts Mutual Life Insurance	omici amp		mmLIV		
0000			04-1590850				2160 Grand Manager LLC	DE	NI A	Company	Ownership.	98.100	MMLIC		
0000			04-1030000				2 100 UT ATIU MATIAYET LLU	∪⊏	INI A	Massachusetts Mutual Life Insurance	owier amb	30. 100	WWLIV		
0000			82-2432216				200 Cauth Trues Hatal 11.0	DE	NIA		Ownership.	100.000	MMLIC		
0000			. 82-2432216				300 South Tryon Hotel LLC	UE	NIA	Company	Owner sn i p	100.000	MMLIC		
								25		Massachusetts Mutual Life Insurance		400.000			
0000			. 04–1590850				300 South Tryon LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
1								l		Massachusetts Mutual Life Insurance					
0000							Almack Mezzanine Fund II Unleveraged LP	GBR	NIA	Company	Ownership/Influence	72.900	MMLIC		
1 1							Barings Affordable Housing Mortgage Fund I			Massachusetts Mutual Life Insurance					
0000			.				LLC	DE	NI A	Company	Owner ship	100.000	MMLIC		
							Barings Affordable Housing Mortgage Fund I								
0000							LLC	DE	NI A	Barings LLC	. Management		MMLIC		
							Barings Affordable Housing Mortgage Fund II			Massachusetts Mutual Life Insurance					
0000			. 61-1902329				LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
							Barings Affordable Housing Mortgage Fund II								
0000			. 61-1902329				LLC	DE	NI A	Barings LLC	. Management		MMLIC		L

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						Name of Securities			Relation-		Board,	Owner-		SCA	
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	
Code	Group Name	Code	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
	•						Barings Affordable Housing Mortgage Fund III		-	Massachusetts Mutual Life Insurance	·				1
.0000			85-3036663				LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
							Barings Affordable Housing Mortgage Fund III								
.0000			85-3036663				LLC	DE	NIA	Barings LLC	Management		MML IC		
										Massachusetts Mutual Life Insurance	managomort				
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Company	Ownership/Influence	12.300	MM_IC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA.	C.M. Life Insurance Company	Ownership/Influence	1.200	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	DE	NIA	Barings LLC	Management.	1.200	MMLIC		
			. 30-4000330				Barings Emerging Markets Corporate Bond Fund	VE	NIA	Massachusetts Mutual Life Insurance	management		MWLTG		
0000				1	İ		Dailings Emerging markets Corporate Bond Fund	IDI	ALLA		O	74 000	188 10		
0000							Desires Francisco Manhata Consent D. 15	IRL	NIA	Company	Ownership/Influence	71.600	MMLIC		·
				1	l		Barings Emerging Markets Corporate Bond Fund			la	I				
0000								IRL	NIA	Barings LLC	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								
0000								LUX	NIA	Barings LLC	Influence		MMLIC		
							Babson Capital Global Special Situation			Massachusetts Mutual Life Insurance					
.0000			98-1206017				Credit Fund 2	DE	NIA	Company	Ownership/Influence	34.300	MMLIC		
							Babson Capital Global Special Situation			. ,	•				
.0000			98-1206017				Credit Fund 2	DE	NIA	C.M. Life Insurance Company	Ownership	2.200	MMLIC		
							Babson Capital Global Special Situation			The first and company					
0000			98-1206017				Credit Fund 2	DE	NIA	Barings LLC	Management		MMLIC		
			30 1200017				orcart runu 2			Massachusetts Mutual Life Insurance	imanagement		I IIII		
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	Company	Ownership/Influence	75.700	MMLIC		
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	C.M. Life Insurance Company	Ownership.	3.800	MMLIC		
0000			37-1506417				Babson Capital Loan Strategies Fund, L.P	DE	NIA	Barings LLC	Management	۵.۵۵۰ د	MMLIC		
			37-1300417				babson capital Loan Strategies Fund, L.F	VE	NIA		management		MINILIG		
0000							D : 1011:1 V: 11 D 1 E 1	ID!	ALL A	Massachusetts Mutual Life Insurance	0 1: // //	57,200	MMLIC		
0000							Barings US High Yield Bond Fund	IRL	NIA	Company	Ownership/Influence	57.200			
0000							Barings US High Yield Bond Fund	IRL	NIA	Barings LLC	Management		MMLIC		
0000							Babson CLO Ltd. 2013-I	CYM	NIA	Barings LLC	Influence	·····	MMLIC		3
0000							Babson CLO Ltd. 2014-I	CYM	NIA	Barings LLC	Influence	·····	MMLIC		2
0000							Babson CLO Ltd. 2015-I	<u>C</u> YM	NIA	Barings LLC	Influence		MMLIC		4
0000							Babson CLO Ltd. 2015-II	CYM	NIA	Barings LLC	Influence		MMLIC		5
0000							Babson CLO Ltd. 2016-I	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Babson CLO Ltd. 2016-II	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO Ltd. 2017-I	CYM	NIA	Barings LLC	Influence		MMLIC		J
.0000				l			Barings CLO 2018-III	CYM	NIA	Barings LLC	Influence.		MMLIC		
.0000							Barings CLO 2018-IV	CYM	NIA	Barings LLC	Influence		MMLIC		.1
0000			98-1473665				Barings CLO 2019-II	CYM	NIA	Barings LLC	Influence		MMLIC		1
0000							Barings CLO 2019-III	CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2019-IV	CYM	NIA	Barings LLC	Influence		MMLIC		1
0000							Barings CLO 2020-I	CYM	NIA	Barings LLC	Influence.		MMLIC		1
0000							Barings CL0 2020-11	CYM	NIA	Barings LLC	Influence.		MMLIC		1
.0000							Barings CLO 2020-11	CYM	NIA	Barings LLC	Influence.	·····	MMLIC		1
0000							Barings CLO 2020-IV	CYM	NIA	Barings LLC	Influence		MMLIC		1
0000															·
							Barings CLO 2021-I	CYM	NIA	Barings LLC	Influence		MMLIC		·
0000							Barings CLO 2021-II	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2014-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		·
0000							Babson Euro CLO 2014-II BV	NLD	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2015-I BV	NLD	NIA	Barings LLC	Influence		MMLIC		
0000							Babson Euro CLO 2016-I BV	NLD	NIA	Barings LLC	Influence	<u> </u>	MMLIC		
0000			36-037260H				Barings Euro CLO 2019-I BV	IRL	NIA	Barings LLC	Influence.		MMLIC		
0000			l				Barings Euro CLO 2019-II BV	IRL	NIA	Barings LLC	Influence.		MMLIC		.1
0000		1					Barings Euro CLO 2020-I DAC	IRL	NIA	Barings LLC	Influence		MMLIC		1

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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	1
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			. 37-15576VH				Barings Euro CLO 2021-I DAC	IRL	NIA	Barings LLC	Influence		MMLIC		
										Massachusetts Mutual Life Insurance					1
0000			81-0841854				Barings CLO Investment Partners LP	DE	NIA	Company	Ownership/Influence	99.300	MMLIC		
0000			. 81-0841854				Barings CLO Investment Partners LP	DE	NI A	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					1
0000							Barings Euro Value Add II (BREEVA II)	LUX	NI A	Company	Ownership/Influence	62.800	MMLIC		
0000							Barings Euro Value Add II (BREEVA II)	LUX	NIA	C.M. Life Insurance Company	Ownership	5.500	MMLIC		
0000							Barings Euro Value Add II (BREEVA II)	LUX	NIA	Barings LLC	Management		MMLIC		
0000		1					Barings Real Estate European Value Add I SCSp	ODD	NIIA	Massachusetts Mutual Life Insurance	0	44 000	188 10	1	1
0000							Davings Deal Catata Commun. Value Add 1 000	GBR	NIA	Company	Ownership/Influence	41.200	MMLIC		
0000		I					Barings Real Estate European Value Add I SCSp	CDD	NIA	C.M. Life Insurance Company	Owner ship	4.600	MMLIC		1
0000							Deniene Deal Catata Communication Add I 000	GBR	NIA	C.M. Life insurance company	. Uwnersnip	4.600	MMLIC		
0000							Barings Real Estate European Value Add I SCSp	GBR	NIA	Danimon II C	Managament		MMLIC		1
0000								ubn	NIA	Barings LLC	Management		MWLIG		
0000			85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	Company	Ownership/Influence	100,000	MMLIC		1
0000			. 85-3449260				Barings Real Estate Debt Income Fund LP	DE	NIA	C.M. Life Insurance Company	Ownership	100.000	MMLIC		
0000			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		
			02 3000 134				Barings Global Energy Infrastructure Fund I	110		Massachusetts Mutual Life Insurance	management		I IIII		1
0000			98-1332384				IP	CYM	NIA	Company	Ownership/Influence	99.200	MMLIC		1
			100 1002001				Barings Global Energy Infrastructure Fund I			o inputi	Comor on py mirracines				1
0000			98-1332384				LP	CYM	NIA	Baring Asset Management Limited	Management		MMLIC		1
0000							Barings Global Dividends Champion Fund	IRL	NIA	Barings LLC	Management.		MMLIC		
0000							Barings Global Inv. Grade Strat Fund	IRL	NIA	Barings LLC	Management		MMLIC		
							3			Massachusetts Mutual Life Insurance					
0000							Barings Global Private Loan Fund	LUX	NI A	Company	. Ownership/Influence	10.500	MMLIC		
0000							Barings Global Private Loan Fund	LUX	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					1
0000			. 82-3867745				Barings Global Real Assets Fund LP	DE	NIA	Company	Ownership/Influence	41.700	MMLIC		
0000			. 82-3867745				Barings Global Real Assets Fund LP	DE	NIA	C.M. Life Insurance Company	Owner ship	7.400	MMLIC		
0000			. 82-3867745				Barings Global Real Assets Fund LP	DE	NIA	Barings LLC	Management		MMLIC		
							Barings Global Special Situations Credit Fund			Massachusetts Mutual Life Insurance					1
0000							3	IRL	NIA	Company	Ownership/Influence	17.900	MMLIC		
0000		I					Barings Global Special Situations Credit 4	DE	NI A	Massachusetts Mutual Life Insurance	0hi	70.400	MMLIC		1
0000							Delaware	DE	NIA	Company	Ownership	/0.400	. WWLIG		·
0000		I					Barings Global Special Situations Credit 4	DE	NIA	C.M. Life Insurance Company	O-marahi-	2 700	MMLIC		1
0000							Delaware	DE	NIA	U.W. Life Insurance Company	. Ownership	3.700	. WWL10		·
0000		I					Delaware	DE	NIA	Barings LLC	Management		MMLIC		1
0000							Barings Global Special Situations Credit 4	UE	NIA	Massachusetts Mutual Life Insurance	manayement		NIVIL I U		1
0000							IIIX	LUX	NIA	Company	Ownership	16.000	MMLIC		1
							Barings Global Special Situations Credit 4	LU/		Company	Owner strip.		. WWL10		1
0000							IIIX	LUX	NIA	C.M. Life Insurance Company	Ownership	0.900	MMLIC		1
							Barings Global Special Situations Credit 4			C.m. Erro modranos company	owner or p				1
0000							LUX	LUX	NIA	Barings LLC	Management		MMLIC		1
							Barings Global Special Situations Credit Fund			J- J			1		
0000		I					3	IRL	NIA	Barings LLC	Management		MMLIC		
0000			87-0977058				Barings Hotel Opportunity Venture	CT	NIA	Barings LLC	Ownership/Influence	100.000	MMLIC		
0000			87-0977058				Barings Hotel Opportunity Venture	CT	NIA	Barings LLC	Management		MMLIC		
0000							Barings Middle Market CLO 2017-I Ltd & LLC	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Barings Middle Market CLO 2018-1	CYM	NIA	Barings LLC	Influence		MMLIC		
0000							Barings Middle Market CLO 2019-I	CYM	NIA	Barings LLC	Influence		MMLIC		
0000			. 98-1612604				Barings Middle Market CLO Ltd 2021-1	CYM	NIA	Barings LLC	Influence		MMLIC		

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											Type	lf			
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						Name of Securities			Relation-		Board,	Owner-		SCA	1
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						Exchange		Domi-	ship		Management,	ship			1
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Group		Company	ID	Federal		(U.S. or	Parent, Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	1
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			38-4010344				Barings North American Private Loan Fund LP .	DE	NIA	Company	Ownership/Influence	42.400	. MMLIC		
0000			38-4010344				Barings North American Private Loan Fund LP .	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
										Massachusetts Mutual Life Insurance					1
0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Company	Ownership/Influence	33.800	MMLIC		
0000			98-1332384				Barings RE Credit Strategies VII LP	DE	NIA	Baring Asset Management Limited	Management		MMLIC		
										Massachusetts Mutual Life Insurance					1
0000							Braemar Energy Ventures I, L.P.	DE	NIA	Company	Ownership/Influence	89.700	. MMLIC		
0000							Braemar Energy Ventures I, L.P.	DE	NIA	C.M. Life Insurance Company	Ownership	1.300	MMLIC		
0000							Braemar Energy Ventures I, L.P.	DE	NIA	Barings LLC	Management		MMLIC		
0000							Barings European Core Property Fund SCSp	LUX	NIA	MassMutual Holding LLC	Ownership/Influence	9.200	MMLIC		
0000							Barings European Core Property Fund SCSp	LUX	NIA	C.M. Life Insurance Company	Ownership	0.600	MMLIC		
0000		.					Barings European Core Property Fund SCSp	LUX	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
0000			38-4059932				Benchmark 2018-B2 Mortgage Trust	NY	NIA	Barings LLC	Influence.		MMLIC		
0000							Benchmark 2018-B4	NY	NIA	Barings LLC	Influence		MMLIC		
0000			38-4096530				Benchmark 2018-B8	NY	NIA	Barings LLC	Influence.		MMLIC		
0000			20-5578089				Barings Core Property Fund LP	DE	NIA	MassMutual Holding LLC	Ownership/Influence	20.900	MMLIC		'
0000			20-5578089				Barings Core Property Fund LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		.
							, ,			Massachusetts Mutual Life Insurance	, and the second				1
0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	Company	Ownership/Influence	25.300	MMLIC		
0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	C.M. Life Insurance Company	Ownership	2.800	MMLIC		.1
0000			46-5432619				Cornerstone Real Estate Fund X LP	DE	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance	1				
0000			35-2531693				Cornerstone Permanent Mortgage Fund III LLC .	MA	NIA	Company	Ownership/Influence	100.000	MMLIC		1
										Massachusetts Mutual Life Insurance					
0000			61-1793735				Cornerstone Permanent Mortgage Fund IV LLC	MA	NIA	Company	Ownership.	100.000	MMLIC		1
										Massachusetts Mutual Life Insurance					
0000							Eclipse Business Capital Holdings	DE	NIA	Company	Ownership/Influence	6.700	MMLIC		1
0000							Eclipse Business Capital Holdings	DE	NIA	Barings LLC	Management		MMLIC		
							zeripee saemeee eapital heranige			Massachusetts Mutual Life Insurance	ina a gonor t				
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Company	Ownership/Influence	32.000	MMLIC		1
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	C.M. Life Insurance Company	Ownership.	4.800	MMLIC		
0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	DE	NIA	Barings LLC	Management		MMLIC		
							datoray mozzamio i ai tiloro i i zi iiiiiiiiiiiiiiiiiiiiiiiiiiiii			Massachusetts Mutual Life Insurance					
0000			37-1708623		1		Great Lakes III, L.P.	DE	NIA	Company	Ownership/Influence	41.400	MMLIC		1
0000			37-1708623				Great Lakes III. L.P.	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance					
0000					1		GIA EU Holdings - Emerson JV Sarl	LUX	NIA	Company	Ownership/Influence	60 . 100	MMLIC		1
0000							GIA EU Holdings - Emerson JV Sarl	LUX	NIA	Barings LLC	Management		MMLIC		
							JPMCC Commercial Mortgage Securities Trust								
0000			38-4041011				2017–JP7	NY	NIA	Barings LLC	Influence	1	MMLIC		1
							JPMDB Commercial Mortgage Securities Trust								
0000			38-4032059		1		2017–C5	NY	NIA	Barings LLC	Influence.		MMLIC		1
										Massachusetts Mutual Life Insurance					
0000			82-1512591		1		KKR-MM Vector LP	DE	NIA	Company	Ownership/Influence	100,000	MMLIC		1
			02 1012001				TOUR TOUR LI			Massachusetts Mutual Life Insurance	- Carrier Gillp/ Illi ruciloc				
0000			46-4255307		1		Marco Hotel LLC	DE	NIA	Company	Ownership	100.000	MMLIC		1
			10 7200007				maroo notor LLO			Massachusetts Mutual Life Insurance	- Carrier 6/11/p				
0000			04-1590850		1		Miami Douglas One GP LLC	DE	NIA	Company	Ownership.	0.000	MMLIC		1
0000			04-1590850				Miami Douglas One GP LLC	DE	NIA	C.M. Life Insurance Company	Ownership.	5.500	MMLIC		
0000			04-1030000				miami bougias one of LLO			Massachusetts Mutual Life Insurance	Omior offip		, mmL10		
0000			04-1590850		1		Miami Douglas Two GP LLC	DE	NIA	Company	Ownership	0.000	MMLIC		1
0000			04-1590850				Miami Douglas Two GP LLC	DE	NIA	C.M. Life Insurance Company	Ownership	0.000	MMLIC		
0000			0000001			l	milami Douglas INO OF LLO	VE	NIA	O.W. LITE HISUITATICE COMPANY	Towner oillh		I MINIT I O		1

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						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-	
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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				Miami Douglas One LP	DE	NIA	Company	Ownership	90.000	MMLIC		
0000			04-1590850				Miami Douglas One LP	DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			04-1590850				Miami Douglas Two LP	DE	NIA	Company	Ownership	90.000	MMLIC		
0000			. 04 1000000				mrami bougras 140 Li			Massachusetts Mutual Life Insurance	Owner strip				
0000			04-1590850				MM BIG Peninsula Co-Invest Member LLC	MA	NIA	Company	Ownership	91.300	MMLIC		
								MA							
0000			. 04-1590850				MM BIG Peninsula Co-Invest Member LLC	MA	NIA	C.M. Life Insurance Company	Ownership	3.000	. MMLIC		
										Massachusetts Mutual Life İnsurance					
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	. MMLIC		ļ
										Massachusetts Mutual Life Insurance					
0000		l	45-3623262				HB Naples Golf Owner LLC	DE	NI A	Company	Ownership	100.000	MMLIC		.
										Massachusetts Mutual Life Insurance					
0000							MM CM Holding LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
							IIII OII FIOTOTTI LEO			Massachusetts Mutual Life Insurance	owner our p		mile 10		
0000			. 81–3000420				MM Debt Participations LLC	DE	NIA	Company	Ownership/Influence	100.000	MMLIC		
0000			81-3000420				MM Debt Participations LLC	DE	NIA	Barings LLC	Management	100.000	MMLIC		
0000			. 01-3000420				mm Debt Participations LLC	UE	NIA		management		MINILIU		
										Massachusetts Mutual Life Insurance					
0000			. 82-4411267				RB Apartments LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			. 75-2901061				Reston Arboretum LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			20-8856877				Somerset Special Opportunities Fund L.P	DE	NIA	Company	Ownership/Influence	40 . 100	MMLIC		
0000			20-8856877				Somerset Special Opportunities Fund L.P	DE	NIA	C.M. Life Insurance Company	Owner ship.	1.900	MMLIC		
0000			04-1590850				SouthPointe Industrial LLC	DE	NIA	Barings LLC	Ownership	100.000	MMLIC		1
							Courting of the Courting of th			Massachusetts Mutual Life Insurance	• •				
0000			35-2553915				Ten Fan Pier Boulevard LLC	DE	NIA	Company	Ownership.	100.000	MMLIC		
0000			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	16.500	MMLIC		
0000			. 41-2280127				lower Square Capital Partners III, L.P.	VE	NIA		Ownership/influence	000.000	MWLIC		
										Massachusetts Mutual Life Insurance					
0000			41-2280129				Tower Square Capital Partners IIIA, L.P	DE	NIA	Company	Ownership/Influence	91.000	MMLIC		
0000			. 41-2280129				Tower Square Capital Partners IIIA, L.P	DE	NIA	Barings LLC	Management		MMLIC		
										Massachusetts Mutual Life Insurance				1	1
0000			. 04-1590850				Trailside MM Member LLC	DE	NIA	Company	Ownership	59.600	MMLIC		
0000			04-1590850				Trailside MM Member LLC	DE	NIA	C.M. Life Insurance Company	Owner ship.	7.400	MMLIC	I	
		1	1	["]				1		Massachusetts Mutual Life Insurance	1			1	1
0000			83-1325764				Washington Gateway Two LLC	DE	NIA	Company	Ownership		MMLIC	1	1
0000			83-1325764				Washington Gateway Two LLC	DE	NIA	C.M. Life Insurance Company	Ownership.	6.700	MMLIC		1
0000							naonington datoray ino LLO			Massachusetts Mutual Life Insurance	Omnor on p.				
0000			32-0574045				Washington Gateway Three LLC	DE	NIA	Company	Ownership.	83.700	MMLIC	1	1
0000			. 32-0574045				Washington Gateway Three LLC	DE	NIA	C.M. Life Insurance Company	Ownership	11.400	MMLIC		·····
1 1										Massachusetts Mutual Life Insurance	I			1	1
0000			. 04–1590850				West 46th Street Hotel LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
							Babson Capital Loan Strategies Master Fund LP	1						1	1
0000								CYM	NIA	Barings LLC	Management		MMLIC		
							Barings China Aggregate Bond Private							1	1
0000				l		l	Securities Investment Fund	CHN	NIA	Barings LLC	Management		MMLIC	l	l
0000			1				Barings European Growth Trust Fund	GBR	NIA	Barings LLC	Ownership/Influence	20.900	MMLIC		1
0000			47-3790192				Barings Global High Yield Fund	MA	NIA	Barings LLC	Management		MMLIC		
			261 06 10-11-				CCIC Fund	CHN	NIA	Barings LLC	Ownership/Influence	55.600	MMLIC		1
0000							ooto i uliu	VIIV	NIA		owner surpy mirruence	000.000	WINILIU		
0000			74 4040404				0	DE	NI2 A	Massachusetts Mutual Life Insurance	0	40.000	188 10	1	1
0000			71-1018134				Great Lakes II LLC	DE	NIA	Company	Ownership	10.600	MMLIC		
0000			. 71–1018134				Great Lakes II LLC	DE	NIA	C.M. Life Insurance Company	Owner ship	0.100	MMLIC		

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						Name of Securities			Relation-		Board,	Owner-		SCA	1
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Group		Company	ID	Federal		(U.S. or	Parent. Subsidiaries	Loca-	Reporting	Directly Controlled by	Influence,	Percen-	Ultimate Controlling	quired?	1
Code	Group Name	Conipany	Number	RSSD	CIK	International)	Or Affiliates	tion	Entity	(Name of Entity/Person)	Other)	tage	Entity(ies)/Person(s)	(Y/N)	*
Code	Gloup Name	Code	Nullibel	KSSD	CIR	international)	Of Allillates	tion	Littly	Massachusetts Mutual Life Insurance	Other)	lage	Littity(les)/Feison(s)	(1/11)	\vdash
0000			04-1590850				Wood Creek Venture Fund LLC	DE	NIA	Company	Owner ship	40.000	MMLIC		1
			01 1000000				NOOD OF CONTROL OF LAND LECT.			Massachusetts Mutual Life Insurance	omor on p.				1
0000			36-4823011				50 Liberty LLC	DE	NIA	Company	Ownership.	65.000	MMLIC		1
0000			36-4823011				50 Liberty LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.800	MMLIC		1
										Massachusetts Mutual Life Insurance					1
0000			87-0977058				Barings Hotel Opportunity Ventures	DE	NIA	Company	Ownership	50.000	MMLIC		ļ
0000							D : 01:7 : H + 5 1.1V	0.1		Massachusetts Mutual Life Insurance		400 000	188.10		1
0000							Barings California Mortgage Fund IV	CA	NIA	Company	Ownership	100.000	MMLIC		·
0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	_LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	26.100	MMLIC		1
0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	LUX	NIA	C.M. Life Insurance Company	Owner ship.	2.300	MMLIC		(
0000							barrings dilibrerra rund Eox doop drow harr			Massachusetts Mutual Life Insurance	omici sirip.	2.000	, mwL10		1
0000			82-2285211				Calgary Railway Holding LLC	DE	NIA	Company	Ownership.	90.000	MMLIC		1
0000			82-2285211				Calgary Railway Holding LLC	DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MMLIC		1
							, ,			Massachusetts Mutual Life İnsurance	·				1
0000			82-3307907				Cornbrook PRS Holdings LLC	DE	NIA	Company	Ownership	100.000	MMLIC		ļ
										Massachusetts Mutual Life Insurance					1
0000			95-4207717				Cornerstone California Mortgage Fund LLC	CA	NIA	Company	Ownership	100.000	MMLIC		t
0000			95-4207717				O	04	NII A	Massachusetts Mutual Life Insurance	0	100.000	MMLIC		1
0000			95-4207717				Cornerstone California Mortgage Fund II LLC . Cornerstone California Mortgage Fund III LLC	CA	NIA	Company Massachusetts Mutual Life Insurance	Ownership	100.000	MMLIC		1
0000			95-4207717				Corner Storie Carriornia mortgage Fund III EEC	CA	NIA	Company	Ownership	100.000	MMLIC		1
0000			33 4201111					Un		Massachusetts Mutual Life Insurance	omici sirip.		I IIII		1
0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	Company	Ownership.	90.000	MMLIC		1
0000			56-2630592				Cornerstone Fort Pierce Development LLC	DE	NIA	C.M. Life Insurance Company	Ownership	5.900	MMLIC		1
										Massachusetts Mutual Life Insurance					1
0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Company	Ownership	100.000	MMLIC		ļ
0000			45-2632610				Cornerstone Permanent Mortgage Fund	MA	NIA	Barings LLC	Management	-	MMLIC		t
0000			61-1750537				Commenter Demonstration Fund II	MA	NIA	Massachusetts Mutual Life Insurance	0	100.000	MMLIC		1
0000			61-1750537				Cornerstone Permanent Mortgage Fund II Cornerstone Permanent Mortgage Fund II	MA	NIA	Company	Ownership	100.000	MMLIC		[
0000			01-1730337				Corner Stone Termanent mortgage Fund 11			Massachusetts Mutual Life Insurance	- Imariagement				
0000			61-1793735				Cornerstone Permanent Mortgage Fund IV	MA	NIA	Company	Ownership	100.000	MMLIC		1
0000			81-0890084				CREA Madison Member LLC	DE	NIA	C.M. Life Insurance Company	Ownership.	100.000	MMLIC		
										Massachusetts Mutual Life İnsurance	·				1
0000			20-0348173				CREA/PPC Venture LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
										Massachusetts Mutual Life Insurance					1
0000			82-2783393				Danville Riverwalk Venture, LLC	DE	NIA	Company	Owner ship	94.400	MMLIC		
0000			20-3347091				F Bi B I II 0	DE	ALLA	Massachusetts Mutual Life Insurance	0	66.200	MMLIC		1
0000			20-3347091				Fan Pier Development LLC Fan Pier Development LLC	DE	NIA NIA	Company C.M. Life Insurance Company	Ownership	5.900	MMLIC		
0000			20-3347091				rail Fiel Development LLC		NIA	Massachusetts Mutual Life Insurance	owner sirrp		- WWLTO		(
0000			04-1590850				GIA EU Holdings LLC	DE	NIA	Company	Owner ship	100.000	MMLIC		1
							3.1. 25 1.0. 4.1. go 220			Massachusetts Mutual Life Insurance					1
0000			81-5360103				Landmark Manchester Holdings LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
					1					Massachusetts Mutual Life Insurance					i l
0000			04-1590850	-			MM Island Member LLC	DE	NIA	Company	Ownership	49.000	MMLIC	[
			00 000 150-	1	1	1	l			Massachusetts Mutual Life Insurance		04.005			i l
0000		-	83-0881588				NoHo West Venture LLC	DE	NIA	Company Massachusetts Mutual Life Insurance	Owner ship	94.800	MMLIC	[
0000			80-0948028		1		One Harbor Shore LLC	DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership.	76.000	MMLIC		i I
0000			80-0948028				One Harbor Shore LLC	DE	NIA	C.M. Life Insurance Company	Owner ship	6.000	MMLIC		[
			00 0070020				ONO TRAIDOL OHOLG LLO			o.m. Erro mourance company	omior only		mmL V		

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						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)	*
										Massachusetts Mutual Life Insurance					
0000			04-1590850				PACO France Logistices LLC	DE	NI A	Company	Ownership	100.000	MMLIC		
0000			82-3393166				Destland 400 Sixth Manager II C	DE	NIA	Massachusetts Mutual Life Insurance	Ownership.	95.000	MMLIC		
0000			02-0090 100				Portland 400 Sixth Manager LLC		NIA	Company	owner strip	93.000	. WWLTO		
0000							Raleigh Crossing Phase Holdings LLC	DE	NIA	Company	Ownership	90.000	MMLIC		
							Salomon Brothers Commercial Mortgage Trust								
0000							2001-MM	DE	NI A	Barings Real Estate Advisers LLC	Influence		MMLIC		
0000			27-2977720				Camarage Village Charring Center II C	DE	NIA	Massachusetts Mutual Life Insurance	Ownership.	84.200	MMLIC		
0000			27-2977720				Sawgrass Village Shopping Center LLC	DE	NIA	Company	Owner ship.		MMLIC		
			27 2077720				oungrado Tittago onopping conter EEC		11170	Massachusetts Mutual Life Insurance	owner on p				
0000							STOA Holding LLC	DE	NIA	Company	Ownership	50.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			81-5273574				Three PW Office Holding LLC	DE	NIA	Company Massachusetts Mutual Life Insurance	Ownership	95.100	MMLIC		
0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	Company	Ownership	65.000	MMLIC		
0000			35-2484550				Twenty Two Liberty LLC	MA	NIA	C.M. Life Insurance Company	Ownership.	35.000	MMLIC		1
										Massachusetts Mutual Life Insurance					
0000			82-3250684				Unna, Dortmund Holding LLC	DE	NIA	Company	Ownership	100.000	MMLIC		
			45 5404400							Massachusetts Mutual Life Insurance		00.700			
0000			45-5401109 45-5401109				Washington Gateway Apartments Venture LLC	DE	NIA NIA	Company	Ownership	90.700	MMLIC		
0000			45-5401109				Washington Gateway Apartments Venture LLC	VE	NIA	Massachusetts Mutual Life Insurance	owner snrp	4.000	MWLIC		
0000			51-0529328		0000927972	0Q	MassMutual Premier Main Street Fund	MA	NIA	Company	Ownership	91.900	MMLIC		
							MassMutual Premier Strategic Emerging Markets			Massachusetts Mutual Life Insurance	·				
0000			26-3229251		0000927972	0Q	Fund	MA	NI A	Company	Ownership	4 . 100	MMLIC		
0000			01-0821120		0000916053	00	MassMutual Select Diversified Value Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership.	0.800	MMLIC		
0000			01-0621120		0000916055	0Q	massmutual Select Diversified value rund	MA	NIA	Massachusetts Mutual Life Insurance	owner snrp	0.00	MWLIC		
0000			04-3512593		0000916053	0Q	MassMutual Select Fundamental Growth Fund	MA	NIA	Company	Ownership.	2.900	MMLIC		
										Massachusetts Mutual Life Insurance	·				
0000			42-1710935		0000916053	00	MassMutual Select Mid-Cap Value Fund	MA	NI A	Company	Ownership	23.800	MMLIC		
0000			02-0769954		0000916053	00	MassMutual Select Small Capital Value Equity Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership.	0.000	MMLIC		
0000			02-0709954		0000910055	UQ	ruliu	MA	NIA	Massachusetts Mutual Life Insurance	owner strip	0.000	I WWLTO		
0000			04-3584140		0000916053	0Q	MassMutual Select Small Company Value Fund	MA	NI A	Company	Ownership.	10.900	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	·				
0000			82-3347422		0000916053	0Q	2005 Fund	MA	NIA	Company	Owner ship	7.200	MMLIC		
0000			82-3355639		0000916053	00	MassMutual Select T. Rowe Price Retirement 2010 Fund	MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership.	0.000	MMLIC		
0000			02-3333639		0000916055	0Q	MassMutual Select T. Rowe Price Retirement	MA	NIA	Massachusetts Mutual Life Insurance	owner strip	0.000	. WWLIG		
0000			82-3382389		0000916053	0Q	2015 Fund	MA	NI A	Company	Ownership.	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	·				
0000			82-3396442		0000916053	0Q	2020 Fund	MA	NIA	Company	Ownership.	0.000	MMLIC		
0000			82-3417420		0000916053	00	MassMutual Select T. Rowe Price Retirement 2025 Fund	MA	NIA	Massachusetts Mutual Life Insurance	Ownership	0.000	MMLIC]]
			02-041/420		86001 60000	UV	MassMutual Select T. Rowe Price Retirement	MA	NIA	Company	Ownership		I WWILTO		1
0000			82-3430358		0000916053	0Q	2030 Fund	MA	NIA	Company	Ownership.	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	·				
0000			82-3439837		0000916053	0Q	2035 Fund	MA	NIA	Company	Owner ship.	0.000	MMLIC		
0000			82-3451779		0000916053	00	MassMutual Select T. Rowe Price Retirement 2040 Fund	MA	NIA	Massachusetts Mutual Life Insurance	Ownership.	0.000	MMLIC		
			04-0401119		56001 60000	υ ν	2040 Fullu	MA	NIA	Company	Owner Sillb		WIVIL I U		

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						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.Ś. 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)	*
	•					,	MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance	,	Ŭ	, , , , , ,	` ′	
0000			82-3472295		0000916053	0Q	2045 Fund	MA	NIA	Company	Ownership	0.000	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	00	2055 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
i							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3525148		0000916053	0Q	2060 Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
							MassMutual Select T. Rowe Price Retirement			Massachusetts Mutual Life Insurance					
0000			82-3533944		0000916053	00	Balanced Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
0000			40 4057050				MM 0 : 14 4: 15 :4 5 1			Massachusetts Mutual Life Insurance		0.000	MMLIC		
0000			46-4257056				MML Series International Equity Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
0000			47-3517233				MML Series II Asset Momentum Fund	MA	NIA		Ownership	100.000	MMLIC		
			47-3317233				MML Series II Asset Momentum Fund	MA	NIA	Company	owner snip	100.000	MWLIC		
0000			47-3529636				MML Series II Dynamic Bond Fund	MA	NIA	Company	Ownership.	0.000	MMLIC		
			47-3323030				minic derives it byttamic botto runo			Massachusetts Mutual Life Insurance	Owner Strip.	0.000	I www.LTO		
0000			47-3544629				MML Series II Equity Rotation Fund	MA	NIA	Company	Owner ship.	95.100	MMLIC		
			0011020				Time correct in Equity notation rand			Massachusetts Mutual Life Insurance					
0000			47-3559064				MML Series II Special Situations Fund	MA	NIA	Company	Owner ship.	97.300	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			27-1933389		0000916053	0Q	MassMutual RetireSMART 2035 Fund	MA	NIA	Company	Ownership.	3.000	MMLIC		
										Massachusetts Mutual Life Insurance					
0000			27-1932769		0000916053	0Q	MassMutual RetireSMART 2045 Fund	MA	NIA	Company	Ownership	8.000	MMLIC		.
										Massachusetts Mutual Life Insurance					
0000			46-3289207		0000916053	00	MassMutual RetireSMART 2055 Fund	MA	NIA	Company	Ownership	24.100	MMLIC		
									l	Massachusetts Mutual Life Insurance	1				
0000			47-5326235		0000916053	00	MassMutual RetireSMART 2060 Fund	MA	NIA	Company	Ownership	53.100	MMLIC		
0000			45 4040455		0000040050	00	W W + 1 00 (00 A) 1			Massachusetts Mutual Life Insurance	l	0.000	188 10		
0000			45-1618155		0000916053	UU	MassMutual 20/80 Allocation Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
0000			45-1618222		0000916053	00	MassMutual 80/20 Allocation Fund	MA	NIA	Massachusetts Mutual Life Insurance	Ownership	0.000	MMLIC		
0000			40-1010222		86001 6000	UV	massmutuai 00/20 ATTOCATTON FUNG	MA	NIA	Company	Owner Siftp	0.000	MWILIU		
0000			03-0532464		0000916053	00	MassMutual RetireSMART In Retirement Fund	MA	NIA	Company	Ownership	1.700	MMLIC		
			00-0002404		60009 10009	OW	massmatuar netricompini in netricilent runu			Massachusetts Mutual Life Insurance	omior sirip	1.700	. mm. I V		
0000			45-1618262		0000916053	00	MassMutual 40/60 Allocation Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
							The state of the s			Massachusetts Mutual Life Insurance					
0000			45-1618046		0000916053	00	MassMutual 60/40 Allocation Fund	MA	NIA	Company	Ownership	0.000	MMLIC		
										T					[
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Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 14.23% of 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 Loan Strategies Fund, L.P.
4	Debt investors own .5% and includes only Great Lakes III, L.P.
5	Debt investors own .2% and includes only Great Lakes III, L.P.

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

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

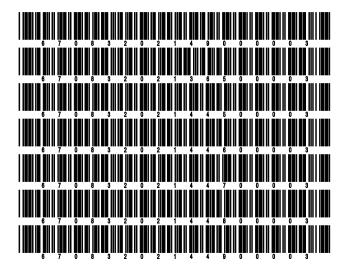
	<u> </u>	Response
1	Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
١.	·	NO
2.	Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3.	Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
4.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
5.	Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC?	NO
6.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
7.	Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
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.	N/A

Explanation:

- I. The data for this supplement is not required to be filed
- 2. The data for this supplement is not required to be filed
- 3. The data for this supplement is not required to be filed
- 4. The data for this supplement is not required to be filed
- 5. The data for this supplement is not required to be filed
- 6. The data for this supplement is not required to be filed
- 7. The data for this supplement is not required to be filed

Bar Code:

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



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 impailment recognized		
8.	Deduct current year's depreciation		
9.	Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8)		
10.	Deduct total nonadmitted amounts		
11.	Statement value at end of current period (Line 9 minus Line 10)		

SCHEDULE B - VERIFICATION

Mortgage Loans

	wortgage Loans	1	2
		I	Prior Year Ended
		Year to Date	December 31
			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		
	2.2 Additional investment made after acquisition		
3.	Capitalized deferred interest and other		
4.	Accrual of discount		
5.	Unrealized valuation increase (decrease)		
6.	Total gain (loss) on disposals		
7.	Deduct amounts received on disposals		
8.	Deduct amortization of premium and mortgage in lest parameter and symitmen lessees		
9.	Total foreign exchange change in book value/recorded investment excurse accrued atterest		
10.	Deduct current year's other than temporary impairment recognized		
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)		
12.	Total valuation allowance		
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)		

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		
	2.2 Additional investment made after acquisition		
3.	Capitalized deferred interest and other		
4.	Accrual of discount		
5.	Unrealized valuation increase (decrease)		
6.	Total gain (loss) on disposals		
7.	Deduct amounts received on disposals		
8.	Deduct amortization of premium and depreciation		
9.	Total foreign exchange change in book/adjusted carrying value		
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)		

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	108,936,961	122,772,518
2.	Cost of bonds and stocks acquired		892,406
3.	Accrual of discount	237,870	305,432
4.	Unrealized valuation increase (decrease)	(2,617)	(42,863)
5.	Total gain (loss) on disposals	734	(704,533)
6.	Deduct consideration for bonds and stocks disposed of	3,517,697	13,489,161
7.	Deduct amortization of premium	71,094	117,860
8.	Total foreign exchange change in book/adjusted carrying value		
9.	Deduct current year's other than temporary impairment recognized	3,389	793,345
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees		114,366
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	105,580,767	108,936,961
12.	Deduct total nonadmitted amounts		0
13.	Statement value at end of current period (Line 11 minus Line 12)	105,580,767	108,936,961

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

Duling ti	1	r all Bonds and Prefe	3	4	5	6	7	8
	Book/Adjusted	2	Ü	7	Book/Adjusted	Book/Adjusted	Book/Adjusted	Book/Adjusted
	Carrying Value	Acquisitions	Dispositions	Non-Trading Activity	Carrying Value	Carrying Value	Carrying Value	Carrying Value
NAIC Designation	Beginning of Current Quarter	During Current Quarter	During Current Quarter	During Current Quarter	End of First Quarter	End of Second Quarter	End of Third Quarter	December 31 Prior Year
NAIC Designation	of Current Quarter	Current Quarter	Current Quarter	Current Quarter	First Quarter	Second Quarter	Tilliu Quartei	FIIOI Teal
BONDS								
1. NAIC 1 (a)	57,474,759	0	1,250,388	54,521	57,606,307	57,474,759	56,278,893	57,298,708
2. NAIC 2 (a)	43,736,608	0	125,000	(1,854)	43,863,411	43,736,608	43,609,754	45,830,265
3. NAIC 3 (a)	3,403,601	0	0	(121)	3,525,205	3,403,601	3,403,480	5,510,763
4. NAIC 4 (a)	1,975,953	0	0	779	1,975,186	1,975,953	1,976,732	0
5. NAIC 5 (a)	306,604	0	0	5.304	301.762	306.604	311,908	297,225
6. NAIC 6 (a)	0			, .	0	0	0	0
7. Total Bonds	106,897,525	0	1,375,388	58,630	107,271,871	106,897,525	105,580,767	108,936,961
1. Total Bolido	100,001,020		.,0.0,000	00,000	.0.,2,0	100,007,020	.50,000,.0.	.00,000,001
PREFERRED STOCK								
8. NAIC 1	0				0	0	0	0
9. NAIC 2	0				0	0	0	0
10. NAIC 3	0				0	0	0	0
11. NAIC 4	0				0	0	0	0
12. NAIC 5	0				0	0	0	۰
13. NAIC 6	0				0	0	0	
	0	0	0	0	0	0	0	
14. Total Preferred Stock						•	-	- U
15. Total Bonds and Preferred Stock	106,897,525	0	1,375,388	58,630	107,271,871	106,897,525	105,580,767	108,936,961

a	Book/Ad	usted	Carrying	Value	e column	for the	end of	f the c	urrent	reporting	neri	nd inc	dudes	the t	following	amoun	t of sh	ort-tern	n and	cash 6	eguivale	ent bon	ds by	/ NAI	C desi	ignatic	'n

Schedule DA - Part 1 - Short-Term Investments

NONE

Schedule DA - Verification - Short-Term Investments

NONE

Schedule DB - Part A - Verification - Options, Caps, Floors, Collars, Swaps and Forwards

NONE

Schedule DB - Part B - Verification - Futures Contracts

NONE

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

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

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

NONE

SCHEDULE E - PART 2 - VERIFICATION

(Cash Equivalents)

	(Oddit Equitalistic)	1	2
		Year To Date	Prior Year Ended December 31
1.	Book/adjusted carrying value, December 31 of prior year	18,796,067	7,984,674
2.	Cost of cash equivalents acquired	63,644,398	34,959,217
3.	Accrual of discount		0
4.	Unrealized valuation increase (decrease)		0
5.	Total gain (loss) on disposals		90
6.	Deduct consideration received on disposals	58,172,625	24,147,913
7.	Deduct amortization of premium		0
8.	Total foreign exchange change in book/adjusted carrying value		0
9.	Deduct current year's other than temporary impairment recognized		0
10.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	24,267,839	18,796,067
11.	Deduct total nonadmitted amounts		0
12.	Statement value at end of current period (Line 10 minus Line 11)	24,267,839	18,796,067

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

Schedule A - Part 3 - Real Estate Disposed

NONE

Schedule B - Part 2 - Mortgage Loans Acquired and Additions Made NONE

Schedule B - Part 3 - Mortgage Loans Disposed, Transferred or Repaid

NONE

Schedule BA - Part 2 - Other Long-Term Invested Assets Acquired and Additions Made NONE

Schedule BA - Part 3 - Other Long-Term Invested Assets Disposed, Transferred or Repaid NONE

Schedule D - Part 3 - Long-Term Bonds and Stocks Acquired **NONE**

SCHEDULE D - PART 4

	Show All Long-Term Bonds and Stock Sold, Redeemed or Otherwise Disposed of During the Current Quarter 1 2 3 4 5 6 7 8 9 10 Change In Book/Adjusted Carrying Value 16 17 18 19 20 21 22																				
1	2	3	4	5	6	7	8	9	10	Ch	ange In Bo	ok/Adiusted	Carrying Va	lue	16	17	18	19	20	21	22
										11	12	13	14	15	-						NAIC
																					Desig-
																					nation,
																					NAIC
													Total	Total							Desig-
												Current	Change in	Foreign					Bond		nation
												Year's	Book/	Exchange	Book/				Interest/		Modifier
									Prior Year		Current	Other Than	Adjusted	Change in	Adjusted	Foreign			Stock	Stated	and
									Book/	Unrealized	Year's	Temporary	Carrying	Book	Carrying	Exchange	Realized		Dividends	Con-	SVO
CUSIP					Number of				Adjusted	Valuation	(Amor-	Impairment	, ,	/Adjusted	Value at	Gain	Gain	Total Gain	Received	tractual	Admini-
Ident-		For-	Disposal	Name	Shares of	Consid-		Actual	Carrying	Increase/	tization)/	Recog-	(11 + 12 -	Carrying	Disposal	(Loss) on		(Loss) on	During	Maturity	strative
ification	Description	eign	Date	of Purchaser	Stock	eration	Par Value	Cost	Value	(Decrease)	Accretion	nized	13)	Value	Date	Disposal	Disposal	Disposal	Year	Date	Symbol
	FH C63727 - RMBS	Cigii	09/01/2021	Paydown	Otook	74	74	74	69	(Decrease)	Accietion	nizeu n	10)	value ^	74	Disposar	Disposai	Disposai	1 Cui	02/01/2032	1 /
	FH C67180 - RMBS		09/01/2021	Paydown		81	81	81		0	3		3		81	0	0	0	3	05/01/2032	1 4
	FH C66477 - RMBS		09/01/2021	Paydown		109	109	110	103	0	6	0	6	0	109	0	0	0	4	04/01/2032	1.A
	FH C67402 - RMBS		09/01/2021	Paydown		31	31	32	29	0	2	0	2	0	31		0		1	05/01/2032	1.A
	FH C68243 - RMBS		09/01/2021	Paydown		42	42	43	15	0	28	0	28	0	42	0	0	0	2	06/01/2032	1.A
	FH C78989 - RMBS		09/01/2021	Paydown		406	406	417	319	0	87	0	87	0	406	0	0	0	15	05/01/2033	1.A
31292G-5V-4	FH C00860 - RMBS	[09/01/2021	Paydown		215	215	217	183	0	32	0	32	0	215	0	0	0	10	09/01/2029	1.A
31292H-NH-3			09/01/2021	Paydown		1,972	1,972	1,980	1,537	0	436	0	436	0	1,972	0	0	0	78	02/01/2032	. 1.A
	FH C01361 - RMBS		09/01/2021	Paydown		624	624	630	584	0	40	0	40	0	624	0	0	0	24	05/01/2032	. 1.A
	GN 432716 - RMBS		09/01/2021	Paydown		86	86	87	85	0	1	0	1	0	86	0	0	0	4	06/15/2026	. 1.A
	GN 447236 - RMBS		09/01/2021	Paydown		29	29	29	29	0	0	0	0	0	29	0	0	0	1	. 06/15/2027	. 1.A
	US INTERNATIONAL DEVELOPMENT FINANCE COR		08/27/2021	Paydown		63,046	63,046	63,046	63,058	0	(12)	0	(12)	0	63,046	0	0	0	2,799		. 1.A
	ubtotal - Bonds - U.S. Governments					66,717	66,717	66,745	66,089	0	628	0	628	0	66,717	0	0	0	2,946	XXX	XXX
	FHR 1474 E - CMO/RMBS			Paydown		551	551	541	547	0	4	0	4	0		0	0	0	25	02/15/2023	. 1.A
	FHR 2333 UZ - CMO/RMBS		09/01/2021	Paydown		829	829	798	984	0	(154)	0	(154)	0	829	0	0	0	37	07/15/2031	. 1.A
	FHR 2329 ZA - CMO/RMBS		09/01/2021	Paydown		8,067	8,067	7,663	9,298	0	(1,231)	0	(1,231)	0	8,067	0	0	0	346	06/15/2031	. 1.A
	FHR 2355E CE - CMO/RMBS		09/01/2021	Paydown		806	806	796	797	0	9	0	9	0	806	0	0	0	35	09/15/2031	. 1.A
	FNR 0131E ZC - CMO/RMBS		09/01/2021	Paydown		4,552	4,552	4,569	5,058	0	(506)	0	(506)	0	4,552	0	0	0	203	07/25/2031	. 1.A
	MICHIGAN FIN AUTH REVVIRGINIA ST HSG DEV AUTH COMVLTH MTG - M			. Maturity @ 100.00 Paydown		1,000,000 77,604	1,000,000 77,604	1,000,000 77,604	1,000,000 77,449	0		0	0	0	1,000,000 77,604	0	0	0	57,460 2,198	09/01/2021 12/25/2043	1.0 FE 1.A FE
			99/01/2021	rayuowii						0						0	0	0			
	ubtotal - Bonds - U.S. Special Reven	iues	00 (04 (0004	D 1	ı	1,092,408	1,092,408	1,091,971	1,094,132	0	(1,724)	0	(1,724)	0	1,092,408	0	0	0	60,304	XXX	XXX
	AH4R 2014-SFR2 A - RMBS		09/01/2021	Paydown		2,214	2,214	2,277	2,239	0	(24)	0	(24)	0	2,214	0	0	0	56	10/17/2036	1.A FE
	BAFC 2006-1 123 - CMO/RMBS		09/01/2021	Paydown		18,289	18,289	17,886	18,117	0	172	0	172		18,289	0	0			01/25/2036	1.D FM
	CWHL 2005-24 A36 - CMO/RMBS		09/01/2021	Paydown		2,506	2,244	2,304	1,911	595			595		2,506	0	0		77	11/25/2035	1.D FM
	CFLX 2007-M1 2F6 - RMBS		09/01/2021	Paydown		12,164	11,512	9,990	11,961	0	204		204		12,164	0	0		360	08/25/2037	1.D FM
	HALO 2007-2 3A6 - CMO/RMBS		09/01/2021	Paydown		0	553	318	10	0	(10)	0	(10)	0	0	0	0	0	18	09/25/2037	1.D FM
	HENDR 2013-1 A - RMBS		09/01/2021	Pavdown		5.087	5,087	5.083	5,084	0	3	0	3	0	.5.087	0	0	0	107	04/15/2067	1.A FE
	NEW YORK UNIVERSITY			Call @ 100.00		47,000	47,000	45,836	46,242	0	24	0	24	0	46,266	0	734	734	2,461	07/01/2032	1.D FE
85208N-AD-2	SPRNTS 2018-1 A1 - RMBS		09/20/2021	Paydown		125,000	125,000	125,000	125,000	0	0	0	0	0	125,000	0	0	0	2,961	09/20/2029	2.A FE
3899999. S	ubtotal - Bonds - Industrial and Misce	ellaneo	us (Unaffili	iated)		216,996	216,635	213,353	215,269	595	399	0	994	0	216,263	0	734	734	6,942	XXX	XXX
8399997 T	otal - Bonds - Part 4		,	· · · · · · · · · · · · · · · · · · ·		1,376,121	1,375,760	1,372,069	1,375,490	595	(697)	0	(102)	0	1,375,388	0	734	734	70,192	XXX	XXX
	otal - Bonds - Part 5					XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	otal - Bonds					1,376,121	1,375,760	1,372,069	1,375,490	595	(697)	0			1,375,388	0		734	70,192	XXX	XXX
						1,376,121		1,372,009	1,3/3,490	090	(097)	0	(102)	0	1,3/3,300	0		734	70, 192		
	otal - Preferred Stocks - Part 4					v	XXX		0	Ü	Ü	·		0	0			ŭ	U	XXX	XXX
	otal - Preferred Stocks - Part 5					XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
8999999. T	otal - Preferred Stocks					0	XXX	0	0	0	0	0	0	0	0	0	0	0	0	XXX	XXX
9799997. T	otal - Common Stocks - Part 4					0	XXX	0	0	0	0	0	0	0	0	0	0	0	0	XXX	XXX
	otal - Common Stocks - Part 5					XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
	otal - Common Stocks					7000	XXX	0	0	0	0				,,,,,	0		0	0	XXX	XXX
						<u> </u>			ů						- 0	1					
	otal - Preferred and Common Stocks	i				0	XXX	0	0	0	0				0	0		0	0	XXX	XXX
9999999 - 7	Γotals					1,376,121	XXX	1,372,069	1,375,490	595	(697)	0	(102)	0	1,375,388	0	734	734	70, 192	XXX	XXX

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

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

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

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

Schedule DB - Part D-Section 2 - Collateral for Derivative Instruments Open - Pledged By **N O N E**

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

Schedule DB - Part E - Derivatives Hedging Variable Annuity Guarantees **N O N E**

Schedule DL - Part 1 - Reinvested Collateral Assets Owned NONE

Schedule DL - Part 2 - Reinvested Collateral Assets Owned NONE

SCHEDULE E - PART 1 - CASH

Month	Fnd	Depository	Balances

					Book Balance at End of Each Month			
1	2							9
			Amount of	During Current Quarter unt of Amount of 6 7 8				
			Interest Received		0	1	0	
		Rate of		at Current				
Depository	Code	Interest		Statement Date	First Month	Second Month	Third Month	*
Bank of New York Mellon New York, NY				Otatement Date	1,000,000			XXX
PNC Bank Pittsburgh, PA					(122,747)		(202,231)	
Wells Fargo Winston Salem, NC					114,970			XXX
0199998. Deposits in depositories that do not					114,370	100,111	100,001	
exceed the allowable limit in any one depository (See								
instructions) - Open Depositories	XXX	XXX						XXX
0199999. Totals - Open Depositories	XXX	XXX	36	0	992.223	708,479	903, 166	XXX
0299998. Deposits in depositories that do not	7000	7001		J	002,220		000, 100	7000
exceed the allowable limit in any one depository (See								
instructions) - Suspended Depositories	XXX	XXX						XXX
0299999. Totals - Suspended Depositories	XXX	XXX	0	0	0	0	0	XXX
0399999. Total Cash on Deposit	XXX	XXX	36	0	992,223	708,479	903, 166	XXX
0499999. Cash in Company's Office	XXX	XXX	XXX	XXX				XXX
				• • • • • • • • • • • • • • • • • • • •				
				• • • • • • • • • • • • • • • • • • • •				
		ļ						
								<u> </u>
0599999. Total - Cash	XXX	XXX	36	0	992,223	708,479	903, 166	XXX

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Chau	Investments	Ourmad	Lad of	Current	Ougston

1 2 3 4 5 6 Book/Aquated Description Des			Show Investments Ov	vned End of Curren	nt Quarter				
DS99999 Total - U.S. Coverment Bonds	1	-	3	4		· ·		Amount of Interest	Amount Received
1009999 Total - All Other Concentrated Bonds 0 0 0 0 0 0 0 0 0			Code	Date Acquired	Rate of Interest	Maturity Date	Carrying Value	Due and Accrued	During Year
1789999 Total - U.S. States, Territories and Possessions Sonds 0 1 0 1 0 1 0 0 1 0 0							0	0	0
249999 Total - U.S. Political Subdivisions Blonds 0 0 0 0 0 0 0 0 0	1099999. Total - All Other Government I	Bonds					0	0	0
3 0 0 0 0 0 0 0 0 0	1799999. Total - U.S. States, Territories	and Possessions Bonds					0	0	0
38999999 Total - Industrial and Miscelaneous (Indiffuited Bonds 0 0 0 0 0 0 0 0 0	2499999. Total - U.S. Political Subdivision	ons Bonds					0	0	0
AB09999 Total - Phyrid Securities 0	3199999. Total - U.S. Special Revenues	Bonds					0	0	0
5599999 Total - Parent, Subsidiaries and Affiliates Bonds 0 0 0 0 0 0 0 0 0	3899999. Total - Industrial and Miscellar	neous (Unaffiliated) Bonds					0	0	0
6009999 Subtotal - SVO Identified Funds	4899999. Total - Hybrid Securities						0	0	0
16599999, Subtotal - Unaffiliated Bank Loans	5599999. Total - Parent, Subsidiaries ar	nd Affiliates Bonds					0	0	0
TRESPAPS Total - Issuer Disignations 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6099999. Subtotal - SVO Identified Fund	ds					0	0	0
17799999 Total - Residential Mortgage-Backed Securities 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6599999. Subtotal - Unaffiliated Bank Lo	pans					0	0	0
7899999. Total - Commercial Mortgage-Backed Securities 0	7699999. Total - Issuer Obligations						0	0	0
7999999. Total - Other Loan-Backed and Structured Securities 0	7799999. Total - Residential Mortgage-E	Backed Securities					0	0	0
7999999. Total - Other Loan-Backed and Structured Securities 0							0	0	0
S 19999 Total - Anfiliated Bank Loans 0 0 0 0 0 0 0 0 0 0 0							0	0	0
S 19999 Total - Anfiliated Bank Loans 0 0 0 0 0 0 0 0 0 0 0							0	0	0
S299999 Total - Unaffiliated Bank Loans 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8199999. Total - Affiliated Bank Loans						0	0	0
S399999 Total Bonds		S					0	0	0
D0248H7-16 BLYRK (0.7-FND INST.							0	0	0
28389-30-0 FIGELITY INET: TS								64	
S25224-0-6 IMESO TELSARY INST S1	09248U-71-8 BLKRK LQ:T-FUND INSTL				0.010			38	
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S0 09/02/2021 0.450 1.041 0 2	711991-00-0 TD BANK DEPOSIT SWEEP	Not mateur Fariate at lateralinear by the eve	SD	09/01/2021	0.000			1	6
	SA0000-56-0 BB&T TRUST DEPOSIT		SD	09/02/2021				0	2
2000000 Total Costs Equivalents	8699999. Subtotal - All Other Money Ma	rket Mutual Funds					35,043	1	7
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