



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

QUARTERLY STATEMENT

AS OF SEPTEMBER 30, 2023

OF THE CONDITION AND AFFAIRS OF THE

MASSMUTUAL ASCEND LIFE INSURANCE COMPANY

NAIC Group Code 0435 (Current) 0435 (Prior) NAIC Company Code 63312 Employer's ID Number 13-1935920

Organized under the Laws of Ohio, State of Domicile or Port of Entry OH

Country of Domicile United States of America

Licensed as business type: Life, Accident and Health [X] Fraternal Benefit Societies []

Incorporated/Organized 12/29/1961 Commenced Business 08/13/1963

Statutory Home Office 191 Rosa Parks Street Cincinnati, OH, US 45202
(Street and Number) (City or Town, State, Country and Zip Code)

Main Administrative Office 191 Rosa Parks Street
(Street and Number)
Cincinnati, OH, US 45202 513-361-9000
(City or Town, State, Country and Zip Code) (Area Code) (Telephone Number)

Mail Address Post Office Box 5420 Cincinnati, OH, US 45201
(Street and Number or P.O. Box) (City or Town, State, Country and Zip Code)

Primary Location of Books and Records 191 Rosa Parks Street
(Street and Number)
Cincinnati, OH, US 45202 513-361-9000
(City or Town, State, Country and Zip Code) (Area Code) (Telephone Number)

Internet Website Address www.massmutualascend.com

Statutory Statement Contact Robert Mayhew Earle II 513-361-9077
(Name) (Area Code) (Telephone Number)
rearle@mmascend.com 513-345-9484
(E-mail Address) (FAX Number)

OFFICERS

President Mark Francis Muething Treasurer Brian Patrick Sponaugle
Secretary John Paul Gruber Appointed Actuary Isaac Cezar Hall

OTHER

Donna Marie Carrelli Michael Harrison Haney Dominic Lusean Blue #

DIRECTORS OR TRUSTEES

<u>Dominic Lusean Blue</u>	<u>Elizabeth Ward Chicares</u>	<u>Susan Marie Cicco</u>
<u>Geoffrey James Craddock</u>	<u>Roger William Crandall</u>	<u>Paul Anthony LaPiana</u>
<u>Sears Andrew Merritt</u>	<u>Mark Francis Muething</u>	<u>Michael James O'Connor</u>
<u>Eric William Partlan</u>	<u>Arthur William Wallace III</u>	

State of Ohio SS:
County of Hamilton

The officers of this reporting entity being duly sworn, each depose and say that they are the described officers of said reporting entity, and that on the reporting period stated above, all of the herein described assets were the absolute property of the said reporting entity, free and clear from any liens or claims thereon, except as herein stated, and that this statement, together with related exhibits, schedules and explanations therein contained, annexed or referred to, is a full and true statement of all the assets and liabilities and of the condition and affairs of the said reporting entity as of the reporting period stated above, and of its income and deductions therefrom for the period ended, and have been completed in accordance with the NAIC Annual Statement Instructions and Accounting Practices and Procedures manual except to the extent that: (1) state law may differ; or, (2) that state rules or regulations require differences in reporting not related to accounting practices and procedures, according to the best of their information, knowledge and belief, respectively. Furthermore, the scope of this attestation by the described officers also includes the related corresponding electronic filing with the NAIC, when required, that is an exact copy (except for formatting differences due to electronic filing) of the enclosed statement. The electronic filing may be requested by various regulators in lieu of or in addition to the enclosed statement.

Mark Francis Muething John Paul Gruber Brian Patrick Sponaugle
President Secretary Treasurer

Subscribed and sworn to before me this 13th day of November 2023
Kelly Buller

- a. Is this an original filing? Yes [X] No []
- b. If no,
1. State the amendment number.....
2. Date filed
3. Number of pages attached.....

OFFICERS AND DIRECTORS WHO DID NOT OCCUPY THE INDICATED POSITION IN THE PREVIOUS ANNUAL STATEMENT



Kelly Buller
Notary Public, State of Ohio
My Commission Expires:
October 14, 2028

ASSETS

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
1. Bonds	34,600,405,499		34,600,405,499	33,331,904,289
2. Stocks:				
2.1 Preferred stocks	206,602,749		206,602,749	184,968,184
2.2 Common stocks	695,062,235		695,062,235	683,285,586
3. Mortgage loans on real estate:				
3.1 First liens	3,938,947,444		3,938,947,444	3,088,813,560
3.2 Other than first liens.....			0	0
4. Real estate:				
4.1 Properties occupied by the company (less \$ encumbrances)			0	0
4.2 Properties held for the production of income (less \$ encumbrances)			0	0
4.3 Properties held for sale (less \$ encumbrances)			0	0
5. Cash (\$9,194,298), cash equivalents (\$ 1,781,821,331) and short-term investments (\$384,959,860)	2,175,975,489		2,175,975,489	1,991,236,955
6. Contract loans (including \$ premium notes)	30,066,646		30,066,646	31,459,162
7. Derivatives	907,129,155		907,129,155	872,965,902
8. Other invested assets	1,429,977,244		1,429,977,244	1,363,435,253
9. Receivables for securities	108,757,497		108,757,497	142,312,266
10. Securities lending reinvested collateral assets			0	0
11. Aggregate write-ins for invested assets	0	0	0	0
12. Subtotals, cash and invested assets (Lines 1 to 11)	44,092,923,958	0	44,092,923,958	41,690,381,157
13. Title plants less \$ charged off (for Title insurers only)			0	0
14. Investment income due and accrued	573,745,665		573,745,665	414,726,057
15. Premiums and considerations:				
15.1 Uncollected premiums and agents' balances in the course of collection	962,415	33,591	928,824	2,479,621
15.2 Deferred premiums, agents' balances and installments booked but deferred and not yet due (including \$ earned but unbilled premiums)	7,756,892	3,446,412	4,310,480	5,262,831
15.3 Accrued retrospective premiums (\$) and contracts subject to redetermination (\$)	0		0	0
16. Reinsurance:				
16.1 Amounts recoverable from reinsurers	7,249,757	1,718,804	5,530,953	1,960,978
16.2 Funds held by or deposited with reinsured companies			0	0
16.3 Other amounts receivable under reinsurance contracts	235,967,311		235,967,311	247,110,241
17. Amounts receivable relating to uninsured plans			0	0
18.1 Current federal and foreign income tax recoverable and interest thereon	59,752,036		59,752,036	89,634,229
18.2 Net deferred tax asset	234,443,061	36,151,561	198,291,500	72,205,814
19. Guaranty funds receivable or on deposit	2,032,548		2,032,548	2,079,536
20. Electronic data processing equipment and software			0	0
21. Furniture and equipment, including health care delivery assets (\$)	5,115,543	5,115,543	0	0
22. Net adjustment in assets and liabilities due to foreign exchange rates			0	0
23. Receivables from parent, subsidiaries and affiliates	815,323		815,323	43,006
24. Health care (\$) and other amounts receivable			0	0
25. Aggregate write-ins for other than invested assets	366,192,209	8,169,679	358,022,530	253,459,195
26. Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25)	45,586,956,718	54,635,590	45,532,321,128	42,779,342,665
27. From Separate Accounts, Segregated Accounts and Protected Cell Accounts	281,258,573		281,258,573	103,698,994
28. Total (Lines 26 and 27)	45,868,215,291	54,635,590	45,813,579,701	42,883,041,659
DETAILS OF WRITE-INS				
1101.				
1102.				
1103.				
1198. Summary of remaining write-ins for Line 11 from overflow page	0	0	0	0
1199. Totals (Lines 1101 through 1103 plus 1198)(Line 11 above)	0	0	0	0
2501. Company-owned life insurance	225,544,267		225,544,267	218,662,787
2502. Admitted Disallowed IMR	100,822,688		100,822,688	
2503. Accrued contractual fee income	31,393,575		31,393,575	34,796,408
2598. Summary of remaining write-ins for Line 25 from overflow page	8,431,679	8,169,679	262,000	0
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	366,192,209	8,169,679	358,022,530	253,459,195

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

LIABILITIES, SURPLUS AND OTHER FUNDS

	1 Current Statement Date	2 December 31 Prior Year
1. Aggregate reserve for life contracts \$ 28,563,576,082 less \$ included in Line 6.3 (including \$ 529,934 Modco Reserve)	28,563,576,082	24,259,873,748
2. Aggregate reserve for accident and health contracts (including \$ Modco Reserve)	52,226,189	50,510,234
3. Liability for deposit-type contracts (including \$ Modco Reserve).....	792,307,740	779,823,617
4. Contract claims:		
4.1 Life	147,422,158	140,168,179
4.2 Accident and health	601,865	390,642
5. Policyholders' dividends/refunds to members \$ and coupons \$ due and unpaid		0
6. Provision for policyholders' dividends, refunds to members and coupons payable in following calendar year - estimated amounts:		
6.1 Policyholders' dividends and refunds to members apportioned for payment (including \$ Modco)		
6.2 Policyholders' dividends and refunds to members not yet apportioned (including \$ Modco) ...		
6.3 Coupons and similar benefits (including \$ Modco)		
7. Amount provisionally held for deferred dividend policies not included in Line 6		
8. Premiums and annuity considerations for life and accident and health contracts received in advance less \$ discount; including \$ 24,300 accident and health premiums	187,576	165,594
9. Contract liabilities not included elsewhere:		
9.1 Surrender values on canceled contracts		
9.2 Provision for experience rating refunds, including the liability of \$ accident and health experience rating refunds of which \$ 0 is for medical loss ratio rebate per the Public Health Service Act		
9.3 Other amounts payable on reinsurance, including \$ 507,748 assumed and \$ 152,271 ceded	660,019	14,213,374
9.4 Interest Maintenance Reserve		93,254,039
10. Commissions to agents due or accrued-life and annuity contracts \$ 4,752,179 , accident and health \$ and deposit-type contract funds \$	4,752,179	8,900,094
11. Commissions and expense allowances payable on reinsurance assumed		
12. General expenses due or accrued	45,856,855	48,404,491
13. Transfers to Separate Accounts due or accrued (net) (including \$ accrued for expense allowances recognized in reserves, net of reinsured allowances)		0
14. Taxes, licenses and fees due or accrued, excluding federal income taxes		2,060,039
15.1 Current federal and foreign income taxes, including \$ on realized capital gains (losses)		
15.2 Net deferred tax liability		
16. Unearned investment income	305,291	290,003
17. Amounts withheld or retained by reporting entity as agent or trustee	1,391,066	1,174,746
18. Amounts held for agents' account, including \$ 848,960 agents' credit balances	848,960	1,071,165
19. Remittances and items not allocated	101,988,689	232,798,384
20. Net adjustment in assets and liabilities due to foreign exchange rates		
21. Liability for benefits for employees and agents if not included above		
22. Borrowed money \$ and interest thereon \$		
23. Dividends to stockholders declared and unpaid		
24. Miscellaneous liabilities:		
24.01 Asset valuation reserve	541,747,940	577,063,642
24.02 Reinsurance in unauthorized and certified (\$) companies		0
24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers	10,643,936,409	12,677,297,503
24.04 Payable to parent, subsidiaries and affiliates	207,068	1,957,201
24.05 Drafts outstanding		
24.06 Liability for amounts held under uninsured plans		
24.07 Funds held under coinsurance		
24.08 Derivatives	599,156,525	700,875,712
24.09 Payable for securities	295,659,392	120,064,449
24.10 Payable for securities lending		
24.11 Capital notes \$ and interest thereon \$		
25. Aggregate write-ins for liabilities	628,132,403	236,402,971
26. Total liabilities excluding Separate Accounts business (Lines 1 to 25)	42,420,964,406	39,946,759,827
27. From Separate Accounts Statement	281,258,573	103,698,994
28. Total liabilities (Lines 26 and 27)	42,702,222,979	40,050,458,821
29. Common capital stock	1,507,500	1,507,500
30. Preferred capital stock		
31. Aggregate write-ins for other than special surplus funds	0	0
32. Surplus notes		0
33. Gross paid in and contributed surplus	815,178,800	815,178,800
34. Aggregate write-ins for special surplus funds	100,822,688	0
35. Unassigned funds (surplus)	2,193,847,734	2,015,896,538
36. Less treasury stock, at cost:		
36.1 shares common (value included in Line 29 \$)		
36.2 shares preferred (value included in Line 30 \$)		
37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement)	3,109,849,222	2,831,075,338
38. Totals of Lines 29, 30 and 37	3,111,356,722	2,832,582,838
39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3)	45,813,579,701	42,883,041,659
DETAILS OF WRITE-INS		
2501. Liability for funds held as collateral	579,697,318	209,544,587
2502. Unclaimed property	29,622,345	23,267,792
2503. Accounts payable	18,812,740	3,590,592
2598. Summary of remaining write-ins for Line 25 from overflow page	0	0
2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above)	628,132,403	236,402,971
3101.		
3102.		
3103.		
3198. Summary of remaining write-ins for Line 31 from overflow page	0	0
3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above)	0	0
3401. Admitted Disallowed IMR	100,822,688	
3402.		
3403.		
3498. Summary of remaining write-ins for Line 34 from overflow page	0	0
3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above)	100,822,688	0

SUMMARY OF OPERATIONS

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Premiums and annuity considerations for life and accident and health contracts	6,237,052,163	(9,645,640,535)	(7,198,257,952)
2. Considerations for supplementary contracts with life contingencies			0
3. Net investment income	1,200,637,020	762,362,895	1,018,987,195
4. Amortization of Interest Maintenance Reserve (IMR)	9,223,239	31,967,794	36,421,280
5. Separate Accounts net gain from operations excluding unrealized gains or losses			0
6. Commissions and expense allowances on reinsurance ceded	83,323,417	430,387,013	496,787,124
7. Reserve adjustments on reinsurance ceded			
8. Miscellaneous Income:			
8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts			0
8.2 Charges and fees for deposit-type contracts	9,990,766	3,393,728	4,705,776
8.3 Aggregate write-ins for miscellaneous income	33,783,463	30,959,931	43,057,256
9. Totals (Lines 1 to 8.3)	7,574,010,068	(8,386,569,174)	(5,598,299,321)
10. Death benefits	10,720,241	14,965,037	19,313,347
11. Matured endowments (excluding guaranteed annual pure endowments)	8,601,120	14,853,330	22,540,278
12. Annuity benefits	533,372,221	317,483,335	460,170,085
13. Disability benefits and benefits under accident and health contracts	3,205,343	2,821,929	3,804,204
14. Coupons, guaranteed annual pure endowments and similar benefits			0
15. Surrender benefits and withdrawals for life contracts	1,747,160,521	1,057,810,599	1,460,476,453
16. Group conversions	0		0
17. Interest and adjustments on contract or deposit-type contract funds	123,999,667	108,030,272	142,273,578
18. Payments on supplementary contracts with life contingencies	0	(1,213)	(1,213)
19. Increase in aggregate reserves for life and accident and health contracts	4,305,418,289	(10,720,490,602)	(8,743,882,548)
20. Totals (Lines 10 to 19)	6,732,477,402	(9,204,527,313)	(6,635,305,816)
21. Commissions on premiums, annuity considerations, and deposit-type contract funds (direct business only)	282,379,208	253,345,538	364,090,995
22. Commissions and expense allowances on reinsurance assumed	377,238	383,830	526,914
23. General insurance expenses and fraternal expenses	119,224,412	120,187,531	158,746,732
24. Insurance taxes, licenses and fees, excluding federal income taxes	10,035,988	9,026,012	12,160,149
25. Increase in loading on deferred and uncollected premiums	(654,266)	219,310	192,875
26. Net transfers to or (from) Separate Accounts net of reinsurance	194,537,674	(119,249,629)	(22,047,053)
27. Aggregate write-ins for deductions	0	319,161,240	319,161,240
28. Totals (Lines 20 to 27)	7,338,377,656	(8,621,453,481)	(5,802,473,964)
29. Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28)	235,632,412	234,884,307	204,174,643
30. Dividends to policyholders and refunds to members	5,893	6,908	10,069
31. Net gain from operations after dividends to policyholders, refunds to members and before federal income taxes (Line 29 minus Line 30)	235,626,519	234,877,399	204,164,574
32. Federal and foreign income taxes incurred (excluding tax on capital gains)	162,704,841	(70,555,546)	13,603,479
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)	72,921,678	305,432,945	190,561,095
34. Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital gains tax of \$ 38,950,776 (excluding taxes of \$ (49,138,269) transferred to the IMR)	(121,224,803)	(3,447,387)	(32,534,189)
35. Net income (Line 33 plus Line 34)	(48,303,125)	301,985,558	158,026,906
CAPITAL AND SURPLUS ACCOUNT			
36. Capital and surplus, December 31, prior year	2,832,582,838	2,878,120,622	2,878,120,622
37. Net income (Line 35)	(48,303,125)	301,985,558	158,026,906
38. Change in net unrealized capital gains (losses) less capital gains tax of \$ (275,518)	138,718,228	(283,324,087)	(200,664,475)
39. Change in net unrealized foreign exchange capital gain (loss)	(6,610,316)		8,817,141
40. Change in net deferred income tax	159,735,226	(146,066,600)	(33,120,202)
41. Change in nonadmitted assets	(22,732,883)	(1,100,859)	(4,655,490)
42. Change in liability for reinsurance in unauthorized and certified companies			
43. Change in reserve on account of change in valuation basis, (increase) or decrease			236,182,404
44. Change in asset valuation reserve	35,315,702	(122,572,199)	(72,918,048)
45. Change in treasury stock			0
46. Surplus (contributed to) withdrawn from Separate Accounts during period			
47. Other changes in surplus in Separate Accounts Statement			
48. Change in surplus notes			
49. Cumulative effect of changes in accounting principles		(157,385,866)	(454,367,260)
50. Capital changes:			
50.1 Paid in			
50.2 Transferred from surplus (Stock Dividend)			
50.3 Transferred to surplus			
51. Surplus adjustment:			
51.1 Paid in	0	0	0
51.2 Transferred to capital (Stock Dividend)			
51.3 Transferred from capital			
51.4 Change in surplus as a result of reinsurance		317,161,240	317,161,240
52. Dividends to stockholders			
53. Aggregate write-ins for gains and losses in surplus	22,651,052	0	0
54. Net change in capital and surplus for the year (Lines 37 through 53)	278,773,884	(91,302,813)	(45,537,784)
55. Capital and surplus, as of statement date (Lines 36 + 54)	3,111,356,722	2,786,817,809	2,832,582,838
DETAILS OF WRITE-INS			
08.301. Contractual rider fee income	26,300,906	26,057,095	36,447,215
08.302. Interest on company-owned life insurance	6,881,480	4,487,061	6,015,989
08.303. Reinsurance experience refund	548,394	376,837	506,212
08.398. Summary of remaining write-ins for Line 8.3 from overflow page	52,683	38,938	87,840
08.399. Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above)	33,783,463	30,959,931	43,057,256
2701. Amortization of ceding commission		317,161,240	317,161,240
2702. Reinsurance fee		2,000,000	2,000,000
2703.			
2798. Summary of remaining write-ins for Line 27 from overflow page	0	0	0
2799. Totals (Lines 2701 through 2703 plus 2798)(Line 27 above)	0	319,161,240	319,161,240
5301. Correction of error, net of tax	22,651,052	0	0
5302.			
5303.			
5398. Summary of remaining write-ins for Line 53 from overflow page	0	0	0
5399. Totals (Lines 5301 through 5303 plus 5398)(Line 53 above)	22,651,052	0	0

CASH FLOW

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
Cash from Operations			
1. Premiums collected net of reinsurance	6,240,234,477	4,344,530,308	6,877,594,339
2. Net investment income	1,394,594,068	934,840,306	1,244,917,697
3. Miscellaneous income	119,962,738	463,076,078	540,147,485
4. Total (Lines 1 to 3)	7,754,791,283	5,742,446,692	8,662,659,521
5. Benefit and loss related payments	2,301,564,412	1,778,511,350	2,266,789,240
6. Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts	0	(119,249,629)	(22,047,053)
7. Commissions, expenses paid and aggregate write-ins for deductions	417,716,273	393,943,452	551,485,249
8. Dividends paid to policyholders	5,893	6,908	10,069
9. Federal and foreign income taxes paid (recovered) net of \$ (10,187,493) tax on capital gains (losses)	122,635,155	158,384,423	103,798,463
10. Total (Lines 5 through 9)	2,841,921,733	2,211,596,504	2,900,035,968
11. Net cash from operations (Line 4 minus Line 10)	4,912,869,550	3,530,850,188	5,762,623,553
Cash from Investments			
12. Proceeds from investments sold, matured or repaid:			
12.1 Bonds	6,793,739,424	13,307,590,235	14,058,518,365
12.2 Stocks	138,574,793	11,935,958	18,218,012
12.3 Mortgage loans	547,777,075	463,265,300	537,024,492
12.4 Real estate	0	0	0
12.5 Other invested assets	95,276,964	161,680,185	274,007,827
12.6 Net gains or (losses) on cash, cash equivalents and short-term investments	0	0	(88,759)
12.7 Miscellaneous proceeds	13,763,081	0	(22,325,520)
12.8 Total investment proceeds (Lines 12.1 to 12.7)	7,589,131,337	13,944,471,678	14,865,354,417
13. Cost of investments acquired (long-term only):			
13.1 Bonds	8,363,729,918	15,085,159,489	16,364,817,270
13.2 Stocks	147,878,138	87,342,179	109,234,027
13.3 Mortgage loans	1,399,495,320	1,023,991,481	1,107,745,261
13.4 Real estate	0	0	0
13.5 Other invested assets	178,331,364	181,353,506	300,895,779
13.6 Miscellaneous applications	332,436,222	510,175,695	673,935,708
13.7 Total investments acquired (Lines 13.1 to 13.6)	10,421,870,962	16,888,022,350	18,556,628,045
14. Net increase (or decrease) in contract loans and premium notes	(1,392,516)	(32,178,334)	(32,719,274)
15. Net cash from investments (Line 12.8 minus Line 13.7 and Line 14)	(2,831,347,109)	(2,911,372,338)	(3,658,554,354)
Cash from Financing and Miscellaneous Sources			
16. Cash provided (applied):			
16.1 Surplus notes, capital notes	0	0	0
16.2 Capital and paid in surplus, less treasury stock	0	0	0
16.3 Borrowed funds	0	0	0
16.4 Net deposits on deposit-type contracts and other insurance liabilities	(110,012,460)	93,044,753	50,372,894
16.5 Dividends to stockholders	0	0	0
16.6 Other cash provided (applied)	(1,786,771,448)	(913,095,672)	(1,172,085,403)
17. Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6)	(1,896,783,908)	(820,050,919)	(1,121,712,509)
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) .	184,738,533	(200,573,069)	982,356,690
19. Cash, cash equivalents and short-term investments:			
19.1 Beginning of year	1,991,236,956	1,008,880,265	1,008,880,265
19.2 End of period (Line 18 plus Line 19.1)	2,175,975,489	808,307,196	1,991,236,956

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

20.0001. Bond conversions and refinancing	201,620,953	455,440,542	453,096,376
20.0002. Common stock conversions	33,929,814	51	205,249
20.0003. Bonds transferred to other invested assets	18,555,573		119,664,976
20.0004. Other invested assets transferred to bonds	15,499,684		17,100,287
20.0005. Net investment income payment-in-kind for bonds	14,387,705	616,605	1,072,948
20.0006. Preferred stock conversions	442,451		
20.0007. Bonds transferred to mortgage loans		362,734,554	362,734,554

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS			
	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
1. Industrial life			0
2. Ordinary life insurance	12,925,215	19,617,177	24,857,140
3. Ordinary individual annuities	6,456,241,904	4,852,501,625	7,344,903,146
4. Credit life (group and individual)			0
5. Group life insurance			0
6. Group annuities	4,353,119	3,597,555	5,079,281
7. A & H - group	52,961	51,025	73,886
8. A & H - credit (group and individual)			0
9. A & H - other	3,586,396	3,818,856	4,930,620
10. Aggregate of all other lines of business	0	0	0
11. Subtotal (Lines 1 through 10)	6,477,159,595	4,879,586,238	7,379,844,073
12. Fraternal (Fraternal Benefit Societies Only)			0
13. Subtotal (Lines 11 through 12)	6,477,159,595	4,879,586,238	7,379,844,073
14. Deposit-type contracts	14,820,355	7,476,578	9,164,370
15. Total (Lines 13 and 14)	6,491,979,950	4,887,062,816	7,389,008,443
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

NOTES TO FINANCIAL STATEMENTS

Note 1 – Summary of Significant Accounting Policies

A. Accounting Practices

The financial statements of the MassMutual Ascend Life Insurance Company (“MMALIC” or “the Company”) are presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance. The Company was formerly known as Great American Life Insurance Company.

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.

In 2021 the Ohio Department of Insurance promulgated Ohio Administrative Code Section 3901-1-67, Alternative Derivative and Reserve Accounting Practices (OAC 3901-1-67), which constitutes a prescribed practice as contemplated by the NAIC SAP. The prescribed practice allows Ohio-domiciled insurance companies to utilize certain alternative derivative and reserve accounting practices for eligible derivative instruments and indexed products, respectively, in order to better align the measurement of indexed product reserves and the derivatives that hedge them. Effective January 1, 2022, the Company elected to apply OAC 3901-1-67 to its derivative instruments hedging equity indexed annuity products and equity indexed reserve liabilities.

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

Net Income	SSAP #	F/S Page	F/S Line #	09/30/2023	12/31/2022
(1) State basis	XXX	XXX	XXX	\$ (48,303,125)	\$ 158,026,906
(2) State prescribed practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX		
OAC 3901-1-67:					
Derivative instruments	86	4	7, 3	(10,015,501)	(26,420,295)
Reserves for fixed indexed annuities	51	4	1, 19	145,761,880	(187,982,067)
Tax impact	101	4	18.2, 32	423,232	381,717
(3) State permitted practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX	-	-
(4) NAIC SAP (1-2-3=4)	XXX	XXX	XXX	\$ (184,472,736)	\$ 372,047,552
Surplus					
(5) Statutory surplus state basis	XXX	XXX	XXX	\$ 3,111,356,722	\$ 2,832,582,838
(6) State prescribed practices that increase/(decrease) NAIC SAP					
OAC 3901-1-67:					
Derivative instruments	86	2, 4	7, 3	(299,999,423)	(39,219,472)
Reserves for fixed indexed annuities	51	3, 4	1, 19	193,962,217	48,200,337
Tax impact	101	2, 4	18.2, 32	37,247,983	13,094,188
(7) State permitted practices that increase/(decrease) NAIC SAP	XXX	XXX	XXX	-	-
(8) NAIC SAP (5-6-7=8)	XXX	XXX	XXX	\$ 3,180,145,945	\$ 2,810,507,785

B, C & D – No significant changes.

Note 2 – Accounting Changes and Corrections of Errors

There were no changes that were considered significant to the Company, except for the following.

Effective January 1, 2022, the Company elected to apply OAC 3901-1-67 to its derivative instruments hedging equity indexed annuity products and equity indexed annuity reserve liabilities. Under OAC 3901-1-67, derivative instruments will be carried on the statutory balance sheet at amortized cost with the initial hedge cost amortized over the term and asset payoffs realized at the end of the term being reported through net investment income rather than derivative instruments being carried at fair value with asset payoffs realized over the term through change in net unrealized capital gains and losses. Additionally, the cash surrender value reserves for equity indexed annuity products will only reflect index interest credits at the end of the crediting term as compared to partial index interest credits accumulating throughout the crediting term in increase in aggregate reserves for life and accident and health contracts. As a result of the Company’s election to apply OAC 3901-1-67 as of January 1, 2022, total statutory admitted assets decreased \$393,568,270, total statutory liabilities decreased \$236,182,404 and total statutory capital and surplus decreased \$157,385,866. The following table summarizes the components of the total decrease in statutory surplus:

Change in fixed indexed annuity reserves	\$ 236,182,404
Change in net deferred income tax	60,798,989
Derivatives instruments	(454,367,259)
Total decrease in statutory surplus	\$ (157,385,866)

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.

NOTES TO FINANCIAL STATEMENTS

(3) The following table shows each security with a credit-related OTTI charge recognized during the period:

CUSIP	Amortized Cost Before OTTI	Present Value of Projected Cash Flow s	OTTI Charge Recognized in Income Statement	Amortized Cost After OTTI	Fair Value at Time of OTTI	Date Reported
00176BAM5	\$ 202,546	\$ 110,277	\$ 92,269	\$ 110,277	\$ 116,065	03/31/2023
001406AA5	1,763,035	1,274,229	488,807	1,274,229	1,285,767	03/31/2023
26827EAC9	9,193,316	4,723,119	4,470,196	4,723,119	6,207,776	03/31/2023
3622EAAA8	3,756,795	3,647,858	108,936	3,647,858	3,611,452	03/31/2023
61751DAE4	1,645,601	1,578,836	66,764	1,578,836	1,967,072	03/31/2023
617526AD0	2,356,207	2,115,198	241,009	2,115,198	2,354,557	03/31/2023
86358RXZ5	421,445	412,256	9,189	412,256	413,530	03/31/2023
05951KAN3	622,182	623,350	(1,169)	623,350	601,336	03/31/2023
059522AU6	2,269,369	2,102,631	166,738	2,102,631	2,176,835	03/31/2023
12628LAD2	785,041	763,053	21,988	763,053	660,429	03/31/2023
12667F4N2	2,210,900	2,186,739	24,161	2,186,739	2,182,686	03/31/2023
12667F5E1	1,062,067	1,059,207	2,860	1,059,207	995,081	03/31/2023
12668APC3	896,073	883,009	13,065	883,009	857,687	03/31/2023
17307GED6	1,409,643	1,393,308	16,335	1,393,308	1,455,502	03/31/2023
17309BAB3	220,495	214,662	5,834	214,662	195,222	03/31/2023
32051GSQ9	1,814,597	1,786,038	28,559	1,786,038	1,836,075	03/31/2023
32051GT70	663,419	662,609	810	662,609	596,313	03/31/2023
46627MAD9	589,002	581,089	7,914	581,089	518,389	03/31/2023
46627MEJ2	1,138,638	1,136,631	2,006	1,136,631	957,220	03/31/2023
59020UW43	223,543	223,584	(41)	223,584	245,108	03/31/2023
643529AC4	537,761	506,075	31,686	506,075	563,770	03/31/2023
74923GAC7	1,432,936	1,431,302	1,634	1,431,302	1,521,208	03/31/2023
74923HAQ4	538,028	538,123	(95)	538,123	480,166	03/31/2023
74928RAB0	248,088	241,996	6,091	241,996	266,975	03/31/2023
74928XBB6	4,436,827	3,886,418	550,409	3,886,418	4,352,809	03/31/2023
75115BAC3	1,010,823	1,015,108	(4,285)	1,015,108	1,087,275	03/31/2023
75115DAA3	195,780	193,598	2,183	193,598	182,546	03/31/2023
761118BU1	717,506	688,322	29,183	688,322	756,457	03/31/2023
761118FM5	2,089,659	1,852,770	236,889	1,852,770	1,945,475	03/31/2023
761118GS1	1,139,848	1,138,816	1,032	1,138,816	1,041,063	03/31/2023
761118SC3	1,581,486	1,581,588	(103)	1,581,588	1,360,351	03/31/2023
761118UG1	506,268	503,201	3,067	503,201	428,316	03/31/2023
76112BNM8	4,707,569	4,708,889	(1,320)	4,708,889	4,941,288	03/31/2023
855541AC2	854,276	851,419	2,857	851,419	808,830	03/31/2023
863579J90	344,828	339,476	5,352	339,476	355,595	03/31/2023
86360BAG3	1,782,553	1,688,545	94,008	1,688,545	1,858,413	03/31/2023
86360BAJ7	684,793	671,937	12,855	671,937	700,892	03/31/2023
87222EAB4	838,918	811,788	27,130	811,788	736,793	03/31/2023
87222EAC2	971,562	933,068	38,494	933,068	795,832	03/31/2023
45660LCK3	2,673,423	2,598,842	74,581	2,598,842	2,689,571	03/31/2023
939336X99	1,829,627	1,670,689	158,938	1,670,689	1,792,660	03/31/2023
05949CHM1	768,548	755,812	12,736	755,812	773,623	03/31/2023
05949CKX3	1,213,201	1,188,146	25,055	1,188,146	1,243,199	03/31/2023
05990HAT0	934,146	930,177	3,969	930,177	940,458	03/31/2023
073880AD8	1,121,205	1,122,339	(1,134)	1,122,339	1,064,409	03/31/2023
07401CAS2	3,138,214	3,078,739	59,474	3,078,739	3,132,170	03/31/2023
12543XAD8	1,165,771	1,150,483	15,288	1,150,483	1,070,971	03/31/2023
12544DAG4	85,474	83,364	2,109	83,364	73,861	03/31/2023
12545EAK2	1,406,029	1,363,895	42,134	1,363,895	1,226,917	03/31/2023
12638PAB5	719,347	697,335	22,011	697,335	549,668	03/31/2023
126694CS5	2,842,754	2,832,174	10,581	2,832,174	2,292,959	03/31/2023
126694HP6	421,087	419,930	1,157	419,930	402,076	03/31/2023
12669G3S8	1,254,365	1,250,349	4,015	1,250,349	1,124,398	03/31/2023
16165MAG3	1,841,254	1,776,091	65,163	1,776,091	1,597,907	03/31/2023
2254582Y3	1,208,346	1,200,002	8,344	1,200,002	1,082,976	03/31/2023
225458L55	539,692	536,533	3,159	536,533	500,154	03/31/2023
225470VF7	1,460,576	1,422,984	37,592	1,422,984	1,400,985	03/31/2023
36185N6N5	4,571,722	4,071,935	499,788	4,071,935	4,514,039	03/31/2023
362341FN4	774,099	765,095	9,005	765,095	702,117	03/31/2023
362341XC8	857,596	848,675	8,921	848,675	768,173	03/31/2023
36242DQY2	99,752	97,979	1,772	97,979	93,530	03/31/2023
41161PCX9	191,672	191,284	388	191,284	190,228	03/31/2023
466247J46	74,610	73,055	1,554	73,055	73,519	03/31/2023
466247UG6	526,361	514,800	11,561	514,800	510,820	03/31/2023
46630WAB6	872,431	866,888	5,543	866,888	808,108	03/31/2023
46630WAL4	506,494	500,786	5,709	500,786	479,625	03/31/2023
46631NAA7	719,259	693,483	25,776	693,483	569,822	03/31/2023
576433D52	503,578	493,400	10,178	493,400	450,563	03/31/2023
57643MLZ5	284,150	280,753	3,397	280,753	269,995	03/31/2023
59023PAB9	508,302	498,819	9,484	498,819	517,983	03/31/2023
74958YAE2	287,181	287,688	(507)	287,688	287,680	03/31/2023
78473TAJ9	198,841	177,853	20,989	177,853	154,392	03/31/2023
863579RP5	609,579	590,361	19,218	590,361	577,909	03/31/2023
863579UL0	263,373	261,997	1,377	261,997	256,211	03/31/2023
92979DAC9	2,710,529	2,629,297	81,232	2,629,297	2,800,364	03/31/2023
94984DAC8	342,454	342,081	373	342,081	345,646	03/31/2023
94986CAA2	264,625	265,827	(1,202)	265,827	262,986	03/31/2023

NOTES TO FINANCIAL STATEMENTS

61751DAE4	1,614,822	1,548,177	66,645	1,548,177	1,908,732	06/30/2023
86358RXZ5	381,361	332,609	48,752	332,609	337,433	06/30/2023
02146TAL1	361,912	345,869	16,042	345,869	366,804	06/30/2023
02147XAR8	617,209	612,988	4,221	612,988	505,733	06/30/2023
059522AU6	2,107,010	2,107,010	0	2,107,010	2,147,399	06/30/2023
07386XAH9	984,857	984,374	483	984,374	807,325	06/30/2023
12566UAN4	572,055	570,484	1,571	570,484	586,599	06/30/2023
12628LAD2	766,444	716,904	49,540	716,904	624,798	06/30/2023
12667F5E1	1,039,544	1,031,360	8,184	1,031,360	960,648	06/30/2023
12667GAC7	662,986	611,428	51,558	611,428	628,342	06/30/2023
12668APC3	845,763	838,619	7,144	838,619	804,549	06/30/2023
17309BAB3	213,365	208,774	4,591	208,774	183,775	06/30/2023
32051GSQ9	1,688,266	1,682,972	5,294	1,682,972	1,728,278	06/30/2023
32051GT70	654,707	650,913	3,793	650,913	584,241	06/30/2023
36244SAD0	2,252,386	2,071,962	180,424	2,071,962	2,271,187	06/30/2023
43739EAP2	616,209	611,759	4,449	611,759	570,177	06/30/2023
46627MAD9	572,129	572,115	13	572,115	503,882	06/30/2023
46627MEC7	377,567	371,830	5,737	371,830	339,925	06/30/2023
46627MEJ2	1,118,100	1,113,603	4,497	1,113,603	921,828	06/30/2023
643529AC4	520,520	491,053	29,467	491,053	557,549	06/30/2023
65535VNL8	2,089,478	2,081,888	7,590	2,081,888	2,063,447	06/30/2023
65535VSJ8	1,285,712	1,246,997	38,715	1,246,997	1,115,827	06/30/2023
74923HAQ4	525,772	519,269	6,502	519,269	443,687	06/30/2023
75116FBH1	1,485,771	1,465,650	20,121	1,465,650	1,253,422	06/30/2023
761118SC3	1,528,680	1,515,672	13,008	1,515,672	1,309,921	06/30/2023
761118UG1	485,611	483,232	2,379	483,232	409,243	06/30/2023
863579J90	326,147	321,439	4,707	321,439	331,247	06/30/2023
86360BAJ7	664,426	663,728	698	663,728	678,337	06/30/2023
87222EAB4	814,203	791,937	22,266	791,937	715,293	06/30/2023
87222EAC2	944,500	906,175	38,325	906,175	780,900	06/30/2023
05949CHM1	754,991	752,303	2,689	752,303	770,786	06/30/2023
05949CKX3	1,233,035	1,190,687	42,348	1,190,687	1,225,158	06/30/2023
07386YAE4	1,919,895	1,890,046	29,849	1,890,046	1,717,512	06/30/2023
073880AD8	1,095,079	1,087,921	7,158	1,087,921	1,010,811	06/30/2023
12543XAD8	1,146,866	1,132,734	14,132	1,132,734	1,025,398	06/30/2023
12544DAG4	82,048	82,482	(434)	82,482	72,144	06/30/2023
12638PAB5	704,325	687,341	16,984	687,341	538,077	06/30/2023
12669G3S8	1,216,352	1,205,920	10,432	1,205,920	1,077,627	06/30/2023
16165MAG3	1,698,141	1,698,815	(675)	1,698,815	1,501,094	06/30/2023
17025AAH5	866,588	804,309	62,279	804,309	831,165	06/30/2023
2254582Y3	239,471	239,472	(2)	239,472	214,686	06/30/2023
225458L55	535,805	532,092	3,713	532,092	459,983	06/30/2023
225470VF7	1,403,814	1,403,895	(81)	1,403,895	1,341,332	06/30/2023
45669AAD6	3,387,280	3,358,005	29,274	3,358,005	3,217,657	06/30/2023
466247J46	71,231	71,237	(5)	71,237	69,271	06/30/2023
466247ZP1	550,885	540,659	10,226	540,659	482,855	06/30/2023
46628LAB4	41,586	40,556	1,030	40,556	41,521	06/30/2023
46630WAL4	515,281	485,878	29,403	485,878	468,594	06/30/2023
46631NAA7	691,427	678,636	12,791	678,636	532,232	06/30/2023
46631NDT3	6,223,773	6,162,743	61,029	6,162,743	6,052,651	06/30/2023
576433D52	492,252	487,446	4,806	487,446	417,672	06/30/2023
57643MLZ5	269,334	264,924	4,410	264,924	253,589	06/30/2023
59023PAB9	497,202	495,714	1,488	495,714	511,575	06/30/2023
74958YAE2	281,262	262,418	18,844	262,418	270,970	06/30/2023
863579XC7	1,084,387	1,062,034	22,353	1,062,034	1,101,633	06/30/2023
863579XR4	2,120,615	2,023,213	97,402	2,023,213	2,051,084	06/30/2023
86363GAF1	1,315,519	1,224,816	90,703	1,224,816	1,244,515	06/30/2023
885220KW2	1,906,234	1,901,275	4,960	1,901,275	1,823,623	06/30/2023
00176BAM54	101,071	71	101,000	71	78,651	09/30/2023
57430U301	1,207,914	922,371	285,543	922,371	815,210	09/30/2023
07325DAF1	214,725	211,984	2,742	211,984	195,404	09/30/2023
3622EAAA8	3,564,775	3,424,094	140,681	3,424,094	3,261,277	09/30/2023
61751DAE4	1,569,635	1,508,933	60,702	1,508,933	1,731,342	09/30/2023
86358RXY8	199,869	182,391	17,478	182,391	196,421	09/30/2023
86358RXZ5	297,911	283,221	14,691	283,221	280,466	09/30/2023
02146TAL1	356,025	334,459	21,566	334,459	347,841	09/30/2023
02147XAR8	595,098	598,203	(3,104)	598,203	483,800	09/30/2023
058933AN2	801,762	795,980	5,782	795,980	738,147	09/30/2023
059522AU6	2,113,373	2,046,846	66,528	2,046,846	2,043,226	09/30/2023
07386XAH9	967,729	884,778	82,951	884,778	783,965	09/30/2023
12628LAD2	722,914	702,073	20,842	702,073	584,662	09/30/2023
12667F4N2	2,131,981	2,102,525	29,456	2,102,525	2,003,869	09/30/2023
12667F5E1	998,934	999,062	(128)	999,062	919,366	09/30/2023
12667GAC7	641,949	642,107	(158)	642,107	605,263	09/30/2023
12668APC3	811,652	812,953	(1,300)	812,953	775,662	09/30/2023
17307GED6	1,383,968	1,370,895	13,074	1,370,895	1,414,213	09/30/2023
17309BAB3	205,994	202,794	3,201	202,794	171,985	09/30/2023
32051GSQ9	1,609,003	1,603,331	5,672	1,603,331	1,656,065	09/30/2023

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32051GT70	638,394	635,227	3,166	635,227	561,409	09/30/2023
36244SAD0	2,086,866	2,091,595	(4,729)	2,091,595	2,092,913	09/30/2023
43739EAP2	600,361	591,499	8,862	591,499	566,842	09/30/2023
46627MAD9	551,967	541,058	10,909	541,058	474,792	09/30/2023
46627MEC7	364,017	360,581	3,437	360,581	323,064	09/30/2023
46627MEJ2	1,097,236	1,094,239	2,997	1,094,239	888,082	09/30/2023
643529AC4	504,332	491,904	12,428	491,904	538,114	09/30/2023
65535VNL8	2,075,144	2,055,698	19,446	2,055,698	2,078,429	09/30/2023
65535VSJ8	1,256,596	1,234,664	21,931	1,234,664	1,073,207	09/30/2023
69337BAH7	1,342,250	1,324,870	17,380	1,324,870	1,128,015	09/30/2023
74923HAQ4	509,767	510,394	(627)	510,394	429,265	09/30/2023
75115DAA3	188,747	185,664	3,083	185,664	182,465	09/30/2023
761118GS1	1,085,700	1,072,281	13,419	1,072,281	1,007,009	09/30/2023
761118SC3	1,483,628	1,492,604	(8,976)	1,492,604	1,269,597	09/30/2023
761118UG1	468,938	469,663	(725)	469,663	393,703	09/30/2023
863579J90	308,602	305,810	2,792	305,810	317,961	09/30/2023
86360BAJ7	651,289	649,170	2,119	649,170	663,487	09/30/2023
87222EAB4	794,273	757,539	36,733	757,539	695,006	09/30/2023
87222EAC2	917,429	875,091	42,338	875,091	735,483	09/30/2023
41161PTN3	331,804	277,221	54,583	277,221	311,042	09/30/2023
45660LCK3	2,616,065	2,518,214	97,852	2,518,214	2,766,498	09/30/2023
05946XY72	1,018,663	1,014,239	4,424	1,014,239	947,595	09/30/2023
05949CHM1	666,490	660,363	6,127	660,363	690,602	09/30/2023
07386YAE4	1,885,974	1,866,881	19,093	1,866,881	1,705,295	09/30/2023
073880AD8	1,076,505	1,037,154	39,351	1,037,154	987,684	09/30/2023
12543XAD8	1,101,148	1,105,980	(4,831)	1,105,980	936,389	09/30/2023
12638PAB5	694,351	675,173	19,178	675,173	512,071	09/30/2023
12669G4K4	2,601,658	2,601,146	511	2,601,146	2,396,294	09/30/2023
12669GR45	498,496	476,051	22,445	476,051	430,865	09/30/2023
170257AE9	2,360,086	2,294,691	65,396	2,294,691	1,706,184	09/30/2023
17025AAH5	753,396	787,624	(34,228)	787,624	795,445	09/30/2023
225458L55	495,061	491,459	3,602	491,459	425,644	09/30/2023
225470VF7	1,387,201	1,333,114	54,088	1,333,114	1,298,598	09/30/2023
32052EAA7	46,567	43,785	2,782	43,785	40,679	09/30/2023
362341FN4	754,611	747,216	7,395	747,216	669,320	09/30/2023
362341XC8	827,434	812,370	15,063	812,370	684,900	09/30/2023
41161PCX9	180,773	179,982	791	179,982	176,391	09/30/2023
46631NDT3	5,999,611	6,009,390	(9,779)	6,009,390	5,617,945	09/30/2023
47233DAB7	595,329	204,708	390,622	204,708	681,585	09/30/2023
576433D52	486,384	480,875	5,509	480,875	413,266	09/30/2023
57643MLZ5	248,993	244,183	4,811	244,183	230,150	09/30/2023
59023PAB9	483,479	478,356	5,122	478,356	492,971	09/30/2023
74958TAB9	519,216	508,266	10,950	508,266	470,425	09/30/2023
863579RP5	591,272	566,391	24,881	566,391	560,020	09/30/2023
863579UL0	259,923	258,399	1,523	258,399	245,880	09/30/2023
863579UU0	1,016,080	963,663	52,416	963,663	990,946	09/30/2023
863579XC7	1,037,796	981,054	56,742	981,054	1,022,671	09/30/2023
86363GAF1	1,179,527	1,182,146	(2,619)	1,182,146	1,193,014	09/30/2023
885220KW2	1,896,532	1,874,254	22,278	1,874,254	1,835,343	09/30/2023
			<u>11,303,883</u>			

- (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

\$34,514,452

2. 12 Months or Longer

818,980,352
- b. The aggregate related fair value of securities with unrealized losses:

1. Less than 12 Months

\$1,772,554,637

2. 12 Months or Longer

7,665,499,421
- (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. 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.

NOTES TO FINANCIAL STATEMENTS

- N. Offsetting and Netting of Assets and Liabilities – Not applicable.
- O. 5GI Securities

Investment	Number of 5GI Securities		Aggregate BACV		Aggregate Fair Value	
	Current Year	Prior Year	Current Year	Prior Year	Current Year	Prior Year
(1) Bonds - AC	31	36	\$ 63,462,691	\$ 102,166,634	\$ 53,623,429	\$ 96,483,303
(2) LB&SS - AC	-	-	-	-	-	-
(3) Preferred Stock - AC	1	1	3,499,929	3,499,929	5,399,922	5,744,476
(4) Preferred Stock - FV	13	23	28,172,243	62,654,401	28,172,243	62,654,401
(5) Total (1+2+3+4)	45	60	\$ 95,134,863	\$ 168,320,964	\$ 87,195,594	\$ 164,882,180

AC - Amortized Cost FV - Fair Value

- P. Short Sales – Not applicable.
- Q. Prepayment Penalties and Acceleration Fees

	General Account	Separate Account
(1) Number of CUSIPS	0	0
(2) Aggregate amount of investment income	\$ -	\$ -

- R. Share of Cash Pool by Asset Type – Not applicable.

Note 6 – Joint Ventures, Partnerships and Limited Liability Companies

No significant change.

Note 7 – Investment Income

No significant change.

Note 8 – Derivative Instruments

No significant change.

NOTES TO FINANCIAL STATEMENTS

Note 9 – Income Taxes

On August 16th, 2022, the Inflation Reduction Act was signed into law and includes certain corporate income tax provisions. Impacts to the Company include the imposition of a corporate alternative minimum tax ("CAMT") applicable to tax years beginning after December 31, 2022. The CAMT imposes a 15% minimum tax on adjusted financial statement income on corporations that have an average adjusted financial statement income over \$1 billion in the prior three-year period (2020-2022). As of the reporting date, the Company has not determined if it will be liable for CAMT in 2023. In accordance with INT 22-02: *Fourth Quarter 2022 through Third Quarter 2023 Reporting of the Inflation Reduction Act – Corporate Alternative Minimum Tax*, the financial statements do not include an estimated impact of the CAMT because a reasonable estimate cannot be made. The United States Treasury Secretary has been authorized to issue guidance on the CAMT and pending such guidance the Company is not able to make a reasonable estimate.

- A. Deferred tax assets and deferred tax liabilities
- (1) The components of the net deferred tax asset/ (liability) are as follows:

	09-2023			12-2022			Change		
	Ordinary	Capital	Total	Ordinary	Capital	Total	Ordinary	Capital	Total
a. Gross deferred tax assets	\$ 251,696,727	\$ 104,635,170	\$ 356,331,897	\$ 187,418,721	\$ -	\$ 187,418,721	\$ 64,278,006	\$ 104,635,170	\$ 168,913,176
b. Statutory valuation allowance adjustment	-	-	-	-	-	-	-	-	-
c. Adjusted gross deferred tax assets	251,696,727	104,635,170	356,331,897	187,418,721	-	187,418,721	64,278,006	104,635,170	168,913,176
d. Deferred tax assets nonadmitted	125,919,909	(89,768,348)	36,151,561	73,566,963	(71,340,460)	2,226,503	52,352,946	(18,427,888)	33,925,058
e. Subtotal net admitted deferred tax asset	125,776,818	194,403,518	320,180,336	113,851,758	71,340,460	185,192,218	11,925,060	123,063,058	134,988,118
f. Deferred tax liabilities	32,120,488	89,768,348	121,888,836	41,645,944	71,340,460	112,986,404	(9,525,456)	18,427,888	8,902,432
g. Net admitted deferred tax assets/(net deferred tax liability)	\$ 93,656,330	\$ 104,635,170	\$ 198,291,500	\$ 72,205,814	\$ -	\$ 72,205,814	\$ 21,450,516	\$ 104,635,170	\$ 126,085,686

- (2) Admission calculation components, SSAP No. 101:

	09-2023			12-2022			Change		
	Ordinary	Capital	Total	Ordinary	Capital	Total	Ordinary	Capital	Total
a. Federal income taxes paid in prior years recoverable through loss carrybacks	\$ -	\$ 42,279,584	\$ 42,279,584	\$ -	\$ -	\$ -	\$ -	\$ 42,279,584	\$ 42,279,584
b. Adjusted gross deferred tax assets expected to be realized (excluding the amount of deferred tax assets from 2(a) above) after application of the threshold limitation. (The lesser of 2(b)1 and 2(b)2 below)	93,656,330	62,355,586	156,011,916	72,205,814	-	72,205,814	21,450,516	62,355,586	83,806,102
1. Adjusted gross deferred tax assets expected to be realized follow ing the balance sheet date	93,656,330	62,355,586	156,011,916	72,205,814	-	72,205,814	21,450,516	62,355,586	83,806,102
2. Adjusted gross deferred tax assets allow ed per limitation threshold	XXX	XXX	383,547,052	XXX	XXX	415,619,723	XXX	XXX	(32,072,671)
c. Adjusted gross deferred tax assets (excluding the amount of deferred tax assets from 2(a) and 2(b) above) offset by gross deferred tax liabilities	32,120,488	89,768,348	121,888,836	41,645,944	71,340,460	112,986,404	(9,525,456)	18,427,888	8,902,432
d. Deferred tax assets admitted as the result of application of SSAP No. 101	\$ 125,776,818	\$ 194,403,518	\$ 320,180,336	\$ 113,851,758	\$ 71,340,460	\$ 185,192,218	\$ 11,925,060	\$ 123,063,058	\$ 134,988,118

- (3) Other admissibility criteria:

	09-2023	12-2022
a. Ratio percentage used to determine recovery period and threshold limitation amount	901%	871%
b. Amount of adjusted capital and surplus used to determine recovery period and threshold limitation in 2(b)2 above	\$ 2,556,980,346	\$ 2,770,798,155

- (4) Impact of tax planning strategies:

	09-2023		12-2022		Change	
	Ordinary	Capital	Ordinary	Capital	Ordinary	Capital
a. Determination of adjusted gross deferred tax assets and net admitted deferred tax assets, by tax character as a percentage						
1. Adjusted gross DTAs amount from Note 9A1(c)	\$ 251,696,727	\$ 104,635,170	\$ 187,418,721	\$ -	\$ 64,278,006	\$ 104,635,170
2. Percentage of adjusted gross DTAs by tax character attributable to the impact of tax planning strategies	0.0%	18.8%	0.0%	0.0%	0.0%	18.8%
3. Net admitted adjusted gross DTAs amount from Note 9A1(e)	125,776,818	194,403,518	113,851,758	71,340,460	11,925,060	123,063,058
4. Percentage of net admitted adjusted gross DTAs by tax character admitted because of the impact of tax planning strategies	0.0%	26.4%	0.0%	0.0%	0.0%	26.4%
b. Does the company's tax planning strategies include the use of reinsurance? Yes [] No [X]						

- B. The Company has recognized all of its deferred tax liabilities.

NOTES TO FINANCIAL STATEMENTS

C. Current income taxes incurred consist of the following major components:

(1) Current income tax expense:

	09-2023	12-2022	Change
a. Federal	\$162,677,171	\$ 13,600,685	\$ 149,076,486
b. Foreign	27,670	2,794	24,876
c. Subtotal	162,704,841	13,603,479	149,101,362
d. Federal income tax (benefit) expense on net capital gains	(10,187,493)	(14,295,851)	4,108,358
e. Utilization of capital loss carry-forwards	-	-	-
f. Other	-	-	-
g. Federal and foreign income taxes incurred	<u>\$152,517,348</u>	<u>\$ (692,372)</u>	<u>\$ 153,209,720</u>

(2) Deferred tax assets:

	09-2023	12-2022	Change
a. Ordinary			
1 Discounting of unpaid losses	\$ -	\$ -	\$ -
2 Unearned premium reserve	-	-	-
3 Policyholder reserve	165,672,515	112,698,436	52,974,079
4 Investments	-	-	-
5 Deferred acquisition costs	73,961,871	61,621,231	12,340,640
6 Policyholder dividends accrual	-	-	-
7 Fixed assets	-	-	-
8 Compensation and benefits accrual	-	-	-
9 Pension accrual	1,215,844	217,028	998,816
10 Receivables - nonadmitted	3,881,646	6,232,003	(2,350,357)
11 Net operating loss carry-forward	-	-	-
12 Tax credit carry-forward	-	-	-
13 Other	1,646,433	2,084,813	(438,380)
14 Accruals	5,318,418	4,565,210	753,208
15 Amortization of intangibles	-	-	-
16 Underwriting expenses	-	-	-
99 Subtotal	<u>\$251,696,727</u>	<u>\$187,418,721</u>	<u>\$ 64,278,007</u>
b. Statutory valuation allowance adjustment	-	-	-
c. Nonadmitted	<u>125,919,909</u>	<u>73,566,963</u>	<u>52,352,946</u>
d. Admitted ordinary deferred tax assets	<u>\$125,776,818</u>	<u>\$113,851,758</u>	<u>\$ 11,925,061</u>
e. Capital			
1 Investments	\$104,635,170	\$ -	\$ 104,635,170
2 Net capital loss carry-forward	-	-	-
3 Real estate	-	-	-
4 Other	-	-	-
5 Non-insurance subsidiaries	-	-	-
99 Subtotal	<u>\$104,635,170</u>	<u>\$ -</u>	<u>\$ 104,635,170</u>
f. Statutory valuation allowance adjustment	-	-	-
g. Nonadmitted	<u>(89,768,348)</u>	<u>(71,340,460)</u>	<u>(18,427,888)</u>
h. Admitted capital deferred tax assets	<u>\$194,403,518</u>	<u>\$ 71,340,460</u>	<u>\$ 123,063,058</u>
i. Admitted deferred tax assets	<u>\$320,180,336</u>	<u>\$185,192,218</u>	<u>\$ 134,988,119</u>

(3) Deferred tax liabilities:

	09-2023	12-2022	Change
a. Ordinary			
1 Investments	\$ 1,015,796	\$ 1,015,796	\$ -
2 Fixed assets	1,133,585	902,671	230,914
3 Deferred and uncollected premium	1,415,360	2,079,689	(664,329)
4 Policyholder reserves	3,082,848	3,869,176	(786,328)
5 Other	428,992	439,162	(10,170)
6 Policy loans	238,345	265,367	(27,022)
7 Other - Reserve transition adjustment	24,805,562	33,074,083	(8,268,521)
99 Subtotal	<u>\$ 32,120,488</u>	<u>\$ 41,645,944</u>	<u>\$ (9,525,456)</u>
b. Capital			
1 Investments	\$ 89,768,348	\$ 71,340,460	\$ 18,427,888
2 Real estate	-	-	-
3 Other	-	-	-
99 Subtotal	<u>\$ 89,768,348</u>	<u>\$ 71,340,460</u>	<u>\$ 18,427,888</u>
c. Deferred tax liabilities	<u>\$121,888,836</u>	<u>\$112,986,404</u>	<u>\$ 8,902,432</u>

(4) Net deferred tax assets/(liabilities) \$198,291,500 \$ 72,205,814 \$ 126,085,686

NOTES TO FINANCIAL STATEMENTS

D. The provision for federal income taxes incurred on operations is different from that which would be obtained by applying the statutory federal income tax rate to income before income taxes. The significant items causing this difference are as follows:

	09-2023	12-2022
Provision computed at federal statutory rate	\$ (16,933,008)	\$ 40,254,415
Reinsurance items	11,657,590	54,946,270
OAC 3901-1-67 adoption	-	(46,220,408)
Investment items	(4,371,631)	(10,404,565)
Nonadmitted assets	2,350,357	(3,571,589)
Tax credits	(27,758)	(117,666)
Other	106,572	(2,458,627)
Total statutory income tax expense (benefit)	\$ (7,217,878)	\$ 32,427,830
Federal and foreign income tax expense (benefit)	\$ 152,517,348	\$ (692,372)
Change in net deferred income taxes	(159,735,226)	33,120,202
Total statutory income tax expense (benefit)	\$ (7,217,878)	\$ 32,427,830

E. (1) The Company does not have any operating loss carry-forwards or capital loss carry-forwards available to offset future net income subject to federal income taxes.

(2) The following are income taxes on operations and realized gains incurred in the current and prior years that will be available for recoupment in the event of future net losses:

Period	Ordinary	Capital	Total
2023	\$ -	\$ -	\$ -
2022	\$ -	\$ 13,416,838	\$ 13,416,838
2021	\$ -	\$ 28,862,746	\$ 28,862,746

(3) The Company had no deposits to disclose under Section 6603 of the Internal Revenue Service Code.

F. (1) The Company's federal income tax return is consolidated with the following entities – No significant change.

(2) Tax allocation agreement – No significant change.

G. Federal or Foreign Income Tax Loss Contingencies

The Company does not have any tax loss contingencies for which it is reasonably possible that the total liability will significantly increase within twelve months of the reporting date.

H. Repatriation Transition Tax (RTT) – Not applicable.

I. Alternative Minimum Tax – Not applicable.

NOTES TO FINANCIAL STATEMENTS

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

A., B. & C.

The Company is a wholly-owned 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 Glidepath Holdings Inc. See Schedule Y, Part 1, Organizational Chart.

The Company did not pay or receive federal income tax payments in cash to (from) parent during the period.

The Company did not pay dividends to parent during the period.

The Company did not receive capital contributions during the period.

- D. The Company reported \$815,323 due from and \$207,068 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 involving the Company:
 - (1) The Company has an agreement with Barings (an affiliate) which provides investment advisory services to the Company.
 - (2) Certain administrative, management, underwriting, claims, 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 Glidepath Holdings Inc., a subsidiary of MMLIC.
- 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 that exceeds 10% of admitted assets.
- 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 owns 100% of the outstanding stock of Manhattan National Holding, LLC (“MNH”), a wholly-owned non-insurance subsidiary. MNH owns 100% of the stock of Manhattan National Life Insurance Company (“MNLIC”), a stock life insurance company domiciled in Ohio. The Company utilizes the look-through approach for the valuation of MNH instead of obtaining audited financial statements for MNH. The Company’s carrying value in MNH is \$15,931,049, and represents the carrying value of MNLIC, which is presented on the basis of accounting practices prescribed or permitted by the Ohio Department of Insurance.
- M. All SCA Investments – No significant change.
- N. Investment in Insurance SCAs

All U.S insurance subsidiaries owned by the Company prepare their statutory financial statement in compliance with NAIC statutory accounting practices and procedures.
- O. SCA and SSAP No. 48 Entity Loss Tracking – Not applicable.

Note 11 – Debt

- A. The Company has no capital notes or reverse repurchase agreements outstanding.
- B. Federal Home Loan Bank Agreements
 - (1) The Company became a member of the Federal Home Loan Bank (“FHLB”) on August 14, 2009. Through its association with the FHLB and by purchasing a set amount of FHLB stock, the Company can enter into deposit contracts. The Company owned \$41,550,700 and \$48,262,300 of FHLB stock at September 30, 2023 and December 31, 2022, respectively. The Company also posted collateral to the FHLB of assets with a fair value of approximately \$1,192,937,917 as of September 30, 2023. The Company’s FHLB borrowing capacity is based on the Company’s estimate of collateral eligible to be pledged with the FHLB. The deposit-type contract liabilities and related assets are accounted for in the Company’s general account.
 - (2) FHLB Capital Stock
 - a. The Company held 200,000 shares of Class B membership stock at September 30, 2023 and December 31, 2022, respectively. The Company held 215,507 and 282,623 shares of activity and excess stock at September 30, 2023 and December 31, 2022, respectively.
 - b. The Company has no membership stock eligible for redemption.
 - (3) Collateral Pledged to FHLB
 - a. The amount of collateral pledged to the FHLB at September 30, 2023 was \$1,192,937,917 (fair value) and \$1,319,452,383 (carrying value). The total aggregate borrowing from the FHLB at September 30, 2023 was \$500,000,000.
 - b. The maximum amount of collateral pledged to the FHLB during the period was \$1,348,965,485 (fair value) and \$1,424,061,225 (carrying value) at March 31, 2023. The amount borrowed from the FHLB at the time of maximum collateral was \$500,000,000.
 - (4) Borrowing from FHLB
 - a. The Company has accessed a total of \$500,000,000 as part of the funding agreement with the FHLB.
 - b. The maximum amount of borrowings from the FHLB during the period was \$500,000,000.
 - c. The current borrowings related to fixed rate funding agreements are subject to prepayment penalties.

NOTES TO FINANCIAL STATEMENTS

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 MMALIC. MMALIC sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for its employees and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$51,095,196 as of September 30, 2023 and \$37,437,537 as of December 31, 2022. The Company matches a percentage of employee contributions to the qualified 401(k) thrift savings plan. The Company's total matching thrift savings contributions included in general insurance expenses were \$3,480,219 for the nine months ended September 30, 2023 and \$3,968,648 for the year ended December 31, 2022.

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.

I. 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

No significant change.

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

No significant change.

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.

NOTES TO FINANCIAL STATEMENTS

Note 20 – Fair Value Measurements

A.

(1) Fair Value Measurements at Reporting Date

The Company has categorized its assets and liabilities measured at fair value 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.

	Level 1	Level 2	Level 3	Net Asset Value (NAV)	Total
Assets at fair value					
Bonds:					
Special revenue	\$ -	\$ 249	\$ -	\$ -	\$ 249
Industrial and misc. (unaffiliated)	-	8,280,269	5,038,146	-	13,318,416
Hybrid securities	-	171,250	-	-	171,250
Total bonds	-	8,451,768	5,038,146	-	13,489,914
Non-affiliated preferred stock	44,079,562	15,954,000	66,650,421	-	126,683,982
Non-affiliated common stock	107,431,484	-	156,027,864	-	263,459,347
Currency sw aps	-	317,614	-	-	317,614
Currency forw ards	-	4,325,098	-	-	4,325,098
Interest rate sw aps	-	133,846,062	-	-	133,846,062
Separate account assets	2,771,394	278,487,178	-	-	281,258,573
Total assets at fair value	\$ 154,282,440	\$ 441,381,720	\$ 227,716,430	\$ -	\$ 823,380,590
Liabilities at fair value					
Currency sw aps	\$ -	\$ 12,054,080	\$ -	\$ -	\$ 12,054,080
Currency forw ards	-	46,238	-	-	46,238
Interest rate sw aps	-	107,242,803	-	-	107,242,803
Financial Futures	7,650,945	-	-	-	7,650,945
Separate account liabilities	2,771,394	278,487,178	-	-	281,258,573
Total liabilities at fair value	\$ 10,422,340	\$ 397,830,299	\$ -	\$ -	\$ 408,252,639

(2) Fair Value Measurements in Level 3 of the Fair Value Hierarchy

	Beginning Balance at 6/30/2023	Transfers into Level 3	Transfers out of Level 3	Total Gains and (losses) included in Net Income	Total Gains and (losses) included in Surplus	Purchases	Issuances	Sales	Settlements	Other Adjustments	Ending Balance at 9/30/2023
Bonds: industrial and misc (unaffiliated)	\$ 6,567,928	\$ -	\$ -	\$ 514,635	\$ (2,038,047)	\$ -	\$ -	\$ -	\$ (6,369)	\$ -	\$ 5,038,147
Non-affiliated preferred stock	70,151,872	-	-	-	2,686,521	(1,343,791)	442,451	-	(442,451)	(4,844,182)	66,650,420
Non-affiliated common stock	153,302,587	(311)	-	-	3,515,687	0	-	-	(790,100)	(0)	156,027,864
Total	\$ 230,022,388	\$ (311)	\$ -	\$ 514,635	\$ 4,164,161	\$ (1,343,791)	\$ 442,451	\$ -	\$ (1,238,920)	\$ (4,844,182)	\$ 227,716,431

(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. All transfers are reflected in the table above at fair value as of the end of 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's Level 3 is comprised of financial instruments whose fair value is estimated based on non-binding broker quotes or internally developed using significant inputs not based on, or corroborated by, observable market information.

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

- a. The Company's derivative assets/liabilities are reported on a gross basis (see 20-A-(1)).
- b. The Company has no gross or net derivative assets/liabilities measured at fair value in the Level 3 category.

B. The Company has no additional fair value disclosures.

NOTES TO FINANCIAL STATEMENTS

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 Asset Value (NAV)	Not Practicable (Carrying Value)
Financial assets:							
Bonds:							
U.S. Governments	\$ 146,052,813	\$ 188,723,180	\$ -	\$ 146,052,813	\$ -	\$ -	\$ -
All other government	17,590,101	19,143,646	-	17,590,101	-	-	-
States, territories and possessions	171,457,415	180,457,982	-	171,457,415	-	-	-
Political subdivisions of states, territories	219,484,109	228,451,867	-	219,484,109	-	-	-
Special revenue	1,615,729,751	1,817,318,983	-	1,601,201,151	14,528,600	-	-
Industrial and misc. (unaffiliated)	27,712,243,032	30,798,313,749	-	20,434,225,632	7,278,017,400	-	-
Hybrid securities	691,736,342	747,786,467	-	679,010,342	12,726,000	-	-
Parent, subs and affiliates	583,987,625	620,209,622	-	449,394,786	134,592,839	-	-
Total bonds	\$ 31,158,281,188	\$ 34,600,405,496	\$ -	\$ 23,718,416,349	\$ 7,439,864,839	\$ -	\$ -
Non affiliated preferred stock	219,384,005	206,602,749	93,730,261	15,954,000	109,699,744	-	-
Non affiliated common stock	263,459,347	263,459,347	107,431,484	-	156,027,864	-	-
Mortgage loans	3,664,311,830	3,938,947,444	-	-	3,664,311,830	-	-
Currency forwards	4,325,098	4,325,098	-	4,325,098	-	-	-
Fixed-indexed annuity options	596,477,344	768,640,381	203,724,920	392,752,423	-	-	-
Interest rate sw aps	133,846,062	133,846,062	-	133,846,062	-	-	-
Currency sw aps	317,614	317,614	-	317,614	-	-	-
Separate account assets	281,258,573	281,258,573	2,771,394	278,487,178	-	-	-
Cash, cash equivalents and short-term investments	2,175,975,489	2,175,975,489	2,175,975,489	-	-	-	-
Policy loans	30,066,646	30,066,646	-	-	30,066,646	-	-
Total financial assets	<u>38,527,703,196</u>	<u>42,403,844,899</u>	<u>2,583,633,548</u>	<u>\$ 24,544,098,724</u>	<u>\$ 11,399,970,923</u>	<u>\$ -</u>	<u>\$ -</u>
Financial liabilities:							
Currency sw aps	\$ 12,054,080	\$ 12,054,080	\$ -	\$ 12,054,080	\$ -	\$ -	\$ -
Currency forw ards	46,238	46,238	-	46,238	-	-	-
Interest rate sw aps	107,242,803	107,242,803	-	107,242,803	-	-	-
Fixed-indexed annuity options	-	472,162,459	-	-	-	-	-
Financial Futures	7,650,945	7,650,945	7,650,945	-	-	-	-
Separate account liabilities	281,258,573	281,258,573	2,771,394	278,487,178	-	-	-
Total financial liabilities	<u>\$ 408,252,639</u>	<u>\$ 880,415,098</u>	<u>\$ 10,422,340</u>	<u>\$ 397,830,299</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

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

A. Unusual or Infrequent Items

On February 17, 2022, MMALIC entered into a Funds Withheld Coinsurance agreement effective February 1, 2022, with Martello Re Limited, a Bermuda-domiciled Class E life and annuity reinsurer launched in 2022. MMALIC ceded statutory reserves of \$14,188,769,319 on a closed block of fixed, fixed-indexed and payout annuity policies, in exchange for a \$320,000,000 ceding commission paid by Martello Re. Under this agreement, the Company ceded \$10,669,260,982 and \$12,648,690,025 of annuity reserves at September 30, 2023 and December 31, 2022, respectively.

The Company entered into a quota share indemnity reinsurance agreement on fixed-indexed annuity (“FIA”) policies with Hannover Life Reassurance Company of America (“HLR”) effective December 31, 2018. Effective January 1, 2022 the Company has recaptured the FIA policies ceded to HLR in the agreement that became effective on December 31, 2018. The financial impact of the reinsurance recapture was a decrease to statutory capital of \$140,568,399.

Admitted disallowed Interest Maintenance Reserve (“IMR”):

As of September 30, 2023, the Company had \$100,822,688 of admitted disallowed IMR in aggregate and allocated between the general account, insulated separate account and non-insulated account.

The Company did not have disallowed IMR admitted in the general account and reported as an asset in the separate account insulated and non-insulated blank.

As of September 30, 2023, the calculated adjusted capital and surplus was \$2,812,242,534.

As of September 30, 2023, the percentage of adjusted capital and surplus for which the admitted disallowed IMR represents was 4%.

When the Company sells bonds and recognizes losses due to interest-rate related factors, and the realized losses are transferred to the IMR, the sales proceeds are generally used for reinvestment as governed by prudent asset liability management (“ALM”) policies and procedures. Such sales of bonds are intermittently used to meet liquidity needs and managed within the ALM framework.

IMR losses for fixed income related derivatives were in accordance with documented risk management procedures, as well as the Company’s derivative use plans, and reflect the same historical treatment of derivative gains reversed to IMR and amortized rather than immediately recognized as realized gain upon termination.

B. The Company had no troubled debt restructuring.

NOTES TO FINANCIAL STATEMENTS

C. Other Disclosures:

The impact of the Martello Re transaction on MMALIC’s income statement for 2022 is as follows:

	12-2022
Premiums and other revenues:	
Premiums and annuity considerations for life and accident and health contracts	\$ (14,113,436,353)
Net investment income	(451,786,096)
Commissions and expense allowances on reinsurance ceded	451,581,204
Aggregate write-ins for miscellaneous income	(34,606,397)
Total premiums and other revenues	\$ (14,148,247,642)
Benefits and expenses:	
Annuity benefits	\$ (470,692,560)
Surrender benefits and withdrawals for life contracts	(1,604,832,240)
Increase in aggregate reserves for life and accident and health contracts	(12,416,592,021)
Aggregate write-ins for deductions	317,161,240
Total benefits and expenses	\$ (14,174,955,581)

Note 22 – Events Subsequent/Other items

No significant change.

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

Reserves on accident and health contracts for incurred and loss adjustment expenses attributable to insured events of prior years developed as anticipated during the period. Original estimates are increased or decreased as additional information becomes known regarding individual claims. However, no significant trends or unanticipated events were noted. None of the Company’s accident and health contracts are subject to retrospective rating or experience refunds.

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

No significant change.

Note 36 – Loss/Claim Adjustment Expenses

No significant change.

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

- 1.1

Did the reporting entity experience any material transactions requiring the filing of Disclosure of Material Transactions with the State of Domicile, as required by the Model Act?

Yes [] No [X]
- 1.2

If yes, has the report been filed with the domiciliary state?

Yes [] No []
- 2.1

Has any change been made during the year of this statement in the charter, by-laws, articles of incorporation, or deed of settlement of the reporting entity?

Yes [] No [X]
- 2.2

If yes, date of change:
- 3.1

Is the reporting entity a member of an Insurance Holding Company System consisting of two or more affiliated persons, one or more of which is an insurer?
If yes, complete Schedule Y, Parts 1 and 1A.

Yes [X] No []
- 3.2

Have there been any substantial changes in the organizational chart since the prior quarter end?

Yes [] No [X]
- 3.3

If the response to 3.2 is yes, provide a brief description of those 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 issued by the SEC for the entity/group.
- 4.1

Has the reporting entity been a party to a merger or consolidation during the period covered by this statement?

Yes [] No [X]
- 4.2

If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation.
- | | | |
|----------------|-------------------|-------------------|
| 1 | 2 | 3 |
| Name of Entity | NAIC Company Code | State of Domicile |
| | | |
5.

If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney-in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved?
If yes, attach an explanation.

Yes [] No [X] N/A []
- 6.1

State as of what date the latest financial examination of the reporting entity was made or is being made.

12/31/2021
- 6.2

State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released.

12/31/2016
- 6.3

State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date).

01/11/2018
- 6.4

By what department or departments?
State of Ohio, Department of Insurance
- 6.5

Have all financial statement adjustments within the latest financial examination report been accounted for in a subsequent financial statement filed with Departments?

Yes [] No [] N/A [X]
- 6.6

Have all of the recommendations within the latest financial examination report been complied with?

Yes [] No [] N/A [X]
- 7.1

Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period?

Yes [] No [X]
- 7.2

If yes, give full information:
- 8.1

Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board?

Yes [] No [X]
- 8.2

If response to 8.1 is yes, please identify the name of the bank holding company.
- 8.3

Is the company affiliated with one or more banks, thrifts or securities firms?

Yes [X] No []
- 8.4

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

1 Affiliate Name	2 Location (City, State)	3 FRB	4 OCC	5 FDIC	6 SEC
Barings LLC	Charlotte, NC	..NO..	..NO..	..NO..	..YES..
Baring International Investment Limited	London, UK	..NO..	..NO..	..NO..	..YES..
Baring Securities LLC	Charlotte, NC	..NO..	..NO..	..NO..	..YES..
Flourish Financial, LLC	New York, NY	..NO..	..NO..	..NO..	..YES..
IMM Ascend Life Investor Services, LLC	Cincinnati, OH	..NO..	..NO..	..NO..	..YES..
IML Distributors, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Investment Advisers, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Investors Services	Springfield, MA	..NO..	..NO..	..NO..	..YES..
IML Strategic Distributors, LLC	Springfield, MA	..NO..	..NO..	..NO..	..YES..
The MassMutual Trust Company, OCC	Enfield, CT	..NO..	..YES..	..NO..	..NO..

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

9.1

Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards?
(a) Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
(b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity;
(c) Compliance with applicable governmental laws, rules and regulations;
(d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and
(e) Accountability for adherence to the code.

Yes [X] No []

9.11

If the response to 9.1 is No, please explain:
.....

9.2

Has the code of ethics for senior managers been amended?

Yes [] No [X]

9.21

If the response to 9.2 is Yes, provide information related to amendment(s).
.....

9.3

Have any provisions of the code of ethics been waived for any of the specified officers?

Yes [] No [X]

9.31

If the response to 9.3 is Yes, provide the nature of any waiver(s).
.....

FINANCIAL

10.1

Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement?

Yes [X] No []

10.2

If yes, indicate any amounts receivable from parent included in the Page 2 amount:\$

INVESTMENT

11.1

Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.)

Yes [] No [X]

11.2

If yes, give full and complete information relating thereto:
.....

12.

Amount of real estate and mortgages held in other invested assets in Schedule BA:

\$255,317,543

13.

Amount of real estate and mortgages held in short-term investments:

\$

14.1

Does the reporting entity have any investments in parent, subsidiaries and affiliates?

Yes [X] No []

14.2

If yes, please complete the following:

	1	2
	Prior Year-End Book/Adjusted Carrying Value	Current Quarter Book/Adjusted Carrying Value
14.21 Bonds	\$520,760,496	\$605,559,441
14.22 Preferred Stock	\$0	\$
14.23 Common Stock	\$401,901,977	\$431,602,887
14.24 Short-Term Investments	\$0	\$
14.25 Mortgage Loans on Real Estate	\$0	\$
14.26 All Other	\$152,544,036	\$197,096,625
14.27 Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26)	\$1,075,206,509	\$1,234,258,953
14.28 Total Investment in Parent included in Lines 14.21 to 14.26 above	\$	\$

15.1

Has the reporting entity entered into any hedging transactions reported on Schedule DB?

Yes [X] No []

15.2

If yes, has a comprehensive description of the hedging program been made available to the domiciliary state? Yes [X] No [] N/A []
If no, attach a description with this statement.
.....

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.

\$0

16.2

Total book/adjusted carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2

\$0

16.3

Total payable for securities lending reported on the liability page.

\$0

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

GENERAL INTERROGATORIES

17. Excluding items in Schedule E - Part 3 - Special Deposits, real estate, mortgage loans and investments held physically in the reporting entity's offices, vaults or safety deposit boxes, were all stocks, bonds and other securities, owned throughout the current year held pursuant to a custodial agreement with a qualified bank or trust company in accordance with Section 1, III - General Examination Considerations, F. Outsourcing of Critical Functions, Custodial or Safekeeping Agreements of the NAIC Financial Condition Examiners Handbook? Yes [X] No []
- 17.1 For all agreements that comply with the requirements of the NAIC Financial Condition Examiners Handbook, complete the following:

1 Name of Custodian(s)	2 Custodian Address
Bank of New York Mellon	1 Wall Street, New York, NY 10286
State Street Global Services	801 Pennsylvania Avenue, Kansas City, MO 64105

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

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

- 17.3 Have there been any changes, including name changes, in the custodian(s) identified in 17.1 during the current quarter? Yes [] No [X]
- 17.4 If yes, give full information relating thereto:

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

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

1 Name of Firm or Individual	2 Affiliation
ARES Capital Management LLC	U.....
Ares Management LLC	U.....
Barings LLC	A.....
Centerbridge Martello Advisors, LLC	U.....
Fractal Investments LLC	U.....
Western Asset Management Company	U.....
Angelo, Gordon & Co., L.P	U.....

- 17.5097 For those firms/individuals listed in the table for Question 17.5, do any firms/individuals unaffiliated with the reporting entity (i.e. designated with a "U") manage more than 10% of the reporting entity's invested assets?..... Yes [] No [X]
- 17.5098 For firms/individuals unaffiliated with the reporting entity (i.e. designated with a "U") listed in the table for Question 17.5, does the total assets under management aggregate to more than 50% of the reporting entity's invested assets?..... Yes [] No [X]

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

1 Central Registration Depository Number	2 Name of Firm or Individual	3 Legal Entity Identifier (LEI)	4 Registered With	5 Investment Management Agreement (IMA) Filed
130074	ARES Capital Management LLC	549300R4YHRZ8JUZU385	SEC	NO.....
130074	Ares Management LLC	549300JA9GMPFTSVQQ05	SEC	NO.....
106006	Barings LLC	549300G36F1EZS4MQM37	SEC	DS.....
131940	Angelo, Gordon & Co., L.P.	XXJ808RONB9FETFPGB63	SEC	NO.....
157359	Centerbridge Martello Advisors, LLC	549300F5X7LPP05D3544	SEC	NO.....
311767	Fractal Investments LLC – Pending Mandate	984500D14JFD006CBC96	SEC	NO.....
801-8162	Western Asset Management Company	549300C5A561UXU1CN46	SEC	NO.....

- 18.1 Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Investment Analysis Office been followed? Yes [] No [X]
- 18.2 If no, list exceptions:
At 9/30/2023, 57 issues for 43 issuers did not meet the filing requirements of the Purposes and Procedures Manual. The majority of these issues currently lack one or more of the following: Valid cusip/PPN, audited financials and/or executed legal documentation.
Exceptions totaled \$316,487,870 or 0.89% of all assets.

19. By self-designating 5GI securities, the reporting entity is certifying the following elements for each self-designated 5GI security:
- a. Documentation necessary to permit a full credit analysis of the security does not exist or an NAIC CRP credit rating for an FE or PL security is not available.
- b. Issuer or obligor is current on all contracted interest and principal payments.
- c. The insurer has an actual expectation of ultimate payment of all contracted interest and principal.
- Has the reporting entity self-designated 5GI securities? Yes [X] No []

20. By self-designating PLGI securities, the reporting entity is certifying the following elements of each self-designated PLGI security:
- a. The security was purchased prior to January 1, 2018.
- b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
- c. The NAIC Designation was derived from the credit rating assigned by an NAIC CRP in its legal capacity as a NRSRO which is shown on a current private letter rating held by the insurer and available for examination by state insurance regulators.
- d. The reporting entity is not permitted to share this credit rating of the PL security with the SVO.
- Has the reporting entity self-designated PLGI securities? Yes [] No [X]

21. By assigning FE to a Schedule BA non-registered private fund, the reporting entity is certifying the following elements of each self-designated FE fund:
- a. The shares were purchased prior to January 1, 2019.
- b. The reporting entity is holding capital commensurate with the NAIC Designation reported for the security.
- c. The security had a public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO prior to January 1, 2019.
- d. The fund only or predominantly holds bonds in its portfolio.
- e. The current reported NAIC Designation was derived from the public credit rating(s) with annual surveillance assigned by an NAIC CRP in its legal capacity as an NRSRO.
- f. The public credit rating(s) with annual surveillance assigned by an NAIC CRP has not lapsed.
- Has the reporting entity assigned FE to Schedule BA non-registered private funds that complied with the above criteria? Yes [] No [X]

GENERAL INTERROGATORIES

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

Life and Accident Health Companies/Fraternal Benefit Societies:

1.

Report the statement value of mortgage loans at the end of this reporting period for the following categories:

1

Amount

1.1

Long-Term Mortgages In Good Standing

1.11

Farm Mortgages

\$

1.12

Residential Mortgages

\$

2,565,432,275

1.13

Commercial Mortgages

\$

1,373,515,169

1.14

Total Mortgages in Good Standing

\$

3,938,947,444

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)

\$

3,938,947,444

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

%

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

[]

Fraternal Benefit Societies Only:

5.1

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?

Yes

[]

No

[]

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

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE S - CEDED REINSURANCE

Showing All New Reinsurance Treaties - Current Year to Date

[illegible]

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

States, Etc.			1	Direct Business Only					
				Life Contracts		4 Accident and Health Insurance Premiums, Including Policy, Membership and Other Fees	5 Other Considerations	6 Total Columns 2 Through 5	7 Deposit-Type Contracts
				2 Life Insurance Premiums	3 Annuity Considerations				
Active Status (a)									
1.	Alabama	AL	L	114,934	148,585,496	23,430	148,723,860		
2.	Alaska	AK	L	5,810	2,061,779		2,067,589		
3.	Arizona	AZ	L	370,137	125,715,014	6,534	126,091,685	690,667	
4.	Arkansas	AR	L	107,393	45,172,282	879	45,280,554	698,255	
5.	California	CA	L	3,269,054	677,170,871	13,021	680,452,946	555,556	
6.	Colorado	CO	L	153,290	71,561,362	65,882	71,780,534	7,711	
7.	Connecticut	CT	L	245,068	116,416,544	2,726	116,664,338	246,811	
8.	Delaware	DE	L	33,131	37,230,151		37,263,282		
9.	District of Columbia	DC	L	18,739	6,078,052		6,096,791		
10.	Florida	FL	L	1,202,259	594,242,150	204,781	595,649,190	315,847	
11.	Georgia	GA	L	544,458	177,551,236	61,293	178,156,987	233,957	
12.	Hawaii	HI	L	186,070	48,614,261		48,800,331		
13.	Idaho	ID	L	60,367	36,444,199	1,953	36,506,519		
14.	Illinois	IL	L	483,059	216,730,945	104,926	217,318,930	212,560	
15.	Indiana	IN	L	122,080	140,583,946	103,720	140,809,746	280,958	
16.	Iowa	IA	L	106,103	49,744,169	81,866	49,932,138		
17.	Kansas	KS	L	75,563	19,815,444	113,681	20,004,688		
18.	Kentucky	KY	L	123,413	77,495,165	128,034	77,746,612		
19.	Louisiana	LA	L	154,325	127,406,087	2,577	127,562,989	643,713	
20.	Maine	ME	L	53,225	19,979,573	4,926	20,037,724		
21.	Maryland	MD	L	356,442	124,082,290	7,600	124,446,332		
22.	Massachusetts	MA	L	305,652	152,390,083		152,695,735	530,836	
23.	Michigan	MI	L	194,336	240,305,614	2,369	240,502,319	511,603	
24.	Minnesota	MN	L	299,907	92,714,148	5,000	93,019,055	138,574	
25.	Mississippi	MS	L	94,997	39,517,641	2,199	39,614,837	895,160	
26.	Missouri	MO	L	222,398	343,020,488	124,120	343,367,006	204,877	
27.	Montana	MT	L	7,916	5,581,347	6,987	5,596,250	293,660	
28.	Nebraska	NE	L	139,349	27,441,356	61,959	27,642,664		
29.	Nevada	NV	L	197,956	38,516,854	10,326	38,725,136		
30.	New Hampshire	NH	L	40,719	25,033,181	48,995	25,122,895	2,004,739	
31.	New Jersey	NJ	L	377,617	296,356,209	5,047	296,738,873	849,833	
32.	New Mexico	NM	L	134,494	12,094,042		12,228,536	42,538	
33.	New York	NY	N	94,135	13,157,146	4,036	13,255,317		
34.	North Carolina	NC	L	751,269	262,383,176	1,096,761	264,231,206		
35.	North Dakota	ND	L	36,751	14,306,579		14,343,330		
36.	Ohio	OH	L	334,283	285,954,764	43,565	286,332,612	536,350	
37.	Oklahoma	OK	L	373,608	31,187,566	51,066	31,612,240		
38.	Oregon	OR	L	75,055	51,868,333	58,368	52,001,756		
39.	Pennsylvania	PA	L	780,372	417,031,381	13,279	417,825,032	409,496	
40.	Rhode Island	RI	L	35,023	41,651,525	2,020	41,688,568		
41.	South Carolina	SC	L	286,984	147,817,512	188,723	148,293,219	428,669	
42.	South Dakota	SD	L	24,260	14,695,897	25	14,720,182		
43.	Tennessee	TN	L	253,222	208,550,843	166,738	208,970,803		
44.	Texas	TX	L	1,594,441	352,635,064	94,953	354,324,458	3,167,827	
45.	Utah	UT	L	99,547	43,807,811	29,886	43,937,244		
46.	Vermont	VT	L	24,179	10,249,092	11,549	10,284,820		
47.	Virginia	VA	L	572,092	128,432,178	164,255	129,168,525	87,793	
48.	Washington	WA	L	212,793	131,436,603	122,187	131,771,583	832,365	
49.	West Virginia	WV	L	82,618	36,134,184	4,523	36,221,325		
50.	Wisconsin	WI	L	171,044	129,038,492	192,813	129,402,349		
51.	Wyoming	WY	L	16,181	4,362,604		4,378,785		
52.	American Samoa	AS	N				0		
53.	Guam	GU	N	60,308			60,308		
54.	Puerto Rico	PR	N	302			302		
55.	U.S. Virgin Islands	VI	N	1,011			1,011		
56.	Northern Mariana Islands	MP	N				0		
57.	Canada	CAN	N				0		
58.	Aggregate Other Aliens	OT	XXX	58,467	242,295	0	300,762	0	
59.	Subtotal	XXX		15,738,206	6,460,595,024	3,439,578	6,479,772,808	14,820,355	
90.	Reporting entity contributions for employee benefits plans	XXX					0		
91.	Dividends or refunds applied to purchase paid-up additions and annuities.....	XXX					0		
92.	Dividends or refunds applied to shorten endowment or premium paying period.....	XXX					0		
93.	Premium or annuity considerations waived under disability or other contract provisions.....	XXX		179,377		204,543	383,920		
94.	Aggregate or other amounts not allocable by State.....	XXX		0	0	0	0	0	
95.	Totals (Direct Business).....	XXX		15,917,583	6,460,595,024	3,644,121	6,480,156,728	14,820,355	
96.	Plus Reinsurance Assumed.....	XXX		2,282,592	860,367	2,337,674	5,480,633		
97.	Totals (All Business).....	XXX		18,200,175	6,461,455,391	5,981,795	6,485,637,361	14,820,355	
98.	Less Reinsurance Ceded.....	XXX		7,298,460	234,457,166	3,644,121	245,399,747	44,482	
99.	Totals (All Business) less Reinsurance Ceded	XXX		10,901,715	6,226,998,225	2,337,674	6,240,237,614	14,775,873	
DETAILS OF WRITE-INS									
58001.	Other Alien	XXX		58,467	242,295		300,762		
58002.	.....	XXX							
58003.	.....	XXX							
58998.	Summary of remaining write-ins for Line 58 from overflow page	XXX		0	0	0	0	0	
58999.	Totals (Lines 58001 through 58003 plus 58998)(Line 58 above)	XXX		58,467	242,295	0	300,762	0	
9401.	.....	XXX							
9402.	.....	XXX							
9403.	.....	XXX							
9498.	Summary of remaining write-ins for Line 94 from overflow page	XXX		0	0	0	0	0	
9499.	Totals (Lines 9401 through 9403 plus 9498)(Line 94 above)	XXX		0	0	0	0	0	

(a) Active Status Counts:

1. L - Licensed or Chartered - Licensed insurance carrier or domiciled RRG	50	4. Q - Qualified - Qualified or accredited reinsurer	0
2. R - Registered - Non-domiciled RRGs	0	5. N - None of the above - Not allowed to write business in the state	7
3. E - Eligible - Reporting entities eligible or approved to write surplus lines in the state	0		

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

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY	04-1590850	65935	Massachusetts
Direct & Indirect Owned Subsidiaries:			
C.M. Life Insurance Company	06-1041383	93432	Connecticut
MML Bay State Life Insurance Company	43-0581430	70416	Connecticut
CML Special Situations Investor LLC	None		Delaware
CM Life Mortgage Lending LLC	None		Delaware
CML Mezzanine Investor III, 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 II LLC	None		Delaware
MM Global Capabilities III LLC	None		Delaware
MM/Barings Multifamily TEBS 2020 LLC	None		Delaware
Berkshire Way LLC	04-1590850		Delaware
MML Mezzanine Investor II, LLC	04-1590850		Delaware
MML Mezzanine Investor III, 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
Lyme Adirondack Timber Sales, LLC	None		Delaware
MSP-SC, LLC	04-1590850		Delaware
Insurance Road LLC	04-1590850		Delaware
MassMutual Trad Private Equity LLC	04-1590850		Delaware
MassMutual Intellectual Property LLC	04-1590850		Delaware
Trad Investments I LLC	None		Delaware
ITPS Holding LLC	None		Delaware
HITPS LLC	None		Delaware
EM Opportunities LLC	None		Delaware
MassMutual MCAM Insurance Company, Inc.	None		Vermont
MassMutual Ventures US IV, GP, LLC	None		Delaware
MassMutual Ventures US IV, L.P.	None		Delaware
MassMutual Ventures US IV, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, LLC	None		Delaware
MassMutual Ventures Europe/APAC I GP, L.P.	None		Cayman Islands
MassMutual Ventures Europe/APAC I L.P.	None		Cayman Islands

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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Counterpointe Sustainable Advisors LLC	None		Delaware
CSA Intermediate Holdco LLC	None		Delaware
Counterpointe Trust Services LLC	None		Delaware
CP PACE LLC	None		Delaware
CSA Employee Services Company LLC	None		Delaware
Counterpointe Sustainable Real Estate II LLC	None		Delaware
Counterpointe Energy Solutions II LLC	None		Delaware
Counterpointe Energy Solutions (CA) II LLC	27-0105644		Delaware
Counterpointe Energy Services LLC	None		Delaware
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
Jefferies Credit Management LLC	None		Delaware
JCP Direct Lending CLO 2022 LLC	None		Delaware
Jefferies Direct Lending Europe SCSp SICAV-RAIF	None		Luxembourg
Jefferies Credit Management Holdings LLC	None		Delaware
Senior Credit Investments, LLC	None		Delaware
JDLF GP (Europe) S.a.r.l	None		Luxembourg
JFAM GP LLC	None		Delaware
JFAM GP LP	None		Delaware
Jefferies Direct Lending Fund C LP	None		Delaware
Jefferies DLF C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund C SPE LLC	None		Delaware
JDLF II GP LLC	None		Delaware
JDLF II GP LP	None		Delaware
Jefferies Direct Lending Fund II C LP	None		Delaware
Jefferies DLF 2 C Holdings LLC	None		Delaware
Jefferies Direct Lending Fund II C SPE LLC	None		Delaware
JCP Direct Lending CLO 2023-1 LLC	None		Delaware
JCP Direct Lending CLO 2023 Ltd.	None		Jersey Channel Islands
Jefferies Private Credit BDC Inc.	None		Maryland
Jefferies Senior Lending LLC	None		Delaware
Jefferies Credit Partners BDC Inc	None		Maryland
JFIN Revolver Holdings LLC	None		Delaware
JFIN Revolver Holdings II LLC	None		Delaware
JFIN Revolver Holdings IV 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

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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Jefferies Finance Business Credit LLC	None		Delaware
JFIN Business Credit Fund I LLC	None		Delaware
JFIN Funding 2021 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 CLO 2021-V Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-II Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-III Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-IV Ltd.	None		Cayman Islands
JFIN Revolver CLO 2022-IV LLC	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
JFIN Revolver Funding 2022-I Ltd.	None		Bermuda
JFIN Revolver SPE1 2022 LLC	None		Delaware
JFIN Revolver SPE3 2022 LLC	None		Delaware
JFIN Revolver SPE4 2022 LLC	None		Delaware
SFL Parkway Funding 2022 LLC	None		Delaware
JCP Private Loan Management GP LLC	None		Delaware
JCP Private Loan Management LP	None		Delaware
Beauty Brands Acquisition Holdings LLC	None		Delaware
Beauty Brands Acquisition LLC	None		Delaware
Beauty Brands Acquisition Intermediate LLC	None		Delaware
Forma Brands, LLC*	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

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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Tomorrow Parent, LLC	None		Delaware
Custom Ecology Holdco, LLC	None		Delaware
Glidepath Holdings Inc.	86-2294635		Delaware
MassMutual Ascend Life Insurance Company	13-1935920	63312	Ohio
AAG Insurance Agency, LLC	31-1422717		Kentucky
Annuity Investors Life Insurance Company	31-1021738	93661	Ohio
MM Ascend Life Investor Services, LLC	31-1395344		Ohio
MM Ascend Mortgage Lending LLC	31-1395344		Ohio
Manhattan National Holding, LLC	26-3260520		Ohio
Manhattan National Life Insurance Company	45-0252531	67083	Ohio
MassMutual Mortgage Lending LLC	None		Delaware
MM Copper Hill Road LLC	04-1590850		Delaware
MMV CTF I GP LLC	None		Delaware
MassMutual Ventures Climate Technology Fund I LP	None		Delaware
MM Direct Private Investment Holding LLC	None		Delaware
MM Direct Private Investments UK Limited	None		England & Wales
DPI-ACRES Capital LLC	None		Delaware
DPI-ARES Mortgage Lending LLC	None		Delaware
MM Investment Holding	None		Cayman Islands
MMIH Bond Holdings LLC	None		Delaware
MassMutual Asset Finance LLC*	26-0073611		Delawar
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 2020–A	None		Delaware
MMAF Equipment Finance LLC 2020–B	None		Delaware
MMAF Equipment Finance LLC 2021-A	None		Delaware
MMAF Equipment Finance LLC 2022–A	None		Delaware
MMAF Equipment Finance LLC 2022–B	None		Delaware
MMAF Equipment Finance LLC 2023-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 Holding Company LLC	None		Delaware
Flourish Insurance Agency LLC	None		Delaware
Flourish Technologies 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.

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

12.4

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MassMutual Ventures US IV GP	04-1590850		Delaware
MassMutual Venture US IV LP	04-1590850		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
Low Carbon Energy Holding	None		United Kingdom
Sleeper Street LLC	None		Delaware
Teaktree Acquisition, LLC	None		Delaware
Haven Life Insurance Agency, LLC	46-2252944		Delaware
GASL Holdings LLC	None		Delaware
Barings Asset-Based Income Fund (US) LP	None		Delaware
Babson Capital Global Special Situation Credit Fund 2	98-1206017		Delaware
Barings Global Real Assets Fund LP	82-3867745		Delaware
Barings Global Special Situations Credit Fund 3	None		Ireland
Barings North American Private Loan Fund LP	38-4010344		Delaware
MassMutual Assignment Company	06-1597528		North Carolina
MassMutual Capital Partners LLC	04-1590850		Delaware
Marco Hotel LLC	46-4255307		Delaware
HB Naples Golf Owner LLC	45-3623262		Delaware
RB Apartments LLC	82-4411267		Delaware
Intermodal Holding II LLC	None		Delaware
MassMutual Ventures Holding LLC	None		Delaware
Athens Fund Management LLC	None		Delaware
Crane Venture Partners LLP	None		United Kingdom
MassMutual Ventures Management LLC	None		Delaware
MassMutual Ventures SEA Management Private Limited	None		Singapore
MMV UK/SEA Limited	None		England & Wales
MassMutual Ventures Southeast Asia I LLC	None		Delaware
MassMutual Ventures Southeast Asia II LLC	None		Delaware
MassMutual Ventures Southeast Asia III LLC	None		Delaware
MMV Digital I LLC	None		Cayman Islands
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
MM Catalyst Fund 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.

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
MM Catalyst Fund II LLC	None		Delaware
MM Rothesay Holdco US LLC	04-1590850		Delaware
Rothesay Limited	None		United Kingdom
Rothesay Mortgages Limited	None		United Kingdom
Rothesay Life Plc	None		United Kingdom
Rothesay MA No.1 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 North America 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
Barings Japan Limited	98-0236449		Japan
Barings Australia Holding Company Pty Ltd	None		Australia
Barings Australia Pty Ltd	None		Australia
Barings Australia Real Estate Holdings Pty Ltd	None		Australia
Barings Australia Real Estate Pty Ltd	14-0045656		Australia
Barings Australia Property Partners Holdings Pty Ltd	98-0457456		Australia
Barings Australia Asset Management Pty Ltd	None		Australia
Barings Australia Property Partners Pty Ltd	None		Australia
Barings Australia Structured Finance Holdings Pty Ltd	None		Australia
Barings Australia Structured Finance Pty Ltd	None		Australia
Gryphon Capital Partners Pty Ltd	None		Australia
Gryphon Capital Management Pty Ltd	None		Australia
Gryphon Capital Investments Pty Ltd	None		Australia
Barings Finance LLC	80-0875475		Delaware

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

	Federal Tax ID	NAIC Co Code	State of Domicile
BCF Europe Funding Limited	None		Ireland
BCF Senior Funding I LLC*	None		Delaware
BCF Senior Funding I Designated Activity Company	None		Ireland
Barings Real Estate Acquisitions LLC	None		Delaware
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
Baring France SAS	None		France
Baring International Fund Managers (Ireland) Limited	None		Ireland
Barings GmbH	None		Germany
Barings Italy S.r.l.	None		Italy
Barings Sweden AB	None		Sweden
Barings Netherlands B.V.	None		Netherlands
Barings (U.K.) Limited	98-0432153		United Kingdom
Barings Switzerland Sàrl	None		Switzerland
Baring Asset Management Limited	98-0241935		United Kingdom
Barings European Direct Lending 1 GP LLP	None		United Kingdom
Baring International Investment Limited	98-0457328		United Kingdom
Baring International Investment Management Holdings	98-0457587		United Kingdom
Barings Asset Management UK Holdings Limited	98-0457576		United Kingdom
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. l	None		Luxembourg
PREIF Holdings Limited Partnership	None		United Kingdom
BMC Holdings DE LLC	None		Delaware
Barings Real Estate Advisers Inc.	04-3238351		Delaware
Remington L & W Holdings LLC	81-4065378		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 Infiniti Fund Management LLC	None		Delaware
Barings Hotel Opportunity Venture I GP, LLC	None		Delaware

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

	Federal Tax ID	NAIC Co Code	State of Domicile
Baring Investment Series LLC	None		Delaware
Barings Emerging Generation Fund GP, LLC	None		Delaware
Barings Emerging Generation Fund GP II, 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 Global Energy Infrastructure Advisors, LLC	None		Delaware
Barings Centre Street CLO Equity Partnership GP, LLC	None		Delaware
Barings Centre Street CLO Equity Partnership LP	None		Delaware
Barings Global Real Assets Fund GP, LLC	None		Delaware
Barings GPSF LLC	None		Delaware
Barings North American Private Loan Fund Management, LLC	None		Delaware
Barings North American Private Loan Fund II Management, LLC	None		Delaware
Barings North American Private Loan Fund III Management, LLC	None		Delaware
Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	None		Delaware
Barings - MM Revolver Fund GP LLC	None		Delaware
Barings Real Estate European Value Add Fund II Feeder LLC	None		Cayman Islands
BMT RE Debt Fund GP LLC	None		Delaware
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
BIG Real Estate Incentive I LLC	None		Delaware
BIG Real Estate Incentive II LLC	None		Delaware
BRECS VII GP LLC	None		Delaware
BREDIF GP LLC	None		Delaware
CREF X GP LLC	None		Delaware
Great Lakes III GP, LLC	04-1590850		Delaware
Lake Jackson LLC	None		Delaware
Barings Emerging Markets Blended Fund I GP, LLC	None		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
Barings CLO 2022-I	98-1624360		Cayman Island
Barings CLO 2022-II	None		Cayman Island
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

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

12.8

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Yunfeng Financial Group Limited	None		Hong Kong
MassMutual Asia Limited (SPV)	None		Hong Kong
MassMutual External Benefits Group LLC	27-3576835		Delaware
100 w. 3rd Street LLC	04-1590850		Delaware
2160 Grand Manager LLC	04-1590850		Delaware
300 South Tryon Hotel LLC	82-2432216		Delaware
300 South Tryon LLC	04-1590850		Delaware
Barings Affordable Housing Mortgage Fund I LLC	82-3468147		Delaware
Barings Affordable Housing Mortgage Fund II LLC	61-1902329		Delaware
Barings Affordable Housing Mortgage Fund III LLC	85-3036663		Delaware
Barings Emerging Generation Fund II LP	None		Delaware
Barings Emerging Generation Fund, LP	84-3784245		Delaware
Barings Global Energy Infrastructure Fund I LP	98-1332384		Cayman Islands
Barings Hotel Opportunity Venture I LP	None		Delaware
Barings Real Estate Debt Income Fund LP	85-3449260		Delaware
Barings Real Estate European Value Add I SCSp	None		Luxembourg
Barings Small Business Fund, L.P.	None		Delaware
Barings-MM Revolver Fund LP	None		Delaware
Calgary Railway Holding LLC	82-2285211		Delaware
Combrook PRS Holdings LLC	82-3307907		Delaware
Cornerstone Fort Pierce Development, LLC	56-2630592		Delaware
Cornerstone Permanent Mortgage Fund II LLC	61-1750537		Massachusetts
Cornerstone Permanent Mortgage Fund III LLC	35-2531693		Massachusetts
Cornerstone Permanent Mortgage Fund IV LLC	61-1793735		Massachusetts
Cornerstone Permanent Mortgage Fund LLC	45-2632610		Massachusetts
CREA Ridge Apartments, LLC	None		Delaware
CREA/PPC Venture, LLC	20-0348173		Delaware
Euro Real Estate Holdings LLC	04-1590850		Delaware
Fan Pier Development LLC	20-3347091		Delaware
GIA EU Holdings LLC	04-1590850		Delaware
Landmark Manchester Holdings LLC	81-5360103		Delaware
Miami Douglas Three MM, LLC	04-1590850		Delaware
MM 1400 E 4th Street Member LLC	04-1590850		Delaware
MM BIG Peninsula Co-Invest Member LLC	87-4021641		Delaware
MM Brookhaven Member LLC	04-1590850		Delaware
MM Debt Participations LLC	81-3000420		Delaware
MM East South Crossing Member LLC	04-1590850		Delaware
MM Horizon Savannah Member LLC	04-1590850		Delaware
MM Kannapolis Industrial Member LLC	04-1590850		Delaware
MM MD1 Station Member LLC	04-1590850		Delaware
MM MD2 Station Member LLC	04-1590850		Delaware
MM National Self-Storage Program Member LLC	04-1590850		Delaware

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

	Federal Tax ID	NAIC Co Code	State of Domicile
MM REED District Landco Member LLC	None		Delaware
MM Subline Borrower LLC	04-1590850		Delaware
One Harbor Shore LLC	80-0948028		Delaware
PACO France Logistics LLC	04-1590850		Delaware
Portland 400 Sixth Manager LLC	None		Delaware
Riverwalk MM Member, LLC	None		Delaware
Ten Fan Pier Boulevard LLC	35-2553915		Delaware
Three PW Office Holding LLC	81-5273574		Delaware
Trailside MM Member II LLC	04-1590850		Delaware
Trailside MM Member LLC	04-1590850		Delaware
Unna, Dortmund Holding LLC	82-3250684		Delaware
Washington Gateway Apartments Venture LLC	45-5401109		Delaware
Washington Gateway Three LLC	32-0574045		Delaware
Washington Gateway Two LLC	83-1325764		Delaware
West 37th Street Hotel LLC	88-3861481		Delaware
Aland Royalty Holdings LP	None		Delaware
Chassis Acquisition Holding LLC	81-2244465		Delaware
CRA Aircraft Holding LLC	81-4258759		Delaware
EIP Holdings I, LLC	None		Delaware
Red Lake Ventures, LLC	46-5460309		Delaware
Validus Holding Company LLC	46-0687392		Delaware
VGS Acquisition Holding, LLC	None		Delaware
SBNP SIA II LLC	04-1590850		Delaware
SBNP SIA III LLC	None		Delaware
Other Affiliates & Funds:			
Almack Mezzanine Fund II Unleveraged LP	None		United Kingdom
Barings Emerging Markets Corporate Bond Fund*	None		Ireland
Barings European Real Estate Debt Income Fund	None		Luxembourg
Babson Capital Loan Strategies Fund, L.P.*	37-1506417		Delaware
Barings US High Yield Bond Fund*	None		Ireland
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

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
Barings CLO 2020-IV	None		Cayman Islands
Barings CLO 2021-I	None		Cayman Islands
Barings CLO 2021-II	None		Cayman Islands
Barings CLO 2021-III	None		Cayman Islands
Babson Euro CLO 2014-I BV	None		Netherlands
Babson Euro CLO 2014-II BV	None		Netherlands
Babson Euro CLO 2015-I BV	None		Netherlands
Barings Euro CLO 2019-I	3603726OH		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 Euro CLO 2021-II DAC	3750378QH		Ireland
Barings Euro CLO 2021-III DAC	None		Ireland
Barings Euro CLO 2022-I DAC	None		Ireland
Barings Global Em. Markets Equity Fund	82-5330194		North Carolina
Barings Global Special Situations Credit 4 Delaware*	85-1465973		Delaware
Barings Global Special Situations Credit 4 LUX*	98-1570693		Luxembourg
Barings Global Technology Equity Fund	None		Ireland
Barings Global Dividends Champion Fund	None		Ireland
Barings Europe Select Fund	None		Ireland
Barings Hotel Opportunity Venture	87-0977058		Connecticut
Barings Innovations & Growth Real Estate Fund*	86-3661023		Delaware
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
Barings Middle Market CLO Ltd 2021-I	98-1612604		Cayman Islands
Barings RE Credit Strategies VII LP	98-1332384		Delaware
Barings Target Yield Infrastructure Debt Fund*	98-1567942		Luxembourg
Barings CLO Investment Partners LP	81-0841854		Delaware
Barings Euro Value Add II (BREEVA II) *	None		Luxembourg
Barings Transportation Fund LP*	87-1262754		Delaware
Braemar Energy Ventures I, L.P.*	None		Delaware
Barings European Core Property Fund SCSp	None		Luxembourg
Barings European Private Loan Fund III A	46-5001122		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
DPI Acres Capital SPV LLC	04-1590850		Delaware
Gateway Mezzanine Partners II LP*	90-0991195		Delaware
Great Lakes III, L.P.	37-1708623		Delaware
GIA EU Holdings - Emerson JV Sarl	98-1607033		Luxembourg
JPMCC Commercial Mortgage Securities Trust 2017-JP7	38-4041011; 38-4041012		New York

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

	<u>Federal Tax ID</u>	<u>NAIC Co Code</u>	<u>State of Domicile</u>
JPMDB Commercial Mortgage Securities Trust 2017-C5	38-4032059		New York
Martello Re Limited	None		Bermuda
MM Direct Private Investment Holding	04-1590850		Delaware
MM CM Holding LLC	None		Delaware
MMV Climate Technology Fund GP	04-1590850		Delaware
Washington Pine LLC	04-1590850		Delaware
Somerset Special Opportunities Fund L.P.*	20-8856877		Delaware
Tower Square Capital Partners III, L.P.	41-2280127		Delaware
Tower Square Capital Partners IIIA, L.P.	41-2280129		Delaware
Barings Affiliates & Funds:			
Babson Capital Loan Strategies Master Fund LP	None		Cayman Islands
Barings China Aggregate Bond Private Securities Investment Fund	None		Peoples Republic of China
Barings European Growth Trust Fund	None		United Kingdom
Barings Global High Yield Fund	47-3790192		Massachusetts
CCIC Fund	None		Peoples Republic of China
Great Lakes II LLC*	71-1018134		Delaware
Wood Creek Venture Fund LLC	04-1590850		Delaware
Barings Real Estate Affiliates & Funds:			
Barings California Mortgage Fund IV	None		California
Barings Umbrella Fund LUX SCSp SICAV RAIF*	None		Luxembourg
Cornerstone California Mortgage Fund I LLC	95-4207717		California
Cornerstone California Mortgage Fund II LLC	95-4207717		California
Cornerstone California Mortgage Fund III LLC	95-4207717		California
Danville Riverwalk Venture, LLC	82-2783393		Delaware
MMLIC Debt Participations LLC	13-1935920		Delaware
Salomon Brothers Commercial Mortgage Trust 2001-MM	None		Delaware
MassMutual Premier Funds:			
MassMutual Premier Main Street Fund	51-0529328		Massachusetts
MassMutual Premier Strategic Emerging Markets Fund	26-3229251		Massachusetts
MassMutual Select Funds:			
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

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

	Federal Tax ID	NAIC Co Code	State of Domicile
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 Dynamic Bond Fund	47-3529636		Massachusetts
MML Series II Equity Rotation Fund	47-3544629		Massachusetts
MassMutual RetireSMART Funds:			
MassMutual RetireSMART 2035 Fund	27-1933380		Massachusetts
MassMutual RetireSMART 2045 Fund	27-1932769		Massachusetts
MassMutual RetireSMART 2055 Fund	46-3289207		Massachusetts
MassMutual RetireSMART 2060 Fund	47-5326235		Massachusetts
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
MassMutual ishares 60/40 Allocation Fund	45-1618046		Massachusetts
MassMutual Balanced Fund	04-3212054		Massachusetts
MassMutual Blue Chip Growth Fund	04-3556992		Massachusetts
MassMutual Core Bond Fund	04-3277549		Massachusetts
MassMutual Disciplined Growth Fund	04-3539084		Massachusetts
MassMutual Disciplined Value Fund	04-3539083		Massachusetts
MassMutual Diversified Value Fund	01-0821120		Massachusetts
MassMutual Equity Opportunities Fund	04-3512590		Massachusetts
MassMutual Growth Opportunities Fund	04-3512589		Massachusetts
MassMutual Inflation-Protected and Income Fund	03-0532475		Massachusetts
MassMutual Mid Cap Growth Fund	04-3512596		Massachusetts
MassMutual Premier Diversified Bond Fund	04-3464165		Massachusetts
MassMutual RetireSMART by JPMorgan 2065 Fund	92-1441036		Massachusetts
MassMutual Select 80/20 Allocation Fund	45-1618222		Massachusetts
MassMutual Select Fundamental Value Fund	04-3584138		Massachusetts
MassMutual Select Overseas Fund	04-3557000		Massachusetts
MassMutual Select T Rowe Price Retirement 2065 Fund	92-1427882		Massachusetts
MassMutual Small Cap Growth Equity Fund	04-3464205		Massachusetts
MassMutual Small Cap Opportunities Fund	04-3424705		Massachusetts
MassMutual Small Cap Value Equity Fund	02-0769954		Massachusetts
MassMutual Strategic Bond Fund	26-0099965		Massachusetts

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SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0435 ...	Massachusetts Mut Life Ins Co	... 65935 ...	04-1590850 ..	3848388 .....	.....	.....	Massachusetts Mutual Life Insurance Company (MMLIC)	.. MA.....	... UIP.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0435 ...	Massachusetts Mut Life Ins Co	... 93432 ...	06-1041383 ..	.....	.....	.....	C.M. Life Insurance Company	.. CT.....	... IA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 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 ..							CM Life Mortgage Lending LLC	.. DE.....	... NIA.....	C.M. Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							CML Mezzanine Investor III, LLC	.. DE.....	... NIA.....	C.M. Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							CML Special Situations Investor LLC	.. DE.....	... NIA.....	C.M. Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							CML Global Capabilities LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MM Global Capabilities I LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MassMutual Global Business Services India LLP	.. IND.....	... NIA.....	MM Global Capabilities I LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MM Global Capabilities (Netherlands) B.V. ...	.. NLD.....	... NIA.....	MM Global Capabilities I LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MassMutual Global Business Services Romania S.R.L.	.. ROU.....	... NIA.....	MM Global Capabilities (Netherlands) B.V.	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MM Global Capabilities II LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MM Global Capabilities III LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							MM/Barings Multifamily TEBS 2020 LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	Berkshire Way LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	MML Mezzanine Investor II, LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	MML Mezzanine Investor III, LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 11.100	MMLIC .....	.....	.....
. 0000 ..							MML Special Situations Investor LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	... NIA.....	C.M. Life Insurance Company	Influence.....	.. 0.000	MMLIC .....	.....	.....
. 0000 ..			47-5322979 ..	.....	.....	.....	Timberland Forest Holding LLC	.. DE.....	... NIA.....	Wood Creek Capital Management LLC	Management.....	.....	MMLIC .....	.....	.....
. 0000 ..							Lyme Adirondack Forest Company, LLC	.. DE.....	... NIA.....	Timberland Forest Holding LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							Lyme Adirondack Timberlands I, LLC	.. DE.....	... NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							Lyme Adirondack Timberlands II, LLC	.. DE.....	... NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							Lyme Adirondack Timber Sales, LLC	.. DE.....	... NIA.....	Lyme Adirondack Forest Company, LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	MSP-SC, LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	Insurance Road LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	MassMutual Trad Private Equity LLC	.. DE.....	... NIA.....	Insurance Road LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..			04-1590850 ..	.....	.....	.....	MassMutual Intellectual Property LLC	.. DE.....	... NIA.....	Insurance Road LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							Trad Investments I LLC	.. DE.....	... NIA.....	Insurance Road LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							ITPSHolding LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							HITPS LLC	.. DE.....	... NIA.....	ITPS Holding LLC	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ..							EM Opportunities LLC	.. DE.....	... NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percen- tage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
. 0000 ...							MassMutual MCAM Insurance Company, Inc.	.. VT.....	.. NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							MassMutual Ventures US IV, GP, LLC	.. DE.....	.. NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							MassMutual Ventures US IV, L.P.	.. DE.....	.. NIA.....	MassMutual Ventures US IV, GP, LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							MassMutual Ventures US IV LLC	.. DE.....	.. NIA.....	MassMutual Ventures US IV, L.P.	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I GP, LLC ..	.. DE.....	.. NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I GP, L.P. .	.. CYM....	.. NIA.....	MassMutual Ventures Europe/APAC I GP, LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0435 ...							MassMutual Ventures Europe/APAC I L.P.	.. CYM....	.. NIA.....	MassMutual Ventures Europe/APAC I GP, L.P.	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0435 ...							Counterpointe Sustainable Advisors LLC	.. DE.....	.. NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							CSA Intermediate Holdco LLC	.. DE.....	.. NIA.....	Counterpointe Sustainable Advisors LLC ...	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Counterpointe Trust Services LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							CP PACE LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							CSA Employee Services Company LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Counterpointe Sustainable Real Estate II LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Counterpointe Energy Solutions II LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Counterpointe Energy Solutions (CA) II LLC .	.. DE.....	.. NIA.....	Counterpointe Energy Solutions II LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Counterpointe Energy Services LLC	.. DE.....	.. NIA.....	CSA Intermediate Holdco LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JFIN Parent LLC	.. DE.....	.. NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			27-0105644 ..	.....	.....	.....	Jefferies Finance LLC	.. DE.....	.. NIA.....	JFIN Parent LLC	Ownership.....	50.000 ...	MMLIC .....	.....	1
. 0000 ...							JFIN GP Adviser LLC	.. DE.....	.. NIA.....	Jefferies Finance LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JFIN Fund III LLC	.. DE.....	.. NIA.....	Jefferies Finance LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Credit Partners LLC	.. DE.....	.. NIA.....	Jefferies Finance LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Apex Credit Partners LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Credit Management LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JCP Direct Lending CLO 2022 LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	9.900 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Direct Lending Europe SCSp SICAV- RAIF	.. LUX....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	9.900 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Credit Management Holdings LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	9.900 ...	MMLIC .....	.....	.....
. 0000 ...							Senior Credit Investments, LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	9.900 ...	MMLIC .....	.....	.....
. 0000 ...							JDLF GP (Europe) S.a.r.l	.. LUX....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							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 .....	.....	.....
. 0000 ...							Jefferies Direct Lending Fund C LP	.. DE.....	.. NIA.....	JFAM GP LP	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies DLF C Holdings LLC	.. DE.....	.. NIA.....	Jefferies Direct Lending Fund C LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Direct Lending Fund C SPE LLC	.. DE.....	.. NIA.....	Jefferies DLF C Holdings LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JDLF II GP LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JDLF II GP LP	.. DE.....	.. NIA.....	JDLF II GP LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Direct Lending Fund II C LP	.. DE.....	.. NIA.....	JDLF II GP LP	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies DLF 2 C Holdings LLC	.. DE.....	.. NIA.....	Jefferies Direct Lending Fund II C LP	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Direct Lending Fund II C SPE LLC ..	.. DE.....	.. NIA.....	Jefferies DLF 2 C Holdings LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JCP Direct Lending CLO 2023-1 LLC	.. DE.....	.. NIA.....	Jefferies Credit Partners LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							JCP Direct Lending CLO 2023 Ltd.	.. JEY....	.. NIA.....	JCP Direct Lending CLO 2023 Ltd.	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Private Credit BDC Inc.	.. MD.....	.. NIA.....	Jefferies Finance LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...							Jefferies Senior Lending LLC	.. DE.....	.. NIA.....	Jefferies Finance LLC	Ownership.....	100.000 ...	MMLIC .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percen- tage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Relation- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000							Jefferies Credit Partners BDC Inc	..MD.....	NIA.....	Jefferies Finance 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	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver Holdings IV LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Co-Issuer Corporation	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Europe GP, S.a.r.l.	..LUX.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							Jefferies Finance Europe, S.L.P.	..LUX.....	NIA.....	JFIN Europe GP, S.a.r.l.	Ownership.....	100.000	MMLIC		
.0000							Jefferies Finance Europe, SCSp	..LUX.....	NIA.....	JFIN Europe GP, S.a.r.l.	Ownership.....	100.000	MMLIC		
.0000							Jefferies Finance Business Credit LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Business Credit Fund I LLC	..DE.....	NIA.....	Jefferies Finance Business Credit LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Funding 2021 LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN High Yield Investments LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN LC Fund LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017 Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-II Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2017-III Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2018 Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019 Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2019-II Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2020 Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2021-II Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2021-V Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-II Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-III Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-IV Ltd.	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver CLO 2022-IV LLC	..CYM.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver Fund, L.P.	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	90.000	MMLIC		
.0000							JFIN Revolver Funding 2021 Ltd.	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver Funding 2021 III Ltd.	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver Funding 2021 IV Ltd.	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver Funding 2022-I Ltd.	..BMJ.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver SPE1 2022 LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver SPE3 2022 LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN Revolver SPE4 2022 LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							SFL Parkway Funding 2022 LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JCP Private Loan Management GP LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							JCP Private Loan Management LP	..DE.....	NIA.....	JCP Private Loan Management GP LLC	Ownership.....	100.000	MMLIC		
.0000							Beauty Brands Acquisition Holdings LLC	..DE.....	NIA.....	Jefferies Finance LLC	Ownership.....	100.000	MMLIC		
.0000							Beauty Brands Acquisition LLC	..DE.....	NIA.....	Beauty Brands Acquisition Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							Beauty Brands Acquisition Intermediate LLC	..DE.....	NIA.....	Beauty Brands Acquisition LLC	Ownership.....	100.000	MMLIC		
.0000							Beauty Brands Acquisition Intermediate LLC	..DE.....	NIA.....	Beauty Brands Acquisition Intermediate LLC	Ownership.....	100.000	MMLIC		
.0000							Forma Brands, LLC	..DE.....	NIA.....		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 Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN CLO 2013 Ltd.	..CYM.....	NIA.....	Apex Credit Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN CLO 2014 Ltd.	..CYM.....	NIA.....	Apex Credit Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN CLO 2014-II Ltd.	..CYM.....	NIA.....	Apex Credit Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN CLO 2015 Ltd.	..CYM.....	NIA.....	Apex Credit Holdings LLC	Ownership.....	100.000	MMLIC		
.0000							JFIN CLO 2015-II Ltd.	..CYM.....	NIA.....	Apex Credit Holdings LLC	Ownership.....	85.000	MMLIC		

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							JFIN CLO 2016 Ltd.	.CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017 Ltd.	.CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MMLIC		
.0000							JFIN CLO 2017-II Ltd.	.CYM	NIA	Apex Credit Holdings LLC	Ownership	100.000	MMLIC		
.0000							Tomorrow Parent, LLC	.DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		
.0000							Custom Ecology Holdco, LLC	.DE	NIA	JFIN Parent LLC	Ownership	100.000	MMLIC		
.0000			86-2294635				Glidepath Holdings Inc.	.DE	UDP	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	63312	13-1935920				MassMutual Ascend Life Insurance Company	.OH	.RE	Glidepath Holdings Inc.	Ownership	100.000	MMLIC		
.0000			31-1422717				AAG Insurance Agency, LLC	.KY	NIA	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	93661	31-1021738				Annuity Investors Life Insurance Company	.OH	.DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			31-1395344				MM Ascend Life Investor Services, LLC	.OH	NIA	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Ascend Mortgage Lending LLC	.OH	.DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0000			26-3260520				Manhattan National Holding, LLC	.OH	.DS	MassMutual Ascend Life Insurance Company	Ownership	100.000	MMLIC		
.0435	Massachusetts Mut Life Ins Co	67083	45-0252531				Manhattan National Life Insurance Company	.OH	.DS	Manhattan National Holding LLC	Ownership	100.000	MMLIC		
.0000							MassMutual Mortgage Lending LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			04-1590850				MM Copper Hill Road LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MMV CTF I GP LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Ventures Climate Technology Fund I LP	.DE	NIA	MMV CTF I GP LLC	Ownership	100.000	MMLIC		
.0000							MM Direct Private Investments Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Direct Private Investments UK Limited	.GBR	NIA	MM Direct Private Investments Holding LLC	Ownership	100.000	MMLIC		
.0000							DPI-ACRES Capital LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							DPI-ARES Mortgage Lending LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MM Investment Holding	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MMTH Bond Holdings LLC	.DE	NIA	MM Investment Holding	Ownership	99.610	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	0.400	MMLIC		
.0000			26-0073611				MassMutual Asset Finance LLC	.DE	NIA	MM Investment Holding	Ownership	99.610	MMLIC		
.0000			32-0546197				MMAF Equipment Finance LLC 2017-B	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			82-5335801				MMAF Equipment Finance LLC 2018-A	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000			83-3722640				MMAF Equipment Finance LLC 2019-A	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2019-B	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2020-A	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2020-B	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2021-A	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2022-A	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2022-B	.DE	NIA	MassMutual Asset Finance LLC	Ownership	100.000	MMLIC		
.0000							MMAF Equipment Finance LLC 2023-A	.DE	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		
.0000			04-3548444				MassMutual International Holding MSC, Inc.	.MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
.0000			04-3341767				MassMutual Holding MSC, Inc.	.MA	NIA	MML Management Corporation	Ownership	100.000	MMLIC		
.0000							MML CM LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Blueprint Income LLC	.NY	NIA	MML CM LLC	Ownership	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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.0000							Flourish Digital Assets LLC	..DE.....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Financial LLC	..DE.....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Holding Company LLC	..DE.....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Insurance Agency LLC	..DE.....	NIA.....	Flourish Holding Company LLC	Ownership.....	100.000	MMLIC		
.0000							Flourish Technologies LLC	..DE.....	NIA.....	MML CM LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MassMutual Ventures US IV GP	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	99.000	MMLC		
.0000			04-1590850				MassMutual Ventures US IV GP	..DE.....	NIA.....	Massachusetts Mutual Ascend	Ownership.....	1.000	MMLC		
.0000			04-1590850				MassMutual Venture US IV LP	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	99.000	MMLC		
.0000			04-3356880				MML Distributors LLC	..MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	99.000	MMLIC		
.0000			04-3356880				MML Distributors LLC	..MA.....	NIA.....	MassMutual Holding LLC	Ownership.....	1.000	MMLIC		
.0000							MML Investment Advisers, LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			46-3238013				MML Strategic Distributors, LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			06-1563535	2881445			The MassMutual Trust Company, FSB	..CT.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MML Private Placement Investment Company I, LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MML Private Equity Fund Investor LLC	..DE.....	NIA.....	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		
.0000			45-2738137				Pioneers Gate LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			04-2854319	2392316			MassMutual Holding LLC	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC		
.0000			37-1732913				Fern Street LLC	..DE.....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Low Carbon Energy Holding	..GBR.....	NIA.....	MassMutual Holding LLC	Ownership.....	49.000	MMLIC		
.0000							Sleeper Street LLC	..DE.....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Teaktree Acquisition, LLC	..DE.....	NIA.....	MassMutual Holding LLC	Ownership/Influence	14.700	MMLIC		
.0000							Teaktree Acquisition, LLC	..DE.....	NIA.....	Barings LLC	Influence.....		MMLIC		
.0000			46-2252944				Haven Life Insurance Agency, LLC	..DE.....	NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			82-2932156				GASL Holdings LLC	..DE.....	NIA.....	MassMutual Holding LLC	Ownership.....	11.300	MMLIC		
.0000			82-2932156				GASL Holdings LLC	..DE.....	NIA.....	Barings LLC	Board		MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE.....	NIA.....	MassMutual Holding LLC	Ownership/Influence	11.300	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE.....	NIA.....	C.M. Life Insurance Company	Ownership/Influence	1.100	MMLIC		
.0000			36-4868350				Barings Asset-Based Income Fund (US) LP	..DE.....	NIA.....	Barings LLC	Management.....		MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE.....	NIA.....	MassMutual Holding LLC	Ownership/Influence	22.900	MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....		MMLIC		
.0000			98-1206017				Babson Capital Global Special Situation Credit Fund 2	..DE.....	NIA.....	Barings LLC	Management.....		MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	..DE.....	NIA.....	MassMutual Holding LLC	Ownership/Influence	27.600	MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	..DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	14.300	MMLIC		
.0000			82-3867745				Barings Global Real Assets Fund LP	..DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	7.100	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percen- tage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Report- ing Entity	Directly Controlled by (Name of Entity/Person)					
.0000			82-3867745				Barings Global Real Assets Fund LP	..DE.....	..NIA.....	Barings LLC	Management.....		MMLIC		
.0000							Barings Global Special Situations Credit Fund 3	..IRL.....	..NIA.....	MassMutual Holding LLC	Ownership/Influence	19.600	MMLIC		
.0000							Barings Global Special Situations Credit Fund 3	..IRL.....	..NIA.....	Barings LLC	Management.....		MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership/Influence	52.200	MMLIC		
.0000			38-4010344				Barings North American Private Loan Fund LP	..DE.....	..NIA.....	Baring Asset Management Limited	Management.....		MMLIC		
.0000			06-1597528				MassMutual Assignment Company	..NC.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MassMutual Capital Partners LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			46-4255307				Marco Hotel LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			45-3623262				HB Naples Golf Owner LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			82-4411267				RB Apartments LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Intermodal Holding II LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures Holding LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Athens Fund Management LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Crane Venture Partners LLP	..GBR.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	33.000	MMLIC		
.0000							MassMutual Ventures Management LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures SEA Management Private Limited	..DE.....	..NIA.....	MassMutual Ventures Management LLC	Ownership.....	100.000	MMLIC		
.0000							MMV UK/SEA Limited	..GBR.....	..NIA.....	MassMutual Ventures SEA Management Private Limited	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia I LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia II LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures Southeast Asia III LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MMV Digital I LLC	..CYM.....	..NIA.....	MassMutual Ventures Southeast Asia III LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures UK 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							MassMutual Ventures US II LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MassMutual Ventures US III LLC	..DE.....	..NIA.....	MassMutual Ventures Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MM Catalyst Fund LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							MM Catalyst Fund II LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000			04-1590850				MM Rothesay Holdco US LLC	..DE.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		
.0000							Rothesay Limited	..GBR.....	..NIA.....	MM Rothesay Holdco US LLC	Ownership.....	48.800	MMLIC		
.0000							Rothesay Mortgages Limited	..GBR.....	..NIA.....	Rothesay Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Life Plc	..GBR.....	..NIA.....	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.3 Limited	..GBR.....	..NIA.....	Rothesay Life PLC	Ownership.....	100.000	MMLIC		
.0000							Rothesay MA No.4 Limited	..GBR.....	..NIA.....	Rothesay Life PLC	Ownership.....	100.000	MMLIC		
.0000							LT Mortgage Finance Limited	..GBR.....	..NIA.....	Rothesay Life PLC	Ownership.....	100.000	MMLIC		
.0000							Rothesay Property Partnership 1 LLP	..GBR.....	..NIA.....	Rothesay Life PLC	Ownership.....	100.000	MMLIC		
.0000							Rothesay Foundation	..GBR.....	..NIA.....	Rothesay Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Pensions Management Limited	..GBR.....	..NIA.....	Rothesay Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Asset Management UK Limited	..GBR.....	..NIA.....	Rothesay Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Asset Management Australia Pty Ltd	..AUS.....	..NIA.....	Rothesay Asset Management UK Limited	Ownership.....	100.000	MMLIC		
.0000							Rothesay Asset Management North America LLC	..DE.....	..NIA.....	Rothesay Asset Management UK Limited	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	Ownership.....	100.000	MMLIC		
.0000			41-2011634				MMLISI Financial Alliances, LLC	..DE.....	..NIA.....	MML Investors Services, LLC	Ownership.....	100.000	MMLIC		
.0000			47-1466022				LifeScore Labs, LLC	..MA.....	..NIA.....	MassMutual Holding LLC	Ownership.....	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Per-centage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000			45-4000072				MM Asset Management Holding LLC	.MA	NIA	MassMutual Holding LLC	Ownership	100.000	MM LIC		
.0000			51-0504477				Barings LLC	.MA	NIA	MassMutual Holding LLC	Ownership	100.000	MM LIC		
.0000			98-0524271				Baring Asset Management (Asia) Holdings Limited	.HKG	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000			98-0457465				Baring International Fund Managers (Bermuda) Limited	.BMU	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MM LIC		
.0000			98-0457463				Baring Asset Management (Asia) Holdings Limited	.HKG	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MM LIC		
.0000							Baring Asset Management Korea Limited	.KOR	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MM LIC		
.0000							Barings Investment Management (Shanghai) Limited	.HKG	NIA	Baring Asset Management (Asia) Limited	Ownership	100.000	MM LIC		
.0000							Barings Overseas Investment Fund Management (Shanghai) Limited	.HKG	NIA	Barings Investment Management (Shanghai) Limited	Ownership	100.000	MM LIC		
.0000			98-0457707				Baring SICE (Taiwan) Limited	.TWN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MM LIC		
.0000			98-0236449				Barings Singapore Pte. Ltd.	.SGP	NIA	Barings Investment Management (Shanghai) Limited	Ownership	100.000	MM LIC		
.0000							Barings Japan Limited	.JPN	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MM LIC		
.0000							Barings Australia Holding Company Pty Ltd	.AUS	NIA	Baring Asset Management (Asia) Holdings Limited	Ownership	100.000	MM LIC		
.0000							Barings Australia Pty Ltd	.AUS	NIA	Barings Australia Holding Company Pty Ltd	Ownership	100.000	MM LIC		
.0000							Barings Australia Real Estate Holdings Pty Ltd	.AUS	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000			14-0045656				Barings Australia Real Estate Pty Ltd	.AUS	NIA	Barings Australia Real Estate Holdings Pty Ltd	Ownership	100.000	MM LIC		
.0000			98-0457456				Barings Australia Property Partners Holdings Pty Ltd	.AUS	NIA	Barings Australia Real Estate Pty Ltd	Ownership	100.000	MM LIC		
.0000							Barings Australia Asset Management Pty Ltd	.AUS	NIA	Barings Australia Property Partners Holdings Pty Ltd	Ownership	100.000	MM LIC		
.0000							Barings Australia Property Partners Pty Ltd	.AUS	NIA	Barings Australia Property Partners Holdings Pty Ltd	Ownership	100.000	MM LIC		
.0000							Barings Australia Structured Finance Holdings Pty Ltd	.AUS	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000							Barings Australia Structured Finance Pty Ltd	.AUS	NIA	Barings Australia Structured Finance Holdings Pty Ltd	Ownership	100.000	MM LIC		
.0000							Gryphon Capital Partners Pty Ltd	.AUS	NIA	Barings Australia Structured Finance Pty Ltd	Ownership	100.000	MM LIC		
.0000							Gryphon Capital Management Pty Ltd	.AUS	NIA	Gryphon Capital Partners Pty Ltd	Ownership	100.000	MM LIC		
.0000							Gryphon Capital Investments Pty Ltd	.AUS	NIA	Gryphon Capital Partners Pty Ltd	Ownership	100.000	MM LIC		
.0000			80-0875475				Barings Finance LLC	.DE	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000							BCF Europe Funding Limited	.IRL	NIA	Barings Finance LLC	Ownership	100.000	MM LIC		
.0000							BCF Senior Funding I LLC	.DE	NIA	Barings Finance LLC	Ownership	100.000	MM LIC		
.0000							BCF Senior Funding I Designated Activity Company	.IRL	NIA	Barings Finance LLC	Ownership	100.000	MM LIC		
.0000							Barings Real Estate Acquisitions LLC	.DE	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000			04-3238351				Barings Securities LLC	.DE	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000			98-0437588				Barings Guernsey Limited	.GGY	NIA	Barings LLC	Ownership	100.000	MM LIC		
.0000							Barings Europe Limited	.GBR	NIA	Barings Guernsey Limited	Ownership	100.000	MM LIC		
.0000							Barings Asset Management Spain SL	.ESP	NIA	Barings Europe Limited	Ownership	100.000	MM LIC		
.0000							Baring France SAS	.FRA	NIA	Barings Europe Limited	Ownership	100.000	MM LIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percen- tage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000							Baring International Fund Managers (Ireland) Limited	.IRL	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings GmbH	.DEU	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Italy S.r.l.	.ITA	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Sweden AB	.SWE	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Netherlands B.V.	.NLD	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000			98-0432153				Barings (U.K.) Limited	.GBR	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings Switzerland Sarl	.CHE	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000			98-0241935				Baring Asset Management Limited	.GBR	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000							Barings European Direct Lending 1 GP LLP	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000			98-0457328				Baring International Investment Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Baring International Investment Management Holdings	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000										Baring International Investment Management Holdings	Ownership	100.000	MMLIC		
.0000			98-0457576				Baring Asset Management UK Holdings Limited	.GBR	NIA	Barings Europe Limited	Ownership	100.000	MMLIC		
.0000			98-0457586				Baring Fund Managers Limited	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BOGSS 2 GP LLP	.GBR	NIA	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 I GP S.à.r.l.	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Investment Fund (LUX) GP S.à. r.l.	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings BME GP S.à.r.l.	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings GPC GP S.à. r.l.	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings European Core Property Fund GP Sarl	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							Barings Umbrella Fund (LUX) GP S.à.r.l.	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							GPLF4(S) GP S.à. r. l	.LUX	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							PREIF Holdings Limited Partnership	.GBR	NIA	Baring Asset Management Limited	Ownership	100.000	MMLIC		
.0000							BMC Holdings DE LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-3238351	3456895			Barings Real Estate Advisers Inc.	.CA	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company	Ownership/Influence	19.900	MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	NIA	Barings LLC	Influence		MMLIC		
.0000			81-4065378				Remington L & W Holdings LLC	.DE	NIA	Barings LLC	Ownership	100.000	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 Funds SLP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BAI GP, 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		
.0000							Barings CMS Fund GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Infiniti Fund Management LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000										Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Hotel Opportunity Venture I GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Baring Investment Series LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Generation Fund GP II, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings ERS PE Emerging Manager III GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Investment Funds (U.S.) Management LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			04-1590850				Barings CLO Investment Partners GP, LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Core Property Fund GP LLC	.DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Direct Lending GP Ltd.	.CYM	NIA	Barings LLC	Ownership	100.000	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

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Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000							Barings Global Energy Infrastructure Advisors, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Centre Street CLO Equity Partnership GP, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			88-3792609				Barings Centre Street CLO Equity Partnership LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	22.700	MMLIC		
.0000			88-3792609				Barings Centre Street CLO Equity Partnership LP	..DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Real Assets Fund GP, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings GPSF LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund Management, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund II Management, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings North American Private Loan Fund III Management, LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Global Special Situations Credit Fund 4 GP (Delaware) LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings – MM Revolver Fund GP LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Real Estate European Value Add Fund II Feeder LLC	..CYM	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BMT RE Debt Fund GP LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	38.200	MMLIC		
.0000			84-5063008				Barings Small Business Fund LLC	..DE	NIA	Barings LLC	Management		MMLIC		
.0000			98-0536233				Benton Street Advisors, Inc.	..CYM	NIA	Barings LLC	Ownership	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							BIG Real Estate Incentive I LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BIG Real Estate Incentive II LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BRECS VII GP LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							BREDIF GP LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							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							Lake Jackson LLC	..DE	NIA	Barings LLC	Ownership	100.000	MMLIC		
.0000							Barings Emerging Markets Blended Fund I GP, LLC	..DE	NIA	Barings LLC	Ownership	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	Ownership	99.300	MMLIC		
.0000							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		
.0000			98-1624360				Barings CLO 2022-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2022-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Massachusetts Mutual Life Insurance Company	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.500	MMLIC		
.0000			04-3313782				MassMutual International LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							MassMutual Solutions LLC	..DE	NIA	MassMutual International LLC	Ownership	100.000	MMLIC		
.0000							Haven Technologies Asia Limited	..HKG	NIA	MassMutual Solutions LLC	Ownership	100.000	MMLIC		
.0000							Yunfeng Financial Group Limited	..HKG	NIA	MassMutual International LLC	Ownership	24.900	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Rela-tion-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							MassMutual Asia Limited (SPV)	.HKG	NIA	MassMutual International LLC	Ownership	100.000	MLLIC		
.0000			27-3576835				MassMutual External Benefits Group LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				100 w. 3rd Street LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				2160 Grand Manager LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			82-2432216				300 South Tryon Hotel LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			04-1590850				300 South Tryon LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000							Barings Affordable Housing Mortgage Fund I LLC	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Affordable Housing Mortgage Fund II LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund II LLC	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			61-1902329				Barings Affordable Housing Mortgage Fund III LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLLIC		
.0000			85-3036663				Barings Affordable Housing Mortgage Fund III LLC	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			85-3036663				Barings Emerging Generation Fund II LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	39.700	MLLIC		
.0000			84-3784245				Barings Emerging Generation Fund, LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.300	MLLIC		
.0000			84-3784245				Barings Emerging Generation Fund, LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MLLIC		
.0000			98-1332384				Barings Global Energy Infrastructure Fund I LP	.CYM	NIA	Baring Asset Management Limited	Management		MLLIC		
.0000							Barings Hotel Opportunity Venture I LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	65.000	MLLIC		
.0000							Barings Hotel Opportunity Venture I LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	76.900	MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	C.M. Life Insurance Company	Influence		MLLIC		
.0000			85-3449260				Barings Real Estate Debt Income Fund LP	.DE	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	42.000	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.LUX	NIA	C.M. Life Insurance Company	Ownership	4.700	MLLIC		
.0000							Barings Real Estate European Value Add I SCSp	.LUX	NIA	Barings LLC	Management		MLLIC		
.0000							Barings Small Business Fund, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	33.600	MLLIC		
.0000							Barings-MM Revolver Fund LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	86.000	MLLIC		
.0000			82-2285211				Calgary Railway Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	90.000	MLLIC		
.0000			82-2285211				Calgary Railway Holding LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	10.000	MLLIC		

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percentage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			82-3307907 ..	.....	.....	.....	Cornbrook PRS Holdings LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			56-2630592 ..	.....	.....	.....	Cornerstone Fort Pierce Development, LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	90.000	MMLIC .....	.....	.....
. 0000 ...			56-2630592 ..	.....	.....	.....	Cornerstone Fort Pierce Development, LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	5.900	MMLIC .....	.....	.....
. 0000 ...			61-1750537 ..	.....	.....	.....	Cornerstone Permanent Mortgage Fund II LLC ..	.. MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			61-1750537 ..	.....	.....	.....	Cornerstone Permanent Mortgage Fund II LLC ..	.. MA.....	NIA.....	Barings LLC	Management.....	.....	MMLIC .....	.....	.....
. 0000 ...							Cornerstone Permanent Mortgage Fund III LLC ..	.. MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			61-1793735 ..	.....	.....	.....	Cornerstone Permanent Mortgage Fund IV LLC ..	.. MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			45-2632610 ..	.....	.....	.....	Cornerstone Permanent Mortgage Fund LLC	.. MA.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	98.800	MMLIC .....	.....	.....
. 0000 ...			45-2632610 ..	.....	.....	.....	Cornerstone Permanent Mortgage Fund LLC	.. MA.....	NIA.....	Barings LLC	Management.....	.....	MMLIC .....	.....	.....
. 0000 ...							CREA Ridge Apartments, LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			20-0348173 ..	.....	.....	.....	CREA/PPC Venture, LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Euro Real Estate Holdings LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	50.000	MMLIC .....	.....	.....
. 0000 ...			20-3347091 ..	.....	.....	.....	Fan Pier Development LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	65.000	MMLIC .....	.....	.....
. 0000 ...			20-3347091 ..	.....	.....	.....	Fan Pier Development LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	5.900	MMLIC .....	.....	.....
. 0000 ...							GIA EU Holdings LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			81-5360103 ..	.....	.....	.....	Landmark Manchester Holdings LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Miami Douglas Three MM, LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM 1400 E 4th Street Member LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	96.000	MMLIC .....	.....	.....
. 0000 ...			87-4021641 ..	.....	.....	.....	MM BIG Peninsula Co-Invest Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	27.000	MMLIC .....	.....	.....
. 0000 ...			87-4021641 ..	.....	.....	.....	MM BIG Peninsula Co-Invest Member LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	0.800	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Brookhaven Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	95.000	MMLIC .....	.....	.....
. 0000 ...			81-3000420 ..	.....	.....	.....	MM Debt Participations LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	100.000	MMLIC .....	.....	.....
. 0000 ...			81-3000420 ..	.....	.....	.....	MM Debt Participations LLC	.. DE.....	NIA.....	Barings LLC	Management.....	.....	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM East South Crossing Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	95.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Horizon Savannah Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	95.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Horizon Savannah Member LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	3.700	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Kannapolis Industrial Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	82.720	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Kannapolis Industrial Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Ascend	Ownership.....	12.280	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM MD1 Station Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM MD1 Station Member LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	.....	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM MD2 Station Member LLC	.. DE.....	NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000	MMLIC .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM MD2 Station Member LLC	.. DE.....	NIA.....	C.M. Life Insurance Company	Ownership.....	.....	MMLIC .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			04-1590850 ..	.....	.....	.....	MM National Self-Storage Program Member LLC ..	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..98.000 ...	MM L C .....	.....	.....
. 0000 ...							MM REED District Landco Member LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	MM Subline Borrower LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...			80-0948028 ..	.....	.....	.....	One Harbor Shore LLC	.. DE.....	 NIA.....	Company	Ownership.....	..95.000 ...	MM L C .....	.....	.....
. 0000 ...			80-0948028 ..	.....	.....	.....	One Harbor Shore LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..6.000 ...	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	PACO France Logistics LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...							Riverwalk MM Member, LLC	.. DE.....	 NIA.....	Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...			35-2553915 ..	.....	.....	.....	Ten Fan Pier Boulevard LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...			81-5273574 ..	.....	.....	.....	Three PW Office Holding LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..95.000 ...	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Trailside MM Member II LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..47.100 ...	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Trailside MM Member LLC	.. DE.....	 NIA.....	Company	Ownership.....	..66.970 ...	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	Trailside MM Member LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..7.380 ...	MM L C .....	.....	.....
. 0000 ...			82-3250684 ..	.....	.....	.....	Unna, Dortmund Holding LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..100.000 ...	MM L C .....	.....	.....
. 0000 ...			45-5401109 ..	.....	.....	.....	Washington Gateway Apartments Venture LLC ...	.. DE.....	 NIA.....	Company	Ownership.....	..95.800 ...	MM L C .....	.....	.....
. 0000 ...			45-5401109 ..	.....	.....	.....	Washington Gateway Apartments Venture LLC ...	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..4.800 ...	MM L C .....	.....	.....
. 0000 ...			32-0574045 ..	.....	.....	.....	Washington Gateway Three LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..95.000 ...	MM L C .....	.....	.....
. 0000 ...			32-0574045 ..	.....	.....	.....	Washington Gateway Three LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..11.400 ...	MM L C .....	.....	.....
. 0000 ...			83-1325764 ..	.....	.....	.....	Washington Gateway Two LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..95.800 ...	MM L C .....	.....	.....
. 0000 ...			83-1325764 ..	.....	.....	.....	Washington Gateway Two LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..6.700 ...	MM L C .....	.....	.....
. 0000 ...			88-3861481 ..	.....	.....	.....	West 37th Street Hotel LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	..93.700 ...	MM L C .....	.....	.....
. 0000 ...			88-3861481 ..	.....	.....	.....	West 37th Street Hotel LLC	.. DE.....	 NIA.....	C.M. Life Insurance Company	Ownership.....	..6.300 ...	MM L C .....	.....	.....
. 0000 ...			83-0560183 ..	.....	.....	.....	Aland Royalty Holdings LP	.. DE.....	 NIA.....	MassMutual Holding LLC	Ownership/Influence	..26.690 ...	MM L C .....	.....	.....
. 0000 ...			83-0560183 ..	.....	.....	.....	Aland Royalty Holdings LP	.. DE.....	 NIA.....	Barings LLC	Management.....	.....	MM L C .....	.....	.....
. 0000 ...			81-2244465 ..	.....	.....	.....	Chassis Acquisition Holding LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..30.000 ...	MM L C .....	.....	.....
. 0000 ...			81-4258759 ..	.....	.....	.....	CRA Aircraft Holding LLC	.. DE.....	 NIA.....	Company	Ownership/Influence	..40.000 ...	MM L C .....	.....	.....
. 0000 ...			81-4258759 ..	.....	.....	.....	CRA Aircraft Holding LLC	.. DE.....	 NIA.....	Barings LLC	Influence.....	.....	MM L C .....	.....	.....
. 0000 ...							EIP Holdings I, LLC	.. DE.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..29.000 ...	MM L C .....	.....	.....
. 0000 ...			46-5460309 ..	.....	.....	.....	Red Lake Ventures, LLC	.. DE.....	 NIA.....	Company	Ownership/Influence	..31.520 ...	MM L C .....	.....	.....
. 0000 ...			46-5460309 ..	.....	.....	.....	Red Lake Ventures, LLC	.. DE.....	 NIA.....	Barings LLC	Influence.....	.....	MM L C .....	.....	.....
. 0000 ...			46-0687392 ..	.....	.....	.....	Validus Holding Company LLC	.. DE.....	 NIA.....	Barings LLC	Ownership.....	..40.440 ...	MM L C .....	.....	.....
. 0000 ...							VGS Acquisition Holding, LLC	.. DE.....	 NIA.....	MassMutual Holding LLC	Ownership/Influence	..33.300 ...	MM L C .....	.....	.....
. 0000 ...							VGS Acquisition Holding, LLC	.. DE.....	 NIA.....	Barings LLC	Management.....	.....	MM L C .....	.....	.....
. 0000 ...			04-1590850 ..	.....	.....	.....	SBNP SIA II LLC	.. DE.....	 NIA.....	Barings LLC	Ownership.....	..100.000 ...	MM L C .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							SBNP SIA III LLC	..DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership	..100.000	MMLIC		
.0000							Almack Mezzanine Fund II Unleveraged LP	..GBR	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership/Influence	..72.900	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	..IRL	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership/Influence	..56.700	MMLIC		
.0000							Barings Emerging Markets Corporate Bond Fund	..IRL	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership	..18.300	MMLIC		
.0000							Barings European Real Estate Debt Income Fund	..LUX	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership/Influence	..63.500	MMLIC		
.0000							Barings European Real Estate Debt Income Fund	..LUX	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Influence		MMLIC		
.0000			37-1506417				Babson Capital Loan Strategies Fund, L.P.	..DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership/Influence	..76.634	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 Massachusetts Mutual Life Insurance Company	Management		MMLIC		
.0000							Barings US High Yield Bond Fund	..IRL	NIA	Barings LLC	Ownership/Influence	..59.400	MMLIC		
.0000							Barings US High Yield Bond Fund	..IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Babson CLO Ltd. 2015-I	..CYM	NIA	Barings LLC	Influence		MMLIC		2
.0000							Babson CLO Ltd. 2015-II	..CYM	NIA	Barings LLC	Influence		MMLIC		3
.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		
.0000							Barings CLO 2018-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2018-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1473665				Barings CLO 2019-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2019-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2019-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-III	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2020-IV	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-II	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings CLO 2021-III	..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			36-037260H				Barings Euro CLO 2019-I BV	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro CLO 2019-II BV	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro CLO 2020-I DAC	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000			37-15576VH				Barings Euro CLO 2021-I DAC	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro CLO 2021-II DAC	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro CLO 2021-III DAC	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Euro CLO 2022-I DAC	..IRL	NIA	Barings LLC	Influence		MMLIC		
.0000			82-5330194				Barings Global Em. Markets Equity Fund	..NC	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	..DE	NIA	Barings LLC Massachusetts Mutual Life Insurance Company	Ownership	..67.700	MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12 Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	13 If Control is Owner- ship Provide Percen- tage	14 Ultimate Controlling Entity(ies)/Person(s)	15 Is an SCA Filing Re- quired? (Yes/No)	16 *
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi- ciliary Loca- tion	Rela- tion- ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)					
.0000							Barings Global Special Situations Credit 4 Delaware	..DE	NIA	C.M. Life Insurance Company	Ownership	..3.600	MMLIC		
.0000							Barings Global Special Situations Credit 4 Delaware	..DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Special Situations Credit 4 LUX	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..13.100	MMLIC		
.0000							Barings Global Special Situations Credit 4 LUX	..LUX	NIA	C.M. Life Insurance Company	Ownership	..0.700	MMLIC		
.0000							Barings Global Special Situations Credit 4 LUX	..LUX	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Global Technology Equity Fund	..IRL	NIA	Barings LLC	Ownership/Influence	..70.730	MMLIC		
.0000							Barings Global Dividends Champion Fund	..IRL	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Europe Select Fund	..IRL	NIA	Barings LLC	Management		MMLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	..CT	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..51.100	MMLIC		
.0000			87-0977058				Barings Hotel Opportunity Venture	..CT	NIA	Barings LLC	Management		MMLIC		
.0000			86-3661023				Barings Innovations & Growth Real Estate Fund	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..30.000	MMLIC		
.0000			86-3661023				Barings Innovations & Growth Real Estate Fund	..DE	NIA	C.M. Life Insurance Company	Ownership	..0.400	MMLIC		
.0000							Barings Middle Market CLO 2017-I Ltd & LLC	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000							Barings Middle Market CLO 2018-I	..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-I	..CYM	NIA	Barings LLC	Influence		MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..34.400	MMLIC		
.0000			98-1332384				Barings RE Credit Strategies VII LP	..DE	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..18.200	MMLIC		
.0000			98-1567942				Barings Target Yield Infrastructure Debt Fund	..LUX	NIA	Baring Asset Management Limited	Management		MMLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..99.200	MMLIC		
.0000			81-0841854				Barings CLO Investment Partners LP	..DE	NIA	Barings LLC	Management		MMLIC		
.0000							Barings Euro Value Add II (BREEVA II)	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..32.200	MMLIC		
.0000							Barings Euro Value Add II (BREEVA II)	..LUX	NIA	C.M. Life Insurance Company	Ownership	..2.800	MMLIC		
.0000							Barings Euro Value Add II (BREEVA II)	..LUX	NIA	Barings LLC	Management		MMLIC		
.0000			87-1262754				Barings Transportation Fund LP	..DE	NIA	MassMutual Holding LLC	Ownership/Influence	..11.300	MMLIC		
.0000			87-1262754				Barings Transportation Fund LP	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..8.100	MMLIC		
.0000							Braemar Energy Ventures I, L.P.	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	..87.700	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	..7.300	MMLIC		
.0000							Barings European Core Property Fund SCSp	..LUX	NIA	C.M. Life Insurance Company	Ownership	..0.500	MMLIC		
.0000							Barings European Core Property Fund SCSp	..LUX	NIA	Barings Real Estate Advisers LLC	Management		MMLIC		
.0000			46-5001122				Barings European Private Loan Fund III A	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	..46.400	MMLIC		
.0000			38-4059932				Benchmark 2018-B2 Mortgage Trust	..NY	NIA	Barings LLC	Influence		MMLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Benchmark 2018-B4	.NY	NIA	Barings LLC	Influence		MLIC		
.0000			38-4096530				Benchmark 2018-B8	.NY	NIA	Barings LLC	Influence		MLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	23.500	MLIC		
.0000			20-5578089				Barings Core Property Fund LP	.DE	NIA	Barings Real Estate Advisers LLC	Management		MLIC		
										Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLIC		
.0000			04-1590850				DPI Acres Capital SPV LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	34.300	MLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	.DE	NIA	C.M. Life Insurance Company	Ownership	5.100	MLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	.DE	NIA	Barings LLC	Management		MLIC		
.0000			90-0991195		0001597511		Gateway Mezzanine Partners II LP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	41.500	MLIC		
.0000			37-1708623				Great Lakes III, L.P.	.DE	NIA	Barings LLC	Management		MLIC		
.0000			37-1708623				Great Lakes III, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	65.200	MLIC		
.0000							GIA EU Holdings - Emerson JV Sarl	.LUX	NIA	Barings LLC	Management		MLIC		
.0000							GIA EU Holdings - Emerson JV Sarl	.LUX	NIA	Barings LLC	Management		MLIC		
.0000			38-4041011				JPMCC Commercial Mortgage Securities Trust 2017-JP7	.NY	NIA	Barings LLC	Influence		MLIC		
.0000			38-4032059				JPMDB Commercial Mortgage Securities Trust 2017-C5	.NY	NIA	Barings LLC	Influence		MLIC		
.0000							Martello Re Limited	.BMU	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	0.275	MLIC		
.0000			04-1590850				MM Direct Private Invetment Holding	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLIC		
.0000							MM CM Holding LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLIC		
.0000			04-1590850				MMV Climate Technology Fund GP	.DE	NIA	Massachusetts Mutual Ascend	Ownership	1.000	MLIC		
.0000			04-1590850				MMV Climate Technology Fund GP	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MLIC		
.0000			04-1590850				Washington Pine LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	0.000	MLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	.DE	NIA	C.M. Life Insurance Company	Ownership	4.524	MLIC		
.0000			20-8856877				Somerset Special Opportunities Fund L.P.	.DE	NIA	Barings LLC	Management		MLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	.DE	NIA	MassMutual Holding LLC	Ownership/Influence	16.400	MLIC		
.0000			41-2280127				Tower Square Capital Partners III, L.P.	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership/Influence	93.700	MLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	.DE	NIA	Barings LLC	Management		MLIC		
.0000			41-2280129				Tower Square Capital Partners IIIA, L.P.	.DE	NIA	Barings LLC	Management		MLIC		
.0000							Babson Capital Loan Strategies Master Fund LP	.CYM	NIA	Barings LLC	Management		MLIC		
.0000							Barings China Aggregate Bond Private Securities Investment Fund	.CHN	NIA	Barings LLC	Management		MLIC		
.0000							Barings European Growth Trust Fund	.GBR	NIA	Barings LLC	Ownership/Influence	14.280	MLIC		
.0000			47-3790192				Barings Global High Yield Fund	.MA	NIA	Barings LLC	Management		MLIC		
.0000							CCIC Fund	.CHN	NIA	Barings LLC	Ownership/Influence	67.310	MLIC		
.0000			71-1018134				Great Lakes II LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	10.600	MLIC		
.0000			71-1018134				Great Lakes II LLC	.DE	NIA	C.M. Life Insurance Company	Ownership	98.000	MLIC		
.0000			04-1590850				Wood Creek Venture Fund LLC	.DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	40.000	MLIC		

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
.0000							Barings California Mortgage Fund IV	..CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	..LUX	NIA	Massachusetts Mutual Life Insurance Company	Ownership	24.959	MMLIC		
.0000							Barings Umbrella Fund LUX SCSp SICAV RAIF	..LUX	NIA	C.M. Life Insurance Company	Ownership	2.300	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund I LLC	..CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund II LLC	..CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			95-4207717				Cornerstone California Mortgage Fund III LLC	..CA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	100.000	MMLIC		
.0000			82-2783393				Danville Riverwalk Venture, LLC	..DE	NIA	Massachusetts Mutual Life Insurance Company	Ownership	94.400	MMLIC		
.0000			13-1935920				MMLIC Debt Participations LLC	..DE	NIA	Massachusetts Mutual Ascend	Ownership	100.000	MMLIC		
.0000							Salomon Brothers Commercial Mortgage Trust 2001-MM	..DE	NIA	Barings Real Estate Advisers LLC	Influence		MMLIC		
.0000			51-0529328		0000927972	OQ	MassMutual Premier Main Street Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	89.268	MMLIC		
.0000			26-3229251		0000927972	OQ	MassMutual Premier Strategic Emerging Markets Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	26.209	MMLIC		
.0000			04-3512593		0000916053	OQ	MassMutual Select Fundamental Growth Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	5.020	MMLIC		
.0000			42-1710935		0000916053	OQ	MassMutual Select Mid-Cap Value Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	29.852	MMLIC		
.0000			02-0769954		0000916053	OQ	MassMutual Select Small Capital Value Equity Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			04-3584140		0000916053	OQ	MassMutual Select Small Company Value Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	18.131	MMLIC		
.0000			82-3347422		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2005 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Ownership	5.479	MMLIC		
.0000			82-3355639		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2010 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3382389		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2015 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3396442		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2020 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3417420		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2025 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3430358		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2030 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3439837		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2035 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3451779		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2040 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3472295		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2045 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3481715		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2050 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3502011		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2055 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		
.0000			82-3525148		0000916053	OQ	MassMutual Select T. Rowe Price Retirement 2060 Fund	..MA	NIA	Massachusetts Mutual Life Insurance Company	Influence	0.000	MMLIC		

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Location	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Ownership Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			82-3533944 ..	.....	0000916053 ..	OQ	MassMutual Select T. Rowe Price Retirement Balanced Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000	MMLIC .....	.....	.....
. 0000 ...			46-4257056 ..	.....	.....	.....	MML Series International Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			47-3529636 ..	.....	.....	.....	MML Series II Dynamic Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 0.000	MMLIC .....	.....	.....
. 0000 ...			47-3544629 ..	.....	.....	.....	MML Series II Equity Rotation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 96.276	MMLIC .....	.....	.....
. 0000 ...			27-1933389 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART 2035 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 3.623	MMLIC .....	.....	.....
. 0000 ...			27-1932769 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART 2045 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 8.258	MMLIC .....	.....	.....
. 0000 ...			46-3289207 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART 2055 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 24.163	MMLIC .....	.....	.....
. 0000 ...			47-5326235 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART 2060 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 41.109	MMLIC .....	.....	.....
. 0000 ...			45-1618155 ..	.....	0000916053 ..	OQ	MassMutual 20/80 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			45-1618222 ..	.....	0000916053 ..	OQ	MassMutual 80/20 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 41.495	MMLIC .....	.....	.....
. 0000 ...			03-0532464 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART In Retirement Fund ...	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 8.832	MMLIC .....	.....	.....
. 0000 ...			45-1618262 ..	.....	0000916053 ..	OQ	MassMutual 40/60 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Influence.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			45-1618046 ..	.....	0000916053 ..	OQ	MassMutual 60/40 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			45-1618046 ..	.....	0000916053 ..	OQ	MassMutual Ishares 60/40 Allocation Fund ...	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 68.903	MMLIC .....	.....	.....
. 0000 ...			04-3212054 ..	.....	0000916053 ..	OQ	MassMutual Balanced Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3556992 ..	.....	0000916053 ..	OQ	MassMutual Blue Chip Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3277549 ..	.....	0000916053 ..	OQ	MassMutual Core Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3539084 ..	.....	0000916053 ..	OQ	MassMutual Disciplined Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3539083 ..	.....	0000916053 ..	OQ	MassMutual Disciplined Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			01-0821120 ..	.....	0000916053 ..	OQ	MassMutual Diversified Value Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3512590 ..	.....	0000916053 ..	OQ	MassMutual Equity Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3512589 ..	.....	0000916053 ..	OQ	MassMutual Growth Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			03-0532475 ..	.....	0000916053 ..	OQ	MassMutual Inflation-Protected and Income Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3512596 ..	.....	0000916053 ..	OQ	MassMutual Mid Cap Growth Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			04-3464165 ..	.....	0000916053 ..	OQ	MassMutual Premier Diversified Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....
. 0000 ...			92-1441036 ..	.....	0000916053 ..	OQ	MassMutual RetireSMART by JPMorgan 2065 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	.. 100.000	MMLIC .....	.....	.....

SCHEDULE Y
PART 1A - DETAIL OF INSURANCE HOLDING COMPANY SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Group Code	Group Name	NAIC Company Code	ID Number	Federal RSSD	CIK	Name of Securities Exchange if Publicly Traded (U.S. or International)	Names of Parent, Subsidiaries Or Affiliates	Domi-ciliary Loca-tion	Relation-ship to Reporting Entity	Directly Controlled by (Name of Entity/Person)	Type of Control (Ownership, Board, Management, Attorney-in-Fact, Influence, Other)	If Control is Owner-ship Provide Percen-tage	Ultimate Controlling Entity(ies)/Person(s)	Is an SCA Filing Re-quired? (Yes/No)	*
. 0000 ...			45-1618222 ..	.....	0000916053 ..	OQ	MassMutual Select 80/20 Allocation Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3584138 ..	.....	0000916053 ..	OQ	MassMutual Select Fundamental Value Fund ...	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3557000 ..	.....	0000916053 ..	OQ	MassMutual Select Overseas Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			92-1427882 ..	.....	0000916053 ..	OQ	MassMutual Select T Rowe Price Retirement 2065 Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	83.170 ...	MMLIC .....	.....	.....
. 0000 ...			04-3464205 ..	.....	0000916053 ..	OQ	MassMutual Small Cap Growth Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			04-3424705 ..	.....	0000916053 ..	OQ	MassMutual Small Cap Opportunities Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			02-0769954 ..	.....	0000916053 ..	OQ	MassMutual Small Cap Value Equity Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....
. 0000 ...			26-0099965 ..	.....	0000916053 ..	OQ	MassMutual Strategic Bond Fund	.. MA.....	 NIA.....	Massachusetts Mutual Life Insurance Company	Ownership.....	100.000 ...	MMLIC .....	.....	.....

Asterisk	Explanation
1	Massachusetts Mutual Life Insurance Company owns 14.23% of the affiliated debt of Jefferies Finance LLC
2	Debt investors own .5% and includes only Great Lakes III, L.P.
3	Debt investors own .2% and includes only Great Lakes III, L.P.

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

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

	Response
1. Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement?	NO
2. Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement?	NO
3. Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	NO
4. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC?	YES
5. Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC?	NO
6. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
7. Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC?	NO
8. Will the Life PBR Statement of Exemption be filed with the state of domicile by July 1st and electronically with the NAIC with the second quarterly filing per the Valuation Manual (by August 15)? (2nd Quarter Only) The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter. In the case of an ongoing statement of exemption, enter "SEE EXPLANATION" and provide as an explanation that the company is utilizing an ongoing statement of exemption.	N/A

AUGUST FILING

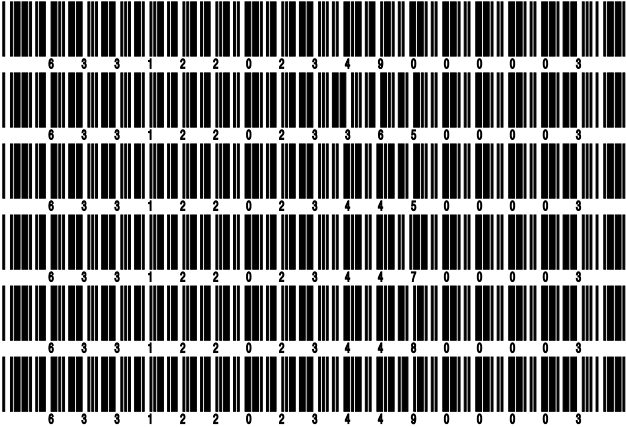
9. Will the regulator-only (non-public) Communication of Internal Control Related Matters Noted in Audit be filed with the state of domicile and electronically with the NAIC (as a regulator-only non-public document) by August 1? The response for 1st and 3rd quarters should be N/A. A NO response resulting with a bar code is only appropriate in the 2nd quarter.	N/A
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Explanation:

1. 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
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]
3. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
5. Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
6. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
7. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]



STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Assets Line 25

	Current Statement Date			4 December 31 Prior Year Net Admitted Assets
	1 Assets	2 Nonadmitted Assets	3 Net Admitted Assets (Cols. 1 - 2)	
2504. Accounts receivable	8,431,679	8,169,679	262,000	0
2597. Summary of remaining write-ins for Line 25 from overflow page	8,431,679	8,169,679	262,000	0

Additional Write-ins for Summary of Operations Line 8.3

	1 Current Year To Date	2 Prior Year To Date	3 Prior Year Ended December 31
08.304. Miscellaneous income	52,683	38,938	87,840
08.397. Summary of remaining write-ins for Line 8.3 from overflow page	52,683	38,938	87,840

SCHEDULE A - VERIFICATION

Real Estate

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

SCHEDULE B - VERIFICATION

Mortgage Loans

	1	2
	Year to Date	Prior Year Ended December 31
1. Book value/recorded investment excluding accrued interest, December 31 of prior year	3,088,813,561	2,148,469,101
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	1,298,722,576	1,426,971,997
2.2 Additional investment made after acquisition	100,772,744	43,507,818
3. Capitalized deferred interest and other	648,646	1,081,607
4. Accrual of discount	(3,614,146)	13,017,034
5. Unrealized valuation increase (decrease)		0
6. Total gain (loss) on disposals	6,266	0
7. Deduct amounts received on disposals	548,037,442	537,024,492
8. Deduct amortization of premium and mortgage interest points and commitment fees	(1,686,420)	7,209,504
9. Total foreign exchange change in book value/recorded investment excluding accrued interest	(51,181)	0
10. Deduct current year's other than temporary impairment recognized		0
11. Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	3,938,947,444	3,088,813,561
12. Total valuation allowance		
13. Subtotal (Line 11 plus Line 12)	3,938,947,444	3,088,813,561
14. Deduct total nonadmitted amounts		0
15. Statement value at end of current period (Line 13 minus Line 14)	3,938,947,444	3,088,813,561

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

	1	2
	Year to Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	1,363,435,253	1,092,315,061
2. Cost of acquired:		
2.1 Actual cost at time of acquisition	67,711,991	34,554,124
2.2 Additional investment made after acquisition	129,174,946	386,006,631
3. Capitalized deferred interest and other		0
4. Accrual of discount		0
5. Unrealized valuation increase (decrease)	(19,321,730)	130,291,068
6. Total gain (loss) on disposals	(10,532,327)	(362,017)
7. Deduct amounts received on disposals	110,776,648	291,108,114
8. Deduct amortization of premium and depreciation	(16,369,429)	1,983,147
9. Total foreign exchange change in book/adjusted carrying value	(321,821)	7,800
10. Deduct current year's other than temporary impairment recognized	5,761,849	(13,713,847)
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10)	1,429,977,244	1,363,435,253
12. Deduct total nonadmitted amounts		
13. Statement value at end of current period (Line 11 minus Line 12)	1,429,977,244	1,363,435,253

SCHEDULE D - VERIFICATION

Bonds and Stocks

	1	2
	Year to Date	Prior Year Ended December 31
1. Book/adjusted carrying value of bonds and stocks, December 31 of prior year	34,200,158,053	32,199,605,856
2. Cost of bonds and stocks acquired	8,527,107,740	16,491,151,584
3. Accrual of discount	58,248,351	161,977,324
4. Unrealized valuation increase (decrease)	6,883,568	(54,103,127)
5. Total gain (loss) on disposals	(222,682,771)	51,389,809
6. Deduct consideration for bonds and stocks disposed of	6,950,869,790	14,559,739,657
7. Deduct amortization of premium	36,373,048	59,049,938
8. Total foreign exchange change in book/adjusted carrying value	(14,199,682)	8,850,307
9. Deduct current year's other than temporary impairment recognized	66,201,944	40,527,854
10. Total investment income recognized as a result of prepayment penalties and/or acceleration fees	0	603,750
11. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10)	35,502,070,477	34,200,158,053
12. Deduct total nonadmitted amounts	0	0
13. Statement value at end of current period (Line 11 minus Line 12)	35,502,070,477	34,200,158,053

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 1B

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

NAIC Designation	1 Book/Adjusted Carrying Value Beginning of Current Quarter	2 Acquisitions During Current Quarter	3 Dispositions During Current Quarter	4 Non-Trading Activity During Current Quarter	5 Book/Adjusted Carrying Value End of First Quarter	6 Book/Adjusted Carrying Value End of Second Quarter	7 Book/Adjusted Carrying Value End of Third Quarter	8 Book/Adjusted Carrying Value December 31 Prior Year
BONDS								
1. NAIC 1 (a)	19,230,087,817	4,505,407,443	3,608,079,168	(16,685,727)	18,497,533,939	19,230,087,817	20,110,730,365	18,045,112,153
2. NAIC 2 (a)	14,450,015,251	8,685,737,922	8,863,312,549	41,945,641	14,526,556,682	14,450,015,251	14,314,386,265	14,733,321,762
3. NAIC 3 (a)	1,437,666,675	50,327,178	259,008,745	(31,524,670)	1,507,308,006	1,437,666,675	1,197,460,438	1,475,937,217
4. NAIC 4 (a)	471,070,323	70,229,474	4,838,960	(75,212,112)	491,742,016	471,070,323	461,248,725	454,644,574
5. NAIC 5 (a)	171,585,453	1,997,697	9,181,460	41,853,169	165,873,924	171,585,453	206,254,859	209,363,131
6. NAIC 6 (a)	34,993,110	7,505,737	1,943,264	(514,950)	37,684,003	34,993,110	40,040,633	31,207,325
7. Total Bonds	35,795,418,629	13,321,205,451	12,746,364,146	(40,138,649)	35,226,698,570	35,795,418,629	36,330,121,285	34,949,586,162
PREFERRED STOCK								
8. NAIC 1	4,606,218	0	0	319,590	4,481,201	4,606,218	4,925,808	4,037,177
9. NAIC 2	95,422,423	63,722,444	7,988,773	(158,496)	95,874,754	95,422,423	150,997,598	92,640,241
10. NAIC 3	6,998,696	15,026,950	0	0	6,998,696	6,998,696	22,025,646	6,998,696
11. NAIC 4	0	3,000,000	0	0	0	0	3,000,000	1,399,018
12. NAIC 5	25,209,172	0	0	116,801	54,915,854	25,209,172	25,325,973	79,292,676
13. NAIC 6	647,701	0	0	(319,977)	802,714	647,701	327,724	600,376
14. Total Preferred Stock	132,884,210	81,749,394	7,988,773	(42,082)	163,073,219	132,884,210	206,602,749	184,968,184
15. Total Bonds and Preferred Stock	35,928,302,839	13,402,954,845	12,754,352,919	(40,180,731)	35,389,771,789	35,928,302,839	36,536,724,034	35,134,554,346

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

NAIC 1 \$505,735,821 ; NAIC 2 \$ 1,223,979,967 ; NAIC 3 \$0 NAIC 4 \$0 ; NAIC 5 \$0 ; NAIC 6 \$0

SCHEDULE DA - PART 1

Short-Term Investments

	1	2	3	4	5
	Book/Adjusted Carrying Value	Par Value	Actual Cost	Interest Collected Year-to-Date	Paid for Accrued Interest Year-to-Date
7709999999 Totals	384,959,860	xxx	399,819,724	3,722,989	73,147

SCHEDULE DA - VERIFICATION

Short-Term Investments

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	389,684,178	476,420,524
2. Cost of short-term investments acquired	691,349,860	433,155,035
3. Accrual of discount	10,775,669	742,798
4. Unrealized valuation increase (decrease)	0	0
5. Total gain (loss) on disposals	(7,613)	(87,555)
6. Deduct consideration received on disposals	706,842,234	520,546,624
7. Deduct amortization of premium	0	0
8. Total foreign exchange change in book/adjusted carrying value	0	0
9. Deduct current year's other than temporary impairment recognized	0	0
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	384,959,860	389,684,178
11. Deduct total nonadmitted amounts	0	0
12. Statement value at end of current period (Line 10 minus Line 11)	384,959,860	389,684,178

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

1.	Book/Adjusted Carrying Value, December 31, prior year (Line 10, prior year)	172,090,191
2.	Cost Paid/(Consideration Received) on additions	427,551,244
3.	Unrealized Valuation increase/(decrease)	95,226,673
4.	SSAP No. 108 adjustments	
5.	Total gain (loss) on termination recognized	299,444,147
6.	Considerations received/(paid) on terminations	299,444,147
7.	Amortization	(379,072,510)
8.	Adjustment to the Book/Adjusted Carrying Value of hedged item	
9.	Total foreign exchange change in Book/Adjusted Carrying Value	(172,022)
10.	Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4+5-6+7+8+9)	315,623,576
11.	Deduct nonadmitted assets	
12.	Statement value at end of current period (Line 10 minus Line 11)	315,623,576

SCHEDULE DB - PART B - VERIFICATION

Futures Contracts

1.	Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)	0
2.	Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cumulative Cash Change column)	
3.1	Add:	
	Change in variation margin on open contracts - Highly Effective Hedges	
3.11	Section 1, Column 15, current year to date minus	0
3.12	Section 1, Column 15, prior year	0
	Change in variation margin on open contracts - All Other	
3.13	Section 1, Column 18, current year to date minus	(7,650,946)
3.14	Section 1, Column 18, prior year	(7,650,946)
3.2	Add:	
	Change in adjustment to basis of hedged item	
3.21	Section 1, Column 17, current year to date minus	0
3.22	Section 1, Column 17, prior year	0
	Change in amount recognized	
3.23	Section 1, Column 19, current year to date minus	(7,650,946)
3.24	Section 1, Column 19, prior year plus	
3.25	SSAP No. 108 adjustments	(7,650,946)
3.3	Subtotal (Line 3.1 minus Line 3.2)	0
4.1	Cumulative variation margin on terminated contracts during the year	(644,366)
4.2	Less:	
	4.21 Amount used to adjust basis of hedged item	
	4.22 Amount recognized	(644,366)
	4.23 SSAP No. 108 adjustments	(644,366)
4.3	Subtotal (Line 4.1 minus Line 4.2)	0
5.	Dispositions gains (losses) on contracts terminated in prior year:	
	5.1 Total gain (loss) recognized for terminations in prior year	
	5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	7,650,946
6.	Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	(7,650,946)
7.	Deduct total nonadmitted amounts	
8.	Statement value at end of current period (Line 6 minus Line 7)	(7,650,946)

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

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

SCHEDULE DB - VERIFICATION

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

		Book/Adjusted Carrying Value Check
1.	Part A, Section 1, Column 14.....	315,623,574
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance.....	0
3.	Total (Line 1 plus Line 2)	315,623,574
4.	Part D, Section 1, Column 6	907,129,155
5.	Part D, Section 1, Column 7	(599,156,525)
6.	Total (Line 3 minus Line 4 minus Line 5)	7,650,945
		Fair Value Check
7.	Part A, Section 1, Column 16	615,622,996
8.	Part B, Section 1, Column 13	(7,650,946)
9.	Total (Line 7 plus Line 8)	607,972,050
10.	Part D, Section 1, Column 9	616,223,201
11.	Part D, Section 1, Column 10	(8,251,150)
12.	Total (Line 9 minus Line 10 minus Line 11)	(1)
		Potential Exposure Check
13.	Part A, Section 1, Column 21	51,855,558
14.	Part B, Section 1, Column 20	10,762,300
15.	Part D, Section 1, Column 12	62,617,858
16.	Total (Line 13 plus Line 14 minus Line 15)	0

SCHEDULE E - PART 2 - VERIFICATION

(Cash Equivalents)

	1	2
	Year To Date	Prior Year Ended December 31
1. Book/adjusted carrying value, December 31 of prior year	1,535,691,774	279,044,687
2. Cost of cash equivalents acquired	82,795,457,199	99,903,606,155
3. Accrual of discount	49,228,910	14,187,427
4. Unrealized valuation increase (decrease)	0	0
5. Total gain (loss) on disposals	9,530	(1,203)
6. Deduct consideration received on disposals	82,598,566,082	98,661,145,292
7. Deduct amortization of premium	0	0
8. Total foreign exchange change in book/adjusted carrying value	0	0
9. Deduct current year's other than temporary impairment recognized	0	0
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9)	1,781,821,331	1,535,691,774
11. Deduct total nonadmitted amounts	0	0
12. Statement value at end of current period (Line 10 minus Line 11)	1,781,821,331	1,535,691,774

Schedule A - Part 2 - Real Estate Acquired and Additions Made

N O N E

Schedule A - Part 3 - Real Estate Disposed

N O N E

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE B - PART 2

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

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Rate of Interest	7 Actual Cost at Time of Acquisition	8 Additional Investment Made After Acquisition	9 Value of Land and Buildings
	2 City	3 State						
155020ST8	Various	CA		09/15/2023	4.290	64,963,822	0	68,317,490
0299999. Mortgages in good standing - Residential mortgages-insured or guaranteed						64,963,822	0	68,317,490
121836TU4	Various	PA		07/20/2023	7.960	1,770,056	0	1,751,428
121836VI7	Various	IN		08/17/2023	7.860	2,683,215	0	2,620,097
121836XY1	Various	NJ		09/21/2023	8.107	3,960,198	0	3,890,879
146738CD9	Various	FL		12/22/2022	9.876	0	632,089	5,499,922
146738DE6	Various	FL		01/11/2023	11.165	1,307,365	0	3,647,666
146738FG9	Various	FL		02/09/2023	12.276	828,722	0	5,479,744
146738HI3	Various	FL		03/09/2023	10.804	2,107,791	0	7,403,216
146738IJ0	Various	FL		03/23/2023	9.244	307,112	0	12,226,190
146738JK6	Various	FL		04/11/2023	9.590	721,899	0	14,905,800
146738KL2	Various	CA		04/27/2023	9.310	901,314	0	6,877,807
146738LM9	Various	CA		05/11/2023	9.490	656,206	0	5,331,142
146738MN6	Various	MA		05/26/2023	9.690	1,772,663	0	16,528,638
146738NO3	Various	CA		05/11/2023	9.489	368,798	0	3,414,350
146738OP9	Various	CA		06/06/2023	9.550	898,078	0	15,614,518
146738PO6	Various	MA		06/23/2023	9.430	1,012,397	0	17,919,596
146738QR3	Various	CA		07/11/2023	9.240	13,571,195	0	13,437,306
146738RS0	Various	CA		07/27/2023	9.520	17,951,306	0	17,951,306
146738ST7	Various	CA		08/10/2023	9.480	4,749,231	0	4,749,231
146738TU3	Various	MA		08/11/2023	9.480	17,992,169	0	17,995,283
146738UV9	Various	CA		08/24/2023	9.300	13,422,285	0	13,294,835
146738VI6	Various	CA		09/07/2023	9.670	11,106,662	0	10,972,124
161225OR1	Various	NY		05/18/2023	8.530	323,814	0	22,154,486
161225UV7	Various	HI		07/20/2023	8.325	14,508,596	0	14,508,596
161225WX1	Various	PA		08/17/2023	8.270	21,319,109	0	21,315,321
161225YZ4	Various	MD		09/21/2023	8.175	28,080,431	0	27,807,251
209999Z A2	Various	AL		09/30/2019	3.580	80,000,000	0	74,804,319
209999Z B0	Various	SC		11/15/2019	3.260	44,500,000	0	40,421,013
209999Z C8	Various	AL		06/18/2020	3.260	39,959,924	0	37,102,634
230921AB4	Various	FL		09/21/2023	7.732	1,323,410	0	1,341,000
243820Z S9	Various	FL		07/20/2023	8.714	20,968,631	0	20,527,565
243820Z U4	Various	FL		08/17/2023	8.370	32,064,912	0	31,409,830
243820Z I1	Various	FL		09/21/2023	8.733	23,425,221	0	22,963,582
489123KL2	Various	CA		07/06/2023	7.490	6,368,775	0	6,092,753
489123MN6	Various	NY		07/20/2023	8.150	4,658,349	0	4,562,322
489123OP9	Various	CA		08/03/2023	7.850	7,706,693	0	7,443,286
489123QR3	Various	CA		08/17/2023	8.010	4,110,242	0	3,990,985
489123ST7	Various	NY		09/11/2023	8.230	5,450,419	0	5,120,981
489123UV9	Various	NY		09/21/2023	7.945	6,213,706	0	6,122,371
62398XMN4	Various	FL		08/10/2023	8.430	8,810,567	0	8,792,667
62398XHJ6	Various	FL		07/06/2023	8.159	26,844,199	0	25,425,494
62398XKL7	Various	CA		07/20/2023	8.490	10,833,353	0	10,635,175
62398XST2	Various	FL		08/24/2023	8.500	28,676,906	0	28,684,406
62398XUV4	Various	CA		09/11/2023	8.560	15,099,659	0	14,343,369
62398XVX8	Various	FL		09/27/2023	8.974	19,410,483	0	19,410,483
685422Z Z3	Various	GA		12/23/2021	7.290	0	262,377	37,100,092
86106#YY8	Various	TX		10/14/2021	7.160	0	2,314,463	15,376,464
89#625Z Z1	Various	FL		03/30/2022	7.810	0	3,320,881	8,601,435
909055Z Z1	Various	AZ		03/30/2022	6.000	0	5,426,919	56,225,228
0399999. Mortgages in good standing - Residential mortgages-all other						548,746,061	11,956,729	773,872,019
N226021	Arlington	VA		05/05/2022	4.490		5,707,424	108,131,878
N234021	Chicago	IL		08/08/2023	7.180	9,990,000		27,625,000
N236031	New York	NY		07/19/2023	10.180	2,119,362		16,672,211
N236071	The Woodlands	TX		08/15/2023	7.390	107		19,174,699

SCHEDULE B - PART 2

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Rate of Interest	7 Actual Cost at Time of Acquisition	8 Additional Investment Made After Acquisition	9 Value of Land and Buildings
	2 City	3 State						
N236081	Bedford	..MA.....	.....	..... 07/27/2023	 10.580	 5,533,920	 7,076,137	 85,131,049
N236101	Lancaster	..TX.....	.....	..... 09/20/2023	 10.070	 26,571,427 .....	.....	..... 26,571,427
N23A021	Willawong	..AUS.....	.....	..... 08/02/2023	 10.320	 858,969 .....	.....	..... 7,185,403
NAC0023	New York	..NY.....	.....	..... 07/07/2022	 8.880	 13,848,764 .....	.....	..... 23,487,386
NAC0025	New York	..NY.....	.....	..... 07/07/2022	 13.330	 2,593,044 .....	.....	..... 17,965,119
NAC0071	Boston	..MA.....	.....	..... 09/21/2023	 9.570	 14,482,755 .....	.....	..... 75,793,085
0599999. Mortgages in good standing - Commercial mortgages-all other						32,985,327	29,225,369	407,737,257
0899999. Total Mortgages in good standing						646,695,210	41,182,098	1,249,926,766
1699999. Total - Restructured Mortgages						0	0	0
2499999. Total - Mortgages with overdue interest over 90 days						0	0	0
3299999. Total - Mortgages in the process of foreclosure						0	0	0
3399999 - Totals						646,695,210	41,182,098	1,249,926,766

SCHEDULE B - PART 3

1 Loan Number	Location		4 Loan Type	5 Date Acquired	6 Disposal Date	7 Book Value/ Recorded Investment Excluding Accrued Interest Prior Year	Change in Book Value/Recorded Investment						14 Book Value/ Recorded Investment Excluding Accrued Interest on Disposal	15 Consid- eration	16 Foreign Exchange Gain (Loss) on Disposal	17 Realized Gain (Loss) on Disposal	18 Total Gain (Loss) on Disposal
	2 City	3 State					8 Unrealized Valuation Increase (Decrease)	9 Current Year's (Amortization) /Accretion	10 Current Year's Other- Than- Temporary Impairment Recognized	11 Capitalized Deferred Interest and Other	12 Total Change in Book Value (8+9-10+11)	13 Total Foreign Exchange Change in Book Value					
N216191	Hialeah	FL .....	.....	..09/24/2021	..09/28/2023	45,046,487	296,205	296,205 .....	.....	.....	.....296,205	45,342,692	45,342,692 .....	.....	.....	.....0	
NAC0024	New York	NY .....	.....	..07/07/2022	..09/30/2023	13,848,764 .....	.....	.....	.....	.....	.....0	13,848,764	13,848,764 .....	.....	.....	.....0	
NAC0026	New York	NY .....	.....	..07/07/2022	..09/30/2023	2,593,044 .....	.....	.....	.....	.....	.....0	2,593,044	2,593,044 .....	.....	.....	.....0	
NAG0011	Miramar Beach	FL .....	.....	..06/01/2021	..07/31/2023	19,660,913 .....	.....	.....	.....	.....	.....0	19,660,913	19,660,913 .....	.....	.....	.....0	
Foreign Exchange Coupon Adj ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	(372)	(372) .....	.....	.....	.....(372)	
0199999. Mortgages closed by repayment						81,149,208	0	296,205	0	0	296,205	0	81,445,413	81,445,071	(372)	0	(372)
Residential .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	311,502,533	311,508,322 .....	.....	.....5,789	5,789	
Commercial .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....0	1,689,113	1,689,113 .....	.....	.....	.....0	
0299999. Mortgages with partial repayments						0	0	0	0	0	0	0	313,191,646	313,197,435	0	5,789	5,789
.....																	
.....																	
.....																	
.....																	
.....																	
.....																	
.....																	
.....																	
0599999 - Totals						81,149,208	0	296,205	0	0	296,205	0	394,637,059	394,642,476	(372)	5,789	5,417

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6	7	8	9	10	11	12	13
		3	4									
CUSIP Identification	Name or Description	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Commitment for Additional Investment	Percentage of Ownership
000000-00-0	2725 Sprott Private Resource Lending Fund III LP	Toronto	OH	Sprott Resource Lending Corp		11/29/2022	3		2,270		4,681,548	1.149
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated								0	2,270	0	4,681,548	XXX
000000-00-0	2781 FIRST EAGLE DCF A FUNDING LLC	Boston	MA	First Eagle DCF Manager LLC		07/06/2023	1	800,000	.0		3,200,000	1.330
000000-00-0	6123 NB Private Equity Credit Opportunities Fund LP	New York	NY	NB Private Equity Credit Opp Assocs LP		06/07/2017	3		25,554		1,388,850	0.851
000000-00-0	6126 Gryphon Mezzanine Partners LP	San Francisco	CA	Gryphon Mezzanine Partners GP LP		11/30/2017	3		57,589		417,617	6.340
000000-00-0	6132 Sagard Credit Partners LP	Toronto	OH	Sagard Credit Partners Cayman GP Inc		10/09/2018	3		19,824		3,764,093	7.515
000000-00-0	6133 PineBridge Private Credit Feeder LP	New York	NY	PineBridge Private Credit Gen Part LP		11/28/2018	3		91,787		906,405	9.870
000000-00-0	6134 Gryphon Mezzanine Partners II Feeder Fund LP	San Francisco	CA	Gryphon Mezzanine Partners II LP		12/20/2019	3		34,002		1,300,796	18.420
000000-00-0	6137 Cyprum Parallel Investors V LP	Cleveland	OH	Cyprum V Management LLC		08/15/2019	3		1,148,916		322,791	3.398
000000-00-0	6148 TTGA SBIC Pioneer Feeder Fund LP	Purchase	NY	TTGA SBIC Feeder GP LLC		05/25/2021	3		330,883		7,134,269	50.000
1799999. Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated								800,000	1,708,555	0	18,434,821	XXX
000000-00-0	2250 Goldner Hawn Fund VII LP	Minneapolis	MN	Goldner Hawn GP LLC		04/29/2019	3		(365,343)		1,526,111	
000000-00-0	2518 MidOcean Partners VI LP	New York	NY	MidOcean Associates V LP		11/09/2021	3		334,297		3,894,905	
000000-00-0	2581 Energy Impact Fund II LP	New York	NY	Energy Impact Fund II GP LLC		11/12/2021	1		625,629		1,277,583	
000000-00-0	2584 One Equity Partners VIII LP	New York	NY	One Equity Partners		01/26/2022	3		274,414		524,510	0.250
000000-00-0	2622 OceanSound Partners Fund LP	New York	NY	OceanSound Partners		12/27/2021	3		443,207		695,123	0.641
000000-00-0	2624 KLCP Domestic Fund III LP	New York	NY	Kennedy Lewis GP III LLC		12/27/2021	3		12,500		2,981,397	0.920
000000-00-0	2633 Weatherby Parent Holdings LLC	Boston	MA	TA Associates		02/07/2022	2		3,979		.0	
000000-00-0	2644 SDC Digital Infrastructure Opportunity Fund III LP	New York	NY	SDC DIOF III GP LP		04/25/2022	1		1,608,807		2,222,079	0.330
000000-00-0	2656 Trident IX LP	Greenwich	CT	Trident Capital IX LP		06/24/2022	1		675,892		2,679,851	0.070
000000-00-0	2686 SER Capital Partners I LP	Houston	TX	Apollo Global Management		07/31/2021	3		1,694,323		2,415,103	1.951
000000-00-0	2710 Asper DHUK LP	London	OH	Asper Investment Management		10/21/2022	3		28,832		3,058,715	1.216
000000-00-0	2717 Ampersand 2022 LP	Wellesley	MA	AHP CF Management Company Ltd Partner		11/02/2022	3		101,042		4,898,958	5.000
000000-00-0	2733 Capital Z Partners (MGA) L.P.	New York	NY	Capital Z Partners		12/14/2022	3		13,125		.0	0.311
000000-00-0	2755 Bertram Capital V LP	Foster City	CA	Bertram Growth Capital IV GP LP		06/09/2023	3		183,334		3,400,466	0.288
000000-00-0	2756 IPCC Fund LP	Wilmington	DE	IPCC GP LLC		05/25/2023	1		306,382		2,331,156	0.400
000000-00-0	2774 Terramont SC Co-Invest LP	New York	NY	Terramont Infrastructure Partners		08/01/2023	3		44,493		1,021,277	10.256
000000-00-0	2776 JFL Equity Investors VI LP	New York	NY	JFL GP Investors IV LLC		09/05/2023	3		274,973		2,125,027	0.150
000000-00-0	2780 Amulet Capital Fund III LP	Greenwich	CT	Amulet Capital Fund II GP LP		08/01/2023	3		1,041,491		2,558,509	0.360
000000-00-0	6011 NB Strategic Co-Investment Partners II LP	New York	NY	NB Strat Co-Investment Assoc II GP LLC		10/01/2012	3		105,464		525,669	0.918
000000-00-0	6012 NB Strategic Co-Investment Partners III LP	New York	NY	NB Strat Co-Investment Assoc III GP LLC		01/28/2016	3		120,324		759,660	0.875
000000-00-0	6013 NB Secondary Opportunities Fund IV LP	New York	NY	NB Secondary Opportunities Assoc IV LP		04/19/2017	3		150,000		2,582,731	0.442
000000-00-0	6015 Bridge Growth Partners LP	New York	NY	Bridge Growth Partners LP		07/15/2014	3		42,556		41,191	6.549
000000-00-0	6023 Patriot Financial Partners III, L.P.	Radnor	PA	Patriot Financial Partners GP III LP		07/21/2017	3		500,000		429,455	2.584
000000-00-0	6030 Snow Phipps II LP	New York	NY	Snow Phipps GP II LP		01/08/2010	3		53,122		119,180	1.063
000000-00-0	6031 Snow Phipps III LP	New York	NY	Snow Phipps GP III LLC		06/08/2016	3		36,083		1,241,822	1.142
000000-00-0	6047 Gryphon Partners IV LP	San Francisco	CA	Gryphon GenPar IV LP		12/06/2016	3		10,409		.0	0.460
000000-00-0	6050 ManchesterStory Venture Fund LP	West Des Moines	IA	ManchesterStory GP1 LLC		03/23/2017	3		25,325		612,865	2.526
000000-00-0	6053 Energy Impact Fund LP	New York	NY	Energy Impact Partners LLC		05/11/2017	3		139,991		1,266,782	1.315
000000-00-0	6058 Cintrifuse Syndicate Fund II, LLC	Cincinnati	OH	Cintrifuse Fund Management II LLC		09/18/2017	1		47,322		415,166	4.483
000000-00-0	6068 Trilantic Capital Partners VI LP	New York	NY	Trilantic Capital Partners Assoc VI LP		07/25/2018	3		231,423		657,900	0.490
000000-00-0	6073 Roark Capital Partners Fund V LP	New York	NY	Roark Capital GenPar V LP		11/01/2018	3		3,362		1,000,844	0.143
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP	New York	NY	Blackstone Tac Opportunities Assoc 3 LLC		02/08/2019	3		503,374		.0	0.243
000000-00-0	6079 Goldner Hawn Fund VII LP	Minneapolis	MN	Goldner Hawn GP LLC		04/29/2019	3		365,343		.0	1.732
000000-00-0	6082 Nutraceutical Investco LP	River Side	CT	M&S GP LLC		10/18/2019	3		7,171		.0	2.273
000000-00-0	6083 Tritium Partners II LLC	Austin	TX	Tritium II GP LLC		11/13/2019	3		578,962		607,274	2.050
000000-00-0	6089 Bridge Growth Partners II LP	New York	NY	Bridge Growth Partners LP		10/01/2021	3		16,979		1,887,569	6.828
000000-00-0	6092 Corsair Indigo Investors LP	New York	NY	Corsair Indigo Management LP		12/07/2020	3		14,982		595,808	5.993
000000-00-0	6095 Greenspring Opportunities VI LP	Owing Mills	MD	Greenspring Opportunities VI LP		01/21/2020	3		25,000		225,000	0.390
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP	New York	NY	NB Alternatives Advisors LLC		01/29/2020	3		955,592		1,039,314	0.494
000000-00-0	6101 Revelstoke EPIC Fund I LP	Denver	CA	ROP Single Asset Fund I GP LLC		10/01/2021	3		5,004		163,956	0.412
000000-00-0	6102 Riverwood Capital Partners III LP	Menlo Park	CA	Riverwood Capital III LP		03/27/2020	3		118,358		665,514	0.682
000000-00-0	6104 Vivo Capital Fund IX LP	Palo Alto	CA	Vivo Capital IX LLC		09/09/2019	3		87,920		259,894	0.350
000000-00-0	6140 GreyLion Capital II LP	New York	NY	GreyLion Capital II GP LP		02/28/2018	3		137,157		1,092,877	1.202
000000-00-0	2182 River Cities Capital Fund VI LP	Cincinnati	OH	River Cities Capital Fund VI LP		02/15/2018	3		1,314,030		560,000	
000000-00-0	2416 Gryphon Partners VI LP	San Francisco	CA	Gryphon Partners VI LP		11/26/2021	3		.0		1,004,320	0.482

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Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6	7	8	9	10	11	12	13
		3	4									
CUSIP Identification	Name or Description	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Commitment for Additional Investment	Percentage of Ownership
000000-00-0	2558 JFL-NG Continuation Fund	New York	NY	JFL-NG Continuation Fund		10/27/2021	3		.0		2,074,495	2.018
000000-00-0	2589 Hidden Harbor Capital Partners II L P	Boca Raton	FL	Hidden Harbor Capital Partners II L P		09/07/2022	3		.0		2,739,447	1.253
000000-00-0	2614 NSH Verisma Holdco LP	Radnor	CA	NSH Verisma Holdco LP		12/16/2021	3		.0		1,950,000	12.089
000000-00-0	2635 Karakoram Fund I LP	Manhattan Beach	CA	Karakoram Fund I LP		01/28/2022	3		.0		1,110,827	0.087
000000-00-0	2665 AEA Growth Equity Fund LP	San Francisco	CA	AEA Growth Equity Fund LP		04/29/2022	3		.0		2,314,601	2.117
000000-00-0	2672 River Cities Capital Fund VII LP	Cincinnati	OH	River Cities Capital Fund VII LP		07/15/2022	3		.0		3,500,000	1.667
000000-00-0	2690 Invesco Direct Lending UL Feeder Fund II LP	San Diego	CA	Invesco Direct Lending UL Feeder Fund II LP		08/03/2022	3		.0		.0	
000000-00-0	2693 Sunstone Partners III Main LP	Sam Mateo	CA	Sunstone Partners III Main LP		04/12/2023	3		.0		4,000,000	0.471
000000-00-0	2709 Low Carbon Renewables Fund SCSp	Lux	WI	Low Carbon Renewables Fund SCSp		02/09/2023	3		.0		6,036,006	0.930
000000-00-0	2737 Applan Natural Resources Fund III LP	London SE1 9SG	WI	Applan Natural Resources Fund III LP		01/13/2023	3		.0		4,754,336	0.333
000000-00-0	2739 PPW Aero Topco LP	New York	NY	PPW Aero Topco LP		02/15/2023	3		.0		.0	0.001
000000-00-0	2741 Matador Film Partners LP	Denver	DE	Matador Film Partners LP		03/14/2023	3		.0		.0	2.000
000000-00-0	2744 OEP VIII Project Laser Co-Investment Partners LP	New York	NY	OEP VIII Project Laser Co-Investment Partners LP		03/17/2023	3		.0		.0	0.544
000000-00-0	2746 AEA SBP CF LP	New York	NY	AEA SBP CF LP		03/24/2023	3		.0		181,415	0.309
000000-00-0	2747 KLCC FEEDER FUND I LP	Wilmington	DE	KLCC FEEDER FUND I LP		03/31/2023	3		.0		.0	10.000
000000-00-0	2757 MassMutual Ventures US IV GP	Springfield	MA	MassMutual Ventures US IV GP		05/11/2023	3		.0		.0	1.000
000000-00-0	2759 MMV Climate Technology Fund GP	Springfield	MA	MMV Climate Technology Fund GP		05/15/2023	3		.0		.0	1.000
000000-00-0	2762 IPCC Advisor LP	Wilmington	DE	IPCC Advisor LP		05/25/2023	3		.0		.0	0.400
000000-00-0	2765 Energy Acquisition Vehicle II LP	Wilmington	DE	Energy Acquisition Vehicle II LP		06/01/2023	3		.0		.0	1.620
000000-00-0	6004 AltEnergy Storage LLC	Rowayton	CT	AltEnergy Storage LLC		09/28/2015	3		(2,617,730)		.0	13.710
000000-00-0	6005 Arclight Energy Partners Fund VI LP	Boston	MA	Arclight Energy Partners Fund VI LP		08/04/2015	3		(1,862,247)		1,961,335	0.250
000000-00-0	6007 Electric Gaurd Dog LLC	New York	NY	Electric Gaurd Dog LLC		06/08/2016	3		(4,561,357)		.0	2.350
000000-00-0	6010 NB Secondary Opportunities Fund III LP	New York	NY	NB Secondary Opportunities Fund III LP		05/23/2013	3		.0		3,701,072	0.794
000000-00-0	6028 River Cities Capital Fund VI LP	Davenport	IA	River Cities Capital Fund VI LP		02/15/2018	3		(1,314,030)		.0	3.500
000000-00-0	6033 Solamere Capital Fund II LP	Boston	MA	Solamere Capital Fund II LP		08/19/2013	3		.0		1,037,411	1.886
000000-00-0	6034 Solamere Capital Fund II-A LP	Boston	MA	Solamere Capital Fund II-A LP		08/19/2013	3		.0		584,939	1.760
000000-00-0	6035 Solamere Portfolio Company Investments II LLC Vivint	Boston	MA	Solamere Portfolio Company Investments II LLC Vivint		01/18/2019	3		.0		.0	8.293
000000-00-0	6037 Thorley Industries LLC	Pittsburgh	NY	Thorley Industries LLC		09/23/2015	3		.0		.0	8.210
000000-00-0	6038 Three Ocean Partners LLC	New York	NY	Three Ocean Partners LLC		06/01/2011	3		354,766		.0	1.000
000000-00-0	6039 Tritium Partners LLC	Austin	TX	Tritium Partners LLC		06/26/2015	3		.0		734,898	2.034
000000-00-0	6048 Gryphon Partners V LP	San Francisco	CA	Gryphon Partners V LP		08/29/2018	3		.0		.0	0.570
000000-00-0	6054 Greenspring Global Partners VIII LP	Owing Mills	MD	Greenspring Global Partners VIII LP		07/14/2017	3		.0		67,280	10.871
000000-00-0	6055 Greenspring Opportunities V LP	Owing Mills	MD	Greenspring Opportunities V LP		01/22/2018	3		.0		175,000	0.707
000000-00-0	6065 Corsair Boomer Investors LP	New York	NY	Corsair Boomer Investors LP		06/25/2018	3		.0		.0	9.845
000000-00-0	6066 Corsair V Financial Services Capital Partners LP	New York	NY	Corsair V Financial Services Capital Partners LP		06/25/2018	3		.0		2,713,950	1.360
000000-00-0	6067 NB Dyal IV US Investors LP	New York	NY	NB Dyal IV US Investors LP		06/11/2018	3		.0		4,951,798	0.273
000000-00-0	6072 Solamere Capital Fund III LP	Boston	MA	Solamere Capital Fund III LP		11/20/2018	3		.0		.0	1.571
000000-00-0	6075 Greenspring Global Partners IX-B LP	Owing Mills	MD	Greenspring Global Partners IX-B LP		02/08/2019	3		.0		371,370	0.278
000000-00-0	6085 Corsair Blade Investors LP	New York	NY	Corsair Blade Investors LP		12/16/2019	3		.0		.0	15.576
000000-00-0	6086 Gallant Capital Partners I LP	Los angeles	CA	Gallant Capital Partners I LP		05/29/2020	3		.0		1,086,946	3.145
000000-00-0	6088 Cross Creek Capital III LP	Salt Lake City	UT	Cross Creek Capital III LP		03/09/2021	3		.0		1,612,500	1.696
000000-00-0	6096 LLR Equity Partners VI LP	Philadelphia	PA	LLR Equity Partners VI LP		05/13/2021	3		.0		.0	0.390
000000-00-0	6098 Dyal V US Investors LP	New York	NY	Dyal V US Investors LP		10/01/2021	3		.0		6,537,072	0.145
000000-00-0	6099 NB Strategic Capital LP	New York	NY	NB Strategic Capital LP		03/05/2020	3		.0		3,378,599	1.013
000000-00-0	6118 Yukon Capital Partners II LP	Minneapolis	MN	Yukon Capital Partners II LP		07/17/2014	3		.0		573,966	0.953
000000-00-0	6124 Yukon Capital Partners III LP	Minneapolis	MN	Yukon Capital Partners III LP		07/18/2017	3		.0		982,263	0.029
000000-00-0	6129 SAAS Capital Fund III	Cincinnati	OH	SAAS Capital Fund III		08/09/2018	3		.0		.0	6.716
000000-00-0	6130 SAAS Capital Fund III (B) LP	Cincinnati	OH	SAAS Capital Fund III (B) LP		08/26/2020	3		.0		.0	7.583
000000-00-0	6135 NB Direct Access Insurance SPV LLC	Wilmington	DE	NB Direct Access Insurance SPV LLC		08/21/2020	3		.0		.0	21.429
000000-00-0	6136 Caltius Partners III LP	Los angeles	CA	Caltius Partners III LP		06/25/2004	3		.0		.0	1.200
000000-00-0	6138 A&M Capital Europe SCSp	Greenwich	CT	A&M Capital Europe SCSp		06/30/2019	3		.0		3,586,749	1.437
000000-00-0	6139 GreyLion Capital LP	New York	NY	GreyLion Capital LP		08/20/2014	3		.0		1,518,592	2.057
000000-00-0	6142 TriArtisan Orlando Partners LLC	New York	NY	TriArtisan Orlando Partners LLC		03/12/2018	3		.0		.0	11.502
000000-00-0	6143 Private Equity Solutions SCSP	Luxemburg	WI	Private Equity Solutions SCSP		12/16/2019	3		.0		1,557,288	1.585
000000-00-0	6146 Desri VI LLC	New York	NY	Desri VI LLC		12/17/2014	3		(705,408)		.0	4.110
000000-00-0	6149 Greylion Capital Fund III LP	New York	NY	Greylion Capital Fund III LP		12/14/2021	3		.0		1,437,322	0.688

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Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6	7	8	9	10	11	12	13
		3	4									
CUSIP Identification	Name or Description	City	State	Name of Vendor or General Partner	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol	Date Originally Acquired	Type and Strategy	Actual Cost at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Commitment for Additional Investment	Percentage of Ownership
1999999. Joint	Venture Interests - Common Stock - Unaffiliated							1,360,957	829,667	0	122,597,041	XXX
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund	Springfield	MA	Massachusetts Mutual Life Ins Co		10/06/2021	3				14,798,401	4.706
000000-00-0	2525 MM BIG Peninsula Co-Invest Member LLC	Hartford	CT	Massachusetts Mutual Life Ins Co		06/30/2021	3				2,139,457	5.710
000000-00-0	2530 MM Horizon Savannah Member LLC	Springfield	MA	Massachusetts Mutual Life Ins Co		10/25/2021	3				5,009,233	7.600
000000-00-0	2676 Trailside MM Member II LLC	Hartford	CT	Massachusetts Mutual Life Ins Co		07/26/2022	3		2,840,939		7,984,032	19.880
000000-00-0	2731 MM Kannapolis Industrial Member LLC	Boston	MA	Massachusetts Mutual Life Ins Co		02/08/2023	3		386,758			12.280
000000-00-0	2773 Arrow Prince Co-Investment SCSp	Grand Duchy of Luxembourg	WI	Bow Advisers II S a r l		07/25/2023	3	4,860,452			632,576	4.440
000000-00-0	6110 Lubert-Adler Workforce Housing Fund LP	Philadelphia	PA	Lubert-Adler Group WH LP		10/01/2021	3		2,625,000		1,500,000	3.548
2199999. Joint	Venture Interests - Real Estate - Unaffiliated							4,860,452	5,852,697	21,947,091	24,438,456	XXX
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	Hartford	CT	BREDIF GP LLC		03/24/2021	3		16,138,578		4,459,269	24.081
000000-00-0	2735 MALIC Debt Participations LLC	Charlotte	NC	MassMutual Ascend Life Insurance Company		02/06/2023	3		445			100.000
000000-00-0	6115 SHARB Investors LP	New York	NY	Waterfall Sentinel GP LLC		11/24/2020	3		15,547			23.330
2399999. Joint	Venture Interests - Mortgage Loans - Unaffiliated							0	16,154,570	0	4,459,269	XXX
000000-00-0	2601 BSP TS Co-Invest I LLC	New York	NY	Broad Sky Partners LLC		12/10/2021	3		1,324,463			
000000-00-0	2616 Stork SPV LP	Greenwich	CT	Amulet Capital Fund II GP LP		12/20/2021	3		18,208			4.526
000000-00-0	2673 KSL Capital Partners CV I LP	Denver	CO	KSL Capital Partners		05/25/2022	1		2,993		1,357,002	0.578
000000-00-0	2778 PROCESS INSIGHTS EQUITY LP	San Francisco	CA	Process Insights General Partner LLC		07/18/2023	2	24,000				0.015
000000-00-0	2782 Q-Energy V FCR	Madrid	NY	Amulet Capital Fund II GP LP		08/18/2023	3	491,201	417,049		2,131,036	0.150
000000-00-0	2785 REP HS Holding LLC	Salt Lake City	UT	REP HS Holding LLC		08/31/2023	2	8,562				0.002
000000-00-0	2786 Rock Labor Holdings LLC	West Palm Beach	FL	Rock Labor Holdings LLC		09/14/2023	2	49,597				0.992
000000-00-0	2787 NAW HOLDINGS LLC	Radnor	PA	Rock Labor Holdings LLC		09/13/2023	2	26,726				1.363
000000-00-0	2790 BharCap Acquisition II LP	Greenwich	CT	BharCap Partners		09/08/2023	3	1,800,000				0.622
2599999. Joint	Venture Interests - Other - Unaffiliated							2,400,086	1,762,713	0	3,488,038	XXX
530790-AC-1	8518 Liberty Mutual Insurance Company Surplus Note 7.875	Cincinnati	OH	Stifel	2-A FE	08/31/2017	3					
000000-00-0	8012 Nationwide Mutual Ins Co	Springfield	MA	Nationwide Mutual Ins Co		08/31/2017	3		(7,097,031)			
000000-00-0	8033 United Educators Insurance	Springfield	MA	United Educators Insurance		04/30/2023	3					
000000-00-0	8507 PACIFIC LIFE INSURANCE 9.25 06/15/2039	Springfield	MA	PACIFIC LIFE INSURANCE 9.25 06/15/2039		10/01/2021	3		(2,872,446)			
2799999. Surplus Debentures, etc - Unaffiliated								0	(9,969,477)	0	0	XXX
US0561-6M-A	7111 BABSON CLO LTD 2015-II SUB NT	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(7,539)			
	7135 AMMC CLO XI Ltd-AMMC 2012-11A	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(662,384)			
US0017-7C-A	7136 Ammc CLO 20 Ltd-AMMC 2017-20A	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(562,442)			
US0017-5N-A	7138 AMMC CLO 15 Ltd-AMMC 2014-15A	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(845,961)			
US0017-6N-A	7140 AMMC CLO 22 Ltd-AMMC 2018-22A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(483,283)			
US0017-6R-A	7141 AMMC CLO 23 Ltd-AMMC 2020-23A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(889,908)			
US0017-9T-A	7142 AMMC CLO 21 LTD-AMMC 2017-21A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(92,239)			
US0017-43-A	7143 AMMC CLO 18 Ltd-AMMC 2016-18A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(1,774,426)			
US0017-6E-A	7144 AMMC CLO XII Ltd-AMMC 2013-12A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(582,412)			
US0017-6O-A	7145 Ammc CLO 19 Ltd-AMMC 2016-19A	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		(2,144,707)			
US2682-9D-A	7146 Man GLG US CLO-GLGU 2018-1A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		3,994,227			
US5595-3P-A	7147 Magnetite XVI Ltd-MAGNE 2015-16A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		16,228			
US0676-3C-A	7155 Babson CLO Ltd/Cayman Is-BABSON LP-2A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		234,730			
US3631-9N-A	7161 Galaxy XXIII CLO Ltd-GALXY 2017-23A SUBA	Springfield	MA	Massachusetts Mutual Life Ins Co		05/09/2014	3		412,851			
46655H-AK-9	7164 JCP Direct Lending CLO 2022 LLC	Springfield	MA	Massachusetts Mutual Life Ins Co		03/13/2014	3		112,760			
53950T-10-5	7165 Loan Asset Issuer LLC SER 2021 M-2	Springfield	MA	Massachusetts Mutual Life Ins Co		03/13/2014	3		9,396,474			
53950X-10-6	7166 Loan Asset Issuer LLC Series 2022 NG-1	Springfield	MA	Massachusetts Mutual Life Ins Co		03/13/2014	3					
000000-00-0	7170 RT balancing	Springfield	MA	Massachusetts Mutual Life Ins Co		01/01/2023	3		15,378,409			
00834H-10-4	7171 Affirm Asset Securitizat-2022-X1 CERT	Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3		(5,228,444)			
	7174 Loan Asset Issuer LLC - Series 2021 NG-1 Class A Asset Backe											
53948W-10-3		Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3		(4,877,738)			
US9291-7T-A	7177 Voya CLO 2018-2 Ltd-VOYA 2018-2A SUB	Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3		72,862			
US4493-1B-A	7182 ICG 2015-1A SUB VARIABLE COUPON 0.000000 MATURITY 20281019	Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3					
US5018-8R-A	7183 LCM 19A INC VARIABLE COUPON 0.000000 MATURITY 20270715	Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3		(1,270,370)			
US6759-23-A	7184 OCT34 2017-1A SUB1 VARIABLE COUPON 0.000000 MATURITY 203001	Springfield	MA	Massachusetts Mutual Life Ins Co		03/31/2023	3					
87251F-AF-6	7202 TCW DIRECT LENDING STRUCTURED SOLUTIONS 2022 LLC - CERTIFICA	White Plains	NY	Massachusetts Mutual Life Ins Co		03/13/2014	3		2,000,000			

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 2

Showing Other Long-Term Invested Assets ACQUIRED AND ADDITIONS MADE During the Current Quarter

1	2	Location		5	6 NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol	7	8	9	10	11	12	13
		3	4									
CUSIP Identification	Name or Description	City	State	Name of Vendor or General Partner		Date Originally Acquired	Type and Strategy	Actual Cost at Time of Acquisition	Additional Investment Made After Acquisition	Amount of Encumbrances	Commitment for Additional Investment	Percentage of Ownership
45112A-AA-5	7137 AMMC CLO XIV Ltd-AMMC 2014-14A	Springfield	MA.....	AMMC CLO XIV Ltd-AMMC 2014-14A		05/09/2014	3.....		(1,030,981)		0	
	7139 AMMC CLO XIII Ltd-AMMC 2013-13A	Springfield	MA.....	AMMC CLO XIII Ltd-AMMC 2013-13A		05/09/2014	3.....		(1,218)		0	
	7159 Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A SUB	Springfield	MA.....	Oaktree CLO 2015-1 Ltd-OAKCL 2015-1A SUB		05/09/2014	3.....		(266,701)		0	
	7172 ICON BRAND HOLDINGS	Springfield	MA.....	RT balancing			3.....		(2,803,760)		0	
4699999. Residual Tranches or Interests with Underlying Assets Having Characteristics of Fixed Income Instruments - Unaffiliated								0	8,094,027	0	0	XXX
6099999. Total - Unaffiliated								9,421,495	24,435,023	21,947,091	178,099,173	XXX
6199999. Total - Affiliated								0	0	0	0	XXX
6299999 - Totals								9,421,495	24,435,023	21,947,091	178,099,173	XXX

SCHEDULE BA - PART 3

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

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (De-crease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other Than Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consid-eration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Invest-ment Income
000000-00-0	2725 Sprott Private Resource Lending Fund III LP	Toronto	OH.....	Distribution	11/29/2022 ...	09/26/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	92,578	.....	.....	.....0	.....
1399999. Non-Registered Private Funds - Other Fixed Income Instruments - Unaffiliated								0	0	0	0	0	0	0	92,578	0	0	0	0
000000-00-0	6116 Sierra Senior Loan Strategy JV I LLC ..	New York	NY.....	Distribution	07/16/2015 ...	09/25/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	317,890	.....	.....	.....0	.....
000000-00-0	6123 NB Private Equity Credit Opportunities Fund LP	New York	NY.....	Distribution	06/07/2017 ...	08/01/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	525,035	.....	.....	.....0	.....
000000-00-0	6126 Gryphon Mezzanine Partners LP	San Francisco	CA.....	Distribution	11/30/2017 ...	07/28/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	135,718	.....	.....	.....0	.....
000000-00-0	6132 Sagard Credit Partners LP	Toronto	OH.....	Distribution	10/09/2018 ...	08/14/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	77,775	.....	.....	.....0	.....
000000-00-0	6133 PineBridge Private Credit Feeder LP	New York	NY.....	Distribution	11/28/2018 ...	09/30/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	186,075	.....	.....	.....0	.....
000000-00-0	6137 Cyprium Parallel Investors V LP	Cleveland	OH.....	Distribution	08/15/2019 ...	08/23/2023 ...	.....	.....	.....	.....	.....	0	.....	.....	221,928	.....	.....	.....0	.....
1799999. Joint Venture Interests - Fixed Income - NAIC Designation Not Assigned by the SVO - Unaffiliated								0	0	0	0	0	0	0	1,464,421	0	0	0	0
000000-00-0	2581 Energy Impact Fund II LP	New York	NY.....	Distribution	11/12/2021 ...	08/21/2023 ...	.....	0	.....	.....	.....	0	.....	.....	173,750	.....	.....	.....0	.....
000000-00-0	2584 One Equity Partners VIII LP	New York	NY.....	Distribution	01/26/2022 ...	07/31/2023 ...	.....	0	.....	.....	.....	0	.....	.....	53,709	.....	.....	.....0	.....
000000-00-0	2622 OceanSound Partners Fund LP	New York	NY.....	Distribution	12/27/2021 ...	09/13/2023 ...	.....	0	.....	.....	.....	0	.....	.....	16,103	.....	.....	.....0	.....
000000-00-0	2686 SER Capital Partners I LP	Houston	TX.....	Distribution	07/31/2021 ...	08/31/2023 ...	.....	0	.....	.....	.....	0	.....	.....	62,115	.....	.....	.....0	.....
000000-00-0	2705 Energy Acquisition Vehicle LP	New York	NY.....	Distribution	09/22/2022 ...	09/06/2023 ...	.....	0	.....	.....	.....	0	.....	.....	413,037	.....	.....	.....0	.....
000000-00-0	2713 Rockland Power Partners IV LP	The Woodlands	TX.....	Distribution	10/20/2022 ...	08/18/2023 ...	.....	0	.....	.....	.....	0	.....	.....	232,083	.....	.....	.....0	.....
000000-00-0	2756 IPOC Fund LP	Wilmington	DE.....	Distribution	05/25/2023 ...	07/14/2023 ...	.....	0	.....	.....	.....	0	.....	.....	10,583	.....	.....	.....0	.....
000000-00-0	6005 Arclight Energy Partners Fund VI LP ...	Boston	MA.....	Distribution	08/04/2015 ...	09/30/2023 ...	.....	0	.....	.....	.....	0	.....	.....	689,655	.....	.....	.....0	.....
000000-00-0	6009 LLR Equity Partners IV LP	Philadelphia	PA.....	Distribution	03/14/2014 ...	09/21/2023 ...	.....	0	.....	.....	.....	0	.....	.....	43,665	.....	.....	.....0	.....
000000-00-0	6010 NB Secondary Opportunities Fund III LP	New York	NY.....	Distribution	05/23/2013 ...	07/01/2023 ...	.....	0	.....	.....	.....	0	.....	.....	95,678	.....	.....	.....0	.....
000000-00-0	6011 NB Strategic Co-Investment Partners II LP	New York	NY.....	Distribution	10/01/2012 ...	07/21/2023 ...	.....	0	.....	.....	.....	0	.....	.....	801,304	.....	.....	.....0	.....

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE BA - PART 3

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

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encumbrances, Prior Year	Unrealized Valuation Increase (Decrease)	Current Year's (Depreciation) or (Amortization)/ Accretion	Current Year's Other Than Temporary Impairment Recognized	Capitalized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10-11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encumbrances on Disposal	Consideration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Investment Income
000000-00-0	6012 NB Strategic Co-Investment Partners III LP	New York	NY	Distribution	01/28/2016	09/01/2023		0				0			140,855			0	
000000-00-0	6013 NB Secondary Opportunities Fund IV LP	New York	NY	Distribution	04/19/2017	09/01/2023		0				0			248,428			0	
000000-00-0	6018 Greenspring Opportunities IV LP	Owing Mills	MD	Distribution	04/25/2016	08/04/2023		0				0			1,443,750			0	
000000-00-0	6022 Patriot Financial Partners II LP	Radnor	PA	Distribution	04/30/2014	09/01/2023		0				0			427,167			0	
000000-00-0	6032 Snow Phipps LP	New York	NY	Distribution	02/06/2007	08/24/2023		0				0			451,651			0	
000000-00-0	6036 Solanere Portfolio Company Investments II LLC	Boston	MA	Distribution	04/18/2016	07/01/2023		0				0			(906,623)			0	
000000-00-0	6047 Gryphon Partners IV LP	San Francisco	CA	Distribution	12/06/2016	09/25/2023		0				0			20,925			0	
000000-00-0	6053 Energy Impact Fund LP	New York	NY	Distribution	05/11/2017	08/02/2023		0				0			454,439			0	
000000-00-0	6055 Greenspring Opportunities V LP	Owing Mills	MD	Distribution	01/22/2018	08/04/2023		0				0			472,500			0	
000000-00-0	6057 LLR Equity Partners V LP	Philadelphia	PA	Distribution	03/31/2017	09/28/2023		0				0			434,383			0	
000000-00-0	6063 Rivercrest Capital Partners LP	Fort Worth	TX	Distribution	04/02/2018	09/29/2023		0				0			102,460			0	
000000-00-0	6066 Corsair V Financial Services Capital Partners LP	New York	NY	Distribution	06/25/2018	08/10/2023		0				0			10,699			0	
000000-00-0	6068 Trilantic Capital Partners VI LP	New York	NY	Distribution	07/25/2018	09/12/2023		0				0			25,264			0	
000000-00-0	6073 Roark Capital Partners Fund V LP	New York	NY	Distribution	11/01/2018	09/20/2023		0				0			44,680			0	
000000-00-0	6076 Blackstone Tactical Opportunities Fund III LP	New York	NY	Distribution	02/08/2019	09/18/2023		0				0			230,677			0	
000000-00-0	6083 Tritium Partners II LLC	Austin	TX	Distribution	11/13/2019	09/28/2023		0				0			177,071			0	
000000-00-0	6086 Gallant Capital Partners I LP	Los Angeles	CA	Distribution	05/29/2020	09/27/2023		0				0			14,688			0	
000000-00-0	6091 CCA Life Settlements Fund II LP	Dublin	US	Distribution	12/16/2019	08/31/2023		0				0			149,344			0	
000000-00-0	6098 Dyal V US Investors LP	New York	NY	Distribution	10/01/2021	09/01/2023		0				0			38,459			0	
000000-00-0	6100 NB Strategic Co-Investment Partners IV LP	New York	NY	Distribution	01/29/2020	08/24/2023		0				0			2,077			0	
000000-00-0	6102 Riverwood Capital Partners III LP	Menlo Park	CA	Distribution	03/27/2020	09/08/2023		0				0			665,405			0	
000000-00-0	6140 GreyLion Capital II LP	New York	NY	Distribution	02/28/2018	07/31/2023		0				0			93,502			0	
000000-00-0	6080 Cincinnati Cornerstone Investors BWI I LLC	Cincinnati	OH	Distribution	06/28/2019	03/01/2023		(8,621)	8,621			(17,242)			0			0	
000000-00-0	6087 Refinery Venture Fund II LP	Cincinnati	OH	Distribution	11/19/2019	03/01/2023		(23,496)	23,496			(46,992)			0			0	
000000-00-0	6041 L-A Saturn Acquisition LP	Philadelphia	PA	Distribution								0			15,499,684			0	
000000-00-0	6128 World Trade Finance LLC	Oak Brook	IL	Distribution	04/20/2020	06/30/2023		(5,991)	5,991			(11,982)			0			0	
1999999. Joint Venture Interests - Common Stock - Unaffiliated								0	(38,108)	0	38,108	0	(76,216)	0	22,832,566	0	0	0	0
000000-00-0	2458 Barings Innovations & Growth Real Estate Fund	Springfield	MA	Distribution	10/06/2021	08/01/2023						0			1,077,484			0	
000000-00-0	2737 Appian Natural Resources Fund III LP	London	OH	Distribution	01/13/2023	08/23/2023						0			42,572			0	
000000-00-0	6106 Lubert-Adler Real Estate Fund VII LP	Philadelphia	PA	Distribution	10/15/2013	08/31/2023						0			1,782,610			0	
2199999. Joint Venture Interests - Real Estate - Unaffiliated								0	0	0	0	0	0	0	2,902,666	0	0	0	0
000000-00-0	2461 Barings Real Estate Debt Income Fund LP	Hartford	CT	Distribution	03/24/2021	09/30/2023						0			1,294,045			0	
000000-00-0	2461A Barings Real Estate Debt Income Fund LP	Hartford	CT	Distribution	03/24/2021	09/30/2023						0			2,879,981			0	
000000-00-0	6114 Pretium Mortgage Credit Partners I LP	New York	NY	Distribution	12/04/2014	08/10/2023						0			223,700			0	
000000-00-0	6115 SHARB Investors LP	New York	NY	Distribution	11/24/2020	09/01/2023						0			236,383			0	
2399999. Joint Venture Interests - Mortgage Loans - Unaffiliated								0	0	0	0	0	0	0	4,634,109	0	0	0	0
000000-00-0	2616A Stork SPV LP	Greenwich	CT	Distribution	12/20/2021	07/07/2023						0			5,297			0	
000000-00-0	2707 TSS Co-Invest Holdings LP	Beverly Hills	CA	Distribution	09/09/2022	09/29/2023						0			5,595			0	
000000-00-0	2765 Energy Acquisition Vehicle II LP	Wilmington	DE	Distribution	06/01/2023	09/29/2023						0			2,567,381			0	
2599999. Joint Venture Interests - Other - Unaffiliated								0	0	0	0	0	0	0	2,578,273	0	0	0	0
638671-AK-3	8012 Nationwide Mutual Ins Co	Springfield	MA	Distribution								0			(7,097,031)			0	
743917-AH-9	8015 Prudential Ins Co America	Springfield	MA	Distribution								0			(140,555)			0	
694475-AA-2	8507 PACIFIC LIFE INSURANCE 9.25 06/15/2039	Springfield	MA	Distribution								0			(2,872,446)			0	
2799999. Surplus Debentures, etc - Unaffiliated								0	0	0	0	0	0	0	(10,110,032)	0	0	0	0

SCHEDULE BA - PART 3

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

1	2	Location		5	6	7	8	Change in Book/Adjusted Carrying Value						15	16	17	18	19	20
		3	4					9	10	11	12	13	14						
CUSIP Identification	Name or Description	City	State	Name of Purchaser or Nature of Disposal	Date Originally Acquired	Disposal Date	Book/ Adjusted Carrying Value Less Encum- brances, Prior Year	Unrealized Valuation Increase (De- crease)	Current Year's (Depre- ciation) or (Amorti- zation)/ Accretion	Current Year's Other Than Temporary Impair- ment Recog- nized	Capital- ized Deferred Interest and Other	Total Change in Book/ Adjusted Carrying Value (9+10- 11+12)	Total Foreign Exchange Change in Book/ Adjusted Carrying Value	Book/ Adjusted Carrying Value Less Encum- brances on Disposal	Consid- eration	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Invest- ment Income
6099999. Total - Unaffiliated							0	(38,108)	0	38,108	0	(76,216)	0	0	24,394,581	0	0	0	0
6199999. Total - Affiliated							0	0	0	0	0	0	0	0	0	0	0	0	0
6299999 - Totals							0	(38,108)	0	38,108	0	(76,216)	0	0	24,394,581	0	0	0	0

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
36179Y-AS-3	Ginnie Mae II Pool-POOL #MA9017		08/01/2023	GOLDMAN		24,711,149	24,950,912	7,624	1.A
36179Y-DK-7	Ginnie Mae II Pool-POOL #MA9106		08/09/2023	VARIOUS		44,595,117	45,000,000	38,194	1.A
91282C-GB-1	United States Treasury N-UNSECURED		07/31/2023	BNP PARIBAS		39,920,977	40,500,000	136,487	1.A
91282C-HJ-3	United States Treasury N-UNSECURED		07/13/2023	BMO CAPITAL MARKETS		114,816,977	115,630,000	164,961	1.A
91282C-HK-0	United States Treasury N-UNSECURED		07/13/2023	BOFAMLSEC		114,838,325	114,610,000	174,407	1.A
91282C-HM-6	United States Treasury N-UNSECURED		07/31/2023	VARIOUS		339,754,340	337,900,000	210,852	1.A
91282C-HQ-7	United States Treasury N-UNSECURED		08/14/2023	WELLS FARGO		254,884,451	256,020,000	147,446	1.A
91282C-HR-5	United States Treasury N-UNSECURED		08/14/2023	VARIOUS		204,894,275	206,610,000	122,984	1.A
91282C-HU-8	United States Treasury N-UNSECURED		08/14/2023	RBC CAPITAL MARKETS		70,003,780	70,530,000	0	1.A
0109999999	Subtotal - Bonds - U.S. Governments					1,208,419,391	1,211,750,912	1,002,935	XXX
3133KR-MX-9	Freddie Mac Pool-FR RA9374		08/22/2023	BARCLAYS CAPITAL INC		23,987,355	24,488,606	86,050	1.A
3140QS-QC-8	Fannie Mae Pool-POOL #CB6750		08/22/2023	DAIWA SECURITIES AME		29,076,309	29,511,293	73,642	1.A
3140QS-TZ-4	Fannie Mae Pool-POOL #CB6867		08/09/2023	WELLS FARGO		19,846,738	19,984,128	39,691	1.A
9140XL-W6-1	Fannie Mae Pool-POOL #FS5168		08/22/2023	MIZUHO SECURITIES		14,466,553	14,728,912	51,756	1.A
47770V-AY-6	JobsOhio Beverage System-REVENUE BONDS		08/17/2023	BOFAMLSEC		4,630,700	4,775,000	26,428	1.D FE
0909999999	Subtotal - Bonds - U.S. Special Revenues					92,007,655	93,487,940	277,567	XXX
00726L-AC-0	Adomni Inc-FIRST LIEN		08/15/2023	SWBC		15,500,000	15,500,000	0	1.D Z
02665W-DZ-1	American Honda Finance C-SENIOR UNSECURE		08/17/2023	RBC CAPITAL MARKETS		5,163,487	5,815,000	34,018	1.G FE
02665W-EH-0	American Honda Finance C-SENIOR UNSECURE		08/07/2023	VARIOUS		15,687,797	15,987,000	214,620	1.G FE
03217R-AA-1	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 A		08/25/2023	DIRECT		58,650,717	63,144,000	0	1.A FE
03217R-AB-9	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 B		08/25/2023	DIRECT		20,052,493	22,123,500	0	1.D FE
03217R-AC-7	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 C		08/25/2023	DIRECT		8,281,304	9,218,000	0	1.G FE
03217R-AD-5	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 D		08/25/2023	DIRECT		9,720,569	11,062,000	0	2.C FE
03217R-AE-3	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 E1		08/25/2023	DIRECT		16,243,404	19,358,000	0	2.B FE
03217R-AF-0	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 E2		08/25/2023	DIRECT		6,432,801	7,835,500	0	2.C FE
03217R-AG-8	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 F1		08/25/2023	DIRECT		7,015,946	9,218,000	0	3.B FE
03217R-AH-6	AMSR 2023-SFR3 Trust-AMSR 2023-SFR3 F2		08/25/2023	DIRECT		3,990,772	5,531,000	0	3.C FE
037389-BE-2	Aon Corp-SENIOR UNSECURED		08/24/2023	VARIOUS		3,419,931	3,997,000	32,020	2.A FE
03939C-AA-1	ARCH CAPITAL FINANCE LLC-SENIOR UNSECURE		08/24/2023	WELLS FARGO		8,098,286	8,510,000	69,215	2.A FE
039482-AD-6	Archer-Daniels-Midland C-SENIOR UNSECURE		07/26/2023	CANTOR		2,739,677	3,135,000	37,124	1.F FE
05377R-EA-8	Avis Budget Rental Car F-AESOP 2020-2A B		08/29/2023	BARCLAYS CAPITAL INC		2,163,341	2,335,000	2,112	1.F FE
05377R-FL-3	Avis Budget Rental Car F-AESOP 2022-3A B		08/31/2023	JP MORGAN SECURITIES		2,435,156	2,500,000	5,531	1.F FE
05377R-FW-9	Avis Budget Rental Car F-AESOP 2022-5A B		08/31/2023	BNP PARIBAS		2,530,786	2,498,000	7,380	1.F FE
05377R-HG-2	Avis Budget Rental Car F-AESOP 2023-6A A		08/10/2023	AMHERST SECURITIES		6,425,507	6,402,000	24,797	1.A FE
05377R-HH-0	Avis Budget Rental Car F-AESOP 2023-6A B		07/26/2023	BNP PARIBAS		2,500,488	2,500,000	3,556	1.F FE
05377R-HL-1	Avis Budget Rental Car F-AESOP 2023-7A A		09/12/2023	BOFAMLSEC		4,248,754	4,250,000	0	1.A FE
05377R-HM-9	Avis Budget Rental Car F-AESOP 2023-8A A		09/12/2023	BOFAMLSEC		4,998,038	5,000,000	0	1.A FE
05377R-HN-7	Avis Budget Rental Car F-AESOP 2023-8A B		09/12/2023	BOFAMLSEC		11,749,031	11,750,000	0	1.F FE
05377R-HR-8	Avis Budget Rental Car F-AESOP 2023-7A B		09/12/2023	BOFAMLSEC		5,999,036	6,000,000	0	1.F FE
05565E-CE-3	BMW US Capital LLC-SENIOR UNSECURED		08/17/2023	VARIOUS		9,842,787	10,000,000	14,028	1.F FE
05592X-AD-2	BMW Vehicle Owner Trust -BMWOT 2023-A A3		08/22/2023	SMBC NIKKO SECURITIE		10,030,350	10,019,000	54,804	1.A FE
07335B-AA-4	US Renal Care Inc-SENIOR UNSECURED		08/14/2023	BARCLAYS CAPITAL INC		1,176,800	2,942,000	25,181	6. FE
09345B-AD-2	Blast Motion Inc-FIRST LIEN		08/14/2023	DTCYID		14,650,000	14,650,000	0	1.E PL
09581H-AA-2	Blue Owl GP Stakes V Iss Senior Secured		09/07/2023	VARIOUS		26,197,500	26,197,500	0	1.D PL
09581H-AA-4	Blue Owl GP Stakes V Iss Senior Secured		09/07/2023	DIRECT		26,302,500	26,302,500	0	1.D PL
10373Q-BM-1	BP Capital Markets Ameri-SENIOR UNSECURE		07/31/2023	BOFAMLSEC		11,463,760	14,000,000	116,989	1.F FE
120568-AZ-3	Bunge Ltd Finance Corp-SENIOR UNSECURED		08/17/2023	BARCLAYS CAPITAL INC		2,662,960	2,849,000	43,329	2.B FE
125523-AH-3	Cigna Corp-SENIOR UNSECURED		07/31/2023	BARCLAYS CAPITAL INC		9,679,900	10,000,000	130,035	2.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
125523-CL-2	Cigna Corp-SENIOR UNSECURED		..08/24/2023	U. S. BANCORP		8,352,300	10,000,000	108,667	2.A FE
12563L-AS-6	CLI Funding VI LLC-2020-3A A		..07/25/2023	MITSUBISHI UFJ SEC I		4,149,859	4,771,667	2,469	1.F FE
12565K-AA-5	CLI Funding VIII LLC-CLIF 2021-1A A		..07/12/2023	CANTOR		833,309	972,099	1,151	1.F FE
12569Q-AA-8	CHNGE Mortgage Trust 202-CHNGE 2023-4 A1		..08/22/2023	CANTOR		5,761,680	5,750,000	27,820	1.A FE
12656V-AD-5	C3 Nano Inc-SECURED		..08/24/2023	DTCYID		15,700,000	15,700,000	0	1.E PL
126650-DM-9	CYS Health Corp-SENIOR UNSECURED		..08/24/2023	VARIOUS		8,681,153	10,154,000	2,587	2.B FE
126694-2H-0	CHL Mortgage Pass-Through-CIHL 2006-10 1A		..07/25/2023	PAYUP		145	0	0	3.C FM
149123-CH-2	Caterpillar Inc-SENIOR UNSECURED		..07/26/2023	BNP PARIBAS		4,450,200	5,000,000	39,361	1.F FE
14913R-2K-2	Caterpillar Financial Se-SENIOR UNSECURE		..08/17/2023	RBC CAPITAL MARKETS		4,497,700	5,000,000	21,125	1.F FE
14913U-AA-8	Caterpillar Financial Se-SENIOR UNSECURE		..09/27/2023	JP MORGAN SECURITIES		9,183,545	9,414,000	152,428	1.F FE
165183-DB-7	Chesapeake Funding II LL-CFII 2023-2A B		..09/12/2023	TORONTO DOMINION SEC		1,479,907	1,480,000	0	1.C FE
165183-DC-5	Chesapeake Funding II LL-CFII 2023-2A C		..09/12/2023	TORONTO DOMINION SEC		4,998,613	5,000,000	0	1.F FE
169926-AA-0	CHNGE Mortgage Trust 202-CHNGE 2023-2 A1		..08/22/2023	MIZUHO SECURITIES		4,697,940	4,775,543	19,908	1.A FE
17025A-AH-5	CHL Mortgage Pass-Through-CIHL 2006-17 A8		..07/25/2023	PAYUP		(40,509)	(40,509)	0	1.A FM
17030A-AA-3	CHNGE Mortgage Trust 202-CHNGE 2023-3 A1		..08/22/2023	MIZUHO SECURITIES		4,243,799	4,271,833	19,378	1.A FE
171937-AA-3	CIFC-LBC MIDDLE MKT CLO 2023-1 LLC - CLB		..08/31/2023	WELLS FARGO		15,000,000	15,000,000	0	2.A Z
171937-AE-5	CIFC-LBC MIDDLE MKT CLO 2023-1 LLC - CLB		..08/31/2023	WELLS FARGO		7,500,000	7,500,000	0	2.A Z
171937-AG-0	CIFC-LBC MIDDLE MKT CLO 2023-1 LLC - CLB		..08/31/2023	WELLS FARGO		5,000,000	5,000,000	0	2.A Z
18453H-AE-6	Clear Channel Outdoor Ho-FIRST LIEN		..08/08/2023	MORGAN		2,483,000	2,483,000	0	4.B FE
186858-AP-7	Cliffwater Corporate Len Senior Secured		..08/04/2023	MITSUBISHI UFJ SEC I		10,000,000	10,000,000	0	1.C PL
19828A-AA-5	Columbia Pipelines Holdi-SENIOR UNSECURE		..08/24/2023	VARIOUS		5,033,223	5,000,000	16,819	2.B FE
19828A-AB-3	CPGX 6.042 08/15/28-SENIOR UNSECURED		..08/17/2023	VARIOUS		35,092,674	35,000,000	12,588	2.B FE
19828T-AA-4	Columbia Pipelines Opera-SENIOR UNSECURE		..08/17/2023	CITIGROUP GLOBAL MAR		4,987,900	5,000,000	10,702	2.A FE
20825C-AF-1	ConocoPhillips-UNSECURED SENIOR NOTE		..07/26/2023	JP MORGAN SECURITIES		8,820,327	8,157,000	137,695	1.F FE
22966R-AF-3	CubeSmart LP-SENIOR UNSECURED		..08/17/2023	WELLS FARGO		8,433,200	10,000,000	5,000	2.B FE
22966R-AH-9	CubeSmart LP-SENIOR UNSECURED		..08/17/2023	WELLS FARGO		1,172,808	1,400,000	5,775	2.B FE
238021-AA-7	DATA 2023-CNTR Mortgage -DATA 2023-CNTR		..07/05/2023	BARCLAYS CAPITAL INC		9,743,160	10,000,000	31,239	1.A FE
238021-AE-9	DATA 2023-CNTR Mortgage -DATA 2023-CNTR		..07/05/2023	BARCLAYS CAPITAL INC		4,730,220	5,000,000	15,620	1.D FE
238021-AG-4	DATA 2023-CNTR Mortgage -DATA 2023-CNTR		..07/05/2023	BARCLAYS CAPITAL INC		3,371,306	3,750,000	11,715	1.G FE
24422E-WZ-8	John Deere Capital Corp-SENIOR UNSECURED		..07/31/2023	VARIOUS		13,987,460	14,000,000	90,867	1.F FE
24703T-AD-8	Dell International LLC -FIRST LIEN		..08/08/2023	CITIGROUP GLOBAL MAR		4,163,304	4,100,000	37,709	2.B FE
26441C-AS-4	Duke Energy Corp-SENIOR UNSECURED		..08/08/2023	CITIGROUP GLOBAL MAR		9,295,800	10,000,000	117,042	2.B FE
31740J-AA-6	FINANCE OF AMERICA STRUC-FASST 2023-RMF1		..07/25/2023	VARIOUS		(143,756)	(143,756)	0	1.A PL
34535C-AB-2	Ford Credit Auto Owner T-FORDR 2023-2 B		..08/01/2023	BOFAMLSEC		9,998,906	10,000,000	0	1.C FE
34535C-AC-0	Ford Credit Auto Owner T-FORDR 2023-2 C		..08/01/2023	BOFAMLSEC		9,997,274	10,000,000	0	1.F FE
36169E-AE-0	GECU Auto Receivables Tr-GECU 2023-1A B		..08/07/2023	BOFAMLSEC		4,099,583	4,100,000	0	1.C FE
36169E-AF-7	GECU Auto Receivables Tr-GECU 2023-1A C		..08/07/2023	BOFAMLSEC		3,649,317	3,650,000	0	1.F FE
36267K-AE-7	GM Financial Consumer Au-GMCAR 2023-3 A4		..08/21/2023	MIZUHO SECURITIES		11,727,450	11,680,000	12,128	1.A FE
379929-AE-2	GM Financial Automobile -GMALT 2023-3 A4		..08/08/2023	JP MORGAN SECURITIES		4,249,435	4,250,000	0	1.A FE
38012R-AA-4	GM Financial Revolving R-GMREV 2023-1 A		..08/01/2023	BARCLAYS CAPITAL INC		24,796,898	24,900,000	77,909	1.A FE
381938-AB-5	GOLUB CAPITAL PARTNERS A-GCPAF 2023-1A A		..07/31/2023	DIRECT		1,000,000	1,000,000	0	1.F Z
40054H-AA-5	Gryphon Mezzanine Partne Note		..07/28/2023	DIRECT		155,199	155,199	0	2.A PL
42806M-AE-9	Hertz Vehicle Financing -HERTZ 2021-2A A		..07/17/2023	BOFAMLSEC		6,678,945	7,644,000	8,561	1.A FE
42806M-CE-7	Hertz Vehicle Financing -HERTZ 2023-4A A		..08/16/2023	JP MORGAN SECURITIES		2,899,526	2,900,000	0	1.A FE
42806M-CF-4	Hertz Vehicle Financing -HERTZ 2023-4A B		..08/16/2023	JP MORGAN SECURITIES		6,997,567	7,000,000	0	1.F FE
43283B-AB-9	Hilton Grand Vacations T-HGVT 2022-10 B		..08/02/2023	BARCLAYS CAPITAL INC		2,512,699	2,647,559	4,221	1.G FE
432917-AB-8	Hilton Grand Vacations T-HGVT 2023-1A B		..09/07/2023	VARIOUS		18,487,469	18,500,000	35,217	1.G FE
437076-BW-1	Home Depot Inc/The-SENIOR UNSECURED		..09/27/2023	VARIOUS		7,343,807	7,802,000	95,509	1.F FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
43815P-AC-3	Honda Auto Receivables 2-HAROT 2022-2 A3		08/22/2023	BOFAMLSEC		30,465,088	31,250,000	19,427	1.A FE
44891A-CN-5	Hyundai Capital America-SENIOR UNSECURED		09/27/2023	BOFAMLSEC		8,265,820	8,335,000	11,299	2.A FE
482480-AG-5	KLA Corp-SENIOR UNSECURED		07/24/2023	TORONTO DOMINION SEC		4,852,050	5,000,000	74,597	1.G FE
532716-AN-7	Bath & Body Works Inc-SENIOR UNSECURED		08/21/2023	VARIOUS		892,500	1,000,000	8,022	4.A FE
548661-DU-8	Lowe's Cos Inc-SENIOR UNSECURED		08/24/2023	BOFAMLSEC		9,575,800	10,000,000	166,250	2.A FE
548661-EP-8	Lowe's Cos Inc-SENIOR UNSECURED		09/27/2023	U. S. BANCORP		4,901,950	5,000,000	119,333	2.A FE
551925-AC-4	M&T Equipment 2023-LEAF1-MTLRF 2023-1A A		08/08/2023	SMBC NIKKO SECURITIE		2,999,107	3,000,000	0	1.A FE
55336V-BR-0	MPLX LP-SENIOR UNSECURED		08/08/2023	MORGAN		2,991,233	3,270,000	25,274	2.B FE
56585A-BD-3	Marathon Petroleum Corp-SENIOR UNSECURED		08/17/2023	JEFFERIESLLC		9,290,000	10,000,000	147,778	2.B FE
571676-AT-2	Mars Inc-SENIOR UNSECURED		08/24/2023	VARIOUS		9,771,715	10,000,000	161,778	1.E FE
571676-AV-7	Mars Inc-SENIOR UNSECURED		07/26/2023	CITIGROUP GLOBAL MAR		7,768,298	7,741,000	100,095	1.E FE
58013M-FU-3	McDonald's Corp-SENIOR UNSECURED		09/27/2023	JP MORGAN SECURITIES		9,755,800	10,000,000	60,000	2.A FE
58942H-AC-5	Mercy Health/OH-SECURED		08/24/2023	JP MORGAN SECURITIES		6,877,224	7,200,000	49,043	1.E FE
59523U-AQ-0	Mid-America Apartments L-SENIOR UNSECURE		08/24/2023	U. S. BANCORP		3,119,342	3,346,000	59,842	1.G FE
618933-AA-3	Mosaic Solar Loan Trust -MSAIC 2023-3A A		08/10/2023	GOLDMAN		3,794,693	3,819,159	15,047	1.D FE
63935B-AB-9	Navient Private Educatio-NAVSL 2020-HA B		08/16/2023	CANTOR		1,380,680	1,735,000	402	1.C FE
63938P-BV-0	Navistar Financial Deale-NAVMT 2023-1 B		09/12/2023	BOFAMLSEC		1,947,998	1,948,000	0	1.C FE
63940V-AC-6	Navient Private Educatio-NAVSL 2018-CA B		08/24/2023	CANTOR		3,637,359	3,900,000	5,943	1.B FE
63941X-AB-3	Navient Private Educatio-NAVSL 2020-FA B		09/07/2023	BOFAMLSEC		4,292,494	5,490,000	10,666	1.C FE
63942M-AA-8	Navient Private Educatio-NAVSL 2022-A A		08/22/2023	BOFAMLSEC		2,757,812	3,186,351	1,776	1.A FE
649322-AG-9	New York and Presbyteria-UNSECURED		08/28/2023	JP MORGAN SECURITIES		1,415,682	1,800,000	2,394	1.C FE
67103H-AG-2	O'Reilly Automotive Inc-SENIOR UNSECURED		08/07/2023	SUNTRUST CAPITAL MAR		4,879,300	5,000,000	41,083	2.B FE
682680-AW-3	ONEOK Inc-SENIOR UNSECURED		07/31/2023	VARIOUS		4,675,010	5,000,000	82,771	2.B FE
682680-BG-7	ONEOK Inc-SENIOR UNSECURED		07/26/2023	CITIGROUP GLOBAL MAR		6,136,680	6,000,000	74,217	2.B FE
682680-BJ-1	ONEOK Inc-SENIOR UNSECURED		08/10/2023	GOLDMAN		4,993,450	5,000,000	0	2.B FE
682680-BK-8	ONEOK Inc-SENIOR UNSECURED		08/10/2023	GOLDMAN		9,816,820	9,836,000	0	2.B FE
69335P-EZ-4	PFS Financing Corp-PFSFC 2023-C B		08/08/2023	CITIGROUP GLOBAL MAR		4,249,317	4,250,000	0	1.F FE
693699-AA-8	PVONE 2023-1 LLC-PVONE 2023-2A A		09/15/2023	CAPONE		66,999,913	67,000,000	0	1.A FE
693984-AB-2	PRKOM 2023-AFC3 Trust-PRKOM 2023-AFC3 A2		08/31/2023	SMBC NIKKO SECURITIE		9,999,917	10,000,000	71,811	1.C FE
718546-AW-4	Phillips 66-SENIOR UNSECURED		07/31/2023	VARIOUS		9,241,117	11,295,000	30,201	2.A FE
741011-AA-8	Presidio Petroleum LLC Presidio Finance		07/17/2023	DIRECT		20,000,000	20,000,000	0	1.F Z
74460W-AF-4	Public Storage Operating-SENIOR UNSECURE		08/17/2023	SUNTRUST CAPITAL MAR		5,332,446	5,400,000	19,219	1.F FE
747525-BN-2	QUALCOMM Inc-SENIOR UNSECURED		07/21/2023	BNP PARIBAS		6,866,800	8,000,000	18,778	1.F FE
76029H-AA-1	Republic Airways Holding Senoir Secured		07/06/2023	DIRECT		22,500,000	22,500,000	0	2.B PL
76711*-AA-8	Rio Grande LNG Senior Secured Notes		07/12/2023	DIRECT		25,000,000	25,000,000	0	2.B PL
78355H-KV-0	Ryder System Inc-SENIOR UNSECURED		07/31/2023	GOLDMAN		10,457,787	10,353,000	249,875	2.A FE
78448P-AF-7	SMB Private Education Lo-SMB 2015-A C		07/20/2023	RBC CAPITAL MARKETS		2,346,680	2,500,000	2,813	1.D FE
78448R-AF-3	SMB 2015-C C		08/18/2023	INTLFCSTONE		1,244,531	1,350,000	1,181	1.D FE
78518*-AB-3	Saber Midstream LLC Senior Secured Notes		09/01/2023	DIRECT		10,000,000	10,000,000	0	2.B Z
78573N-AJ-1	Sabre GBLB Inc-FIRST LIEN		09/07/2023	EXCHANGE OFFER		60,453	61,000	2,226	4.C FE
805564-EM-9	Saxon Asset Securities T-SAST 1999-3 BF1		09/01/2023	PAYUP		575	575	0	1.A FM
806851-AK-7	Schlumberger Holdings Co-SENIOR UNSECURE		08/17/2023	BNP PARIBAS		7,518,240	8,000,000	81,467	2.A FE
826525-AB-3	Sierra Timeshare 2020-2 -SRFC 2020-2A B		08/02/2023	BARCLAYS CAPITAL INC		6,106,317	6,459,575	5,828	1.F FE
83207D-AA-6	SMB Private Education Lo-SMB 2023-C A1A		08/22/2023	BARCLAYS CAPITAL INC		9,910,547	10,000,000	12,600	1.A FE
83401C-AC-8	SoFi Professional Loan P-SOFI 2019-C		08/10/2023	BARCLAYS CAPITAL INC		3,724,453	4,500,000	11,056	1.B FE
838518-H*-8	South Jersey Industries Senior Note Seri		08/03/2023	WELLS FARGO		10,455,000	10,455,000	0	2.B Z
838518-J*-0	South Jersey Industries Senior Note Seri		08/03/2023	WELLS FARGO		8,182,000	8,182,000	0	2.B Z
855244-AZ-2	Starbucks Corp-SENIOR UNSECURED		07/31/2023	BOFAMLSEC		4,273,200	5,000,000	27,271	2.A FE

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CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
863931-10-1	Structured Carbon Level -SCLM3 2023-1 R		09/29/2023	CITIGROUP GLOBAL MAR		622,463	5,000,000	0	6. *
863931-AA-9	Structured Carbon Level -SCLM3 2023-1 A		09/29/2023	CITIGROUP GLOBAL MAR		61,334,065	62,596,000	0	1.C Z
863931-AB-7	Structured Carbon Level -SCLM3 2023-1 B		09/29/2023	CITIGROUP GLOBAL MAR		21,146,157	40,415,500	0	1.F Z
863931-AC-5	Structured Carbon Level -SCLM3 2023-1 C		09/29/2023	CITIGROUP GLOBAL MAR		6,397,072	13,631,500	0	2.B Z
863931-AD-3	Structured Carbon Level -SCLM3 2023-1 D		09/29/2023	CITIGROUP GLOBAL MAR		854,831	1,734,000	0	2.C Z
86745X-AA-4	Sunnova Sol V Issuer LLC-SNVA 2023-1A A		08/22/2023	BARCLAYS CAPITAL INC		3,751,761	3,984,281	14,343	1.G FE
86745Y-AA-2	Sunnova Helios XII Issue-SNVA 2023-B A		08/18/2023	SMBC NIKKO SECURITIE		9,576,934	10,000,000	0	1.D FE
86765K-AA-7	Sunoco LP / Sunoco Finan-SENIOR UNSECURE		09/13/2023	JP MORGAN SECURITIES		3,525,000	3,525,000	0	3.C FE
87251F-AD-1	TCW DIRECT LENDING STRUCTURED SOLUTIONS		07/17/2023	DIRECT		302,326	302,326	0	2.B FE
87264A-BF-1	T-Mobile USA Inc-FIRST LIEN		08/24/2023	WELLS FARGO		9,061,500	10,000,000	143,160	2.B FE
87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A		07/18/2023	BNP PARIBAS		1,220,628	1,428,531	1,570	1.F FE
875127-BH-4	Tampa Electric Co-SENIOR UNSECURED		07/26/2023	BARCLAYS CAPITAL INC		5,980,371	7,211,000	63,938	1.G FE
880451-AZ-2	Tennessee Gas Pipeline C-SENIOR UNSECURE		08/24/2023	MITSUBISHI UFJ SEC I		4,263,450	5,000,000	71,292	2.B FE
88167P-AE-8	Tesla Auto Lease Trust 2-TESLA 2023-A B		07/19/2023	WELLS FARGO		9,999,861	10,000,000	0	1.C FE
89231F-AE-0	Toyota Auto Receivables -TAOT 2023-C A4		08/08/2023	BNP PARIBAS		4,498,898	4,500,000	0	1.A FE
89236T-DR-3	Toyota Motor Credit Corp-SENIOR UNSECURE		08/08/2023	MORGAN		3,349,515	3,529,000	9,097	1.E FE
89236T-EM-3	Toyota Motor Credit Corp-SENIOR UNSECURE		08/07/2023	BARCLAYS CAPITAL INC		9,312,500	10,000,000	23,722	1.E FE
89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A		07/12/2023	CANTOR		3,697,854	3,877,015	13,841	1.F FE
89609M-AB-5	Tribute Rail LLC-TRP 2022-1 B		08/10/2023	PAYUP		7,606	7,606	0	2.B FE
89656R-AA-8	Trinity Rail Leasing 202-TRL 2022-1 A		08/24/2023	CANTOR		2,853,093	3,072,229	2,718	1.F FE
89680H-AA-0	Triton Container Finance-TCF 2020-1A A		08/29/2023	WELLS FARGO		17,165,823	19,830,552	24,421	1.F FE
89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A		08/29/2023	CANTOR		10,611,786	12,145,171	18,775	1.F FE
90915U-AB-4	Uniquify Inc-SECURED		08/24/2023	DTCYID		16,960,000	16,960,000	0	1.E PL
92257P-AA-9	Velocity Commercial Capi-VCC 2022-5 A		07/27/2023	CITIGROUP GLOBAL MAR		5,934,661	5,934,786	34,273	1.A FE
92539X-AB-0	Verus Securitization Tru-VERUS 2023-6 A2		09/07/2023	MORGAN		3,499,986	3,500,000	12,143	1.C FE
927804-FU-3	Virginia Electric & Powe-SENIOR UNSECURE		08/17/2023	AMHERST SECURITIES		1,595,294	1,680,000	5,292	2.A FE
92845V-AA-5	Vita Inclinata Technolog-SECURED		07/25/2023	PERFTRUSTOP		12,739,792	12,920,000	0	1.G PL
928668-BT-8	Volkswagen Group of Amer-SENIOR UNSECURE		07/21/2023	MORGAN		4,857,634	4,997,000	30,010	2.A FE
94106L-BU-2	Waste Management Inc-SENIOR UNSECURED		07/26/2023	WELLS FARGO		9,818,500	10,000,000	209,410	2.A FE
969457-CH-1	Williams Cos Inc/The-SENIOR UNSECURED		08/07/2023	TORONTO DOMINION SEC		15,027,150	15,000,000	355,500	2.B FE
970648-AJ-0	Willis North America Inc-SENIOR UNSECURE		08/24/2023	SUNTRUST CAPITAL MAR		3,802,535	4,430,000	59,171	2.B FE
98138H-AG-6	Workday Inc-SENIOR UNSECURED		08/24/2023	VARIOUS		16,052,316	17,051,000	230,480	2.B FE
98138H-AH-4	Workday Inc-SENIOR UNSECURED		08/17/2023	VARIOUS		11,179,750	12,000,000	150,056	2.B FE
98164F-AE-2	World Omni Auto Receivab-WOART 2023-C A4		08/10/2023	BOFAMLSEC		6,999,854	7,000,000	0	1.A FE
98389B-AY-6	Xcel Energy Inc-SENIOR UNSECURED		08/07/2023	MORGAN		15,794,679	17,856,000	114,675	2.A FE
G3934F-AA-2	Global Ports Group Finan Senior Secured		09/27/2023	DIRECT		10,000,000	10,000,000	0	2.B Z
29250N-BR-5	Enbridge Inc-SENIOR UNSECURED	A.	07/26/2023	RBC CAPITAL MARKETS		10,142,800	10,000,000	221,667	2.A FE
53278L-B4-3	Linamar Corp Senior Notes		07/19/2023	BOFAMLSEC		15,019	15,019	0	2.B Z
67077M-AT-5	Nutrien Ltd-SENIOR UNSECURED	A.	07/21/2023	MORGAN		4,501,198	4,728,000	62,882	2.B FE
68251P-AA-5	1375209 BC Ltd-FIRST LIEN	A.	07/18/2023	RBC CAPITAL MARKETS		1,854,225	1,845,000	78,413	5.B
89352H-BA-6	TransCanada PipeLines Lt-SENIOR UNSECURE	A.	08/08/2023	JP MORGAN SECURITIES		6,538,887	7,100,000	92,990	2.A FE
89352H-BC-2	TransCanada PipeLines Lt-SENIOR UNSECURE	A.	07/26/2023	BARCLAYS CAPITAL INC		8,107,700	10,000,000	73,611	2.A FE
00111G-AC-4	ABPCI Direct Lending Fun-ABPCI 2023-12A	D.	06/21/2023	SMBC NIKKO SECURITIE		6,021,000	6,000,000	251,717	1.C FE
001748-AF-9	AMMC CLO XIV Ltd-AMMC 2014-14A B2L1	D.	07/25/2023	PAYUP		708	708	0	3.C FE
001748-AH-5	AMMC CLO XIV Ltd-AMMC 2014-14A B2L2	D.	07/25/2023	PAYUP		662	662	0	3.C FE
039951-AG-3	Ares LXX CLO Ltd-ARES 2023-70A C	D.	09/29/2023	GOLDMAN		5,000,000	5,000,000	0	1.F FE
05451-BB-3	BHP Billiton Finance USA-SENIOR UNSECURE	D.	09/27/2023	JP MORGAN SECURITIES		9,923,700	10,000,000	30,625	1.F FE
05685N-AA-8	Bain Capital Credit CLO -BCC 2023-1A AN	D.	08/25/2023	CITIGROUP GLOBAL MAR		5,652,017	5,641,862	170,994	1.A FE
06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A	D.	08/07/2023	CITIGROUP GLOBAL MAR		(4,926,500)	(5,000,000)	(55,512)	1.A
067932-AG-8	Barings CLO Ltd 2023-III-BABSN 2023-3A C	D.	08/28/2023	MORGAN		3,000,000	3,000,000	0	1.F Z

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
09077C-AA-0	Birch Grove CLO 4 Ltd-BGCLO 2022-4A A1	D	07/11/2023	RBC CAPITAL MARKETS		9,845,000	10,000,000	156,511	1.A FE
12555X-AA-9	CIFC Funding 2019-VI Ltd-CIFC 2019-6A A1	D	07/11/2023	BOFAMLSEC		5,967,000	6,000,000	95,559	1.A FE
12575R-AC-4	CIFC Funding 2023-I Ltd-CIFC 2023-1A C	D	09/14/2023	BOFAMLSEC		4,125,000	4,125,000	0	1.F Z
138927-AG-3	Canyon Capital CLO 2023--CANVC 2023-1A C	D	07/28/2023	GOLDMAN		4,000,000	4,000,000	0	1.F FE
25255R-AA-7	Diameter Capital CLO 1 L-DCLC 2023-5A A1	D	09/20/2023	GOLDMAN		15,000,000	15,000,000	0	1.A FE
29004J-AQ-6	Elmwood CLO 19 Ltd-ELM19 2022-6A CR	D	08/15/2023	BOFAMLSEC		5,850,000	5,850,000	0	1.F FE
29247B-AG-2	Empower CLO 2023-2 Ltd-EMPIR 2023-2A B	D	07/18/2023	CITIGROUP GLOBAL MAR		4,300,000	4,300,000	0	1.D Z
38139B-AU-3	Goldentree Loan Managem-GLM 2022-15A CR	D	08/18/2023	MORGAN		6,750,000	6,750,000	0	1.F Z
44989M-AA-2	IP Lending X LTD-IPL 2023-10A SNR	D	07/21/2023	DTCYID		3,170,000	3,170,000	0	1.F FE
46091R-AC-7	Invesco US CLO 2023-3 Lt-INVCO 2023-3A B	D	07/06/2023	MORGAN		4,900,000	4,900,000	0	1.D Z
46091R-AE-3	Invesco US CLO 2023-3 Lt-INVCO 2023-3A C	D	07/06/2023	MORGAN		5,000,000	5,000,000	0	1.F Z
46656T-AD-8	JCP Direct Lending CLO 2-JCPDL 2023-11 A	D	09/19/2023	JEFFERIESLLC		3,959,696	3,959,696	0	1.A FE
46656T-AK-2	JCP Direct Lending CLO 2-JCPDL 2023-11 B	D	09/19/2023	JEFFERIESLLC		614,703	614,703	0	1.C FE
46656T-AM-8	JCP Direct Lending CLO 2-JCPDL 2023-11 C	D	09/19/2023	JEFFERIESLLC		395,970	395,970	0	1.F FE
55301G-GM-0	Maslow Kensington Investments S.A.R.L -	B	09/27/2023	DIRECT		550,709	550,709	0	1.F Z
716973-AB-8	Pfizer Investment Enterp-SENIOR UNSECURE	D	08/08/2023	GOLDMAN		9,890,500	10,000,000	100,125	1.E FE
716973-AD-4	Pfizer Investment Enterp-SENIOR UNSECURE	D	07/24/2023	BARCLAYS CAPITAL INC		4,569,180	4,600,000	39,809	1.E FE
749979-AE-0	Rad CLO 20 Ltd-RAD 2023-20A C	D	07/27/2023	BARCLAYS CAPITAL INC		5,000,000	5,000,000	0	1.F Z
75000G-AV-8	RR 23 Ltd-RRAM 2022-23A A2R	D	08/02/2023	RBC CAPITAL MARKETS		11,120,000	11,120,000	0	1.C FE
75009A-AJ-9	Rad CLO 18 Ltd-RAD 2023-18A A1	D	07/07/2023	MORGAN		6,996,500	7,000,000	169,777	1.A FE
75973H-AA-5	Renew 2023-1-RENEW 2023-1A A	C	07/31/2023	NATIXIS CAP MKT		9,402,013	10,000,000	0	1.A FE
78111F-AL-2	RR 23 Ltd-RRAM 2022-23A DR	D	08/02/2023	RBC CAPITAL MARKETS		15,306,250	15,500,000	0	3.B FE
806854-AK-1	Schlumberger Investment -SENIOR UNSECURE	D	08/24/2023	DEUTSCHE BANK SECURI		14,042,901	14,408,000	185,503	1.F FE
829829-AE-8	Sixth Street CLO XXIII L-SIXST 2023-23A	D	09/21/2023	CITIGROUP GLOBAL MAR		4,000,000	4,000,000	0	1.F Z
87170A-AQ-1	Symphony CLO 34-PS Ltd-SYMP 2022-34A B1R	D	07/13/2023	BOFAMLSEC		10,000,000	10,000,000	0	1.C FE
87251P-AG-2	TCW CLO 2023-2 Ltd-TCW 2023-2A C	D	08/14/2023	JEFFRIES PROGRAM DES		7,000,000	7,000,000	0	1.F FE
88315L-AJ-7	Textainer Marine Contain-SERIES 2020-3A	D	09/07/2023	WELLS FARGO		6,951,729	7,933,500	9,765	1.F FE
88315L-AS-7	Textainer Marine Contain-TMOL 2021-3A A	C	07/25/2023	BOFAMLSEC		2,048,379	2,497,667	942	1.F FE
936919-AA-7	Warwick Capital CLO 1 Lt-WWICK 2023-1A A	D	08/16/2023	RBC CAPITAL MARKETS		9,100,000	9,100,000	0	1.A FE
936919-AC-3	Warwick Capital CLO 1 Lt-WWICK 2023-1A B	D	08/16/2023	RBC CAPITAL MARKETS		14,000,000	14,000,000	0	1.C FE
96467K-AE-9	Whitebox CLO Ltd-WBOX 2023-4A B	D	08/18/2023	GOLDMAN		4,260,625	4,250,000	132,425	1.C FE
F7725A-ZZ-6	Remy Cointreau SA Senior Unsecured Notes	B	09/28/2023	DIRECT		10,558,000	10,558,001	0	2.B Z
G5222B-AA-0	Keller Holdings Limited Gtd Senior Note	D	08/10/2023	HSBC SECURITIES INC		25,000,000	25,000,000	0	2.B Z
G9020*-AC-4	Travis Perkins PLC Senior Note Series A	B	08/23/2023	RBS SECURITIES INC		17,828,989	17,828,989	0	2.B Z
G9020*-AE-0	Travis Perkins PLC Senior Note Series C	B	08/23/2023	RBS SECURITIES INC		11,461,500	11,461,493	0	2.B Z
N5828#-AE-0	Modec Finance B.V. Senior Note Series E	D	08/15/2023	MIZUHO SECURITIES		50,000,000	50,000,000	0	2.B Z
78573N-AC-6	Sabre GBLB Inc		09/14/2023	Sabre GBLB Inc		15,499,677	15,499,677	0	4.
55903V-BA-0	Warnermedia Holdings Inc-SENIOR UNSECURE		09/30/2023	20 adjustment		(28,386,761)	(30,000,000)	(143,942)	2.C FE
55903V-BB-8	Warnermedia Holdings Inc-SENIOR UNSECURE		09/30/2023	20 adjustment		(9,912,407)	(11,500,000)	(59,571)	2.C FE
78466Z-MM-4	SSG CREDIT STRATEGIES VII ICAV		08/30/2023	SSG CREDIT STRATEGIES VII ICAV		5,500,000	5,500,000	0	1.
1109999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)						1,767,273,643	1,863,338,448	6,909,469	XXX
29379V-BN-2	Enterprise Products Oper-ENTERPRISE PROD		08/02/2023	BARCLAYS CAPITAL INC		6,452,950	7,210,000	176,645	2.B FE
92556H-AE-7	Paramount Global-PARA 6 3/8 03/30/62		09/13/2023	JP MORGAN SECURITIES		5,286,875	6,500,000	189,568	3.A FE
29250N-BS-3	Enbridge Inc-SUBORDINATED	A	09/18/2023	MORGAN		7,353,000	7,353,000	0	2.C FE
018820-AC-4	Allianz SE-SUBORDINATED	D	08/30/2023	CITIGROUP GLOBAL MAR		10,400,000	10,400,000	0	1.F Z
1309999999. Subtotal - Bonds - Hybrid Securities						29,492,825	31,463,000	366,213	XXX
06761K-AL-5	Barings CLO Ltd 2019-III-BABSN 2019-3A A	D	08/07/2023	CITIGROUP GLOBAL MAR		4,926,500	5,000,000	55,512	1.A FE
067930-AA-5	Barings Private Credit C-BPCC 2023-1A A1	D	07/28/2023	BNP PARIBAS		25,000,000	25,000,000	0	1.A Z
067930-AC-1	Barings Private Credit C-BPCC 2023-1A A2	D	07/28/2023	BNP PARIBAS		8,000,000	8,000,000	0	1.D Z
067932-AA-1	Barings CLO Ltd 2023-III-BABSN 2023-3A A	D	08/28/2023	MORGAN		25,000,000	25,000,000	0	1.A Z
067932-AE-3	Barings CLO Ltd 2023-III-BABSN 2023-3A B	D	08/28/2023	MORGAN		7,000,000	7,000,000	0	1.D Z
1509999999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates						69,926,500	70,000,000	55,512	XXX
00177#-AA-1	AMF Levered II, LLC - Revolver		09/27/2023	BANK LOANS BABSON CA		4,410,000	4,410,000	0	1.C PL
00437Z-MM-4	Accuserve Solutions, Inc. - Term Loan		08/11/2023	BANK LOANS BABSON CA		2,482,759	2,482,759	0	3.B Z

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
00452#-AA-7	Accommodations Plus Technologies LLC/Ter		..07/05/2023	PIK NOTE BUY UP		(2,902)	(2,902)	0	4.B PL
00777Y-AC-0	Adviser Investments - 2022 Delayed Draw		..07/17/2023	BANK LOANS BABSON CA		154,265	154,265	0	4.C Z
05351K-A#-6	Avant Credit Card Master Avant Master Tr		..08/09/2023	BANK LOANS BABSON CA		657,913	657,913	0	3.A Z
05351K-A*-0	Avant Cr Card Master Tr 2021-VFN1 CI A		..08/09/2023	BANK LOANS BABSON CA		8,850,800	8,850,800	0	1.F Z
05351K-A#-8	Avant Credit Card Master Avant Master Tr		..08/09/2023	BANK LOANS BABSON CA		892,620	892,620	0	2.B Z
05629*-AA-8	BR DSCO I INVESTCO, LLC - Senior Secured		..09/28/2023	BANK LOANS BABSON CA		3,800,000	3,800,000	0	2.B PL
09173#-AA-8	Bitly - Term Loan B		..09/20/2023	BANK LOANS BABSON CA		931,394	945,578	0	4.C
000000-00-0	Spatial Business Systems - Delayed Draw		..08/18/2023	BANK LOANS BABSON CA		937,500	937,500	0	4.C Z
10970#-AA-9	Brinley PD SPV I LLC/Revolving Facility		..08/30/2023	BANK LOANS BABSON CA		1,308,458	1,308,333	0	1.F Z
12759#-AA-2	CELF SPV LLC - Revolving Senior Secured		..09/25/2023	BANK LOANS BABSON CA		13,571,429	13,571,429	0	1.F PL
12781#-AA-6	CRE II LENDER SUB I, LLC - Term Loan Ser		..08/31/2023	BANK LOANS BABSON CA		304,275	304,275	0	1.F PL
12781#-AC-2	CRE II LENDER SUB I, LLC - Term Loan Ser		..08/31/2023	BANK LOANS BABSON CA		281,712	281,712	0	1.F Z
12781#-AD-0	CRE II LENDER SUB I, LLC - Term Loan Ser		..08/31/2023	BANK LOANS BABSON CA		363,184	363,184	0	1.F Z
14318*-AA-6	CARLYLE SECURED LENDING III SPV, - Senio		..09/28/2023	BANK LOANS BABSON CA		2,076,000	2,076,000	0	2.F Z
000000-00-0	Olympia Acquisition, Inc - 2023 First Ou		..09/26/2023	BANK LOANS BABSON CA		24,092	24,092	0	4.C Z
000000-00-0	HV Dover L.P. - Term Loan 8/23		..08/09/2023	BANK LOANS BABSON CA		12,500,000	12,500,000	0	1.F Z
15644G-A#-1	CENTRIC BRANDS ILEXIT TL L+1000 10/09/20		..08/22/2023	PIK NOTE BUY UP		82,493		0	4.A PL
15644G-B*-4	CENTRIC BRANDS INC. - REVOLVING LOAN (FI		..08/25/2023	BANK LOANS BABSON CA		146,040	146,040	0	4.A PL
18539#-AA-8	Cleaver-Brooks Inc - 2022 Fixed PIK Term		..09/29/2023	PIK NOTE BUY UP		36,982	36,982	0	5.C Z
19076*-AB-5	COBALT BUYER SUB INC. - DELAYED DRAW TE		..07/24/2023	BANK LOANS BABSON CA		4,219	4,219	0	3.A PL
29251#-AB-9	Encina Business Credit SPV LLC Revolving		..09/28/2023	BANK LOANS BABSON CA		20,000,000	20,000,000	0	2.B PL
29643*-AC-6	EShipping LLC		..09/06/2023	BANK LOANS BABSON CA		294,608	294,608	0	4.C Z
30034#-AA-3	EVERLAKE PRIVATE FUND BORROWER, LLC - Se		..09/29/2023	BANK LOANS BABSON CA		12,000,000	12,000,000	0	2.A PL
30301*-AA-1	FS CREIT FINANCE MM-1 LLC - Secured Term		..07/21/2023	BANK LOANS BABSON CA		7,509,905	7,509,905	0	1.F PL
31575*-AA-8	First Eagle DCF-A Funding LLC - Revolvin		..07/06/2023	BANK LOANS BABSON CA		3,200,000	3,200,000	0	3.A Z
32013#-AA-2	FIRST EAGLE DIRECT LENDING V-B, LLC - Se		..09/28/2023	BANK LOANS BABSON CA		1,304,348	1,304,348	0	1.D Z
000000-00-0	Fortis Payment Systems LLC - 2022 Term L		..07/11/2023	BANK LOANS BABSON CA		(12,865)	0	0	4.C Z
34962B-AB-6	Fortis Payment Systems LLC - 2022 Delaye		..08/01/2023	BANK LOANS BABSON CA		290,090	290,090	0	4.C Z
36457W-AC-5	Galway Borrower LLC-1L SR SEC0		..09/29/2023	BANK LOANS BABSON CA		(557)	(557)	0	3.B PL
44961*-AB-1	Implus Footcare LLC/Initial Term Loan 0		..09/29/2023	PIK NOTE BUY UP		2,530	2,530	0	3.C PL
45321*-AA-5	Implus Footcare LLC/Spenco Incremental		..09/29/2023	PIK NOTE BUY UP		394	394	0	3.C PL
46127*-AA-9	Invesco Private Credit Opportunities Hol		..09/19/2023	BANK LOANS BABSON CA		5,800,000	5,800,000	0	1.F Z
47235#-AA-2	JEFFERIES DIRECT LENDING FUND II SPE LLC		..08/23/2023	BANK LOANS BABSON CA		387,235		0	2.C PL
47236#-AA-1	JEFFERIES DIRECT LENDING OFFSHORE FD II		..08/23/2023	BANK LOANS BABSON CA		950,724	950,724	0	2.B Z
47236#-AA-3	JEFFERIES DIRECT LENDING FD II C SPE LLC		..08/23/2023	BANK LOANS BABSON CA		39,080	39,080	0	2.B Z
47237#-AA-0	JEFFERIES DIRECT LENDING OFFSHORE FUND I		..08/23/2023	BANK LOANS BABSON CA		220,224	220,224	0	2.B Z
50207M-AA-5	LMF 2023-1, LLC - Class A Term Loans		..07/12/2023	BANK LOANS BABSON CA		40,000,000	40,000,000	0	4.C Z
50541#-AA-5	Laboratories Bidco LLC/Term Loan 9/19		..09/29/2023	PIK NOTE BUY UP		17	17	0	3.C PL
50541#-AB-3	Laboratories Bidco LLC/Second Amendment		..09/29/2023	PIK NOTE BUY UP		3	3	0	3.C PL
50541#-AC-1	LABORATORIES BIDCO LLC - THIRD AMENDMENT		..09/29/2023	PIK NOTE BUY UP		17	17	0	3.C PL
50541#-AD-9	LABORATORIES BIDCO LLC - TL		..09/29/2023	PIK NOTE BUY UP		1,190	1,190	0	3.C PL
50541#-AE-7	LABORATORIES BIDCO LLC - DELAYED DRAW TE		..08/29/2023	PIK NOTE BUY UP		18		0	3.B Z
515095-MN-4	Landmark Equity Partners XVII-B, L.P. -		..09/22/2023	BANK LOANS BABSON CA		6,600,000	6,600,000	0	1.D Z
515095-MO-2	Landmark Equity Partners XVII, L.P. - Re		..09/22/2023	BANK LOANS BABSON CA		13,700,000	13,700,000	0	1.D Z
54288#-AC-2	LONG TERM CARE GROUP INC AMENDMENT NO 1		..07/20/2023	VARIOUS		6,716	6,716	0	4.C
60510M-A#-5	Mission Lane Credit Card Master Trust -		..07/11/2023	BANK LOANS BABSON CA		906,667	906,667	0	2.B PL
60510M-A#-7	Mission Lane Credit Card Master Trust -		..07/11/2023	BANK LOANS BABSON CA		4,306,667	4,306,667	0	1.F PL
60510M-B*-8	Mission Lane Credit Card Master Trust -		..07/11/2023	BANK LOANS BABSON CA		453,333	453,333	0	3.A PL

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CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
62879X-AB-1	NB Select Opportunities ISPV 2022 LLC -		09/29/2023	BANK LOANS BABSON CA		2,283,887	2,283,887	0	1.G PL
62879X-AC-9	NB Select Opportunities ISPV 2022 LLC -		09/29/2023	BANK LOANS BABSON CA		529,314	529,314	0	2.C PL
62902#-MM-4	NCL III-PE-E, LLC - Revolver		09/22/2023	BANK LOANS BABSON CA		3,600,000	3,600,000	0	1.D Z
65405Z-MN-3	NICOLA SP WAREHOUSE LENDER 1, LP - Senio		09/20/2023	BANK LOANS BABSON CA		3,928,165	3,928,165	0	1.F Z
65658#-AA-2	NORTH HAVEN FALCON BUYER LLC - TERM LOA		08/21/2023	PIK NOTE BUY UP		2,687	2,687	0	3.B PL
65658#-AB-0	NORTH HAVEN FALCON BUYER LLC - DELAYED		09/29/2023	PIK NOTE BUY UP		456	456	0	3.B PL
67080B-A*-8	NXT Capital Structured Note 1, LLC - Cla		09/14/2023	BANK LOANS BABSON CA		2,570,637	2,570,637	0	1.A PL
67100#-AA-2	OC III LVS XXVI LP - Secured Loan Facili		08/15/2023	BANK LOANS BABSON CA		4,400,000	4,400,000	0	1.F PL
68144#-AB-6	Olympia Acquisition, Inc-2022 2nd Amendn		08/31/2023	PIK NOTE BUY UP		764	764	0	4.B PL
68144#-AD-2	Olympia Acquisition, Inc-2022 Rolled Ter		08/31/2023	PIK NOTE BUY UP		17,353	17,353	0	4.B Z
70466#-AA-6	Polymer Solutions Group Holdings LLC - T		08/03/2023	BANK LOANS BABSON CA		41,080	41,080	0	3.B Z
71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		07/07/2023	PIK NOTE BUY UP		10,242	10,242	0	6.*
72305#-AA-7	PINEBRIDGE PRIVATE CREDIT III HOLDINGS L		08/11/2023	BANK LOANS BABSON CA		2,666,667	2,666,667	0	1.F Z
73112#-AB-6	Policy Services Company, 1L PIK Toggle T		07/24/2023	PIK NOTE BUY UP		78,634	78,634	0	5.B GI
73112#-AC-4	Policy Services Company, 1L PIK Toggle D		07/24/2023	PIK NOTE BUY UP		27,856	27,856	0	5.B GI
74276G-AC-0	Process Insights - Term Loan		07/18/2023	BANK LOANS BABSON CA		444,315	455,708	0	4.C Z
74309#-AB-5	PRG 9/20 Last Out		08/28/2023	PIK NOTE BUY UP		26,197	26,197	0	4.C PL
74354#-AA-1	PROJECT ESSENTIAL BIDCO LLC - TERM LOAN		08/24/2023	PIK NOTE BUY UP		1,841	1,841	0	3.C PL
74923#-AB-3	RoadOne IntermodaLogistics - Term Loan		09/30/2023	BANK LOANS BABSON CA		(5,756)	0	0	4.C Z
749329-MP-0	RCC REAL ESTATE SPE 9 LLC -Series 2023-3		09/22/2023	BANK LOANS BABSON CA		675,000	675,000	0	1.F Z
75645#-AA-9	Red Cedar Holdings BLP CI A Ln		09/07/2023	BANK LOANS BABSON CA		800,100	800,100	0	1.D PL
78472Z-MM-6	SPV FACILITY I LLC - Senior Secured Revo		09/27/2023	BANK LOANS BABSON CA		13,450,000	13,450,000	0	1.F Z
816307-A#-1	SelectQuote Inc./Term Loan 10/19		08/31/2023	PIK NOTE BUY UP		2,920	2,920	0	3.B PL
82419*-AB-9	Shermco Intermediate Holdings Inc. - 201		09/06/2023	BANK LOANS BABSON CA		593,774	608,999	0	4.C Z
82419*-AC-7	Shermco Intermediate Holdings Inc. - 202		09/06/2023	BANK LOANS BABSON CA		36,532	44,968	0	4.C Z
87329#-AA-5	TTGA SBIC FEEDER FUND LP 6.00 12/31/2035		08/17/2023	BANK LOANS BABSON CA		1,875,000	1,875,000	0	2.B PL
90139#-AA-1	Twin Brook Capital Funding XIII WSPV, LL		09/30/2023	BANK LOANS BABSON CA		(1)	(1)	0	1.E PL
90140*-AA-0	Twin Brook Capital Funding XIV WSPV, LLC		09/30/2023	BANK LOANS BABSON CA		(23,671)	(23,671)	0	1.E PL
91860*-AA-6	VPC ASSET BACKED OPPORTUNISTIC CREDIT Ho		09/28/2023	BANK LOANS BABSON CA		20,178,093	20,178,093	0	1.F PL
000000-00-0	Visual Edge Technology, Inc./Last Out T		07/20/2023	BANK LOANS BABSON CA		5,696,232	5,843,424	0	6.Z
000000-00-0	Kings III - Delayed Draw Term Loan		08/30/2023	BANK LOANS BABSON CA		54,604	54,604	0	4.C Z
96524K-AD-2	WHITEHORSE LIQUIDITY PARTNERS V-R LP, -C		09/25/2023	BANK LOANS BABSON CA		1,359,453	1,359,453	0	1.F Z
000000-00-0	BTC Holdings Fund III LLC - Bank Loan		07/19/2023	DIRECT		70,000,000	70,000,000	0	1.D Z
000000-00-0	BTC Holdings Fund III LLC - DDTL Revolve		07/19/2023	DIRECT		17,500,000	17,500,000	0	1.D Z
000000-00-0	SBP Holding LP - Delayed Draw Term Loan		09/29/2023	BANK LOANS BABSON CA		113,514	113,514	0	4.C Z
000000-00-0	Trintech Inc - 2023 Term Loan		07/25/2023	BANK LOANS BABSON CA		1,215,034	1,252,612	0	4.C Z
000000-00-0	Luxury Line of Credit		08/11/2023	BANK LOANS BABSON CA		2,500,000	2,500,000	0	3.
000000-00-0	Conrex ML Portfolio 2019-01 - Term Loan		09/27/2023	BANK LOANS BABSON CA		(44,500,000)	(44,500,000)	0	2.A Z
000000-00-0	Conrex ML SMA 2019-01 - Term Loan A2		09/27/2023	BANK LOANS BABSON CA		(80,000,000)	(80,000,000)	0	2.A Z
000000-00-0	Conrex ML SMA 2019-01 - Term Loan C8		09/27/2023	BANK LOANS BABSON CA		(39,959,924)	(39,959,924)	0	2.A Z
000000-00-0	HemaSource Inc. - 2023 Senior Term Loan		08/31/2023	BANK LOANS BABSON CA		670,553	687,746	0	4.C Z
000000-00-0	BS13 Hold Teal Inc. - First Lien Term Lo		08/22/2023	BANK LOANS BABSON CA		18,333,333	18,333,333	0	2.B Z
000000-00-0	Warner Pacific Insurance Services - Seni		08/01/2023	BANK LOANS BABSON CA		89,450	91,276	0	4.C Z
000000-00-0	Warner Pacific Insurance Services - Fund		08/01/2023	BANK LOANS BABSON CA		228,981	233,654	0	4.C Z
000000-00-0	RMA Companies - 2023 Incremental Term Lo		09/26/2023	BANK LOANS BABSON CA		396,425	396,333	0	4.C Z
000000-00-0	ZB Holdco LLC - 2023 Incremental Term Lo		08/31/2023	BANK LOANS BABSON CA		406,481	415,837	0	4.C Z
000000-00-0	Rock Labor LLC - Term Loan		09/14/2023	BANK LOANS BABSON CA		254,341	262,207	0	4.C Z
000000-00-0	NAW Buyer LLC - Term Loan		09/13/2023	BANK LOANS BABSON CA		835,575	857,000	0	4.C Z

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Administrative Symbol
000000-00-0	Seattle Soccer LLC - 2023 Multi Draw Ter		09/25/2023	BANK LOANS BABSON CA		17,055,657	17,242,567	0	2.B Z
68656@-AA-9	TPG TIGER HOLDCO, LLC, - Class A Term Lo		09/26/2023	BANK LOANS BABSON CA		1,863,935	1,863,935	0	1.G Z
68656@-AB-7	TPG TIGER HOLDCO, LLC, - Class B Term Lo		09/26/2023	BANK LOANS BABSON CA		621,312	621,312	0	2.B Z
000000-00-0	Lernen Bidco Limited - 2023 EUR Extended	B	07/21/2023	BANK LOANS BABSON CA		1,101,276	1,112,400	0	4.C Z
000000-00-0	Acclime Holdings HK Limited-2023 Accordi	D	07/28/2023	BANK LOANS BABSON CA		1,973,000	2,045,455	0	4.B Z
64701#-AA-1	IFM USIDF (INTERMEDIATE) B, L.P. - Secur	D	08/25/2023	BANK LOANS BABSON CA		7,299,167	7,299,167	0	2.A PL
66684@-AA-9	QHA Credit Solutions Master Fund I SPV,	C	09/25/2023	BANK LOANS BABSON CA		3,800,000	3,800,000	0	1.F PL
67741#-AA-6	STEPSTONE GROUP EUROPE ALTERNATIVE INVES	D	08/28/2023	BANK LOANS BABSON CA		5,850,000	5,850,000	0	3.E Z
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans						224,734,062	225,329,297	0	XXX
2509999997. Total - Bonds - Part 3						3,391,854,076	3,495,369,597	8,611,696	XXX
2509999998. Total - Bonds - Part 5						XXX	XXX	XXX	XXX
2509999999. Total - Bonds						3,391,854,076	3,495,369,597	8,611,696	XXX
23281#-12-4	Cyprum Parallel Investors V LP - Perpet		08/18/2023	DIRECT	(13,437,910)	(1,343,791)		0	2.A PL
30767E-4@-6	Farm Credit Bank of Texas		08/02/2023		21,797,234.750	21,797,235		0	2.
4019999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Perpetual Preferred						20,453,444	XXX	0	XXX
03769M-2@-5	Apollo Global Management-APOLLO GLOBAL M		08/16/2023	MORGAN	800,000.000	20,000,000		0	2.A FE
04651L-3@-5	AT&T Mobility II LLC Preferred Equity		07/11/2023	DIRECT	23,269.000	23,269.000		0	2.B PL
000000-00-0	Luxury Mortgage Corp Series I Preferred		07/25/2023	DIRECT	3,000,000.000	3,000,000		0	4.C Z
015857-7@-9	Algonquin Power & Utilit-ALGONQUIN POWER	A	08/28/2023	CANTOR	600,000.000	15,026,950		0	3.A FE
4029999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Redeemable Preferred						61,295,950	XXX	0	XXX
4509999997. Total - Preferred Stocks - Part 3						81,749,394	XXX	0	XXX
4509999998. Total - Preferred Stocks - Part 5						XXX	XXX	XXX	XXX
4509999999. Total - Preferred Stocks						81,749,394	XXX	0	XXX
013091-1@-3	Albertsons Cos Inc-COMMON STOCK		08/08/2023	IN-KIND TRANSFER	786,786.000	16,349,413		0	
02215L-2@-9	Kinetik Holdings Inc-COMMON STOCK		08/24/2023	BLOOMBERG TRADEBOOK	615.000	21,707		0	
12008R-1@-7	BUILDERS FIRSTSOURCE INC-COMMON STOCK		07/25/2023	BLOOMBERG TRADEBOOK	800.000	113,531		0	
142339-1@-0	CARLISLE COS INC-COMMON STOCK		07/25/2023	BLOOMBERG TRADEBOOK	570.000	152,822		0	
16411R-2@-8	CHENIERE ENERGY INC-COMMON STOCK		08/10/2023	BLOOMBERG TRADEBOOK	12,792.000	2,089,740		0	
166764-1@-0	CHEVRON CORP-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	2,000.000	327,493		0	
237266-1@-1	DARLING INGREDIENTS INC COMMON STK		07/25/2023	BLOOMBERG TRADEBOOK	1,700.000	115,585		0	
29273V-1@-0	ENERGY TRANSFER EQUITY L P LTD PARTNERSH		09/27/2023	VARIOUS	141,018.000	1,924,643		0	
30231@-1@-2	Exxon Mobil Corp-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	3,100.000	328,561		0	
369604-3@-1	General Electric Co-COMMON STOCK		07/26/2023	BLOOMBERG TRADEBOOK	1,600.000	186,870		0	
37946R-1@-9	Global Partners LP/MA-COMMON STOCK LTD P		09/29/2023	BLOOMBERG TRADEBOOK	958.000	33,111		0	
49456B-1@-1	Kinder Morgan Inc/DE-KINDER MORGAN INC		09/27/2023	RILY	53,472.000	888,972		0	
55353@-1@-6	MSC Industrial Direct Co-COMMON STOCK		07/25/2023	BLOOMBERG TRADEBOOK	770.000	77,023		0	
55908@-1@-6	MAGELLAN MIDSTREAM PARTNERS LP COMMON UN		09/18/2023	RILY	21,000.000	1,433,460		0	
62913M-1@-7	NGL ENERGY PARTNERS LP-COMMON STOCK LTD		09/29/2023	VARIOUS	19,365.000	74,834		0	
67058H-1@-2	MUSTAR ENERGY LP-COMMON STOCK LTD PART		08/24/2023	VARIOUS	28,789.000	469,808		0	
68268@-1@-3	ONEOK INC COMMON STK		09/25/2023	MERGER	79,104.130	3,209,440		0	
719405-1@-2	PHOTRONICS INC-COMMON STOCK		07/25/2023	BLOOMBERG TRADEBOOK	4,500.000	115,923		0	
87612@-1@-1	TARGA RES CORP COMMON STK		09/28/2023	BLOOMBERG TRADEBOOK	16,373.000	1,413,687		0	
958669-1@-3	Western Midstream Partne-COMMON STOCK		09/11/2023	RILY	16,250.000	424,463		0	
969457-1@-0	WILLIAMS COS INC COMMON STK		09/28/2023	RILY	70,000.000	2,409,466		0	
5019999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded						32,160,552	XXX	0	XXX
5989999997. Total - Common Stocks - Part 3						32,160,552	XXX	0	XXX
5989999998. Total - Common Stocks - Part 5						XXX	XXX	XXX	XXX

SCHEDULE D - PART 3

Show All Long-Term Bonds and Stock Acquired During the Current Quarter

1	2	3	4	5	6	7	8	9	10
CUSIP Identification	Description	Foreign	Date Acquired	Name of Vendor	Number of Shares of Stock	Actual Cost	Par Value	Paid for Accrued Interest and Dividends	NAIC Designation, NAIC Designation Modifier and SVO Admini- strative Symbol
5989999999. Total - Common Stocks						32,160,552	XXX	0	XXX
5999999999. Total - Preferred and Common Stocks						113,909,946	XXX	0	XXX
6009999999 - Totals						3,505,764,022	XXX	8,611,696	XXX

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..36179X-NF-9	Ginnie Mae II Pool-POOL #MA8490		09/01/2023	PAYDOWN		425,867	425,867	426,466	426,465	0	(598)	0	(598)	0	425,867	0	0	0	14,151	12/01/2052	1.A
..36179X-QW-9	Ginnie Mae II Pool-POOL #MA8569		09/01/2023	PAYDOWN		333,278	333,278	335,673	0	0	(2,395)	0	(2,395)	0	333,278	0	0	0	9,614	01/01/2053	1.A
..36179Y-AS-3	Ginnie Mae II Pool-POOL #MA9017		09/01/2023	PAYDOWN		62,352	62,352	61,753	0	0	599	0	599	0	62,352	0	0	0	(122)	07/01/2053	1.A
..36179Y-DK-7	Ginnie Mae II Pool-POOL #MA9106		09/01/2023	PAYDOWN		93,755	93,755	92,912	0	0	844	0	844	0	93,755	0	0	0	430	08/01/2053	1.A
..91282C-GB-1	United States Treasury N-UNSECURED		08/21/2023	HSBC SECURITIES INC		39,188,496	40,500,000	39,920,977	0	0	4,010	0	4,010	0	39,924,987	0	(736,490)	(736,490)	226,024	12/31/2029	1.A
..91282C-HC-8	United States Treasury N-UNSECURED		07/27/2023	BNP PARIBAS		40,640,891	42,200,000	40,833,445	0	0	7,133	0	7,133	0	40,840,578	0	(199,687)	(199,687)	263,287	05/15/2033	1.A
..91282C-HH-7	United States Treasury N-UNSECURED		07/18/2023	VARIOUS		51,763,766	52,300,000	51,924,094	0	0	4,342	0	4,342	0	51,928,436	0	(164,671)	(164,671)	169,576	06/15/2026	1.A
..91282C-HJ-3	United States Treasury N-UNSECURED		08/04/2023	VARIOUS		186,933,677	191,130,000	189,666,004	0	0	8,690	0	8,690	0	189,674,694	0	(2,741,017)	(2,741,017)	617,847	06/30/2030	1.A
..91282C-HK-0	United States Treasury N-UNSECURED		08/04/2023	VARIOUS		195,791,627	197,210,000	197,288,606	0	0	(2,293)	0	(2,293)	0	197,286,314	0	(1,494,687)	(1,494,687)	559,661	06/30/2028	1.A
..91282C-HL-8	United States Treasury N-UNSECURED		07/12/2023	CITIGROUP GLOBAL MAR		9,079,027	9,100,000	9,076,895	0	0	228	0	228	0	9,077,122	0	1,905	1,905	14,868	06/30/2025	1.A
..91282C-HM-6	United States Treasury N-UNSECURED		08/21/2023	VARIOUS		337,639,102	337,900,000	339,754,340	0	0	(37,682)	0	(37,682)	0	339,716,658	0	(2,077,556)	(2,077,556)	1,024,814	07/15/2026	1.A
..91282C-HQ-7	United States Treasury N-UNSECURED		09/08/2023	VARIOUS		253,959,909	256,020,000	254,884,451	0	0	6,529	0	6,529	0	254,890,981	0	(931,071)	(931,071)	631,965	07/31/2028	1.A
..91282C-HR-5	United States Treasury N-UNSECURED		09/14/2023	VARIOUS		203,351,589	206,610,000	204,894,275	0	0	11,514	0	11,514	0	204,905,790	0	(1,554,201)	(1,554,201)	644,093	07/31/2030	1.A
..91282C-HJ-8	United States Treasury N-UNSECURED		09/08/2023	VARIOUS		70,057,610	70,530,000	70,003,780	0	0	7,755	0	7,755	0	70,011,535	0	46,075	46,075	180,101	08/15/2026	1.A
0109999999. Subtotal - Bonds - U.S. Governments						1,389,320,946	1,404,415,252	1,399,163,671	426,465	0	8,676	0	8,676	0	1,399,172,347	0	(9,851,400)	(9,851,400)	4,356,329	XXX	XXX
..93974C-BF-0	State of Washington-GENERAL OBLIGATION U		08/08/2023	CALL 100		4,645,000	4,645,000	4,575,325	4,617,996	0	(11,235)	0	(11,235)	0	4,606,762	0	38,239	38,239	204,896	07/01/2027	1.B FE
0509999999. Subtotal - Bonds - U.S. States, Territories and Possessions						4,645,000	4,645,000	4,575,325	4,617,996	0	(11,235)	0	(11,235)	0	4,606,762	0	38,239	38,239	204,896	XXX	XXX
..084154-TY-9	Berkeley Unified School -GENERAL OBLIGAT		08/01/2023	MATURITY		2,520,000	2,520,000	2,542,453	2,521,391	0	(1,391)	0	(1,391)	0	2,520,000	0	0	0	131,040	08/01/2023	1.B FE
..129775-LB-2	City of Cathoun GA-GENERAL OBLIGATION UN		09/01/2023	MATURITY		1,315,000	1,315,000	1,315,000	1,315,000	0	0	0	0	0	1,315,000	0	0	0	62,081	09/01/2023	1.B FE
..134141-ZE-3	Campbell Union School Di-GENERAL OBLIGAT		08/01/2023	CALL 100		605,000	605,000	605,000	605,000	0	0	0	0	0	605,000	0	0	0	32,706	08/01/2027	1.C FE
..655867-SC-4	City of Norfolk VA-GENERAL OBLIGATION UN		08/01/2023	CALL 100		3,075,000	3,075,000	3,075,000	3,075,000	0	0	0	0	0	3,075,000	0	0	0	126,536	08/01/2026	1.B FE
..655867-SD-2	City of Norfolk VA-GENERAL OBLIGATION UN		08/01/2023	CALL 100		1,750,000	1,750,000	1,750,000	1,750,000	0	0	0	0	0	1,750,000	0	0	0	74,638	08/01/2027	1.B FE
..655867-SE-0	City of Norfolk VA-GENERAL OBLIGATION UN		08/01/2023	CALL 100		2,865,000	2,865,000	2,865,000	2,865,000	0	0	0	0	0	2,865,000	0	0	0	136,231	08/01/2030	1.B FE
..718814-ZZ-2	PHOENIX AZ-BUILD AMERICA GENERAL OBLIGAT		07/01/2023	CALL 100		1,500,000	1,500,000	1,780,830	1,675,955	0	7,621	0	7,621	0	1,683,576	0	(183,576)	(183,576)	79,035	07/01/2034	1.B FE
..801495-D2-5	Santa Clara Unified Scho-GENERAL OBLIGAT		07/01/2023	MATURITY		3,050,000	3,050,000	3,050,000	3,050,000	0	0	0	0	0	3,050,000	0	0	0	146,400	07/01/2023	1.A FE
..810453-6C-9	City of Scottsdale AZ-GENERAL OBLIGATION		07/01/2023	CALL 100		7,110,000	7,110,000	5,736,064	6,288,818	0	24,117	0	24,117	0	6,312,935	0	797,065	797,065	213,300	07/01/2031	1.A FE
0709999999. Subtotal - Bonds - U.S. Political Subdivisions of States, Territories and Possessions						23,790,000	23,790,000	22,719,347	23,146,164	0	30,347	0	30,347	0	23,176,511	0	613,489	613,489	1,001,967	XXX	XXX
..041083-VB-9	Arkansas Development Fin-REVENUE BONDS		09/01/2023	CALL 100		51,213	51,213	51,213	51,213	0	0	0	0	0	51,213	0	0	0	1,162	07/01/2043	1.B FE
..196479-V4-8	Colorado Housing and Fin-REVENUE BONDS		08/01/2023	CALL 100		76,179	76,179	78,415	77,492	0	(132)	0	(132)	0	77,360	0	(1,181)	(1,181)	2,285	11/01/2048	1.A FE
..196480-EX-1	Colorado Housing and Fin-REVENUE BONDS		08/01/2023	CALL 100		40,217	40,217	40,217	40,217	0	0	0	0	0	40,217	0	0	0	877	01/01/2050	1.A FE
..25477P-NF-8	District of Columbia Hou-REVENUE BONDS		08/15/2023	CALL 100		28,593	28,593	28,593	28,593	0	0	0	0	0	28,593	0	0	0	971	06/15/2045	1.B FE
..296122-UT-9	Escambia County Housing -REVENUE BONDS		08/01/2023	CALL 100		21,732	21,732	21,732	21,732	0	0	0	0	0	21,732	0	0	0	465	11/01/2038	1.A FE
..312931-A6-5	Freddie Mac Gold Pool-FG A84529		09/01/2023	PAYDOWN		225	225	228	227	0	(2)	0	(2)	0	225	0	0	0	7	02/01/2039	1.A
..3132DQ-AG-1	Freddie Mac Pool-FR SD2707		09/01/2023	PAYDOWN		698,784	698,784	687,538	0	0	11,246	0	11,246	0	698,784	0	0	0	5,352	04/01/2053	1.A
..3132DQ-B9-6	Freddie Mac Pool-FR SD2764		09/01/2023	PAYDOWN		369,520	369,520	363,169	0	0	6,351	0	6,351	0	369,520	0	0	0	2,876	04/01/2053	1.A
..313398-P7-8	Freddie Mac REMICS-FHR 2334 TD		09/01/2023	PAYDOWN		1,503	1,503	1,572	1,516	0	(13)	0	(13)	0	1,503	0	0	0	65	07/01/2031	1.A
..3133JL-UE-7	Freddie Mac Pool-FREDDIE MAC POOL-FR QJ7		09/01/2023	PAYDOWN		199,510	199,510	201,068	200,888	0	(1,379)	0	(1,379)	0	199,510	0	0	0	2,660	03/01/2051	1.A
..3133KP-Q2-7	Freddie Mac Pool-FR RA7673		09/01/2023	PAYDOWN		302,774	302,774	297,049	297,064	0	5,709	0	5,709	0	302,774	0	0	0	8,733	07/01/2052	1.A
..3133KQ-VY-9	Freddie Mac Pool-FR RA8731		09/01/2023	PAYDOWN		458,243	458,243	448,484	0	0	8,759	0	8,759	0	458,243	0	0	0	4,666	04/01/2053	1.A
..3133KR-BN-3	Freddie Mac Pool-FR RA9045		09/01/2023	PAYDOWN		659,838	659,838	649,529	0	0	10,310	0	10,310	0	659,838	0	0	0	6,174	05/01/2053	1.A
..3133KR-MX-9	Freddie Mac Pool-FR RA9374		09/01/2023	PAYDOWN		136,044	136,044	133,260	0	0	2,785	0	2,785	0	136,044	0	0	0	624	07/01/2053	1.A
..3133N3-U9-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		09/01/2023	PAYDOWN		102,615	102,615	104,324	104,131	0	(1,516)	0	(1,516)	0	102,615	0	0	0	2,398	11/01/2049	1.A
..3133N3-VG-6	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		09/01/2023	PAYDOWN		70,375	70,375	71,398	71,376	0	(1,000)	0	(1,000)	0	70,375	0	0	0	1,806	09/01/2049	1.A
..3133N3-X3-3	Freddie Mac Pool-FREDDIE MAC POOL-FR RE6		09/01/2023	PAYDOWN		563,291	563,291	576,845	576,796	0	(13,505)	0	(13,505)	0	563,291	0	0	0	9,166	05/01/2051	1.A
..3133T3-BU-1	Freddie Mac REMICS-FHR 1644 K		09/01/2023	PAYDOWN		471	471	515	472	0	(11)	0	(11)	0	471	0	0	0	21	12/01/2023	1.A
..3133TB-4G-2	Freddie Mac REMICS-FHR 1991 PG		09/01/2023	PAYDOWN		2,530	2,530	2,623	2,539	0	(9)	0	(9)	0	2,530	0	0	0	102	09/01/2027	1.A

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..3133TC-HE-1	Freddie Mac REMICS-FHR 2018 PG		09/01/2023	PAYDOWN		1,756	1,756	1,852	1,776	0	(21)	0	(21)	0	1,756	0	0	0	78	01/01/2028	1.A
..3133TD-3A-2	Freddie Mac REMICS-FHR 2037 HB		09/01/2023	PAYDOWN		2,302	2,302	2,518	2,354	0	(51)	0	(51)	0	2,302	0	0	0	139	03/01/2028	1.A
..3133TH-S8-1	Freddie Mac REMICS-FHR 2118 PE		09/01/2023	PAYDOWN		4,938	4,938	5,185	5,000	0	(61)	0	(61)	0	4,938	0	0	0	213	01/01/2029	1.A
..3133TS-F2-4	Freddie Mac REMICS-FHR 2303 OK		09/01/2023	PAYDOWN		3,007	3,007	3,106	3,038	0	(31)	0	(31)	0	3,007	0	0	0	120	04/01/2031	1.A
..3133TU-S7-4	Freddie Mac REMICS-FHR 2357 OH		09/01/2023	PAYDOWN		882	882	925	899	0	(17)	0	(17)	0	882	0	0	0	38	09/01/2031	1.A
..31359D-H5-5	Fannie Mae REMICS-FNR 1993-155 PJ		09/01/2023	VARIOUS		1,121	1,121	1,241	1,122	0	(1)	0	(1)	0	1,121	0	0	0	49	09/01/2023	1.A
..31359H-NH-0	Fannie Mae REMICS-FNR 1994-63 PK		09/01/2023	PAYDOWN		1,121	1,121	1,239	1,125	0	(3)	0	(3)	0	1,121	0	0	0	52	04/01/2024	1.A
..31359H-OP-2	Fannie Mae REMICS-FNR 1994-76 KA		09/01/2023	PAYDOWN		61	61	61	60	0	1	0	1	0	61	0	0	0	3	04/01/2024	1.A
..31359N-ZH-0	Fannie Mae REMICS-FNR 1997-19 PG		09/01/2023	PAYDOWN		2,331	2,331	2,511	2,341	0	(11)	0	(11)	0	2,331	0	0	0	109	04/01/2027	1.A
..31359V-GF-4	Fannie Mae REMICS-FNR 1999-1 PJ		09/01/2023	PAYDOWN		6,823	6,823	7,256	6,931	0	(108)	0	(108)	0	6,823	0	0	0	304	02/01/2029	1.A
..31371K-LU-3	Fannie Mae Pool-POOL #254239		09/01/2023	PAYDOWN		121	121	140	131	0	(10)	0	(10)	0	121	0	0	0	5	03/01/2032	1.A
..31388T-OZ-9	Fannie Mae Pool-POOL #614372		09/01/2023	PAYDOWN		435	435	498	465	0	(30)	0	(30)	0	435	0	0	0	20	01/01/2032	1.A
..313921-JK-5	Fannie Mae REMICS-FNR 2001-57 PD		09/01/2023	PAYDOWN		2,958	2,958	3,119	3,015	0	(57)	0	(57)	0	2,958	0	0	0	128	10/01/2031	1.A
..31392B-SC-1	Fannie Mae REMICS-FNR 2002-6 L		09/01/2023	PAYDOWN		1,360	1,360	1,414	1,378	0	(19)	0	(19)	0	1,360	0	0	0	54	02/01/2032	1.A
..31392C-EM-2	Fannie Mae REMIC Trust 2-FW/ 2002-W2 AF5		09/01/2023	PAYDOWN		5,166	5,166	4,961	4,962	0	204	0	204	0	5,166	0	0	0	123	06/01/2032	1.A
..31392E-PC-8	Fannie Mae REMICS-FNR 2002-58 PG		09/01/2023	PAYDOWN		7,498	7,498	7,902	7,639	0	(141)	0	(141)	0	7,498	0	0	0	306	09/01/2032	1.A
..31392K-SC-6	Freddie Mac REMICS-FHR 2455 GK		09/01/2023	PAYDOWN		6,216	6,216	6,610	6,364	0	(149)	0	(149)	0	6,216	0	0	0	270	05/01/2032	1.A
..31392M-SR-9	Freddie Mac REMICS-FHR 2448 TX		09/01/2023	PAYDOWN		9,804	9,804	10,299	9,981	0	(177)	0	(177)	0	9,804	0	0	0	393	05/01/2032	1.A
..3140HN-LY-6	Fannie Mae Pool-POOL #BK8442		09/01/2023	PAYDOWN		173,907	173,907	174,342	174,307	0	(400)	0	(400)	0	173,907	0	0	0	2,315	01/01/2051	1.A
..3140JS-EP-0	Fannie Mae Pool-POOL #BN9141		09/01/2023	PAYDOWN		173,931	173,931	173,333	173,351	0	579	0	579	0	173,931	0	0	0	2,321	04/01/2051	1.A
..3140JX-EE-4	Fannie Mae Pool-POOL #B02832		09/01/2023	PAYDOWN		5,836	5,836	5,960	5,931	0	(95)	0	(95)	0	5,836	0	0	0	131	09/01/2049	1.A
..3140KO-EL-8	Fannie Mae Pool-POOL #B04638		09/01/2023	PAYDOWN		14,444	14,444	14,468	14,444	0	(14)	0	(14)	0	14,444	0	0	0	325	11/01/2049	1.A
..3140K2-LK-8	Fannie Mae Pool-POOL #B06629		09/01/2023	PAYDOWN		1,368,433	1,368,433	1,375,061	1,374,440	0	(6,007)	0	(6,007)	0	1,368,433	0	0	0	17,333	04/01/2051	1.A
..3140K2-PV-0	Fannie Mae Pool-POOL #B06735		09/01/2023	PAYDOWN		616,984	616,984	618,381	618,223	0	(1,240)	0	(1,240)	0	616,984	0	0	0	8,229	05/01/2051	1.A
..3140QB-N5-3	Fannie Mae Pool-POOL #CA4011		09/01/2023	PAYDOWN		10,265	10,265	10,427	10,416	0	(151)	0	(151)	0	10,265	0	0	0	269	08/01/2049	1.A
..3140QC-DT-0	Fannie Mae Pool-POOL #CA4613		09/01/2023	PAYDOWN		89,937	89,937	91,361	91,229	0	(1,292)	0	(1,292)	0	89,937	0	0	0	2,358	11/01/2049	1.A
..3140QC-PN-0	Fannie Mae Pool-POOL #CA4928		09/01/2023	PAYDOWN		48,095	48,095	49,147	49,118	0	(1,022)	0	(1,022)	0	48,095	0	0	0	1,272	01/01/2050	1.A
..3140QH-NJ-0	Fannie Mae Pool-POOL #CA9392		09/01/2023	PAYDOWN		1,093,287	1,093,287	1,103,878	1,102,786	0	(9,500)	0	(9,500)	0	1,093,287	0	0	0	14,654	03/01/2051	1.A
..3140QM-4N-1	Fannie Mae Pool-POOL #CB2628		09/01/2023	PAYDOWN		226,537	226,537	191,849	0	0	34,689	0	34,689	0	226,537	0	0	0	1,457	01/01/2052	1.A
..3140QR-EJ-8	Fannie Mae Pool-POOL #CB5536		09/01/2023	PAYDOWN		273,377	273,377	276,495	0	0	(3,118)	0	(3,118)	0	273,377	0	0	0	8,167	01/01/2053	1.A
..3140QS-QC-8	Fannie Mae Pool-POOL #CB6750		09/01/2023	PAYDOWN		445,897	445,897	439,324	0	0	6,572	0	6,572	0	445,897	0	0	0	2,044	07/15/2028	1.F
..3140QS-TZ-4	Fannie Mae Pool-POOL #CB6867		09/01/2023	PAYDOWN		157,682	157,682	156,598	0	0	1,084	0	1,084	0	157,682	0	0	0	723	08/01/2053	1.A
..3140XL-W6-1	Fannie Mae Pool-POOL #FS5168		09/01/2023	PAYDOWN		187,491	187,491	184,151	0	0	3,340	0	3,340	0	187,491	0	0	0	859	06/01/2053	1.A
..31416K-WP-9	Fannie Mae Pool-POOL #AA2453		09/01/2023	PAYDOWN		1,224	1,224	1,224	1,237	0	(12)	0	(12)	0	1,224	0	0	0	37	02/01/2039	1.A
..31418D-JH-3	Fannie Mae Pool-POOL #MA3876		09/01/2023	PAYDOWN		25,951	25,951	26,015	25,995	0	(44)	0	(44)	0	25,951	0	0	0	584	12/01/2049	1.A
..31418D-YS-5	Fannie Mae Pool-POOL #MA4320		09/01/2023	PAYDOWN		305,249	305,249	311,163	310,857	0	(5,609)	0	(5,609)	0	305,249	0	0	0	4,893	04/01/2051	1.A
..3407MH-ND-9	Florida Housing Finance -REVENUE BONDS		08/01/2023	CALL 100		132,536	132,536	132,536	132,536	0	0	0	0	0	132,536	0	0	0	3,152	07/01/2039	1.A FE
..3407MH-PF-2	Florida Housing Finance -REVENUE BONDS		08/01/2023	CALL 100		86,483	86,483	86,483	86,486	0	0	0	0	0	86,486	0	(3)	(3)	1,592	01/01/2043	1.A FE
..358266-CA-0	County of Fresno CA-REVENUE BONDS		08/15/2023	MATURITY		8,545,000	8,545,000	4,792,463	8,277,445	0	267,555	0	267,555	0	8,545,000	0	0	0	0	08/15/2023	1.E FE
..45129H-KB-5	Idaho Housing & Finance -REVENUE BONDS		07/15/2023	CALL 100		360,000	360,000	453,557	400,970	0	(3,593)	0	(3,593)	0	397,378	0	(37,378)	(37,378)	22,853	07/15/2028	1.F FE
..45201L-VM-4	Illinois Housing Develop-REVENUE BONDS		07/01/2023	MATURITY		421,787	421,787	421,787	421,787	0	0	0	0	0	421,787	0	0	0	13,231	07/01/2023	1.D FE
..45201Y-YL-5	ILL INOIS ST HSG DEV AUTH REV PROG SER B		08/01/2023	CALL 100		48,175	48,175	46,681	46,963	0	20	0	20	0	46,983	0	1,192	1,192	936	06/01/2043	1.A FE
..45203L-CT-8	Illinois Housing Develop-REVENUE BONDS		08/28/2023	CALL 100		35,106	35,106	35,106	35,076	0	1	0	1	0	35,078	0	29	29	1,054	09/01/2034	1.A FE
..454624-U5-4	Indiana Bond Bank-REVENUE BONDS		07/15/2023	CALL 100		205,000	205,000	209,606	205,000	0	0	0	0	0	205,000	0	0	0	11,255	01/15/2024	1.B FE
..52518R-BE-5	Lehman Structured Secur-I-LSSC 2002-GE1 A		09/01/2023	PAYDOWN		347	347	331	53	66	228	0	294	0	347	0	0	0	0	07/01/2024	6. *
..567830-BU-7	County of Marin CA-REVENUE BONDS		08/01/2023	CALL 100		980,000	980,000	1,035,929	997,291	0	(2,578)	0	(2,578)	0	994,713	0	(14,713)	(14,713)	53,018	08/01/2026	1.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-ign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..57419R-D6-9	Maryland Community Devel-REVENUE BONDS .....	.....	08/28/2023	CALL 100 .....	.....	335,000	335,000	346,896	337,385	0	(563)	0	(563)	0	336,822	0	(1,822)	(1,822)	11,627	09/01/2047	1.B FE
..57419R-PL-3	Maryland Community Devel-REVENUE BONDS .....	.....	08/28/2023	CALL 100 .....	.....	115,000	115,000	115,000	115,000	0	0	0	0	0	115,000	0	0	0	3,258	09/01/2040	1.B FE
..57604P-5P-5	Massachusetts Clean Wate-REVENUE BONDS .....	.....	08/01/2023	VARIOUS .....	.....	445,000	445,000	531,731	505,029	0	87,732	0	87,732	0	566,659	0	(121,659)	(121,659)	23,104	08/01/2040	1.A FE
..59334H-FU-4	Miami-Dade County Housin-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	46,750	46,750	46,750	46,750	0	0	0	0	0	46,750	0	0	0	725	11/01/2038	1.A FE
..60416Q-FW-9	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	43,533	43,533	42,445	42,657	0	20	0	20	0	42,677	0	856	856	941	09/01/2041	1.A FE
..60416Q-GK-4	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	23,073	23,073	23,073	23,073	0	0	0	0	0	23,073	0	0	0	473	08/01/2046	1.A FE
..60416Q-GM-0	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	12,263	12,263	10,693	10,815	0	20	0	20	0	10,836	0	1,427	1,427	163	10/01/2046	1.A FE
..60416Q-HA-5	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	185,283	185,283	185,283	185,283	0	0	0	0	0	185,283	0	0	0	4,766	03/01/2048	1.A FE
..60416Q-HE-7	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	72,959	72,959	72,959	72,959	0	0	0	0	0	72,959	0	0	0	1,981	09/01/2048	1.A FE
..60416Q-HG-2	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	128,679	128,679	128,679	128,679	0	0	0	0	0	128,679	0	0	0	3,686	11/01/2048	1.A FE
..60416Q-HJ-6	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	50,403	50,403	50,403	50,403	0	0	0	0	0	50,403	0	0	0	1,305	01/01/2049	1.A FE
..60416Q-HL-1	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	105,376	105,376	105,376	105,376	0	0	0	0	0	105,376	0	0	0	2,588	03/01/2049	1.A FE
..60416Q-HN-7	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	4,858	4,858	4,858	4,858	0	0	0	0	0	4,858	0	0	0	89	06/01/2049	1.A FE
..60416Q-HS-6	Minnesota Housing Financ-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	129,620	129,620	129,620	129,620	0	0	0	0	0	129,620	0	0	0	(5,062)	12/01/2049	1.A FE
..60636Y-MJ-7	Missouri Housing Develop-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	6,952	6,952	6,952	6,952	0	0	0	0	0	6,952	0	0	0	216	01/01/2040	1.B FE
..60637B-ML-1	Missouri Housing Develop-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	158,686	158,686	153,529	154,503	0	71	0	71	0	154,575	0	4,111	4,111	2,796	06/01/2044	1.B FE
..610763-PF-5	Monroe County Water Auth-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	340,000	340,000	340,000	340,000	0	0	0	0	0	340,000	0	0	0	20,040	08/01/2025	1.B FE
..641667-NZ-9	New Albany-Floyd County -REVENUE BONDS .....	.....	07/15/2023	CALL 100 .....	.....	580,000	580,000	580,000	580,000	0	0	0	0	0	580,000	0	0	0	18,038	01/15/2027	1.B FE
..647200-2G-8	New Mexico Mortgage Fina-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	64,704	64,704	64,705	64,704	0	0	0	0	0	64,704	0	0	0	1,379	08/01/2035	1.B FE
..647200-4S-0	New Mexico Mortgage Fina-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	55,000	55,000	55,000	55,000	0	0	0	0	0	55,000	0	0	0	1,116	09/01/2040	1.B FE
..64972C-BD-4	New York City Housing De-REVENUE BONDS .....	.....	08/15/2023	CALL 100 .....	.....	10,613	10,613	10,613	10,613	0	0	0	0	0	10,613	0	0	0	270	06/15/2036	1.C FE
..64972C-M6-7	New York City Housing De-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	61,186	61,186	61,186	61,258	0	(1)	0	(1)	(1)	61,257	0	(71)	(71)	1,422	10/01/2046	1.B FE
..677377-2P-7	Ohio Housing Finance Age-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	300,000	300,000	300,000	300,000	0	0	0	0	0	300,000	0	0	0	6,276	11/01/2041	1.A FE
..686087-MP-9	State of Oregon Housing -REVENUE BONDS .....	.....	07/01/2023	CALL 100 .....	.....	760,000	760,000	760,000	760,000	0	0	0	0	0	760,000	0	0	0	21,972	07/01/2033	1.C FE
..686087-ZL-4	State of Oregon Housing -REVENUE BONDS .....	.....	07/01/2023	CALL 100 .....	.....	100,000	100,000	100,000	99,998	0	0	0	0	0	99,998	0	2	2	3,900	07/01/2038	1.C FE
..708797-AN-5	Pennsylvania Housing Fin-REVENUE BONDS .....	.....	08/28/2023	CALL 100 .....	.....	26,867	26,867	26,867	26,853	0	1	0	1	0	26,853	0	14	14	880	08/01/2035	1.A FE
..76221T-DH-9	Rhode Island Housing and-REVENUE BONDS .....	.....	09/01/2023	CALL 100 .....	.....	140,000	140,000	140,000	140,000	0	0	0	0	0	140,000	0	0	0	3,738	10/01/2039	1.B FE
..88275F-NU-9	Texas Department of Hous-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	60,000	60,000	60,000	60,039	0	(12)	0	(12)	0	60,027	0	(27)	(27)	1,573	09/01/2039	1.B FE
..88275F-PA-1	Texas Department of Hous-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	26,090	26,090	24,606	24,772	0	18	0	18	0	24,790	0	1,300	1,300	794	09/01/2047	1.B FE
..91476P-FV-5	University of Oklahoma/T-REVENUE BONDS .....	.....	07/01/2023	CALL 100 .....	.....	5,100,000	5,100,000	5,100,000	5,100,000	0	0	0	0	0	5,100,000	0	0	0	265,047	07/01/2028	1.D FE
..91476P-FW-3	University of Oklahoma/T-REVENUE BONDS .....	.....	07/01/2023	CALL 100 .....	.....	1,500,000	1,500,000	1,500,000	1,500,000	0	0	0	0	0	1,500,000	0	0	0	82,890	10/01/2033	1.D FE
..91743P-DD-4	Utah Housing Corp-REVENUE BONDS .....	.....	08/22/2023	CALL 100 .....	.....	61,958	61,958	64,678	64,519	0	(28)	0	(28)	0	64,490	0	(2,532)	(2,532)	1,562	02/21/2050	1.B FE
..92812U-Q3-5	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	54,800	54,800	54,800	54,764	0	1	0	1	0	54,765	0	35	35	2,179	12/25/2043	1.A FE
..92812U-Q4-3	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	147,089	147,089	147,089	147,089	0	0	0	0	0	147,089	0	0	0	4,126	10/25/2037	1.A FE
..92812U-Q6-8	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	66,484	66,484	66,484	66,471	0	0	0	0	0	66,472	0	13	13	1,800	06/25/2041	1.A FE
..92812U-Q7-6	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	167,243	167,243	167,243	167,243	0	0	0	0	0	167,243	0	0	0	3,735	10/25/2049	1.A FE
..92812U-Q8-4	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	266,759	266,759	266,759	266,759	0	0	0	0	0	266,759	0	0	0	6,304	12/25/2049	1.A FE
..92812U-XB-9	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	12,510	12,510	13,479	13,163	0	(16)	0	(16)	0	13,147	0	(637)	(637)	659	03/25/2038	1.A FE
..92813T-EE-6	Virginia Housing Develop-REVENUE BONDS .....	.....	08/25/2023	CALL 100 .....	.....	193,398	193,398	193,398	193,305	0	2	0	2	0	193,307	0	92	92	4,849	08/25/2042	1.B FE
..93978X-EQ-9	Washington State Housing-REVENUE BONDS .....	.....	07/01/2023	CALL 100 .....	.....	25,000	25,000	25,000	24,967	0	(26)	0	(26)	0	24,941	0	59	59	522	09/01/2040	1.A FE
..93978X-ER-7	Washington State Housing-REVENUE BONDS .....	.....	08/01/2023	CALL 100 .....	.....	160,000	160,000	159,280	160,000	0	0	0	0	0	160,000	0	0	0	3,628	05/01/2041	1.A FE
0909999999. Subtotal - Bonds - U.S. Special Revenues						32,017,654	32,017,654	28,472,716	28,289,651	66	393,533	0	393,599	0	32,188,550	0	(170,893)	(170,893)	739,231	XXX	XXX
..000366-AA-2	AASET 2017-1 TRUST-SERIES 17-1A CLASS A .....	.....	09/16/2023	PAYDOWN .....	.....	2,633,218	2,633,218	2,633,204	2,633,218	0	0	0	0	0	2,633,218	0	0	0	68,165	05/16/2042	2.B FE
..00038R-AA-4	Aaset 2019-2 Trust-AASET 2019-2 A .....	.....	09/16/2023	PAYDOWN .....	.....	289,090	289,090	289,088	289,114	0	(25)	0	(25)	0	289,090	0	0	0	6,578	10/16/2039	2.C FE
..00077B-4W-0	ABN Amro Mortgage Corp-AMAC 2002-9 A30 .....	.....	09/01/2023	PAYDOWN .....	.....	185	185	187	181	0	4	0	4	0	185	0	0	0	7	12/01/2032	1.A FM
..000780-NL-6	ABN Amro Mortgage Corp-AMAC 2003-12 2A .....	.....	09/01/2023	PAYDOWN .....	.....	1,108	1,108	1,123	1,090	0	18	0	18	0	1,108	0	0	0	36	12/01/2033	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..00164T-AA-6	AMC East Communities LLC-SECURED		07/15/2023	SINKING PAYMENT		276,975	276,975	290,509	282,896	0	(5,920)	0	(5,920)	0	276,975	0	0	0	15,898	01/15/2028	1.F FE
..00184@-AA-4	Amazon (Euclid Oh) Trust Certificate		09/30/2023	SINKING PAYMENT		33,824	33,824	33,824	33,807	0	17	0	17	0	33,824	0	0	0	1,076	06/30/2039	1.E
..00191#-AA-3	Amazon (Tucson Az) Trust Certificate		09/30/2023	SINKING PAYMENT		36,488	36,488	36,488	36,457	0	31	0	31	0	36,488	0	0	0	1,120	08/31/2039	1.E
..00191@-AA-5	Amazon (Oklahoma City Ok Trust Certifica		09/30/2023	SINKING PAYMENT		68,693	68,693	68,693	68,685	0	8	0	8	0	68,693	0	0	0	1,934	09/30/2039	1.E
..00192J-AA-4	APS Resecuritization Tru-APS 2016-1 1A		09/01/2023	PAYDOWN		189,706	189,706	169,075	189,590	0	116	0	116	0	189,706	0	0	0	7,008	07/01/2057	1.A FE
..00193*-AA-5	Amazon (Tulsa Ok) Trust Certificate		09/30/2023	SINKING PAYMENT		71,824	71,824	71,824	71,820	0	4	0	4	0	71,824	0	0	0	2,027	09/30/2039	1.E
..00195#-AA-9	Amazon (Toledo Oh) Trust Certificate		09/30/2023	SINKING PAYMENT		119,468	119,468	119,468	119,468	0	0	0	0	0	119,468	0	0	0	3,084	10/31/2040	1.E
..00217L-AC-6	AREIT 2019-CRE3 Trust-AREIT 2019-CRE3 AS		09/15/2023	PAYDOWN		848,520	848,520	848,520	848,520	0	0	0	0	0	848,520	0	0	0	46,274	09/14/2036	1.A FE
..00225#-AA-3	Amazon (Grand Rapids, M Trust Certifica		09/30/2023	SINKING PAYMENT		33,745	33,745	33,745	33,719	0	26	0	26	0	33,745	0	0	0	959	09/30/2039	1.E
..00255U-AA-3	AASET 2020-1 Trust-AASET 2020-1A A		09/15/2023	PAYDOWN		399,803	399,803	399,796	399,802	0	1	0	1	0	399,803	0	0	0	8,515	01/16/2040	2.A FE
..00432C-CW-9	ACCESS GROUP INC-SERIES 2005-B CLASS A3		07/25/2023	PAYDOWN		62,039	62,039	57,231	60,597	0	1,443	0	1,443	0	62,039	0	0	0	2,436	07/25/2035	1.A FE
..00436M-AA-3	Accelerated Assets 2018--AALLC 2018-1 A		09/02/2023	PAYDOWN		170,302	170,302	170,259	170,277	0	25	0	25	0	170,302	0	0	0	4,416	12/02/2033	1.F FE
..00634@-AS-9	ADAMS OUTDOOR ADV SECD REV NT SER 2018-1		07/15/2023	PAYDOWN		14,534,813	14,534,813	14,534,813	14,534,813	0	251,297	0	251,297	0	14,534,813	0	0	0	583,512	11/15/2048	1.F FE
..00703@-GS-9	Adjustable Rate Mortgage-ARMT 2005-2 2A1		09/01/2023	PAYDOWN		1,282	1,282	1,200	1,228	0	54	0	54	0	1,282	0	0	0	50	06/01/2035	1.A FM
..00703@-SE-7	Adjustable Rate Mortgage-ARMT 2005-9 5A1		09/25/2023	PAYDOWN		14,818	14,818	10,337	13,656	0	1,162	0	1,162	0	14,818	0	0	0	485	11/25/2035	1.A FM
..00703Q-AD-4	Adjustable Rate Mortgage-ARMT 2006-3 4A1		09/25/2023	PAYDOWN		56,748	56,748	40,344	31,092	0	25,656	0	25,656	0	56,748	0	0	0	529	08/25/2036	1.A FM
..008513-AA-1	Agree LP-SENIOR UNSECURED		07/28/2023	WELLS FARGO		8,494,633	10,208,000	10,141,425	10,147,831	0	4,074	0	4,074	0	10,151,905	0	(1,657,272)	(1,657,272)	246,693	10/01/2030	2.B FE
..00909@-A*-5	Air Cargo Logistics Ft W Lease-Collatera		09/10/2023	SINKING PAYMENT		26,220	26,220	26,220	26,220	0	0	0	0	0	26,220	0	0	0	295	11/10/2039	1.E
..00910G-AA-4	Air Cargo Logistics CtI Trust Certificat		09/10/2023	SINKING PAYMENT		37,051	37,051	37,051	37,051	0	0	0	0	0	37,051	0	0	0	0	02/10/2041	1.E
..00981@-AA-9	Akron Childrens Hospital Trust Certifica		09/15/2023	SINKING PAYMENT		26,113	26,113	26,374	26,359	0	(246)	0	(246)	0	26,113	0	0	0	777	08/15/2050	1.F
..015271-AY-5	Alexandria Real Estate E-SENIOR UNSECURE		08/21/2023	SUNTRUST CAPITAL MAR		3,845,400	5,000,000	4,652,800	4,670,913	0	15,594	0	15,594	0	4,686,507	0	(841,107)	(841,107)	138,486	03/15/2034	2.A FE
..02146P-AF-2	Alternative Loan Trust 2-CWALT 2006-HY12		09/01/2023	PAYDOWN		20,255	20,255	12,993	14,877	0	5,378	0	5,378	0	20,255	0	0	0	324	08/01/2036	1.A FM
..02146T-AL-1	Alternative Loan Trust 2-CWALT 2006-24CB		09/01/2023	PAYDOWN		8,572	9,073	4,803	5,053	0	4,037	224	3,813	0	8,572	0	0	0	370	08/01/2036	1.A FM
..02147W-AT-6	Alternative Loan Trust 2-CWALT 2006-26CB		09/01/2023	PAYDOWN		5,566	34,547	24,112	23,362	0	2,571	0	2,571	0	5,566	0	0	0	1,812	09/01/2036	4.A FM
..02147X-AR-8	Alternative Loan Trust 2-CWALT 2006-32CB		09/01/2023	PAYDOWN		9,892	9,005	6,169	6,519	0	2,738	12	2,726	0	9,892	0	0	0	324	11/01/2036	4.A FM
..02150V-AA-3	Alternative Loan Trust 2-CWALT 2007-HY7C		09/25/2023	PAYDOWN		23,461	21,546	17,409	19,131	0	2,876	0	2,876	0	23,461	0	0	0	719	08/25/2037	1.A FM
..02152A-AS-8	Alternative Loan Trust 2-CWALT 2007-16CB		09/25/2023	PAYDOWN		39,819	35,716	22,680	23,442	0	13,766	0	13,766	0	39,819	0	0	0	1,442	08/25/2037	1.A FM
..02660L-AA-8	American Home Mortgage A-AHMA 2006-4 1A1		09/25/2023	PAYDOWN		3,752	3,752	2,814	2,068	0	1,684	0	1,684	0	3,752	0	0	0	161	10/25/2046	1.A FM
..02660T-AR-4	American Home Mortgage I-AHM 2004-1 4A		09/01/2023	PAYDOWN		16,286	16,286	16,103	16,134	0	152	0	152	0	16,286	0	0	0	415	04/01/2044	3.A FM
..02660T-DH-3	American Home Mortgage I-AHM 2005-1 6A		09/01/2023	PAYDOWN		20,054	20,054	17,472	19,691	0	363	0	363	0	20,054	0	0	0	506	06/01/2045	1.A FM
..02660T-EK-5	American Home Mortgage I-AHM 2005-2 1A1		09/25/2023	PAYDOWN		51,589	48,284	49,640	49,640	0	1,948	0	1,948	0	51,589	0	0	0	1,263	09/25/2045	1.A FM
..02660V-AE-8	American Home Mortgage A-AHMA 2005-1 3A1		09/25/2023	PAYDOWN		777	777	634	732	0	45	0	45	0	777	0	0	0	18	11/25/2035	1.A FM
..02665U-AA-3	AMERICAN HOMES 4 RENT-SERIES 2014-SFR2 C		09/01/2023	PAYDOWN		66,085	66,085	66,151	66,050	0	35	0	35	0	66,085	0	0	0	1,669	10/01/2036	1.A FE
..02692@-AA-7	American Home Mortgage I-AHM 2006-3 11A1		09/25/2023	PAYDOWN		35,894	35,894	27,482	27,495	0	8,399	0	8,399	0	35,894	0	0	0	193	12/25/2046	1.A FM
..03072S-RC-1	Ameriquet Mortgage Secu-AMSI 2004-FR1W		09/01/2023	PAYDOWN		24,883	24,883	24,136	24,794	0	89	0	89	0	24,883	0	0	0	738	05/01/2034	1.A FM
..03235T-AA-5	Amur Finance VI LLC-ACEF 2014-1A A		09/20/2023	PAYDOWN		6,369	6,369	6,369	1,529	4,098	743	0	4,841	0	6,369	0	0	0	346	12/20/2024	6. *
..03464@-AA-6	Angel Oak Mortgage Trust-AOMT 2022-1 A1		09/01/2023	PAYDOWN		95,181	95,181	95,180	95,181	0	0	0	0	0	95,181	0	0	0	2,163	12/01/2066	1.A
..03464@-AB-4	Angel Oak Mortgage Trust-AOMT 2022-1 A2		09/01/2023	PAYDOWN		271,947	271,947	271,944	271,944	0	2	0	2	0	271,947	0	0	0	6,729	12/01/2066	1.A
..03464@-AC-2	Angel Oak Mortgage Trust-AOMT 2022-1 A3		09/01/2023	PAYDOWN		271,947	271,947	271,942	271,942	0	4	0	4	0	271,947	0	0	0	7,057	12/01/2066	1.B
..03464P-AA-5	Angel Oak Mortgage Trust-AOMT 2022-2 A1		09/01/2023	PAYDOWN		527,197	527,197	525,343	526,302	0	895	0	895	0	527,197	0	0	0	12,543	01/01/2067	1.A FE
..03464P-AB-3	Angel Oak Mortgage Trust-AOMT 2022-2 A2		09/01/2023	PAYDOWN		316,318	316,318	315,830	315,826	0	493	0	493	0	316,318	0	0	0	8,444	01/01/2067	1.C FE
..03464P-AC-1	Angel Oak Mortgage Trust-AOMT 2022-2 A3		09/01/2023	PAYDOWN		316,318	316,318	315,523	315,516	0	802	0	802	0	316,318	0	0	0	8,673	01/01/2067	1.F FE
..03464T-AA-7	Angel Oak Mortgage Trust-AOMT 2022-3 A1		09/01/2023	PAYDOWN		330,997	330,997	327,454	327,826	0	3,171	0	3,171	0	330,997	0	0	0	8,214	01/01/2067	1.A FE
..03464T-AB-5	Angel Oak Mortgage Trust-AOMT 2022-3 A2		09/01/2023	PAYDOWN		220,665	220,665	215,957	216,499	0	4,166	0	4,166	0	220,665	0	0	0	5,684	01/01/2067	1.C FE
..0366@H-AA-9	Antares Holdings LP-SENIOR UNSECURED		08/15/2023	MATURITY		10,000,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	0	0	1,140,000	08/15/2023	2.C FE
..038370-AA-0	Aqua Finance Trust 2019--AQFIT 2019-A A		09/15/2023	PAYDOWN		87,700	87,700	87,687	87,683	0	17	0	17	0	87,700	0	0	0	1,686	07/16/2040	1.E FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..038413-AA-8	Aqua Finance Trust 2020--AQFIT 2020-AA A		09/17/2023	PAYDOWN		276,876	276,876	276,825	276,835	0	41	0	41	0	276,876	0	0	0	3,518	07/17/2046	1.E FE
..04249@-AD-3	Army & Air Force Exchang Senior Note		09/15/2023	SINKING PAYMENT		44,460	44,460	44,460	44,460	0	0	0	0	0	44,460	0	0	0	1,834	10/15/2024	1.D
..04285E-AC-1	Arroyo Mortgage Trust 20-ARRW 2022-2 A2		09/01/2023	PAYDOWN		136,155	136,155	131,821	132,188	0	3,967	0	3,967	0	136,155	0	0	0	4,460	07/01/2057	1.C FE
..04285E-AD-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A3		09/01/2023	PAYDOWN		136,155	136,155	130,511	130,986	0	5,169	0	5,169	0	136,155	0	0	0	4,460	07/01/2057	1.F FE
..04285E-AM-9	Arroyo Mortgage Trust 20-ARRW 2022-2 A1		09/01/2023	PAYDOWN		130,918	130,918	129,335	129,574	0	1,345	0	1,345	0	130,918	0	0	0	4,288	07/01/2057	1.A FE
..043671-AA-4	Aseko Inc-FIRST LIEN		08/08/2023	CALL 100		7,130,000	7,130,000	7,130,000	7,130,000	0	0	0	0	0	7,130,000	0	0	0	299,955	06/15/2025	1.E PL
..04544P-AD-1	Asset Backed Securities --ABSHE 2006--HE5		09/25/2023	PAYDOWN		175,435	175,435	113,999	171,374	0	4,061	0	4,061	0	175,435	0	0	0	1,321	07/25/2036	1.A FM
..04621W-AC-4	Assured Guaranty US Hold--SENIOR UNSECURE		09/25/2023	CALL 100		3,960,000	3,960,000	3,951,882	3,958,536	0	396	0	396	0	3,958,932	0	1,068	1,068	244,200	07/01/2024	2.A FE
..05178T-AA-9	Aurora Military Housing --SECURED		07/15/2023	SINKING PAYMENT		10,282	10,282	10,283	10,283	0	(1)	0	(1)	0	10,282	0	0	0	598	07/15/2034	1.F FE
..05279@-AA-9	Autoliv ASP, Inc. Trust Certificate Tran		09/15/2023	SINKING PAYMENT		69,390	69,390	69,390	69,390	0	0	0	0	0	69,390	0	0	0	1,265	05/15/2034	2.B
..05532@-AA-6	BCC Middle Market CLO 20-BMMC 2018-1A A1		07/20/2023	PAYDOWN		1,342,627	1,342,627	1,342,627	1,342,627	0	0	0	0	0	1,342,627	0	0	0	64,295	10/20/2030	1.A FE
..05532E-CE-3	BCAP LLC 2009-RR10 Trust-BCAP 2009-RR10		09/01/2023	PAYDOWN		15,883	16,904	4,863	10,298	0	5,829	0	5,829	0	15,883	0	0	0	736	06/01/2037	1.A FM
..05532T-AF-9	BCAP LLC 2010-RR1 Trust-BCAP 2010-RR1 2A		09/01/2023	PAYDOWN		181,057	181,057	78,760	166,602	0	14,455	0	14,455	0	181,057	0	0	0	5,636	06/01/2045	1.A FM
..05533N-AJ-3	BCAP LLC 2010-RR12 Trust-BCAP 2010-RR12		09/01/2023	PAYDOWN		67,068	61,959	54,282	60,824	0	1,838	0	1,838	0	67,068	0	0	0	1,615	06/01/2037	1.F FM
..05552F-AG-2	BBCMS Trust--BBCMS 2022-C15 E		07/14/2023	BARCLAYS CAPITAL INC		3,750,000	10,000,000	7,100,020	7,252,272	0	121,050	0	121,050	0	7,373,322	0	(3,623,322)	(3,623,322)	157,639	04/01/2055	1.A
..05552Y-AD-3	BBCMS Mortgage Trust 202--BBCMS 2022-C16		07/13/2023	BARCLAYS CAPITAL INC		5,603,100	14,745,000	9,065,491	9,258,382	0	215,616	0	215,616	0	9,473,998	0	(3,870,898)	(3,870,898)	231,415	06/01/2055	1.B
..05584A-AA-8	BRE Grand Islander Times-HGVGI 2017-1A A		09/25/2023	PAYDOWN		85,998	85,998	85,976	85,988	0	10	0	10	0	85,998	0	0	0	1,698	05/25/2029	1.F FE
..05586*-AA-9	BGS Spartanburg 2017 Trust Certificate		09/15/2023	SINKING PAYMENT		114,800	114,800	114,800	114,800	0	0	0	0	0	114,800	0	0	0	1,899	07/15/2032	2.A S
..05587*-AA-8	BGS Fedex Series 2017A Trust Certificate		09/15/2023	SINKING PAYMENT		99,765	99,765	99,765	99,768	0	(3)	0	(3)	0	99,765	0	0	0	2,834	03/15/2037	1.E PL
..05588*-AA-7	BGS Huntersville 2017 Trust Certificate		09/15/2023	SINKING PAYMENT		93,783	93,783	93,783	93,783	0	0	0	0	0	93,783	0	0	0	2,771	05/15/2038	2.B S
..05590*-AA-9	BPHQ 2017 Trust Certificate BP Corp Nort		09/15/2023	SINKING PAYMENT		50,368	50,368	50,368	50,368	0	0	0	0	0	50,368	0	0	0	992	11/15/2032	1.F
..05591U-AA-5	BSREP Commercial Mortgag-BSREP 2021-DC A		08/15/2023	PAYDOWN		308,273	308,273	292,859	293,039	0	15,234	0	15,234	0	308,273	0	0	0	12,029	08/15/2038	1.A
..05608W-AG-9	BX Commercial Mortgage T-BX 2021--SOAR B		07/15/2023	PAYDOWN		113,656	113,656	108,257	109,379	0	4,276	0	4,276	0	113,656	0	0	0	3,772	06/15/2038	1.A
..05608W-AN-4	BX Trust-BX 2021--SOAR E		07/15/2023	PAYDOWN		409,276	409,276	409,276	409,276	0	0	0	0	0	409,276	0	0	0	15,825	06/15/2038	1.A
..05609K-AC-3	BX Commercial Mortgage T-BX 2021--XL2 B		07/15/2023	PAYDOWN		723,924	723,924	695,307	0	0	28,618	0	28,618	0	723,924	0	0	0	11,127	10/15/2038	1.A
..05609K-AJ-8	BX Commercial Mortgage T-BX 2021--XL2 E		07/15/2023	PAYDOWN		723,925	723,925	720,304	722,236	0	1,688	0	1,688	0	723,925	0	0	0	28,144	10/15/2038	1.A
..05609K-AL-3	BX Commercial Mortgage T-BX 2021--XL2 F		07/15/2023	PAYDOWN		1,809,811	1,809,811	1,800,756	1,805,813	0	3,999	0	3,999	0	1,809,811	0	0	0	74,610	10/15/2038	1.A
..05609K-AN-9	BX Commercial Mortgage T-BX 2021--XL2 G		07/15/2023	PAYDOWN		2,171,773	2,171,773	2,160,907	2,166,682	0	5,092	0	5,092	0	2,171,773	0	0	0	97,185	10/15/2038	1.A
..058927-AG-9	Banc of America Funding --BAFC 2006-A 3A2		09/01/2023	PAYDOWN		15,312	15,899	13,879	14,970	0	840	0	840	0	15,312	0	0	0	299	02/01/2036	2.B FM
..058931-AD-8	Banc of America Funding --BAFC 2006-3 2A1		09/01/2023	PAYDOWN		16,433	20,025	16,332	15,842	0	3,492	0	3,492	0	16,433	0	0	0	69	03/01/2036	1.A FM
..058931-AT-3	Banc of America Funding --BAFC 2006-3 4A1		09/01/2023	PAYDOWN		8,930	76,547	73,507	73,244	0	648	0	648	0	8,930	0	0	0	3,275	03/01/2036	5.A FM
..058931-BL-9	Banc of America Funding --BAFC 2006-3 5A8		09/01/2023	PAYDOWN		4,419	4,543	4,611	4,110	0	416	0	416	0	4,419	0	0	0	29	03/01/2036	1.A FM
..058933-AN-2	Banc of America Funding --BAFC 2006-D 5A1		09/01/2023	PAYDOWN		10,595	10,835	9,891	9,890	0	928	0	928	0	10,595	0	0	0	387	05/01/2036	1.A FM
..05946X-XP-3	Banc of America Funding --BAFC 2005-E 3A1		09/01/2023	PAYDOWN		23,612	24,048	23,582	24,449	0	(428)	0	(428)	0	23,612	0	0	0	212	05/01/2035	4.A FM
..05946X-V7-2	Banc of America Funding --BAFC 2005-8 2A8		09/01/2023	PAYDOWN		7,111	11,424	10,850	11,218	0	(16)	0	(16)	0	7,111	0	0	0	225	01/01/2036	3.B FM
..05946X-VY-9	Banc of America Funding --BAFC 2005-F 2A1		08/01/2023	PAYDOWN		5,510	5,787	5,393	5,961	0	(194)	0	(194)	0	5,510	0	0	0	92	09/01/2035	3.A FM
..05948X-T2-7	Banc of America Mortgage--BOAMS 2004-A 2A		09/01/2023	PAYDOWN		7,586	7,586	7,446	7,446	0	139	0	139	0	7,586	0	0	0	215	02/01/2034	1.A FM
..05949A-H8-6	Banc of America Mortgage--BOAMS 2005-A 2A		09/01/2023	PAYDOWN		51,385	51,385	49,683	51,066	0	319	0	319	0	51,385	0	0	0	1,414	02/01/2035	1.A FM
..05949A-H9-4	Banc of America Mortgage--BOAMS 2005-A 2A		08/01/2023	PAYDOWN		61,533	61,533	59,918	61,533	0	0	0	0	0	61,533	0	0	0	1,685	02/01/2035	1.A FM
..05949C-GW-0	Banc of America Mortgage--BOAMS 2005-B A9		09/01/2023	PAYDOWN		40,477	40,979	38,466	39,912	0	2,451	0	2,451	0	40,477	0	0	0	515	09/01/2035	2.C FM
..05949C-HM-1	Banc of America Mortgage--BOAMS 2005-I 1A		09/01/2023	PAYDOWN		99,908	103,069	88,939	90,998	0	12,609	1,845	10,764	0	99,908	0	0	0	3,164	10/01/2035	3.A FM
..05949C-KS-4	Banc of America Mortgage--BOAMS 2005-J 2A		09/01/2023	PAYDOWN		448	449	439	467	0	(17)	0	(17)	0	448	0	0	0	12	11/01/2035	3.A FM
..05949C-KX-3	Banc of America Mortgage--BOAMS 2005-J 4A		09/01/2023	PAYDOWN		22,433	22,575	18,491	18,696	0	5,133	1,296	3,837	0	22,433	0	0	0	500	11/01/2035	1.A FM
..05949C-PP-5	Banc of America Mortgage--BOAMS 2005-L 4A		09/01/2023	PAYDOWN		37,921	41,472	39,243	37,940	0	3,100	0	3,100	0	37,921	0	0	0	336	01/01/2036	1.A FM
..05949T-AX-7	Banc of America Funding --BAFC 2006-1 1A2		09/01/2023	PAYDOWN		149,740	149,740	163,444	163,916	0	(14,175)	0	(14,175)	0	149,740	0	0	0	6,340	01/01/2036	1.A FM
..05950M-AJ-9	Banc of America Funding --BAFC 2006-G 3A3		09/01/2023	PAYDOWN		183,201	183,201	175,644	175,227	0	7,974	0	7,974	0	183,201	0	0	0	5,348	07/01/2036	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..05950P-AF-0	Banc of America Funding -BAFC 2006-H 2A3		09/01/2023	PAYDOWN		15,214	16,809	14,724	13,613	0	2,980	0	2,980	0	15,214	0	0	0	165	09/01/2046	1.A FM
..05950T-AC-9	Banc of America Mortgage-BOAMS 2006-B 2A		09/01/2023	PAYDOWN		2,522	3,325	3,138	2,750	0	(121)	0	(121)	0	2,097	0	424	424	80	11/01/2046	1.A FM
..05951F-AB-0	Banc of America Funding -BAFC 2007-1 TA1		09/01/2023	PAYDOWN		873	829	873	829	0	187	0	187	0	873	0	0	0	35	01/01/2037	1.A FM
..05951K-AN-3	Banc of America Funding -BAFC 2006-7 1A1		09/01/2023	PAYDOWN		46,232	51,985	44,788	46,452	0	4,945	(83)	5,028	0	46,232	0	0	0	366	09/01/2036	3.B FM
..05951U-AC-5	Banc of America Funding -BAFC 2006-8T2 A		09/01/2023	PAYDOWN		378	411	389	301	0	103	0	103	0	378	0	0	0	11	10/01/2036	1.A FM
..05951V-AV-1	Banc of America Funding -BAFC 2006-I 6A1		09/20/2023	PAYDOWN		6,273	6,273	5,171	5,469	0	804	0	804	0	6,273	0	0	0	113	12/20/2046	1.A FM
..059522-AA-0	Banc of America Funding -BAFC 2007-C 6A1		09/20/2023	PAYDOWN		185,401	185,401	159,445	183,357	0	2,044	0	2,044	0	185,401	0	0	0	4,546	05/20/2047	1.A FM
..059522-AU-6	Banc of America Funding -BAFC 2007-C 1A2		08/01/2023	PAYDOWN		16,938	15,298	13,534	14,569	0	2,008	1,079	929	0	16,938	0	0	0	322	05/01/2036	1.A FM
..059523-AX-8	Banc of America Funding -BAFC 2007-5 7A1		09/01/2023	PAYDOWN		17	108,815	63,486	72,240	0	(8,381)	0	(8,381)	0	17	0	0	0	2,304	07/01/2047	1.A FM
..059526-AT-8	Banc of America Funding -BAFC 2007-D 3A1		07/01/2023	PAYDOWN		17,273	17,528	17,177	17,010	0	492	0	492	0	17,273	0	0	0	224	06/01/2037	2.C FM
..059529-AV-3	Banc of America Funding -BAFC 2007-D 3A3		07/01/2023	PAYDOWN		25,031	25,222	24,717	24,462	0	735	0	735	0	25,031	0	0	0	319	06/01/2037	2.C FM
..05953Y-AH-4	Banc of America Funding -BAFC 2007-4 TA1		09/01/2023	PAYDOWN		4,467	4,871	4,257	4,000	0	2,577	0	2,577	0	4,467	0	0	0	168	05/01/2037	1.A FM
..05954D-AL-0	Banc of America Funding -BAFC 2007-E 6A1		09/01/2023	PAYDOWN		209	209	181	193	0	16	0	16	0	209	0	0	0	7	09/01/2037	4.C FM
..05956E-AB-8	Banc of America Funding -BAFC 2010-R6 1A		08/01/2023	PAYDOWN		93,060	93,060	91,664	92,834	0	226	0	226	0	93,060	0	0	0	3,806	02/01/2035	1.A FM
..05990E-AD-2	Banc of America Funding -BAFC 2012-R6 2A		09/26/2023	PAYDOWN		121,649	121,649	105,866	119,068	0	3,337	0	3,337	0	121,649	0	0	0	3,727	07/26/2036	3.B FM
..05990H-AH-6	Banc of America Funding -BAFC 2010-R2 1A		09/01/2023	PAYDOWN		35,567	33,248	21,037	19,573	0	14,404	0	14,404	0	35,567	0	0	0	1,454	08/01/2037	1.A FM
..05990H-AQ-6	Banc of America Funding -BAFC 2010-R2 3A		09/01/2023	PAYDOWN		68,121	68,121	66,226	66,202	0	1,919	0	1,919	0	68,121	0	0	0	2,151	07/01/2035	1.A FM
..05990H-AT-0	Banc of America Funding -BAFC 2010-R2 4A		09/01/2023	PAYDOWN		5,356	12,173	9,720	10,337	0	545	44	501	0	5,356	0	0	0	583	08/01/2036	1.A FM
..064248-AA-1	Bank Of America (Houston Pass-Thru Certi		09/15/2023	SINKING PAYMENT		94,631	94,631	95,212	95,049	0	(418)	0	(418)	0	94,631	0	0	0	2,183	12/31/2029	1.C S
..065402-AJ-8	BANK 2019-BNK18-BANK 2019-BN18 D		09/05/2023	BOFAM1SEC		3,801,675	8,790,000	6,993,544	7,117,759	0	148,315	0	148,315	0	7,266,074	0	(3,464,399)	(3,464,399)	202,170	05/01/2062	2.A
..06744D-AA-7	Barclays Mortgage Loan T-BARC 2022-NQM1		09/01/2023	PAYDOWN		30,642	30,642	30,070	30,112	0	530	0	530	0	30,642	0	0	0	891	07/01/2052	1.A FE
..06744D-AB-5	Barclays Mortgage Loan T-BARC 2022-NQM1		09/01/2023	PAYDOWN		30,642	30,642	29,480	29,519	0	1,123	0	1,123	0	30,642	0	0	0	884	07/01/2052	1.C FE
..06744D-AC-3	Barclays Mortgage Loan T-BARC 2022-NQM1		09/01/2023	PAYDOWN		86,165	86,165	81,791	81,868	0	4,297	0	4,297	0	86,165	0	0	0	3,138	07/01/2052	1.F FE
..06744Y-AA-1	Barclays Mortgage Loan T-BARC 2022-INV1		09/01/2023	PAYDOWN		338,867	338,867	338,862	338,867	0	0	0	0	0	338,867	0	0	0	10,170	02/01/2062	1.A FE
..07325D-AF-1	Bayview Financial Mortga-BAYV 2006-C 1A5		09/01/2023	PAYDOWN		34,957	34,957	29,423	31,399	0	3,558	0	3,558	0	34,957	0	0	0	944	11/01/2036	1.A FM
..07325V-AE-4	Bayview Financial Acquis-BAYV 2007-A 1A4		09/01/2023	PAYDOWN		469,848	469,848	394,672	432,173	0	37,675	0	37,675	0	469,848	0	0	0	19,548	05/01/2037	1.A FM
..07335B-AA-4	US Renal Care Inc-SENIOR UNSECURED		08/14/2023	USRENAL		1,353,320	2,942,000	1,176,800	0	0	461	0	461	0	1,177,261	0	176,059	176,059	26,049	07/15/2027	6. FE
..07384M-AE-4	Bear Stearns ARM Trust 2-BSARM 2004-10 2		09/01/2023	PAYDOWN		19,668	18,341	19,668	18,963	0	705	0	705	0	19,668	0	0	0	573	01/01/2035	1.A FM
..07384M-Q8-8	Bear Stearns ARM Trust 2-BSARM 2004-3 2A		09/01/2023	PAYDOWN		18,596	18,596	18,654	18,596	0	0	0	0	0	18,596	0	0	0	472	07/01/2034	1.A FM
..07384M-S7-8	Bear Stearns ARM Trust 2-BSARM 2004-5 2A		09/01/2023	PAYDOWN		9,267	9,267	9,307	9,261	0	6	0	6	0	9,267	0	0	0	235	07/01/2034	3.B FM
..07384Y-KF-2	Bear Stearns Asset Backe-BSABS 2003-AC4		09/01/2023	PAYDOWN		3,907	3,907	3,949	3,864	0	43	0	43	0	3,907	0	0	0	1,201	09/01/2033	1.A FM
..07384Y-TL-0	Bear Stearns Asset Backe-BSABS 2004-SD2		09/01/2023	PAYDOWN		4,382	4,382	4,432	4,474	0	(92)	0	(92)	0	4,382	0	0	0	142	03/01/2044	1.A FM
..07386H-PD-7	Bear Stearns ALT-A Trust-BALTA 2004-12 2		09/01/2023	PAYDOWN		2,833	2,833	2,600	2,647	0	186	0	186	0	2,833	0	0	0	91	01/01/2035	1.A FM
..07386H-QZ-7	Bear Stearns ALT-A Trust-BALTA 2005-2 2A		09/01/2023	PAYDOWN		38,175	38,175	32,724	30,654	0	7,558	0	7,558	0	38,175	0	0	0	129	04/01/2035	1.A FM
..07386H-UG-4	Bear Stearns ALT-A Trust-BALTA 2005-5 21		09/01/2023	PAYDOWN		91	91	82	86	0	5	0	5	0	91	0	0	0	3	07/01/2035	1.A FM
..07386X-AH-9	Bear Stearns ALT-A Trust-BALTA 2007-1 21		09/01/2023	PAYDOWN		24,517	24,494	14,307	14,150	0	10,378	7	10,371	0	24,517	0	0	0	719	01/01/2047	1.A FM
..07386Y-AE-4	Bear Stearns ARM Trust 2-BSARM 2007-5 3A		09/01/2023	PAYDOWN		20,982	20,019	20,140	19,892	0	2,223	235	1,988	0	20,982	0	0	0	438	08/01/2047	1.A FM
..073870-AG-2	Bear Stearns ALT-A Trust-BALTA 2007-2 2A		09/01/2023	PAYDOWN		5,649	5,022	2,660	2,547	0	2,771	0	2,771	0	5,649	0	0	0	106	04/01/2037	1.A FM
..073879-GN-2	Bear Stearns Asset Backe-BSABS 2004-AC5		09/25/2023	PAYDOWN		6,397	6,397	4,782	5,411	0	987	0	987	0	6,397	0	0	0	143	10/25/2034	1.A FM
..073880-AD-8	Bear Stearns ARM Trust 2-BSARM 2007-1 2A		09/01/2023	PAYDOWN		17,262	22,435	21,004	21,260	0	817	117	700	0	17,262	0	0	0	550	02/01/2047	2.A FM
..07389N-AC-9	Bear Stearns Asset Backe-BSABS 2006-SD4		09/01/2023	PAYDOWN		3,237	3,237	2,906	2,591	0	645	0	645	0	3,237	0	0	0	94	10/01/2036	1.A FM
..07401C-AS-2	Bear Stearns ARM Trust 2-BSARM 2007-4 21		09/01/2023	PAYDOWN		497,678	492,726	436,720	450,429	0	51,855	8,574	43,281	0	497,678	0	0	0	13,820	06/01/2047	1.A FM
..08163P-AN-0	Benchmark 2022-B33 Mortg-BMARK 2022-B33		09/21/2023	MORGAN		4,828,870	13,051,000	8,662,931	8,889,384	0	247,702	0	247,702	0	9,137,086	0	(4,308,216)	(4,308,216)	213,166	03/01/2055	1.E
..097093-AC-2	BOF VII AL Funding Trust-BVABS 2023-CAR3		09/25/2023	PAYDOWN		1,016,733	1,016,733	1,016,724	0	0	9	0	9	0	1,016,733	0	0	0	10,353	07/26/2032	1.D FE
..09748R-AA-6	Bojangles Issuer LLC-BOJA 2020-1A A2		07/20/2023	PAYDOWN		20,000	20,000	20,000	20,000	0	0	0	0	0	20,000	0	0	0	575	10/20/2050	2.B FE
..10568K-AA-6	BRAVO Residential Fundin-BRAVO 2022-NQM2		09/01/2023	PAYDOWN		88,147	88,147	88,146	88,146	0	1	0	1	0	88,147	0	0	0	2,440	11/01/2061	1.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..10568K-AB-4	BRAVO Residential Fundin-BRAVO 2022-NQM2		09/01/2023	PAYDOWN		39,407	39,407	39,406	39,406	0	1	0	1	0	39,407	0	0	0	1,247	11/01/2061	1.C FE
..10569F-AC-2	BRAVO Residential Fundin-BRAVO 2022-NQM1		09/01/2023	PAYDOWN		364,401	364,401	364,126	364,191	0	211	0	211	0	364,401	0	0	0	9,683	09/01/2061	1.F FE
..10569J-AB-6	BRAVO Residential Fundin-BRAVO 2022-NQM3		09/01/2023	PAYDOWN		37,074	37,074	36,927	36,952	0	122	0	122	0	37,074	0	0	0	1,330	07/01/2062	1.C FE
..10922N-AG-8	Brighthouse Financial In-SENIOR UNSECURE		07/27/2023	SUNTRUST CAPITAL MAR		9,653,000	10,000,000	11,728,800	11,548,003	0	(114,235)	0	(114,235)	0	11,433,768	0	(1,780,768)	(1,780,768)	400,000	05/15/2030	2.B FE
..10948W-AA-1	Brightsphere Investment -SENIOR UNSECURE		09/07/2023	VARIOUS		9,860,222	10,429,000	10,410,124	10,421,861	0	1,212	0	1,212	0	10,423,073	0	(562,851)	(562,851)	509,097	07/27/2026	3.A FE
..11044M-AA-4	BRITISH AIR 20-1 A PPT-FIRST LIEN		08/15/2023	SINKING PAYMENT		36,987	36,987	36,987	36,982	0	5	0	5	0	36,987	0	0	0	1,179	11/15/2032	1.G FE
..115236-AC-5	Brown & Brown Inc-SENIOR UNSECURED		07/27/2023	JANE		4,031,100	5,000,000	4,805,500	4,823,104	0	11,277	0	11,277	0	4,834,381	0	(803,281)	(803,281)	104,236	03/15/2031	2.C FE
..11750*-AA-7	Bryan Health (Kearney NE Senior Secured		09/15/2023	SINKING PAYMENT		45,880	45,880	45,880	45,880	0	0	0	0	0	45,880	0	0	0	1,454	12/15/2046	1.E
..12327A-AA-6	Business Jet Securities -BJETS 2022-1A A		09/15/2023	PAYDOWN		430,798	430,798	417,942	419,229	0	11,569	0	11,569	0	430,798	0	0	0	13,048	06/15/2037	1.G FE
..12327F-AA-5	Business Jet Securities -BJETS 2020-1A A		09/15/2023	PAYDOWN		286,255	286,255	286,251	286,252	0	3	0	3	0	286,255	0	0	0	5,242	11/15/2035	1.F FE
..12479R-AE-7	CAPITAL AUTOMOTIVE REIT-SERIES 17-1A CLA		09/15/2023	PAYDOWN		13,899	13,899	13,933	13,906	0	(7)	0	(7)	0	13,899	0	0	0	513	04/15/2047	1.E FE
..12489W-JQ-8	Credit-Based Asset Servi-CBASS 2004-CB4		09/01/2023	PAYDOWN		525	525	524	521	0	4	0	4	0	525	0	0	0	18	05/01/2035	1.A FM
..12510H-AB-6	CARS-DB4 LP-CAUTO 2020-1A A2		09/15/2023	PAYDOWN		7,118	7,118	7,117	7,117	0	1	0	1	0	7,118	0	0	0	161	02/15/2050	1.A FE
..12510H-AC-4	Capital Automotive Reit-CAUTO 2020-1A A3		09/15/2023	PAYDOWN		7,415	7,415	7,410	7,410	0	5	0	5	0	7,415	0	0	0	213	02/15/2050	1.A FE
..12510H-AF-7	Capital Automotive Reit-CAUTO 2020-1A A6		09/15/2023	PAYDOWN		2,938	2,938	2,669	2,678	0	260	0	260	0	2,938	0	0	0	90	02/15/2050	1.E FE
..12510H-AM-2	CARS-DB5 LP-CAUTO 2021-1A A3		09/15/2023	PAYDOWN		1,925	1,925	1,713	1,739	0	186	0	186	0	1,925	0	0	0	25	08/15/2051	1.E FE
..12510H-AN-0	Capital Automotive REIT-CAUTO 2021-1A A4		09/15/2023	PAYDOWN		15,000	15,000	14,310	14,360	0	640	0	640	0	15,000	0	0	0	341	08/15/2051	1.E FE
..12510H-AQ-3	Capital Automotive REIT-CAUTO 2022-1A A2		09/15/2023	PAYDOWN		64,375	64,375	64,002	64,019	0	356	0	356	0	64,375	0	0	0	2,116	03/15/2052	1.E FE
..12530M-AB-1	OF Hippolyta Issuer LLC-SERIES 20-1 CLAS		09/15/2023	PAYDOWN		10,965	10,965	10,959	10,960	0	4	0	4	0	10,965	0	0	0	175	07/15/2060	1.D FE
..125431-AH-9	CHL Mortgage Pass-Through-CIHL 2006-HYB4		09/01/2023	PAYDOWN		4,698	5,605	5,483	3,505	0	2,072	0	2,072	0	4,698	0	0	0	154	06/01/2036	1.A FM
..12543X-AD-8	CHL Mortgage Pass-Through-CIHL 2006-19 1A		09/01/2023	PAYDOWN		695	724	473	480	0	251	10	241	0	695	0	0	0	34	01/01/2037	3.B FM
..12544B-AE-3	CHL Mortgage Pass-Through-CIHL 2007-HY5 3		09/01/2023	PAYDOWN		4,377	4,564	3,552	3,839	0	665	0	665	0	4,377	0	0	0	(599)	09/01/2037	1.A FM
..12544D-AG-4	CHL Mortgage Pass-Through-CIHL 2007-14 A7		09/01/2023	PAYDOWN		2,870	2,871	1,831	1,909	0	999	37	962	0	2,870	0	0	0	141	09/01/2037	2.B FM
..12544H-BF-6	CHL Mortgage Pass-Through-CIHL 2007-HY7 A		09/01/2023	PAYDOWN		598	(199)	(249)	(337)	0	(1,012)	0	(1,012)	0	598	0	0	0	(16)	11/01/2037	1.A FM
..12546Y-AA-9	CHNGE Mortgage Trust-CHNGE 2022-2 A1		09/01/2023	PAYDOWN		808,181	808,181	808,174	808,176	0	4	0	4	0	808,181	0	0	0	18,762	03/01/2067	1.D FE
..12551S-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-4 A1		09/01/2023	PAYDOWN		974,704	974,704	955,122	957,259	0	17,444	0	17,444	0	974,704	0	0	0	42,017	10/01/2057	1.E FE
..12558M-AG-7	CIT Home Equity Loan Tru-CITHE 2002-1 AF		09/01/2023	PAYDOWN		7,711	7,711	7,894	7,639	0	72	0	72	0	7,711	0	0	0	416	02/01/2030	1.A FM
..12563L-AS-6	CLI Funding VI LLC-2020-3A A		09/18/2023	PAYDOWN		216,667	216,667	201,443	99,982	0	15,221	0	15,221	0	216,667	0	0	0	1,682	10/18/2045	1.F FE
..12564E-AA-0	CIM Trust 2021-J2-CIM 2021-J2 A1		09/01/2023	PAYDOWN		470,141	470,141	475,430	475,301	0	(5,161)	0	(5,161)	0	470,141	0	0	0	9,168	04/01/2051	1.A
..12564K-AA-6	CIM Trust 2021-J1-CIM 2021-J1 A1		09/01/2023	PAYDOWN		185,151	185,151	190,011	189,894	0	(4,743)	0	(4,743)	0	185,151	0	0	0	3,472	03/01/2051	1.A
..12565K-AA-5	CLI Funding VIII LLC-CLIF 2021-1A A		09/18/2023	PAYDOWN		143,322	143,322	143,322	93,513	0	20,497	0	20,497	0	143,322	0	0	0	1,287	02/18/2046	1.F FE
..12566U-AE-4	CitiMortgage Alternative-CMALT 2007-A2 1		09/01/2023	PAYDOWN		6,441	7,995	7,441	7,647	0	247	0	247	0	6,441	0	0	0	217	02/01/2037	3.B FM
..12566U-AN-4	CitiMortgage Alternative-CMALT 2007-A2 1		09/01/2023	PAYDOWN		11,747	19,086	14,968	15,601	0	1,940	77	1,863	0	11,747	0	0	0	389	02/01/2037	1.A FM
..12566V-AE-2	CitiMortgage Alternative-CMALT 2007-A4 1		09/01/2023	PAYDOWN		19,330	16,863	16,863	19,330	0	2,356	0	2,356	0	17,768	0	0	0	554	04/01/2037	1.A FM
..12566X-AM-0	CitiMortgage Alternative-CMALT 2007-A7 2		08/01/2023	PAYDOWN		11,987	16,317	15,639	15,912	0	227	0	227	0	11,987	0	0	0	300	07/01/2037	4.B FM
..12569C-AB-7	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		09/01/2023	PAYDOWN		159,044	159,044	158,682	158,726	0	317	0	317	0	159,044	0	0	0	6,604	06/01/2067	1.C FE
..12569C-AC-5	CHNGE Mortgage Trust 202-CHNGE 2022-NQM1		09/01/2023	PAYDOWN		331,342	331,342	326,629	327,204	0	4,137	0	4,137	0	331,342	0	0	0	13,758	06/01/2067	1.F FE
..12569Q-AA-8	CHNGE Mortgage Trust 202-CHNGE 2023-4 A1		09/01/2023	PAYDOWN		177,891	177,891	178,252	0	0	(361)	0	(361)	0	177,891	0	0	0	0	09/01/2058	1.A FE
..12575A-AB-3	CHFT Net Lease-CIMNL 2021-1 A2		07/20/2023	PAYDOWN		17,623	17,623	17,615	17,616	0	7	0	7	0	17,623	0	0	0	264	07/20/2051	1.A FE
..125858-AA-4	CHP (Fresno Ca) Trust Certificate		09/15/2023	SINKING PAYMENT		391,218	391,218	391,218	391,218	0	0	0	0	0	391,218	0	0	0	8,322	02/15/2028	1.F
..12593F-BC-7	COMM 2015-LC21 Mortgage -COMM 2015-LC21		08/01/2023	PAYDOWN		413,774	413,774	416,473	414,506	0	(732)	0	(732)	0	413,774	0	0	0	10,691	07/01/2048	1.A
..12598R-AA-1	COLT 2021-S Mortgage Loa-COLT 2021-5 A1		09/01/2023	PAYDOWN		182,799	182,799	165,662	167,870	0	14,930	0	14,930	0	182,799	0	0	0	2,199	11/01/2086	1.A FE
..126117-AW-0	CNA Financial Corp-SENIOR UNSECURED		07/27/2023	WELLS FARGO		3,975,950	5,000,000	4,728,550	4,755,124	0	17,017	0	17,017	0	4,772,141	0	(796,191)	(796,191)	98,514	08/15/2030	2.B FE
..12626G-AF-0	COMM 2013-LC13 Mortgage -COMM 2013-LC13		08/01/2023	PAYDOWN		238,145	238,145	245,735	238,598	0	(453)	0	(453)	0	238,145	0	0	0	8,434	08/01/2046	1.A
..12628L-AD-2	CSAB Mortgage-Backed Tru-CSAB 2006-4 A2A		09/01/2023	PAYDOWN		25,795	25,795	5,927	6,404	0	19,980	588	19,392	0	25,795	0	0	0	359	12/01/2036	1.A FM
..12630D-AX-2	COMM 2014-CR14 Mortgage -COMM 2014-CR14		09/01/2023	PAYDOWN		7,000,000	7,000,000	7,099,365	7,006,408	0	(6,408)	0	(6,408)	0	7,000,000	0	0	0	296,625	02/01/2047	1.A

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..12632Q-AW-3	COMM 2014-CORE18 Mortgag-COMM 2014-CR18		09/01/2023	PAYDOWN		134,515	134,515	135,854	134,623	0	(108)	0	(108)	0	134,515	0	0	0	3,499	07/01/2047	1.A
..12638P-AB-5	CSMC Mortgage-Backed Tru-CSMC 2007-3 1A1		09/01/2023	PAYDOWN		8,798	8,798	2,961	3,065	0	5,896	163	5,733	0	8,798	0	0	0	76	04/01/2037	1.A FM
..12640W-AC-4	CSMC Series 2008-3R-CSMC 2008-3R 1A2		09/01/2023	PAYDOWN		19,124	20,741	19,018	19,277	0	1,236	0	1,236	0	19,124	0	0	0	592	07/01/2037	1.A FM
..126416-AB-2	CSMC 2022-NQM1-CSMC 2022-NQM1 A2		09/01/2023	PAYDOWN		306,811	306,811	306,806	306,807	0	4	0	4	0	306,811	0	0	0	5,900	11/01/2066	1.C FE
..126416-AC-0	CSMC 2022-NQM1-CSMC 2022-NQM1 A3		09/01/2023	PAYDOWN		751,350	751,350	751,347	751,348	0	2	0	2	0	751,350	0	0	0	15,026	11/01/2066	1.F FE
..12641T-AB-2	CSMC Series 2009-5R-CSMC 2009-5R 1A2		09/01/2023	PAYDOWN		84,624	84,624	64,513	65,684	0	18,940	0	18,940	0	84,624	0	0	0	2,637	06/01/2036	1.A FM
..12646U-AC-4	CSMC Trust 2013-IVR1-CSMC 2013-IVR1 A2		09/01/2023	PAYDOWN		55,853	55,853	52,222	52,624	0	3,229	0	3,229	0	55,853	0	0	0	1,314	03/01/2043	1.A
..12646W-AH-7	CSMC Trust 2013-IVR2-CSMC 2013-IVR2 A2		09/01/2023	PAYDOWN		44,673	44,673	41,741	41,971	0	2,701	0	2,701	0	44,673	0	0	0	1,029	04/01/2043	1.A
..12646X-AJ-1	CSMC Trust 2013-IVR3-CSMC 2013-IVR3 A2		09/01/2023	PAYDOWN		26,598	26,598	25,185	25,427	0	1,171	0	1,171	0	26,598	0	0	0	601	05/01/2043	1.A
..12647G-BZ-0	CSMC Trust 2013-IVR4-CSMC 2013-IVR4 A20		09/01/2023	PAYDOWN		4,727	4,727	4,617	4,628	0	99	0	99	0	4,727	0	0	0	121	07/01/2043	1.A
..12647H-BC-9	CSMC Trust 2013-8R-CSMC 2013-8R 4A2		09/27/2023	PAYDOWN		160,936	158,520	115,056	145,237	0	13,975	0	13,975	0	160,936	0	0	0	22,458	12/27/2036	1.A FM
..12647P-AK-4	CSMC Trust 2013-7-CSMC 2013-7 A6		09/01/2023	PAYDOWN		36,369	36,369	35,050	35,120	0	1,249	0	1,249	0	36,369	0	0	0	966	08/01/2043	1.A
..12648H-BB-0	CSMC Trust 2014-IVR2-CSMC 2014-IVR2 B1		09/01/2023	PAYDOWN		67,886	66,528	66,514	66,514	0	1,372	0	1,372	0	67,886	0	0	0	1,756	04/01/2044	1.A
..12648T-AQ-2	CSMC Trust 2014-IVR3-CSMC 2014-IVR3 B1		09/01/2023	PAYDOWN		25,161	25,161	25,020	25,003	0	158	0	158	0	25,161	0	0	0	767	07/01/2044	1.A
..12659Y-AB-0	COLT 2022-3 Mortgage Loa-COLT 2022-3 A2		09/01/2023	PAYDOWN		240,001	240,001	239,997	239,998	0	2	0	2	0	240,001	0	0	0	7,455	06/01/2028	1.C FE
..12659Y-AC-8	COLT 2022-3 Mortgage Loa-COLT 2022-3 A3		09/01/2023	PAYDOWN		192,000	192,000	191,900	191,917	0	84	0	84	0	192,000	0	0	0	7,183	06/01/2028	1.F FE
..12660B-AB-7	Credit Suisse Mortgage C-CSMC 2022-ATH1		09/01/2023	PAYDOWN		521,055	521,055	521,047	521,049	0	6	0	6	0	521,055	0	0	0	13,451	01/01/2067	1.C FE
..12660B-AC-5	Credit Suisse Mortgage C-CSMC 2022-ATH1		09/01/2023	PAYDOWN		774,556	774,556	774,549	774,551	0	5	0	5	0	774,556	0	0	0	20,899	01/01/2067	1.F FE
..12663G-AA-5	COLT 2022-7 Mortgage Loa-COLT 2022-7 A1		09/01/2023	PAYDOWN		273,844	273,844	273,841	273,844	0	0	0	0	0	273,844	0	0	0	9,977	04/01/2067	1.A FE
..12663G-AB-3	COLT 2022-7 Mortgage Loa-COLT 2022-7 A2		09/01/2023	PAYDOWN		260,158	260,158	260,158	260,158	0	0	0	0	0	260,158	0	0	0	11,067	04/01/2067	1.C FE
..12663G-AC-1	COLT 2022-7 Mortgage Loa-COLT 2022-7 A3		09/01/2023	PAYDOWN		136,925	136,925	135,993	136,123	0	803	0	803	0	136,925	0	0	0	6,753	04/01/2067	1.F FE
..12664A-AE-9	CSMC 2022-ATH3-CSMC 2022-ATH3 A2		09/01/2023	PAYDOWN		492,923	492,923	492,918	492,923	0	0	0	0	0	492,923	0	0	0	20,511	08/01/2067	1.C FE
..12664A-AF-6	CSMC 2022-ATH3-CSMC 2022-ATH3 A3		09/01/2023	PAYDOWN		513,735	513,735	513,734	513,735	0	0	0	0	0	513,735	0	0	0	25,505	08/01/2067	1.F FE
..126650-AN-0	CVS Pass-Through Trust-FIRST LIEN		09/10/2023	SINKING PAYMENT		81,000	81,000	82,845	81,143	0	(143)	0	(143)	0	81,000	0	0	0	3,488	10/10/2025	2.B
..126650-AW-0	CVS Pass-Through Trust-FIRST LIEN		09/10/2023	SINKING PAYMENT		66,898	66,898	66,898	66,900	0	(2)	0	(2)	0	66,898	0	0	0	2,364	01/11/2027	2.B
..126650-BQ-2	CVS HEALTH CORP PASS THRU CTF 30/360		09/10/2023	SINKING PAYMENT		99,213	99,213	116,497	107,033	0	(7,820)	0	(7,820)	0	99,213	0	0	0	4,594	01/10/2030	2.B FE
..126650-BY-5	CVS PASS-THROUGH TRUST-SENIOR SECURED NO		09/10/2023	SINKING PAYMENT		10,956	10,956	12,947	12,045	0	(1,089)	0	(1,089)	0	10,956	0	0	0	433	01/10/2034	2.B FE
..12665E-AD-2	CSMC 2022-NQM4 Trust-CSMC 2022-NQM4 A2		09/01/2023	PAYDOWN		148,123	148,123	144,142	144,481	0	3,642	0	3,642	0	148,123	0	0	0	4,576	06/01/2067	1.C FE
..12665V-AA-0	CVS Pass-Through Trust S-FIRST LIEN		09/10/2023	SINKING PAYMENT		80,675	80,675	80,675	80,675	0	0	0	0	0	80,675	0	0	0	2,146	08/11/2036	2.B FE
..12665W-AD-2	CSMC 2022-ATH2-CSMC 2022-ATH2 A2		09/01/2023	PAYDOWN		221,792	221,792	215,416	0	0	6,377	0	6,377	0	221,792	0	0	0	4,550	05/01/2067	1.C FE
..126670-JP-4	OHL Mortgage Pass-Through-CIHL 2005-HYB9		09/01/2023	PAYDOWN		6,723	6,723	5,248	5,531	0	1,188	0	1,188	0	6,723	0	0	0	525	02/01/2036	1.A FM
..126670-IY-0	CIABS Asset-Backed Certi-CIWL 2005-16 2AF		09/01/2023	PAYDOWN		6,989	6,989	6,693	8,930	0	(1,942)	0	(1,942)	0	6,989	0	0	0	230	05/01/2036	1.A FM
..126673-DR-0	CIABS Asset-Backed Certi-CIWL 2004-7 MF2		09/01/2023	PAYDOWN		170,124	170,124	173,952	169,066	0	1,059	0	1,059	0	170,124	0	0	0	5,386	10/01/2034	1.A FM
..12667F-4N-2	Alternative Loan Trust 2-CIWL 2005-7CB		09/01/2023	PAYDOWN		44,951	44,951	38,623	38,219	0	6,261	423	5,838	0	44,951	0	0	0	1,738	03/01/2038	1.A FM
..12667F-5E-1	Alternative Loan Trust 2-CIWL 2005-6CB		09/01/2023	PAYDOWN		32,207	35,832	31,572	32,136	0	3,592	260	3,332	0	32,207	0	0	0	1,250	04/01/2035	1.A FM
..12667F-EG-6	Alternative Loan Trust 2-CIWL 2004-J2 3		09/01/2023	PAYDOWN		88,399	88,399	87,778	88,122	0	277	0	277	0	88,399	0	0	0	4,127	04/01/2034	1.A FM
..12667F-FE-7	Alternative Loan Trust 2-CIWL 2004-J6 1		09/01/2023	PAYDOWN		25,075	25,075	25,075	25,097	0	(23)	0	(23)	0	25,075	0	0	0	918	08/01/2024	1.A FM
..12667F-FG-2	Alternative Loan Trust 2-CIWL 2004-J6 2		09/01/2023	PAYDOWN		259	259	260	259	0	0	0	0	0	259	0	0	0	11	11/01/2031	1.A FM
..12667F-VN-2	COUNTRYWIDE ALTERNATIVE -SERIES 2004-24C		09/01/2023	PAYDOWN		241,034	241,034	240,882	238,708	0	2,326	0	2,326	0	241,034	0	0	0	9,594	11/01/2034	1.A FM
..12667G-AA-1	Alternative Loan Trust 2-CIWL 2005-13CB		09/25/2023	PAYDOWN		131,703	131,913	113,926	107,720	0	24,169	0	24,169	0	131,703	0	0	0	4,521	05/25/2035	1.A FM
..12667G-AC-7	Alternative Loan Trust 2-CIWL 2005-13CB		09/01/2023	PAYDOWN		18,076	18,076	14,842	16,108	0	3,224	1,255	1,969	0	18,076	0	0	0	681	05/01/2035	1.A FM
..12668A-4C-6	Alternative Loan Trust 2-CIWL 2005-IM1		09/25/2023	PAYDOWN		12,480	7,422	4,866	3,849	0	5,055	0	5,055	0	12,480	0	0	0	171	01/25/2036	5.A FM
..12668A-PC-3	Alternative Loan Trust 2-CIWL 2005-54CB		09/01/2023	PAYDOWN		29,138	29,764	23,466	25,337	0	5,103	537	4,566	0	29,138	0	0	0	1,127	11/01/2035	1.A FM
..12668A-XL-4	Alternative Loan Trust 2-CIWL 2005-63 5		09/01/2023	PAYDOWN		1,997	1,997	1,819	1,776	0	221	0	221	0	1,997	0	0	0	52	12/01/2035	1.A FM
..12668B-YA-5	Alternative Loan Trust 2-CIWL 2006-7CB		09/01/2023	PAYDOWN		2	1,365	1,179	638	0	546	0	546	0	2	0	0	0	63	05/01/2036	1.A FM
..126694-ZH-0	OHL Mortgage Pass-Through-CIHL 2006-10 1A		09/01/2023	PAYDOWN		11,262	5,865	3,373	3,442	0	4,514	0	4,514	0	11,262	0	0	0	309	05/01/2036	3.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..126694-4F-2	CHL Mortgage Pass-Through-CIHL 2006-HYB3		09/01/2023	PAYDOWN		9,300	14,554	13,977	14,353	0	19	0	19	0	9,300	0	0	0	447	05/01/2036	1.B FM
..126694-BE-7	CHL Mortgage Pass-Through-CIHL 2005-HYB6		09/01/2023	PAYDOWN		13,014	18,405	15,411	15,831	0	1,579	0	1,579	0	13,014	0	0	0	528	10/01/2035	1.A FM
..126694-CS-5	CHL Mortgage Pass-Through-CIHL 2005-21 A1		09/01/2023	PAYDOWN		131,534	131,816	103,659	105,347	0	26,766	388	26,378	0	131,534	0	0	0	4,235	10/01/2035	4.B FM
..126694-D5-4	CHL Mortgage Pass-Through-CIHL 2006-HYB2		09/01/2023	PAYDOWN		26,767	29,881	26,169	23,958	0	(39,687)	0	(39,687)	0	26,767	0	0	0	740	04/01/2036	1.A FM
..126694-D7-0	CHL Mortgage Pass-Through-CIHL 2006-HYB2		09/01/2023	PAYDOWN		19,346	68,399	62,424	69,885	0	(5,770)	0	(5,770)	0	19,346	0	0	0	1,688	04/01/2036	4.B FM
..126694-LC-0	CHL Mortgage Pass-Through-CIHL 2005-24 A3		09/01/2023	PAYDOWN		12,809	12,809	9,772	9,944	0	2,865	0	2,865	0	12,809	0	0	0	280	11/01/2035	4.C FM
..126694-MH-8	CHL Mortgage Pass-Through-CIHL 2005-HYB7		09/01/2023	PAYDOWN		23,722	23,722	18,978	20,318	0	3,406	0	3,406	0	23,722	0	0	0	555	11/01/2035	1.A FM
..126694-QJ-0	CHL Mortgage Pass-Through-CIHL 2005-HYB8		09/01/2023	PAYDOWN		37,849	35,756	32,460	34,651	0	(25,903)	0	(25,903)	0	37,849	0	0	0	3,111	12/01/2035	1.A FM
..126694-UJ-5	CHL Mortgage Pass-Through-CIHL 2005-31 1A		09/01/2023	PAYDOWN		15,821	15,821	12,898	12,889	0	2,932	0	2,932	0	15,821	0	0	0	405	01/01/2036	1.A FM
..126694-UM-8	CHL Mortgage Pass-Through-CIHL 2005-31 2A		09/01/2023	PAYDOWN		10,497	10,506	10,109	10,035	0	468	0	468	0	10,497	0	0	0	183	01/01/2036	1.A FM
..126694-UN-6	CHL Mortgage Pass-Through-CIHL 2005-31 2A		09/01/2023	PAYDOWN		16,213	16,227	15,614	15,499	0	723	0	723	0	16,213	0	0	0	356	01/01/2036	1.A FM
..12669D-US-5	CHL Mortgage Pass-Through-CIHL 2002-39 A1		09/01/2023	PAYDOWN		18,076	18,080	18,014	17,597	0	0	0	0	0	17,593	0	483	483	693	02/01/2033	1.A FM
..12669F-A8-6	CHL Mortgage Pass-Through-CIHL 2004-11 2A		09/01/2023	PAYDOWN		125,610	125,610	101,744	109,132	0	16,478	0	16,478	0	125,610	0	0	0	2,926	07/01/2034	1.A FM
..12669F-VH-3	CHL Mortgage Pass-Through-CIHL 2004-6 2A1		09/01/2023	PAYDOWN		4,938	4,938	4,947	4,896	0	41	0	41	0	4,938	0	0	0	133	05/01/2034	1.A FM
..12669G-3S-8	CHL Mortgage Pass-Through-CIHL 2005-16 A2		09/01/2023	PAYDOWN		4,887	4,887	3,808	3,896	0	1,036	45	991	0	4,887	0	0	0	170	09/01/2035	2.C FM
..12669G-4K-4	CHL Mortgage Pass-Through-CIHL 2005-J3 1A		09/01/2023	PAYDOWN		21,447	17,548	17,446	17,447	0	4,001	0	4,001	0	21,447	0	0	0	787	09/01/2035	1.A FM
..12669G-A5-0	CHL Mortgage Pass-Through-CIHL 2005-HYB3		09/01/2023	PAYDOWN		1,701	1,701	1,547	1,656	0	45	0	45	0	1,701	0	0	0	37	06/01/2035	1.A FM
..12669G-BY-6	CHL Mortgage Pass-Through-CIHL 2004-HYB7		09/01/2023	PAYDOWN		4,177	4,177	4,195	4,037	0	140	0	140	0	4,177	0	0	0	199	11/01/2034	1.A FM
..12669G-BZ-3	CHL Mortgage Pass-Through-CIHL 2004-HYB7		09/01/2023	PAYDOWN		12,165	12,165	12,218	11,750	0	415	0	415	0	12,165	0	0	0	578	11/01/2034	1.A FM
..12669G-GH-8	CHL Mortgage Pass-Through-CIHL 2004-HYB8		09/01/2023	PAYDOWN		299,708	299,708	245,012	259,164	0	40,544	0	40,544	0	299,708	0	0	0	8,286	01/01/2035	1.A FM
..12669G-R4-5	CHL Mortgage Pass-Through-CIHL 2005-15 A8		09/01/2023	PAYDOWN		523	523	1,762	325	0	4,167	(417)	4,584	0	523	0	0	0	129	08/01/2035	1.A FM
..12694-AA-4	CVS (New Albany, IN) Trust Certificate		09/15/2023	SINKING PAYMENT		45,470	45,470	45,470	45,470	0	0	0	0	0	45,470	0	0	0	975	01/15/2041	2.B
..12697-AA-7	Cric KY HQ LLC Senior Secured Note		09/15/2023	SINKING PAYMENT		37,828	37,828	37,828	37,829	0	(1)	0	(1)	0	37,828	0	0	0	1,105	03/15/2042	1.D PL
..12707-AA-9	CVS (NC SC PA & VA) Con Trust Certifica		09/15/2023	SINKING PAYMENT		113,030	113,030	113,030	113,030	0	0	0	0	0	113,030	0	0	0	3,219	01/15/2044	2.B
..12724-AA-6	CVS (Clawson & Richmond Trust Certificat		09/15/2023	SINKING PAYMENT		123,221	123,221	124,408	124,223	0	(1,002)	0	(1,002)	0	123,221	0	0	0	3,328	01/15/2035	2.B
..12733-AA-3	CTL Pass-Thru Trust Seri Trust Certifica		09/15/2023	SINKING PAYMENT		73,440	73,440	73,440	73,440	0	0	0	0	0	73,440	0	0	0	1,035	10/15/2043	1.F
..12760-AA-1	CGA Capital Corp Pass Thru Cfs Series 2		09/10/2023	SINKING PAYMENT		253,380	253,380	253,380	253,380	0	0	0	0	0	253,380	0	0	0	0	03/10/2031	1.A
..12762-AA-1	CDI Tuscany Intermediate Senior Secured		09/30/2023	SINKING PAYMENT		44,526	44,526	44,526	44,526	0	0	0	0	0	44,526	0	0	0	685	06/30/2040	2.A PL
..134429-BJ-7	Campbell Soup Co-SENIOR UNSECURED		08/21/2023	JP MORGAN SECURITIES		4,081,200	5,000,000	4,858,500	4,872,990	0	10,193	0	10,193	0	4,883,182	0	(801,982)	(801,982)	98,628	04/24/2030	2.B FE
..14040H-BG-9	Capital One Financial Co-SENIOR UNSECURE		09/29/2023	MORGAN		1,485,102	1,550,000	1,610,559	1,591,555	0	(15,441)	0	(15,441)	0	1,576,114	0	(91,012)	(91,012)	57,591	02/05/2025	2.A FE
..14576A-AA-0	Cars Net Lease Mortgage -CARM 2020-1A A1		09/15/2023	PAYDOWN		17,500	17,500	17,493	17,500	0	7	0	7	0	17,500	0	0	0	255	12/15/2050	1.A FE
..14576A-AB-8	Cars Net Lease Mortgage -CARM 2020-1A A2		09/15/2023	PAYDOWN		1,875	1,875	1,874	1,874	0	1	0	1	0	1,875	0	0	0	37	12/15/2050	1.A FE
..14576A-AC-6	Cars Net Lease Mortgage -CARM 2020-1A A3		09/15/2023	PAYDOWN		2,813	2,813	2,811	2,811	0	2	0	2	0	2,813	0	0	0	65	12/15/2050	1.F FE
..14686G-AD-8	Carvana Auto Receivables-CRVNA 2022-N1 C		09/10/2023	PAYDOWN		3,114,134	3,114,134	3,113,784	3,113,918	0	216	0	216	0	3,114,134	0	0	0	68,810	12/11/2028	1.E FE
..14855M-AA-6	Castlelake Aircraft Secu-SERIES 2019-1A		09/15/2023	PAYDOWN		34,876	34,876	34,876	34,876	0	0	0	0	0	34,876	0	0	0	864	04/15/2039	2.B FE
..14855W-AA-4	Castlelake Secured Aviat Notes Class A		09/15/2023	SINKING PAYMENT		2,189,677	2,189,677	2,134,068	0	0	55,609	0	55,609	0	2,189,677	0	0	0	40,604	07/31/2036	1.F PL
..14856G-AA-8	Castlelake Aircraft Stru-CLAST 2021-1A A		09/15/2023	PAYDOWN		507,959	507,959	507,944	507,959	0	0	0	0	0	507,959	0	0	0	11,496	01/15/2046	1.G FE
..14989B-AA-2	CEAMER FINANCE II LLC Senior Secured Not		09/25/2023	SINKING PAYMENT		158,874	158,874	158,874	158,874	0	0	0	0	0	158,874	0	0	0	7,423	11/15/2037	2.B PL
..152314-KJ-8	Centex Home Equity Loan -CXHE 2004-C AF5		09/01/2023	PAYDOWN		57,665	57,665	57,520	57,444	0	221	0	221	0	57,665	0	0	0	2,153	06/01/2034	1.A FM
..161546-CW-4	Chase Funding Trust Seri-CFAB 2002-3 1A5		09/01/2023	PAYDOWN		28,127	28,127	27,847	27,968	0	160	0	160	0	28,127	0	0	0	1,385	06/01/2032	1.A FM
..16159W-AC-8	Chase Home Lending Mortg-CHASE 2019-1 A3		09/01/2023	PAYDOWN		38,619	38,619	39,536	39,605	0	(987)	0	(987)	0	38,619	0	0	0	1,006	03/01/2050	1.A
..16162W-PV-5	Chase Mortgage Finance T-CHASE 2005-A2 1		09/01/2023	PAYDOWN		6,153	5,893	5,063	4,365	0	1,564	0	1,564	0	6,153	0	0	0	186	01/01/2036	1.A FM
..161630-BA-5	Chase Mortgage Finance T-CHASE 2007-A1 1		09/01/2023	PAYDOWN		1,792	1,792	1,735	1,748	0	44	0	44	0	1,792	0	0	0	54	02/01/2037	1.A FM
..16165M-AG-3	ChaseFlex Trust Series 2-CFKX 2006-2 A5		08/01/2023	PAYDOWN		9,701	9,701	8,873	9,146	0	834	322	512	0	9,701	0	0	0	276	09/01/2036	1.A FM
..16372P-AA-0	Chemical Bank Pass-Thru Certificate		09/10/2023	SINKING PAYMENT		49,897	49,897	49,897	49,897	0	0	0	0	0	49,897	0	0	0	192	06/10/2044	2.A
..16877P-AA-0	Childress Klien-Cambridg Senior Secured		09/05/2023	SINKING PAYMENT		182,133	182,133	182,361	182,286	0	(154)	0	(154)	0	182,133	0	0	0	7,025	02/05/2036	1.B

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..169926-AA-0	CHNGE Mortgage Trust 202-CHNGE 2023-2 A1		09/01/2023	PAYDOWN		73,338	73,338	72,146	0	0	1,192	0	1,192	0	73,338	0	0	0	1,395	06/01/2058	1.A FE
..170257-AE-9	CHL Mortgage Pass-Throug-CIHL 2006-16 3A		09/01/2023	PAYDOWN		75,011	75,252	31,997	31,014	0	44,106	0	44,106	0	75,011	0	0	0	4,897	11/01/2036	1.A FM
..17025R-AA-3	COUNTRYWIDE HOME LOANS-SERIES 2007-HY4 C		09/01/2023	PAYDOWN		13,157	13,101	9,466	9,494	0	3,614	0	3,614	0	13,157	0	0	0	322	09/01/2047	1.A FM
..17030A-AA-3	CHNGE Mortgage Trust 202-CHNGE 2023-3 A1		09/01/2023	PAYDOWN		60,190	60,190	59,795	0	0	395	0	395	0	60,190	0	0	0	1,504	07/01/2058	1.A FE
..17030J-AA-4	CHNGE Mortgage Trust 202-CHNGE 2022-1 A1		09/01/2023	PAYDOWN		335,908	335,908	335,905	335,908	0	0	0	0	0	335,908	0	0	0	6,532	01/01/2067	1.C FE
..172967-HB-0	CITIGROUP INC-SUBORDINATED		09/28/2023	CITIGROUP GLOBAL MAR		8,885,610	9,000,000	10,067,670	9,800,942	0	(218,700)	0	(218,700)	0	9,582,242	0	(696,632)	(696,632)	521,125	09/13/2025	2.B FE
..172967-NN-7	Citigroup Inc-SENIOR UNSECURED		08/21/2023	GOLDMAN		27,210,240	32,000,000	32,161,600	32,149,657	0	(8,295)	0	(8,295)	0	30,349,004	0	(3,138,764)	(3,138,764)	1,736,053	03/17/2033	1.G FE
..17307G-EB-7	Citigroup Mortgage Loan -CMLTI 2005-8 1A		09/01/2023	PAYDOWN		28,243	32,829	27,826	28,139	0	4,011	0	4,011	0	28,243	0	0	0	843	10/01/2035	1.A FM
..17307G-ED-6	Citigroup Mortgage Loan -CMLTI 2004-HYB2		09/01/2023	PAYDOWN		17,869	17,869	16,097	16,154	0	1,904	189	1,715	0	17,869	0	0	0	470	03/01/2034	1.A FM
..17307G-RE-0	Citigroup Mortgage Loan -CMLTI 2005-2 1A		09/01/2023	PAYDOWN		3,418	3,418	3,182	3,290	0	128	0	128	0	3,418	0	0	0	87	05/01/2035	1.A FM
..17307G-TY-4	Citigroup Mortgage Loan -CMLTI 2005-3 24		09/01/2023	PAYDOWN		18,318	18,678	17,767	15,729	0	3,282	0	3,282	0	18,318	0	0	0	508	08/01/2035	1.A FM
..17307G-VN-5	Citigroup Mortgage Loan -CMLTI 2005-WF2		09/01/2023	PAYDOWN		203	203	169	33	0	170	0	170	0	203	0	0	0	8	08/01/2035	1.A FM
..17307G-W9-5	Citigroup Mortgage Loan -CMLTI 2005-11 A		09/01/2023	PAYDOWN		808	808	782	793	0	16	0	16	0	808	0	0	0	39	11/01/2035	1.A FM
..17309A-AD-1	CitiMortgage Alternative-CMALT 2006-A1 1		09/01/2023	PAYDOWN		44,492	40,842	38,895	39,887	0	1,414	0	1,414	0	44,492	0	0	0	1,718	04/01/2036	1.C FM
..17309A-AF-6	CitiMortgage Alternative-CMALT 2006-A1 1		09/01/2023	PAYDOWN		74,403	56,347	53,413	52,627	0	5,080	0	5,080	0	74,403	0	0	0	2,173	04/01/2036	1.A FM
..17309B-AB-3	Citigroup Mortgage Loan -CMLTI 2006-WF2		09/01/2023	PAYDOWN		8,858	8,858	3,884	4,046	0	4,998	186	4,812	0	8,858	0	0	0	125	05/01/2036	1.A FM
..17309N-AG-6	Citicorp Residential Mor-CRMSI 2006-1 M1		09/01/2023	PAYDOWN		177,491	177,491	170,059	174,592	0	2,899	0	2,899	0	177,491	0	0	0	6,028	07/01/2036	1.A FM
..17309V-AH-6	CitiMortgage Alternative-CMALT 2006-A4 1		09/01/2023	PAYDOWN		13,247	15,186	14,609	14,853	0	255	0	255	0	13,247	0	0	0	412	09/01/2036	4.A FM
..17312H-AF-6	Citigroup Residential Mor-CRMSI 2007-2 A6		09/01/2023	PAYDOWN		407	407	392	400	0	7	0	7	0	407	0	0	0	15	06/01/2037	1.A FM
..17312V-AA-6	Citigroup Mortgage Loan -CMLTI 2007-6 1A		09/01/2023	PAYDOWN		1,071	1,099	383	538	0	543	0	543	0	1,071	0	0	0	11	03/01/2037	1.A FM
..17315X-AF-8	Citigroup Mortgage Loan -CMLTI 2009-9 2A		07/01/2023	PAYDOWN		100,175	100,175	75,886	90,463	0	9,713	0	9,713	0	100,175	0	0	0	2,663	11/01/2035	1.A FM
..17322N-AD-6	Citigroup Mortgage Loan -CMLTI 2014-J1 A		09/01/2023	PAYDOWN		4,919	4,919	4,890	4,817	0	102	0	102	0	4,919	0	0	0	128	06/01/2044	1.A
..17323M-AE-5	Citigroup Mortgage Loan -CMLTI 2015-A B3		09/01/2023	PAYDOWN		199,848	199,848	181,612	186,115	0	13,733	0	13,733	0	199,848	0	0	0	5,651	06/01/2058	1.A
..193938-AB-3	College Ave Student Loan-CASL 2023-A A2		09/25/2023	PAYDOWN		25,310	25,310	25,306	0	0	5	0	5	0	25,310	0	0	0	426	05/25/2055	1.A FE
..19421U-AB-0	College Avenue Student L-CASL 2019-A A2		09/25/2023	PAYDOWN		110,302	110,302	110,262	110,273	0	29	0	29	0	110,302	0	0	0	2,441	12/28/2048	1.A FE
..19424K-AB-9	College Avenue Student L-CASL 2021-A A2		09/25/2023	PAYDOWN		216,126	216,126	216,083	216,087	0	39	0	39	0	216,126	0	0	0	2,905	07/25/2051	1.A FE
..19424K-AD-5	College Ave Student Loan-CASL 2021-A C		09/25/2023	PAYDOWN		407,905	407,905	375,272	380,188	0	27,717	0	27,717	0	407,905	0	0	0	7,663	07/25/2051	1.F FE
..19685G-AA-4	COLT Funding LLC-COLT 2022-4 A1		09/01/2023	PAYDOWN		71,666	71,666	70,143	70,273	0	1,393	0	1,393	0	71,666	0	0	0	2,119	03/01/2067	1.A FE
..19685G-AC-0	COLT Funding LLC-COLT 2022-4 A3		09/01/2023	PAYDOWN		95,881	95,881	95,066	95,150	0	731	0	731	0	95,881	0	0	0	3,325	03/01/2067	1.F FE
..19687Y-AA-3	COLT 2020-RPL1 Trust-COLT 2020-RPL1 A1		09/01/2023	PAYDOWN		630,593	630,593	630,592	630,584	0	9	0	9	0	630,593	0	0	0	5,856	01/01/2065	1.A FE
..19688E-AA-6	COLT 2021-1 Mortgage Loa-COLT 2021-1 A1		09/01/2023	PAYDOWN		61,719	55,001	61,719	54,313	0	6,718	0	6,718	0	61,719	0	0	0	422	06/01/2066	1.A FE
..19688F-AA-3	COLT 2021-3 Mortgage Loa-COLT 2021-3 A1		09/01/2023	PAYDOWN		107,726	107,726	92,510	93,828	0	13,898	0	13,898	0	107,726	0	0	0	707	09/01/2066	1.A FE
..19688H-AA-9	COLT 2022-1 Mortgage Loa-COLT 2022-1 A1		09/01/2023	PAYDOWN		1,288,034	1,288,034	1,288,021	1,288,025	0	9	0	9	0	1,288,034	0	0	0	22,611	12/01/2066	1.A FE
..19688L-AA-0	COLT 2022-5 Mortgage Loa-COLT 2022-5 A1		09/01/2023	PAYDOWN		192,874	192,874	192,874	192,874	0	0	0	0	0	192,874	0	0	0	6,064	04/01/2067	1.A FE
..19688L-AB-8	COLT 2022-5 Mortgage Loa-COLT 2022-5 A2		09/01/2023	PAYDOWN		321,592	321,592	316,907	317,724	0	3,867	0	3,867	0	321,592	0	0	0	10,111	03/01/2067	1.C FE
..19688M-AB-6	COLT 2022-8 Mortgage Loa-COLT 2022-8 A2		09/01/2023	PAYDOWN		179,347	179,347	177,847	177,928	0	1,419	0	1,419	0	179,347	0	0	0	9,523	08/01/2067	1.C FE
..19688M-AC-4	COLT 2022-8 Mortgage Loa-COLT 2022-8 A3		09/01/2023	PAYDOWN		185,726	185,726	183,016	183,016	0	2,710	0	2,710	0	185,726	0	0	0	9,862	08/01/2067	1.F FE
..20267U-AA-7	COMMONBOND STUDENT LOAN -SERIES 16-B CLA		09/25/2023	PAYDOWN		42,433	42,433	42,422	42,423	0	11	0	11	0	42,433	0	0	0	768	10/25/2040	1.A FE
..20268B-AB-6	Commonbond Student Loan -OBSLT 2020-1 B		09/25/2023	PAYDOWN		113,111	113,111	96,144	0	0	16,967	0	16,967	0	113,111	0	0	0	1,115	10/25/2051	1.D FE
..20753Y-CH-3	Connecticut Avenue Secur-CAS 2022-R04 1M		09/25/2023	PAYDOWN		379,138	379,138	379,138	379,138	0	0	0	0	0	379,138	0	0	0	16,825	03/25/2042	1.E
..20755D-AA-4	Connecticut Avenue Secur-CAS 2022-R08 1M		09/25/2023	PAYDOWN		804,514	804,514	808,744	808,408	0	(3,894)	0	(3,894)	0	804,514	0	0	0	38,680	07/25/2042	2.A
..212168-AA-6	Continental Wind LLC-FIRST LIEN		08/31/2023	SINKING PAYMENT		171,314	171,314	171,314	171,314	0	0	0	0	0	171,314	0	0	0	10,279	02/28/2033	2.B FE
..21872M-AA-0	CoreVest American Financ-CAFL 2018-2 A		09/01/2023	PAYDOWN		1,259,079	1,259,079	1,259,070	1,259,021	0	58	0	58	0	1,259,079	0	0	0	40,322	11/01/2052	1.A FE
..221608-AA-6	Costco (Monterey Park C Trust Certifica		09/20/2023	SINKING PAYMENT		31,259	31,259	31,259	31,254	0	5	0	5	0	31,259	0	0	0	780	06/20/2043	1.E
..221639-AA-1	Costco (Oceanside NY) Le Trust Certifica		09/15/2023	SINKING PAYMENT		76,898	76,898	76,898	76,898	0	0	0	0	0	76,898	0	0	0	1,406	11/30/2041	1.E
..22541Q-CZ-3	Credit Suisse First Bost-CSFB 2003-AR15		09/25/2023	PAYDOWN		25,243	25,243	25,243	25,645	0	(402)	0	(402)	0	25,243	0	0	0	824	06/25/2033	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..22541Q-FV-9	CSFB MORTGAGE-BACKED PAS-CSFB 2003-17 1A		09/01/2023	PAYDOWN		6,021	6,021	6,077	6,010	0	11	0	11	0	6,021	0	0	0	223	06/01/2033	3.C FM
..22541Q-XS-6	Credit Suisse First Bost-CSFB 2003-23 DB		09/01/2023	PAYDOWN		48,274	48,274	48,304	48,170	0	104	0	104	0	48,274	0	0	0	2,085	09/01/2033	1.C FM
..22541S-PJ-1	CSFB Mortgage-Backed Tru-CSFB 2004-AR6 C		09/25/2023	PAYDOWN		15,209	15,209	12,091	13,530	0	1,679	0	1,679	0	15,209	0	0	0	505	10/25/2034	1.A FM
..225458-2Y-3	Credit Suisse First Bost-CSFB 2005-8 9A1		09/01/2023	PAYDOWN		101,204	88,699	74,017	76,202	0	14,949	524	14,425	0	101,204	0	0	0	2,773	09/01/2035	1.E FM
..225458-L5-5	Credit Suisse First Bost-CSFB 2005-7 1A1		09/01/2023	PAYDOWN		41,618	41,618	39,985	38,213	0	3,892	488	3,404	0	41,618	0	0	0	1,280	08/01/2035	3.C FM
..225470-VF-7	CSMC Mortgage-Backed Tru-CSMC 2006-1 3A1		08/01/2023	PAYDOWN		21,980	21,980	13,300	13,784	0	8,547	351	8,196	0	21,980	0	0	0	657	02/01/2036	1.A FM
..225410-FJ-9	Credit Suisse First Bost-CSFB 2003-1 1A1		09/01/2023	PAYDOWN		3,718	3,718	3,853	3,778	0	(61)	0	(61)	0	3,718	0	0	0	173	02/01/2033	2.B FM
..22942M-BF-2	CSMC Mortgage-Backed Tru-CSMC 2006-8 5A1		09/01/2023	PAYDOWN		24,305	24,305	23,697	24,805	0	(500)	0	(500)	0	24,305	0	0	0	1,009	10/01/2026	3.C FM
..22960*-AA-0	CTL PASS THRU TR SER 2013 (OCHSNER SLIDE		09/15/2023	SINKING PAYMENT		236,088	236,088	236,088	236,093	0	(5)	0	(5)	0	236,088	0	0	0	8,282	12/15/2028	1.G
..229658-AA-3	WAG (Edina, Minnesota) C Trust Certifica		09/15/2023	SINKING PAYMENT		47,293	47,293	47,766	47,635	0	(342)	0	(342)	0	47,293	0	0	0	1,629	07/15/2037	2.B
..22970*-AA-8	BSNF (Dayton, Texas) Con Trust Certifica		09/01/2023	SINKING PAYMENT		227,693	227,693	227,693	227,700	0	(7)	0	(7)	0	227,693	0	0	0	8,166	05/15/2034	1.D PL
..229738-AA-3	Great West Casualty Comp Trust Certifica		09/15/2023	SINKING PAYMENT		210,394	210,394	211,101	211,101	0	(707)	0	(707)	0	210,394	0	0	0	1,426	12/15/2037	1.C PL
..229778-AA-9	CTL Pass-Thru Trust Seri Trust Certifica		09/15/2023	SINKING PAYMENT		74,052	74,052	74,052	74,052	0	0	0	0	0	74,052	0	0	0	478	12/15/2038	1.E
..23242L-AB-9	CIWHEQ Revolving Home Equ-CIWHEL 2006-F 2A		09/15/2023	PAYDOWN		10,188	10,188	7,119	9,617	0	572	0	572	0	10,188	0	0	0	345	07/15/2036	1.A FM
..23248A-AJ-0	COUNTRYWIDE ASSET-BACKED-SERIES 2007-SEA		09/25/2023	PAYDOWN		35,736	35,736	22,156	33,548	0	2,188	0	2,188	0	35,736	0	0	0	1,422	05/25/2047	1.A FM
..233046-AF-8	DNKN 2017-1A A211		08/20/2023	PAYDOWN		52,500	52,500	52,500	52,500	0	0	0	0	0	52,500	0	0	0	1,587	11/20/2047	2.B FE
..233046-AH-4	DB Master Finance LLC-DNKN 2017-1AW A211		08/20/2023	PAYDOWN		30,000	30,000	29,986	29,993	0	7	0	7	0	30,000	0	0	0	754	11/20/2047	1.C FE
..233046-AM-3	DB Master Finance LLC-DNKN 2019-1AW A23W		08/20/2023	PAYDOWN		45,000	45,000	45,480	45,327	0	(327)	0	(327)	0	45,000	0	0	0	1,351	05/20/2049	1.C FE
..233168-AA-5	DEA (Nashville TN) LLC Pass-Thru Certifi		09/05/2023	SINKING PAYMENT		89,631	89,631	89,631	89,631	0	0	0	0	0	89,631	0	0	0	322	08/05/2040	1.B
..23332U-AD-6	DSLA Mortgage Loan Trust-DSLA 2004-AR1 A		09/19/2023	PAYDOWN		10,919	10,919	9,578	10,107	0	812	0	812	0	10,919	0	0	0	222	09/19/2044	1.A FM
..240238-AA-7	DC Department of Correct Pass-Thru Certi		09/15/2023	SINKING PAYMENT		84,424	84,424	84,424	84,547	0	(123)	0	(123)	0	84,424	0	0	0	2,358	03/15/2033	1.B PL
..24736X-AA-6	DELTA AIR LINES 2015-1AA-FIRST LIEN		07/30/2023	SINKING PAYMENT		153,409	153,409	153,409	153,409	0	(28)	0	(28)	0	153,409	0	0	0	5,561	07/30/2027	1.F FE
..24736Y-AA-4	Delta Air Lines 2015-1 C-DAL 3 7/8 07/30		07/30/2023	SINKING PAYMENT		76,705	76,705	76,705	76,665	0	41	0	41	0	76,705	0	0	0	2,972	07/30/2027	2.A FE
..25150M-AC-0	Deutsche Alt-A Securitie-DBALT 2007-RMP1		09/25/2023	PAYDOWN		85,090	85,090	67,008	78,373	0	6,717	0	6,717	0	85,090	0	0	0	973	12/25/2036	1.A FM
..25150N-AB-0	Deutsche Alt-A Securitie-DBALT 2006-AR5		09/25/2023	PAYDOWN		27,969	27,969	14,894	9,982	0	17,987	0	17,987	0	27,969	0	0	0	203	10/25/2036	2.A FM
..251510-CV-3	Deutsche Alt-A Securitie-DBALT 2005-1 1A		09/25/2023	PAYDOWN		27,574	27,574	20,026	21,941	0	5,633	0	5,633	0	27,574	0	0	0	960	02/25/2035	1.A FM
..251510-EP-4	DEUTSCHE ALT-A SECURITIE-DBALT 2005-3 5A		09/25/2023	PAYDOWN		74,093	74,093	55,612	63,567	0	10,526	0	10,526	0	74,093	0	0	0	2,719	06/25/2035	1.A FM
..251510-LM-3	Deutsche Alt-A Securitie-DBALT 2006-AR1		09/01/2023	PAYDOWN		15,269	15,269	13,709	15,658	0	(389)	0	(389)	0	15,269	0	0	0	383	02/01/2036	1.A FM
..251510-MD-2	Deutsche Alt-B Securitie-DBALT 2006-AB1		09/01/2023	PAYDOWN		16,661	16,662	16,636	11,254	0	5,403	0	5,403	0	16,661	0	0	0	358	02/01/2036	1.A FM
..25273C-AB-6	Diamond Resorts Owner Tr-DROT 2021-1A B		09/20/2023	PAYDOWN		141,634	141,634	140,771	140,956	0	679	0	679	0	141,634	0	0	0	1,929	11/21/2033	1.F FE
..254687-DD-5	Walt Disney Co/The-SENIOR UNSECURED		09/28/2023	GOLDMAN		3,858,560	4,098,640	4,098,640	4,042,105	0	(12,018)	0	(12,018)	0	4,030,087	0	(171,527)	(171,527)	142,656	10/15/2025	1.G FE
..25512D-AA-7	Diversified ABS Phase V Senior Secured N		09/30/2023	SINKING PAYMENT		2,640,866	2,640,866	2,640,866	2,640,866	0	0	0	0	0	2,640,866	0	0	0	111,354	12/31/2030	2.B FE
..25755T-AE-0	DOMINOS PIZZA MASTER ISS-SERIES 2015-1A		07/25/2023	PAYDOWN		40,000	40,000	40,000	40,000	0	0	0	0	0	40,000	0	0	0	1,342	10/25/2045	2.A FE
..25755T-AH-3	DOMINOS PIZZA MASTER ISS-SERIES 17-1A CL		07/25/2023	PAYDOWN		57,500	57,500	47,477	57,480	0	20	0	20	0	57,500	0	0	0	1,776	07/25/2047	2.A FE
..25755T-AJ-9	Domino's Pizza Master Is-DPABS 2018-1A A		07/25/2023	PAYDOWN		17,500	17,500	17,500	17,501	0	(1)	0	(1)	0	17,500	0	0	0	540	07/25/2048	2.A FE
..25755T-AK-6	Domino's Pizza Master Is-DPABS 2018-1A A		07/25/2023	PAYDOWN		8,750	8,750	8,747	8,750	0	1	0	1	0	8,750	0	0	0	284	07/25/2048	2.A FE
..25755T-AL-4	Domino's Pizza Master Is-DPABS 2019-1A A		07/25/2023	PAYDOWN		18,750	18,750	18,750	18,750	0	0	0	0	0	18,750	0	0	0	516	10/25/2049	2.A FE
..25755T-AM-2	Domino's Pizza Master Is-DPABS 2019-1AW		07/25/2023	PAYDOWN		53,750	53,750	53,777	53,777	0	(27)	0	(27)	0	53,750	0	0	0	1,295	10/25/2049	1.C FE
..26067*-AA-3	Dow (Midland MI) Control Trust Certifica		09/15/2023	SINKING PAYMENT		135,480	135,480	136,090	135,868	0	(388)	0	(388)	0	135,480	0	0	0	5,265	03/15/2034	2.A
..26208L-AC-2	DRIVEN BRANDS FUNDING LL-HONK 2018-1A A2		07/20/2023	PAYDOWN		17,500	17,500	17,500	17,500	0	(2)	0	(2)	0	17,500	0	0	0	622	04/20/2048	2.C FE
..26209X-AC-5	DRIVEN BRANDS FUNDING LL-HONK 2020-2A A2		07/20/2023	PAYDOWN		12,500	12,500	12,500	12,500	0	0	0	0	0	12,500	0	0	0	303	01/20/2051	2.C FE
..26209X-AF-8	DRIVEN BRANDS FUNDING LL-HONK 2022-1A A2		07/20/2023	PAYDOWN		87,500	87,500	87,500	87,500	0	0	0	0	0	87,500	0	0	0	4,852	10/20/2052	2.C FE
..264438-AA-6	Dulles Discovery 1 Contr Pass-Thru Certi		09/05/2023	SINKING PAYMENT		145,844	145,844	145,844	145,844	0	0	0	0	0	145,844	0	0	0	3,002	06/05/2037	1.B
..268478-AA-8	Edx/Ge Inventory Supply Pass-Thru Certif		07/15/2023	SINKING PAYMENT		207,197	207,197	207,197	207,198	0	(1)	0	(1)	0	207,197	0	0	0	0	04/15/2028	2.A
..268488-AA-5	EDX/GE Inventory Supply Pass-Thru Certif		07/15/2023	SINKING PAYMENT		110,512	110,512	110,512	110,513	0	(2)	0	(2)	0	110,512	0	0	0	0	01/15/2029	2.A
..26848*-AA-9	EDX/GE Inventory Supply Pass-Thru Certif		07/15/2023	SINKING PAYMENT		72,935	72,935	72,935	72,935	0	0	0	0	0	72,935	0	0	0	0	01/15/2030	2.A

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..26929H-AB-1	EWC Master Issuer LLC-WAX 2022-1A A2 .....	.....	09/15/2023	PAYDOWN	.....	18,750	18,750	18,015	18,064	0	686	0	686	0	18,750	0	0	0	773	03/15/2052	2.B FE
..28416L-AA-0	Elara HGV Timeshare Issu-EHGV 2021-A A .....	.....	09/25/2023	PAYDOWN	.....	248,572	248,572	222,860	0	0	25,712	0	25,712	0	248,572	0	0	0	2,274	08/27/2035	1.A FE
..28416L-AB-8	Elara HGV Timeshare Issu-EHGV 2021-A B .....	.....	09/25/2023	PAYDOWN	.....	190,084	190,084	186,891	187,349	0	2,735	0	2,735	0	190,084	0	0	0	2,225	08/27/2035	1.F FE
..28416T-AA-3	Elara HGV Timeshare Issu-EHGV 2019-A A .....	.....	09/25/2023	PAYDOWN	.....	293,650	293,650	275,114	0	0	18,537	0	18,537	0	293,650	0	0	0	4,921	01/25/2034	1.A FE
..28628C-AB-2	ELFI Graduate Loan Progr-ELFI 2022-A B .....	.....	09/25/2023	PAYDOWN	.....	1,027,740	1,027,740	830,546	858,256	0	169,485	0	169,485	0	1,027,740	0	0	0	0	08/26/2047	1.C FE
..28852L-AA-1	Ellington Clo III Ltd-ECLO 2018-3A A1 .....	.....	07/20/2023	PAYDOWN	.....	710,567	710,567	710,567	714,539	0	(3,972)	0	(3,972)	0	710,567	0	0	0	34,566	07/20/2030	1.A FE
..28932M-AA-3	Elm Road Generating Stat-SECURED NOTE .....	.....	08/11/2023	SINKING PAYMENT	.....	204,125	204,125	204,125	204,133	0	(7)	0	(7)	0	204,125	0	0	0	5,316	02/11/2030	1.F FE
..30227F-AJ-9	Extended Stay America Tr-ESA 2021-ESH D .....	.....	09/15/2023	PAYDOWN	.....	198,754	198,754	198,754	198,754	0	0	0	0	0	198,754	0	0	0	9,592	07/15/2038	1.A
..30260G-AA-4	FCI Funding 2021-1 LLC-FCITL 2021-1A A .....	.....	09/15/2023	PAYDOWN	.....	475,928	475,928	475,907	475,917	0	11	0	11	0	475,928	0	0	0	3,477	04/15/2033	1.A FE
..302637-AG-8	FS KKR MM CLO 1 LLC-FSKMM 2019-1A A1R .....	.....	07/17/2023	PAYDOWN	.....	125,796	125,796	125,796	125,796	0	0	0	0	0	125,796	0	0	0	6,256	01/15/2031	1.A FE
..30292*-AA-2	FBI Bronx Control Trust Pass-Thru Certif .....	.....	09/15/2023	SINKING PAYMENT	.....	140,413	140,413	140,413	140,413	0	0	0	0	0	140,413	0	0	0	3,208	07/15/2033	1.B PL
..30295M-AS-1	FREMF 2016-K723 Mortgage-FREMF 2016-K723 .....	.....	09/01/2023	PAYDOWN	.....	3,189,774	3,189,774	2,986,097	3,160,297	0	29,477	0	29,477	0	3,189,774	0	0	0	85,031	11/01/2023	1.A
..31307*-AA-9	FDL-CC LLC Senior Note Tranche A-1 .....	.....	09/15/2023	SINKING PAYMENT	.....	33,606	33,606	33,612	33,610	0	(3)	0	(3)	0	33,606	0	0	0	1,016	02/15/2035	2.B
..31307*-AC-5	FDL-CC LLC Senior Note Tranche A-3 .....	.....	09/15/2023	SINKING PAYMENT	.....	19,134	19,134	19,135	19,135	0	(1)	0	(1)	0	19,134	0	0	0	579	06/15/2037	1.A
..3137BL-AR-9	Freddie Mac Multifamily -FMIV M036 A .....	.....	09/01/2023	CALL 100	.....	15,000	15,000	15,413	15,118	0	(18)	0	(18)	0	15,100	0	(100)	(100)	416	12/01/2029	1.B FE
..31429*-AA-2	Fedex Chino Control Pass Trust Certifica .....	.....	09/15/2023	SINKING PAYMENT	.....	186,085	186,085	186,085	186,085	0	0	0	0	0	186,085	0	0	0	7,015	10/15/2035	2.B
..31572Y-AB-4	Ellington Financial Mort-EFMT 2022-2 A2 .....	.....	09/01/2023	PAYDOWN	.....	204,499	204,499	201,397	201,603	0	2,896	0	2,896	0	204,499	0	0	0	6,456	04/01/2067	1.C FE
..31572Y-AC-2	Ellington Financial Mort-EFMT 2022-2 A3 .....	.....	09/01/2023	PAYDOWN	.....	779,223	779,223	764,861	765,813	0	13,410	0	13,410	0	779,223	0	0	0	23,875	04/01/2067	1.G FE
..31573E-AA-9	Ellington Financial Mort-EFMT 2022-3 A1 .....	.....	09/01/2023	PAYDOWN	.....	317,247	317,247	313,765	314,225	0	3,022	0	3,022	0	317,247	0	0	0	10,630	08/01/2067	1.A FE
..31573E-AB-7	Ellington Financial Mort-EFMT 2022-3 A2 .....	.....	09/01/2023	PAYDOWN	.....	219,281	219,281	213,125	213,527	0	5,754	0	5,754	0	219,281	0	0	0	7,827	08/01/2067	1.C FE
..31573E-AC-5	Ellington Financial Mort-EFMT 2022-3 A3 .....	.....	09/01/2023	PAYDOWN	.....	105,749	105,749	101,121	101,389	0	4,360	0	4,360	0	105,749	0	0	0	3,987	08/01/2067	1.F FE
..31847R-AG-7	First American Financial-SENIOR UNSECURE .....	.....	07/27/2023	VARIOUS	.....	6,132,320	7,000,000	6,977,997	6,977,997	0	1,397	0	1,397	0	6,979,394	0	(847,074)	(847,074)	195,778	05/15/2030	2.B FE
..32010L-AN-4	First Eagle Commercial L-NMSTR 2016-1A A .....	.....	07/25/2023	PAYDOWN	.....	724,441	724,441	724,432	724,393	0	48	0	48	0	724,441	0	0	0	22,757	01/25/2032	1.A FE
..32027L-AE-5	First Franklin Mortgage -FFML 2006-FF14 .....	.....	09/25/2023	PAYDOWN	.....	57,602	57,602	50,429	57,059	0	544	0	544	0	57,602	0	0	0	1,619	10/25/2036	1.A FM
..32051G-SQ-9	First Horizon Alternativ-FHAMS 2005-AA7 .....	.....	09/01/2023	PAYDOWN	.....	87,128	87,128	76,994	78,188	0	10,838	1,502	9,336	0	87,128	0	0	0	3,106	09/01/2035	1.A FM
..32051G-T7-0	First Horizon Alternativ-FHAMS 2006-FA1 .....	.....	09/01/2023	PAYDOWN	.....	7,716	6,970	3,732	3,935	0	3,376	17	3,359	0	7,716	0	0	0	339	04/01/2036	2.C FM
..32051G-XQ-3	First Horizon Mortgage P-FHASI 2005-AR5 .....	.....	09/01/2023	PAYDOWN	.....	15,536	15,536	14,063	13,078	0	2,458	0	2,458	0	15,536	0	0	0	446	11/01/2035	1.A FM
..32051G-XV-2	First Horizon Mortgage P-FHASI 2005-AR5 .....	.....	09/01/2023	PAYDOWN	.....	16,047	16,047	15,818	14,972	0	1,075	0	1,075	0	16,047	0	0	0	487	11/01/2035	1.A FM
..32052E-AA-7	First Horizon Mortgage P-FHASI 2006-AR3 .....	.....	09/01/2023	PAYDOWN	.....	8,657	8,657	7,272	5,888	0	2,768	0	2,768	0	8,657	0	0	0	202	11/01/2036	1.A FM
..32056J-AA-2	First Horizon Mortgage P-FHASI 2007-AR3 .....	.....	09/01/2023	PAYDOWN	.....	221,479	221,484	149,025	99,080	0	121,933	0	121,933	0	221,479	0	0	0	6,424	11/01/2037	1.A FM
..33803*-AA-7	Fishers Lane Associates -SECURED .....	.....	09/05/2023	SINKING PAYMENT	.....	247,603	247,603	247,603	247,603	0	0	0	0	0	247,603	0	0	0	6,084	08/05/2030	1.B
..33972P-AA-7	FLNG LIQUEFACTION 2 LLC-FIRST LIEN .....	.....	09/30/2023	SINKING PAYMENT	.....	101,500	101,500	101,500	101,491	0	9	0	9	0	101,500	0	0	0	2,093	03/31/2038	2.B FE
..34107*-AA-7	Florida Pipeline Holding Senior Secured .....	.....	08/15/2023	SINKING PAYMENT	.....	857,534	857,534	857,534	857,534	0	0	0	0	0	857,534	0	0	0	25,040	08/15/2038	2.B PL
..34417M-AB-3	FOCUS Brands Funding LLC-FOCUS 2017-1A A .....	.....	07/30/2023	PAYDOWN	.....	15,000	15,000	15,000	15,000	0	0	0	0	0	15,000	0	0	0	573	04/30/2047	2.B FE
..34417Q-AA-6	FOCUS Brands Funding LLC-FOCUS 2018-1 A2 .....	.....	07/30/2023	PAYDOWN	.....	30,000	30,000	30,000	30,004	0	(4)	0	(4)	0	30,000	0	0	0	1,166	10/30/2048	2.B FE
..35041J-AA-3	Foundation Finance Trust-FFIN 2019-1A A .....	.....	09/15/2023	PAYDOWN	.....	235,539	235,539	235,502	233,857	0	1,682	0	1,682	0	235,539	0	0	0	6,557	11/15/2034	1.A FE
..35564K-B2-4	Freddie Mac Structured A-STACR 2022-HQ2 .....	.....	09/25/2023	PAYDOWN	.....	521,274	521,274	521,696	521,754	0	(480)	0	(480)	0	521,274	0	0	0	25,401	07/25/2042	1.B
..35564K-E3-9	Freddie Mac STACR REMIC -STACR 2022-HQ3 .....	.....	09/25/2023	PAYDOWN	.....	303,801	303,801	303,801	303,801	0	0	0	0	0	303,801	0	0	0	14,208	08/25/2042	1.B
..35824*-AA-4	Fresno County (Rowell) Bu Trust Certifica .....	.....	09/15/2023	SINKING PAYMENT	.....	3,738	3,738	3,773	3,769	0	(31)	0	(31)	0	3,738	0	0	0	92	05/15/2040	1.D S
..35826*-AA-4	County of Fresno CA Trust Certificates .....	.....	09/15/2023	SINKING PAYMENT	.....	96,460	96,460	97,422	97,422	0	(812)	0	(812)	0	96,460	0	0	0	3,011	06/15/2038	1.C
..36157N-FL-3	GE Mortgage Services LLC-GEOMS 1997-HE4 .....	.....	09/01/2023	PAYDOWN	.....	944	975	769	594	0	372	0	372	0	944	0	0	0	34	12/01/2028	3.B FM
..36167K-AA-6	GCAT 2021-NQM6 Trust-GCAT 2021-NQM6 A1 .....	.....	09/01/2023	PAYDOWN	.....	123,576	123,576	111,064	112,303	0	11,273	0	11,273	0	123,576	0	0	0	1,887	08/01/2066	1.A
..36169K-AA-4	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A1 .....	.....	09/01/2023	PAYDOWN	.....	64,065	64,065	63,822	63,767	0	243	0	243	0	64,065	0	0	0	1,762	02/01/2067	1.A FE
..36169K-AB-2	GCAT 2022-NQM2 Trust-GCAT 2022-NQM2 A2 .....	.....	09/01/2023	PAYDOWN	.....	234,907	234,907	230,288	230,893	0	4,015	0	4,015	0	234,907	0	0	0	6,462	02/01/2067	1.E FE
..36185N-BN-5	GMACM Mortgage Loan Trus-GMACM 2005-AR2 .....	.....	09/01/2023	PAYDOWN	.....	415,890	415,890	347,501	387,119	0	71,354	42,583	28,771	0	415,890	0	0	0	11,031	05/01/2035	1.A FM
..36198*-AA-0	GE Huntsville 2020A Leas Trust Certifica .....	.....	09/15/2023	SINKING PAYMENT	.....	60,834	60,834	60,834	60,834	0	0	0	0	0	60,834	0	0	0	2,232	04/15/2046	2.A

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..36200@-AA-8	GE Huntsville 2020B Leas Trust Certifica		09/15/2023	SINKING PAYMENT		14,358	14,358	14,358	14,358	0	0	0	0	0	14,358	0	0	0	382	04/15/2046	2.A
..36228F-UJ-3	GSR Mortgage Loan Trust -GSR 2003-7F 4A1		08/01/2023	PAYDOWN		5,586	5,586	5,448	5,443	0	142	0	142	0	5,586	0	0	0	113	10/01/2032	1.A FM
..3622EA-AA-8	GSAA TRUST-GSAA 2007-3 1A1A		09/25/2023	PAYDOWN		79,796	79,796	45,098	45,900	0	35,244	1,348	33,896	0	79,796	0	0	0	668	03/25/2047	1.A FM
..362341-4A-4	GSR Mortgage Loan Trust -GSR 2006-AR1 2A		09/01/2023	PAYDOWN		20,107	20,008	19,143	19,784	0	247	0	247	0	20,107	0	0	0	393	01/01/2036	1.A FM
..362341-4F-3	GSR Mortgage Loan Trust -GSR 2006-AR1 3A		07/01/2023	PAYDOWN		482	389	382	379	0	19	0	19	0	482	0	0	0	2	01/01/2036	1.A FM
..362341-DP-1	GSR Mortgage Loan Trust -GSR 2005-6F 1A5		09/01/2023	PAYDOWN		13,357	13,357	13,407	13,407	0	(50)	0	(50)	0	13,357	0	0	0	492	07/01/2035	1.C FM
..362341-SG-5	GSR MORTGAGE LOAN TRUST-SERIES 2005-AR6		09/01/2023	PAYDOWN		264,031	260,345	235,937	236,325	0	24,898	0	24,898	0	264,031	0	0	0	6,418	09/01/2035	1.A FM
..362341-XC-8	GSR Mortgage Loan Trust -GSR 2005-AR7 4A		09/01/2023	PAYDOWN		746	0	(110)	0	0	141	0	141	0	746	0	0	0	0	11/01/2035	4.A FM
..362341-XE-4	GSR Mortgage Loan Trust -GSR 2005-AR7 5A		09/01/2023	PAYDOWN		11,502	7,360	6,384	6,261	0	1,887	0	1,887	0	11,502	0	0	0	90	11/01/2035	1.A FM
..362341-XG-9	GSR Mortgage Loan Trust -GSR 2005-AR7 6A		09/01/2023	PAYDOWN		20,260	20,260	19,688	19,267	0	573	0	573	0	20,260	0	0	0	562	11/01/2035	1.A FM
..36242D-4W-0	GSR Mortgage Loan Trust -GSR 2005-AR3 6A		09/01/2023	PAYDOWN		13,034	13,034	12,247	11,684	0	1,350	0	1,350	0	13,034	0	0	0	356	05/01/2035	1.A FM
..36242D-BZ-5	GSR MORTGAGE LOAN TRUST-SERIES 2004-9 CL		09/01/2023	PAYDOWN		72,900	72,900	70,804	72,389	0	511	0	511	0	72,900	0	0	0	2,245	08/01/2034	1.A FM
..36242D-FS-7	GSR Mortgage Loan Trust -GSR 2004-11 2A1		09/01/2023	PAYDOWN		42,196	42,196	42,419	42,196	0	0	0	0	0	42,196	0	0	0	1,168	09/01/2034	1.A FM
..36242D-FX-6	GSR Mortgage Loan Trust -GSR 2004-11 3A1		09/01/2023	PAYDOWN		698	698	699	698	0	0	0	0	0	698	0	0	0	24	09/01/2034	1.A FM
..36242D-H4-8	GSR Mortgage Loan Trust -GSR 2005-AR2 1A		08/01/2023	PAYDOWN		9,711	9,711	8,910	9,207	0	505	0	505	0	9,711	0	0	0	266	04/01/2035	1.A FM
..36242D-H9-7	GSR Mortgage Loan Trust -GSR 2005-AR2 4A		09/01/2023	PAYDOWN		297,352	297,352	288,989	295,314	0	2,038	0	2,038	0	297,352	0	0	0	7,303	04/01/2035	1.A FM
..36242D-QY-2	GSR Mortgage Loan Trust -GSR 2004-15F 2A		09/01/2023	PAYDOWN		1,236	1,236	1,100	1,121	0	135	20	115	0	1,236	0	0	0	41	12/01/2034	3.B FM
..36242D-VA-8	GSR Mortgage Loan Trust -GSR 2005-1F 1A6		09/01/2023	PAYDOWN		20,621	20,621	20,301	20,015	0	606	0	606	0	20,621	0	0	0	757	02/01/2035	1.G FM
..36244S-AD-0	GSAA Home Equity Trust 2-GSAA 2006-13 AF		09/01/2023	PAYDOWN		57,211	57,211	16,958	17,955	0	40,712	1,457	39,255	0	57,211	0	0	0	680	07/01/2036	1.A FM
..36248@-AA-0	GSA (Anchorage AK) CTL P Pass-Thru Certi		09/15/2023	SINKING PAYMENT		350,255	350,255	353,407	352,071	0	(1,816)	0	(1,816)	0	350,255	0	0	0	8,175	11/15/2030	1.A
..36248D-AD-7	GSC CAPITAL CORP MORTGAG-SERIES 2006-2 C		09/25/2023	PAYDOWN		36,351	36,351	28,118	31,591	0	4,778	0	4,778	0	36,351	0	0	0	1,211	05/25/2036	1.A FM
..36249@-AA-1	GSA Gth I US Government Lease-Backed Pas		09/15/2023	SINKING PAYMENT		157,133	157,133	157,133	157,133	0	0	0	0	0	157,133	0	0	0	2,073	05/15/2038	1.A
..36259N-AA-3	GS Mortgage Securities T-GSMS 2018-GS9 D		08/24/2023	PERFTRUSTCP	3,128,125	5,500,000	3,997,813	0	0	0	135,405	0	135,405	0	4,133,217	(1,005,092)	(1,005,092)	94,875	03/01/2051	2.C	
..36264E-BD-5	GS Mortgage-Backed Secur-GSMS 2022-NOM1		09/01/2023	PAYDOWN		117,705	117,705	121,346	120,982	0	(3,277)	0	(3,277)	0	117,705	0	0	0	3,501	05/01/2062	1.G
..36298G-AA-7	GSPA Monetization Trust-SECURED		09/09/2023	SINKING PAYMENT		229,656	229,656	232,870	231,034	0	(1,378)	0	(1,378)	0	229,656	0	0	0	9,837	10/09/2029	2.A FE
..36850@-AA-9	Geisinger (Jenkins Towns Trust Certifica		09/15/2023	SINKING PAYMENT		133,925	133,925	133,925	133,925	0	0	0	0	0	133,925	0	0	0	2,993	12/15/2033	1.F S
..380241-AA-7	Goddard Funding LLC-GDRD 2022-1 A2		07/30/2023	PAYDOWN		42,250	42,250	42,262	42,262	0	(12)	0	(12)	0	42,250	0	0	0	2,175	10/30/2052	2.C FE
..38141G-ZM-9	Goldman Sachs Group Inc-/SENIOR UNSECURE		08/21/2023	GOLDMAN	5,454,269	6,700,000	6,770,082	6,764,182	6,764,182	0	(3,829)	0	(3,829)	0	6,760,352	(1,306,083)	(1,306,083)	207,257	02/24/2033	1.F FE	
..38150Y-AD-5	Goldman Home Improvement-GHIT 2022-GRN1		09/25/2023	PAYDOWN		891,170	891,170	872,040	874,163	0	17,008	0	17,008	0	891,170	0	0	0	45,870	06/25/2052	2.B FE
..38177B-AA-0	Golub Capital BDC CLO 20-GCBDC 2018-1A A		07/20/2023	PAYDOWN		1,796,122	1,796,122	1,796,122	1,797,847	0	(1,725)	0	(1,725)	0	1,796,122	0	0	0	85,058	01/20/2031	1.A FE
..38217U-AC-6	Goodgreen 2021-1 Trust-GOODG 2021-1A C		09/15/2023	PAYDOWN		34,973	34,973	31,913	32,113	0	2,861	0	2,861	0	34,973	0	0	0	0	10/15/2056	2.B FE
..39538W-BE-7	GreenPoint Mortgage Fund-GPMF 2005-HY1 M		09/25/2023	PAYDOWN		652,122	652,122	470,751	606,807	0	45,316	0	45,316	0	652,122	0	0	0	16,810	07/25/2035	1.A FM
..39678W-AA-6	Greenwich Capital Struct-GCSP 2005-1 A1		09/01/2023	PAYDOWN		9,661	9,661	9,613	9,817	0	(156)	0	(156)	0	9,661	0	0	0	330	09/01/2034	1.A FM
..41161P-CX-9	HarborView Mortgage Loan-HVMLT 2004-1 A		09/19/2023	PAYDOWN		5,031	5,031	4,775	4,788	0	253	10	243	0	5,031	0	0	0	134	04/19/2034	1.A FM
..41161P-EX-7	HarborView Mortgage Loan-HVMLT 2004-5 2A		09/01/2023	PAYDOWN		3,047	3,047	2,445	2,910	0	138	0	138	0	3,047	0	0	0	79	06/01/2034	1.A FM
..41161P-EZ-2	HarborView Mortgage Loan-HVMLT 2004-5 3A		09/01/2023	PAYDOWN		6,247	6,247	6,220	6,247	0	0	0	0	0	6,247	0	0	0	147	06/01/2034	1.A FM
..41161P-FV-0	HarborView Mortgage Loan-HVMLT 2004-6 5A		09/01/2023	PAYDOWN		10,349	10,349	10,491	10,556	0	(207)	0	(207)	0	10,349	0	0	0	253	08/01/2034	2.C FM
..41161P-MV-2	HarborView Mortgage Loan-HVMLT 2005-4 1A		09/01/2023	PAYDOWN		4,141	4,141	2,923	2,803	0	0	0	0	0	2,803	1,339	1,339	121	07/01/2035	1.A FM	
..41161P-TN-3	HARBORVIEW MORTGAGE LOAN-SERIES 2005-10		09/19/2023	PAYDOWN		3,002	3,002	2,101	2,067	0	935	0	935	0	3,002	0	0	0	97	11/19/2035	1.A FM
..41161P-UK-7	HarborView Mortgage Loan-SERIES 05-11 CL		09/19/2023	PAYDOWN		3,884	3,884	2,739	3,351	0	533	0	533	0	3,884	0	0	0	105	08/19/2045	1.A FM
..41161V-AC-4	HarborView Mortgage Loan-HVMLT 2006-7 2A		09/19/2023	PAYDOWN		5,487	5,527	3,927	4,694	0	852	0	852	0	5,487	0	0	0	165	09/19/2046	1.A FM
..41162G-AA-0	HarborView Mortgage Loan-HVMLT 2006-11 A		09/19/2023	PAYDOWN		51,139	51,139	46,105	50,915	0	762	0	762	0	51,139	0	0	0	997	12/19/2036	1.B FM
..411707-AD-4	Hardee's Funding LLC-HNGRY 2018-1A A211		09/20/2023	PAYDOWN		35,000	35,000	35,000	35,000	0	0	0	0	0	35,000	0	0	0	1,302	06/20/2048	2.B FE
..411707-AH-5	Hardee's Funding LLC-HNGRY 2020-1A A2		09/20/2023	PAYDOWN		30,000	30,000	30,000	30,000	0	0	0	0	0	30,000	0	0	0	896	12/20/2050	2.B FE
..42770Q-AA-0	HERO Funding Trust 2014-HERO 2014-2A A		09/20/2023	PAYDOWN		130,825	130,825	130,736	130,787	0	38	0	38	0	130,825	0	0	0	5,220	09/21/2040	1.A FE
..42770R-AA-8	HERO Funding Trust 2014-HERO 2014-1A A		09/20/2023	PAYDOWN		85,527	85,527	85,526	85,527	0	0	0	0	0	85,527	0	0	0	4,063	09/20/2038	1.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..43283B-AB-9	Hilton Grand Vacations T-HGVT 2022-1D B		09/20/2023	PAYDOWN		143,178	143,178	135,884	0	0	7,293	0	7,293	0	143,178	0	0	0	758	06/20/2034	1.6 FE
..43283G-AD-4	Hilton Grand Vacations T-HGVT 2022-2A D		09/25/2023	PAYDOWN		533,385	533,385	533,313	533,323	0	61	0	61	0	533,385	0	0	0	30,910	01/25/2037	3.C FE
..433674-AA-6	NRZ Excess Spread-Collat-NZES 2020-PLS1		09/25/2023	PAYDOWN		249,913	249,913	249,912	249,913	0	0	0	0	0	249,913	0	0	0	6,388	12/25/2025	2.C FE
..43722#-AA-1	Home Depot (Monterey Par Trust Certifica		09/15/2023	SINKING PAYMENT		64,611	64,611	64,611	64,611	0	0	0	0	0	64,611	0	0	0	999	06/15/2038	1.F
..43722*-AA-5	Home Depot South Windsor Pass-Thru Certi		09/15/2023	SINKING PAYMENT		50,913	50,913	50,913	50,913	0	0	0	0	0	50,913	0	0	0	1,287	10/15/2040	1.F
..43739E-AP-2	HOMEBANC MORTGAGE TRUST-SERIES 2005-1 CL		09/25/2023	PAYDOWN		14,215	12,235	12,266	12,266	0	2,038	89	1,949	0	14,215	0	0	0	488	03/25/2035	1.A FM
..43739E-CL-9	HomeBanc Mortgage Trust -HMBT 2006-1 1A1		09/01/2023	PAYDOWN		1,836	3,479	3,036	2,948	0	65	0	65	0	1,836	0	0	0	(438)	04/01/2037	1.A FM
..43739H-AA-8	HomeBanc Mortgage Trust -HMBT 2006-2 A1		09/25/2023	PAYDOWN		286,790	286,790	250,825	283,167	0	3,623	0	3,623	0	286,790	0	0	0	9,474	12/25/2036	1.A FM
..43741B-AA-7	HomeBanc Mortgage Trust -HMBT 2007-1 11A		09/01/2023	PAYDOWN		4,677	5,664	5,666	5,355	0	210	0	210	0	4,677	0	0	0	83	04/01/2047	1.A FM
..45254N-JB-4	IMPAC CMB TRUST-SERIES 2004-4 CLASS 2A1		09/01/2023	PAYDOWN		7,240	6,869	6,966	7,240	0	372	0	372	0	7,240	0	0	0	295	09/01/2034	1.A FM
..45254N-KX-4	IMPAC CMB TRUST-SERIES 2004-9 CLASS 1A1		09/25/2023	PAYDOWN		5,652	5,652	5,172	5,369	0	283	0	283	0	5,652	0	0	0	225	01/25/2035	1.A FM
..45254N-MZ-7	Impac CMB Trust Series 2-1MM 2005-2 1A2		09/25/2023	PAYDOWN		25,189	25,189	20,466	23,136	0	2,053	0	2,053	0	25,189	0	0	0	923	04/25/2035	1.A FM
..45254N-NT-0	Impac CMB Trust Series 2-1MM 2005-3 M1		09/25/2023	PAYDOWN		2,201	1,695	1,067	1,695	0	506	0	506	0	2,201	0	0	0	83	08/25/2035	5.B FM
..45254T-TN-4	Impac Secured Assets Tru-IMSA 2006-1 2A1		09/25/2023	PAYDOWN		52	52	37	48	0	4	0	4	0	52	0	0	0	2	05/25/2036	1.A FM
..45276Q-AA-2	Imperial Fund Mortgage T-IMPRL 2022-NQM5		09/01/2023	VARIOUS		123,308	123,308	123,306	123,308	0	0	0	0	0	123,308	0	0	0	4,333	08/01/2067	1.A FE
..45276Q-AB-0	Imperial Fund Mortgage T-IMPRL 2022-NQM5		09/01/2023	VARIOUS		332,610	332,610	332,606	332,610	0	0	0	0	0	332,610	0	0	0	15,812	08/01/2067	1.D FE
..45276Q-AC-8	Imperial Fund Mortgage T-IMPRL 2022-NQM5		09/01/2023	VARIOUS		91,556	91,556	90,780	91,277	0	279	0	279	0	91,556	0	0	0	3,778	08/01/2067	1.G FE
..45660K-AA-9	IndyMac INDX Mortgage Lo-INDX 2006-AR39		08/25/2023	PAYDOWN		35,787	33,579	27,052	29,839	0	4,307	0	4,307	0	35,787	0	0	0	615	02/25/2037	1.A FM
..45660L-CK-3	IndyMac INDX Mortgage Lo-INDX 2005-AR2 1		07/25/2023	PAYDOWN		2,563	1,752	1,752	1,752	0	863	50	813	0	2,563	0	0	0	92	02/25/2035	1.A FM
..45660L-DB-2	IndyMac INDX Mortgage Lo-INDX 2005-AR1 1		09/01/2023	PAYDOWN		13,079	13,079	12,980	13,079	0	0	0	0	0	13,079	0	0	0	323	03/01/2035	1.A FM
..45660L-V9-7	IndyMac INDX Mortgage Lo-INDX 2005-AR31		09/01/2023	PAYDOWN		3,401	3,401	3,044	3,336	0	65	0	65	0	3,401	0	0	0	87	01/01/2036	1.A FM
..45660N-X9-1	IndyMac INDX Mortgage Lo-INDX 2004-AR6 5		09/01/2023	PAYDOWN		2,891	2,891	2,371	2,612	0	280	0	280	0	2,891	0	0	0	77	10/01/2034	1.A FM
..45661X-AF-4	IndyMac INDX Mortgage Lo-INDX 2006-AR8 A		09/25/2023	PAYDOWN		12,594	12,594	11,158	12,724	0	(131)	0	(131)	0	12,594	0	0	0	349	07/25/2046	1.A FM
..45661X-AB-8	IndyMac INDX Mortgage Lo-INDX 2006-AR13		09/25/2023	PAYDOWN		15,927	15,927	9,546	9,887	0	6,040	0	6,040	0	15,927	0	0	0	436	07/25/2036	1.A FM
..45669A-AD-6	IndyMac INDX Mortgage Lo-INDA 2007-AR1 2		09/01/2023	PAYDOWN		16,242	16,242	14,108	14,159	0	2,083	123	2,083	0	16,242	0	0	0	468	03/01/2037	2.C FM
..45783N-AA-5	InStar Leasing III LLC-INSTR 2021-1A A		09/15/2023	PAYDOWN		52,086	52,086	52,058	52,061	0	25	0	25	0	52,086	0	0	0	790	02/15/2054	1.F FE
..46590K-AD-6	JP Morgan Chase Commerci-JPMCC 2015-JP1		07/01/2023	PAYDOWN		733,943	733,943	741,276	735,847	0	(1,904)	0	(1,904)	0	733,943	0	0	0	17,858	01/01/2049	1.A
..46591L-AC-7	JP Morgan Mortgage Trust-JPMMT 2019-8 A3		09/01/2023	PAYDOWN		47,909	47,909	48,531	49,648	0	(1,738)	0	(1,738)	0	47,909	0	0	0	1,246	03/01/2050	1.A
..46616M-AA-8	J G WENTWORTH RECV XXII-ASSET BKD NT 10-		09/15/2023	PAYDOWN		55,723	55,723	55,712	55,494	0	229	0	229	0	55,723	0	0	0	1,407	12/15/2048	1.A FE
..46616M-AB-6	JG Wentworth XXII LLC-HENDR 2010-3A B		09/15/2023	PAYDOWN		21,510	21,510	21,509	21,512	0	(2)	0	(2)	0	21,510	0	0	0	974	12/15/2050	1.A FE
..46616P-AA-1	JGWPT XXIII LLC-HENDR 2011-1A A		09/15/2023	PAYDOWN		70,189	70,189	70,171	70,171	0	19	0	19	0	70,189	0	0	0	2,282	10/15/2056	1.A FE
..46616Q-AA-9	321 HENDERSON RECEIVABLE-SERIES 2011-2A		09/15/2023	PAYDOWN		86,487	86,487	86,437	86,438	0	49	0	49	0	86,487	0	0	0	2,964	09/15/2056	1.A FE
..46616V-AA-8	J G WENTWORTH RECV XXV-ASSET BKD NT 12-1		09/15/2023	PAYDOWN		51,009	51,009	50,998	51,400	0	(391)	0	(391)	0	51,009	0	0	0	1,468	02/16/2065	1.A FE
..46617A-AA-3	JGWPT XXVII LLC-ASSET BKD SERIES 2012-3		08/15/2023	PAYDOWN		78,599	78,599	77,812	77,871	0	729	0	729	0	78,599	0	0	0	1,778	09/15/2065	1.A FE
..46617F-AA-2	JGWPT XXVIII LLC-HENDR 2013-1A A		09/15/2023	PAYDOWN		97,659	97,659	97,377	97,378	0	281	0	281	0	97,659	0	0	0	2,200	04/15/2067	1.A FE
..46617J-AA-4	JGWPT XXIX LLC-HENDR 2013-2A A		09/15/2023	PAYDOWN		81,511	81,511	81,492	81,510	0	1	0	1	0	81,511	0	0	0	2,536	03/15/2062	1.A FE
..46617L-AA-9	JGWPT XXX LLC-HENDR 2013-3A A		09/15/2023	PAYDOWN		148,163	148,163	148,043	148,056	0	107	0	107	0	148,163	0	0	0	4,017	01/17/2073	1.A FE
..46617T-AA-2	JGWPT XXXI LLC-ASSET BKD SERIES 2014-1 C		09/15/2023	PAYDOWN		97,614	97,614	97,559	97,555	0	59	0	59	0	97,614	0	0	0	2,525	03/15/2063	1.A FE
..46618A-AA-2	JGWPT XXXII LLC-ASSET BKD SERIES 2014-2		09/15/2023	PAYDOWN		144,716	144,716	144,513	144,537	0	179	0	179	0	144,716	0	0	0	3,428	01/17/2073	1.A FE
..46618H-AA-7	J G WENTWORTH XXXIII LLC-ASSET BKD SER 2		09/15/2023	PAYDOWN		226,979	226,979	227,152	226,979	0	(178)	0	(178)	0	226,979	0	0	0	5,230	06/15/2077	1.A FE
..46618L-AA-8	J G WENTWORTH XXXIV LLC-ASSET BKD SER 20		09/15/2023	PAYDOWN		243,437	243,437	241,177	242,758	0	679	0	679	0	243,437	0	0	0	5,277	09/15/2072	1.A FE
..46619R-AA-4	J G WENTWORTH XXXV LLC-ASSET BKD NT 15-		09/15/2023	PAYDOWN		185,652	185,652	185,938	185,881	0	(229)	0	(229)	0	185,652	0	0	0	4,846	03/15/2058	1.A FE
..46619X-AA-1	JG Wentworth XXXVI LLC-HENDR 2015-3A A		09/15/2023	PAYDOWN		87,343	87,343	87,267	87,275	0	68	0	68	0	87,343	0	0	0	2,436	03/17/2070	1.A FE
..46620J-AA-9	J.G. Wentworth XXXVIII L-HENDR 2017-1A A		09/15/2023	PAYDOWN		91,116	91,116	91,046	91,039	0	77	0	77	0	91,116	0	0	0	2,635	08/16/2060	1.A FE
..46620V-AA-2	J.G. Wentworth XXXIX LLC-HENDR 2017-2A A		09/15/2023	PAYDOWN		127,583	127,583	127,526	127,583	0	0	0	0	0	127,583	0	0	0	3,004	09/15/2072	1.A FE
..466247-J4-6	JP Morgan Mortgage Trust-JPMMT 2006-A2 2		09/01/2023	PAYDOWN		2,821	2,821	2,516	2,534	0	340	53	287	0	2,822	0	0	0	70	04/01/2036	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-ign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..466247-L6-8	JP Morgan Mortgage Trust-JPMMT 2006-A2 1	.....	09/01/2023	PAYDOWN	.....	220,332	220,332	210,004	217,944	0	2,388	0	2,388	0	220,332	0	0	0	6,467	08/01/2034	1.A FM
..466247-PW-7	JP Morgan Mortgage Trust-JPMMT 2005-A3 2	.....	09/01/2023	PAYDOWN	.....	.....579	579	488	555	0	25	0	25	0	579	0	0	0	15	06/01/2035	1.A FM
..466247-OP-1	JP Morgan Mortgage Trust-JPMMT 2005-A3 7	.....	08/01/2023	PAYDOWN	.....	4,348	4,348	3,998	3,481	0	866	0	866	0	4,348	0	0	0	133	06/01/2035	1.A FM
..466247-PP-0	JP Morgan Mortgage Trust-JPMMT 2005-A4 2	.....	09/01/2023	PAYDOWN	.....	4,443	4,443	3,943	4,233	0	210	0	210	0	4,443	0	0	0	122	07/01/2035	1.A FM
..466247-UG-6	JP MORGAN MORTGAGE TRUST-SERIES 2005-A6	.....	09/01/2023	PAYDOWN	.....	4,165	4,165	3,716	3,765	0	483	83	400	0	4,165	0	0	0	133	08/01/2035	1.A FM
..46627M-AD-9	JP Morgan Alternative Lo-JPALT 2005-S1 1	.....	09/01/2023	PAYDOWN	.....	10,938	13,590	7,045	5,781	0	7,708	78	7,630	0	10,938	0	0	0	590	12/01/2035	1.A FM
..46627M-CU-9	JP Morgan Alternative Lo-JPALT 2006-A1 2	.....	08/29/2023	PAYDOWN	.....	41,107	(502)	(502)	(392)	0	5,379	0	5,379	0	41,107	0	0	0	(95)	03/01/2036	1.A FM
..46627M-CY-1	JP Morgan Alternative Lo-JPALT 2006-A1 3	.....	09/01/2023	PAYDOWN	.....	82,744	82,744	64,704	64,677	0	18,067	0	18,067	0	82,744	0	0	0	2,168	03/01/2036	1.A FM
..46627M-EC-7	JP Morgan Alternative Lo-JPALT 2006-S1 1	.....	09/01/2023	PAYDOWN	.....	8,618	8,604	5,068	5,222	0	3,393	79	3,314	0	8,618	0	0	0	290	03/01/2036	1.A FM
..46627M-EJ-2	JP Morgan Alternative Lo-JPALT 2006-S1 1	.....	09/01/2023	PAYDOWN	.....	3,715	3,715	2,471	2,544	0	1,186	14	1,172	0	3,715	0	0	0	135	03/01/2036	1.A FM
..46628K-AC-4	JP Morgan Mortgage Trust-JPMMT 2006-A3 2	.....	09/01/2023	PAYDOWN	.....	8,907	8,907	7,866	6,871	0	2,036	0	2,036	0	8,907	0	0	0	245	05/01/2036	1.A FM
..46628L-AB-4	JP Morgan Mortgage Trust-JPMMT 2006-A4 1	.....	09/01/2023	PAYDOWN	.....	2,300	2,300	1,648	1,659	0	683	42	641	0	2,300	0	0	0	48	06/01/2036	1.A FM
..46628V-AH-9	JP Morgan Alternative Lo-JPALT 2006-S3 A	.....	09/01/2023	PAYDOWN	.....	5,401	49,384	33,001	34,092	0	1,092	0	1,092	0	5,401	0	0	0	1,225	08/01/2036	1.A FM
..46630B-AE-3	JP Morgan Alternative Lo-JPALT 2008-R3 3	.....	09/01/2023	PAYDOWN	.....	20,419	20,419	18,500	16,636	0	3,782	0	3,782	0	20,419	0	0	0	0	05/01/2037	1.A FM
..46630G-AN-5	JP Morgan Mortgage Trust-JPMMT 2007-A1 4	.....	09/01/2023	PAYDOWN	.....	11,375	11,375	10,635	11,155	0	219	0	219	0	11,375	0	0	0	394	07/01/2035	1.A FM
..46630P-AP-0	JP Morgan Mortgage Trust-JPMMT 2007-A2 3	.....	09/01/2023	PAYDOWN	.....	339	339	325	(392)	0	97	0	97	0	339	0	0	0	10	04/01/2037	1.A FM
..46630W-AB-6	JP Morgan Mortgage Trust-JPMMT 2007-S2 1	.....	09/01/2023	PAYDOWN	.....	48,853	48,488	26,257	26,689	0	23,954	167	23,787	0	48,853	0	0	0	1,860	06/01/2037	3.C FM
..46630W-AL-4	JP Morgan Mortgage Trust-JPMMT 2007-S2 1	.....	09/01/2023	PAYDOWN	.....	6,726	6,525	3,625	3,801	0	3,329	259	3,070	0	6,726	0	0	0	222	06/01/2037	4.B FM
..46631N-AA-7	JP Morgan Mortgage Trust-JPMMT 2007-S3 1	.....	09/01/2023	PAYDOWN	.....	1,597	2,526	1,500	1,014	0	84	84	930	0	2,526	0	0	0	122	08/01/2037	4.A FM
..46631N-DT-3	JP Morgan Mortgage Trust-JPMMT 2007-S3 1	.....	09/01/2023	PAYDOWN	.....	85,186	76,749	43,473	44,459	0	35,618	164	35,454	0	85,186	0	0	0	4,461	08/01/2037	1.A FM
..46632T-AA-3	JP Morgan Mortgage Trust-JPMMT 2008-R2 1	.....	09/01/2023	PAYDOWN	.....	150,724	150,724	121,331	138,747	0	11,977	0	11,977	0	150,724	0	0	0	3,992	07/01/2037	1.A FM
..46632Y-AB-0	JP Morgan Mortgage Trust-JPMMT 2008-R3 1	.....	09/01/2023	PAYDOWN	.....	35,343	79,609	10,121	(2,604)	0	35,401	0	35,401	0	35,343	0	0	0	2,254	06/01/2036	1.A FM
..46633M-AM-1	JP Morgan Resecuritizati-JPMRR 2009-6 2A	.....	09/01/2023	PAYDOWN	.....	59,693	59,790	6,039	(1,759)	0	61,459	0	61,459	0	59,693	0	0	0	1,464	04/01/2035	1.A FM
..46634D-AX-6	JP Morgan Resecuritizati-JPMRR 2010-1 3A	.....	09/01/2023	PAYDOWN	.....	84,662	91,287	43,109	48,867	0	37,868	0	37,868	0	84,662	0	0	0	2,327	04/01/2037	1.A FM
..46635B-AD-3	JP Morgan Resecuritizati-JPMRR 2010-7 1A	.....	09/01/2023	PAYDOWN	.....	113,902	113,902	80,102	93,662	0	20,241	0	20,241	0	113,902	0	0	0	3,867	03/01/2039	1.A FM
..466365-AB-9	Jack in the Box Funding -JACK 2019-1A A2	.....	08/25/2023	PAYDOWN	.....	50,000	50,000	50,000	50,000	0	0	0	0	0	50,000	0	0	0	1,679	08/25/2049	2.B FE
..466365-AC-7	Jack in the Box Funding -JACK 2019-1A A2	.....	08/25/2023	PAYDOWN	.....	80,238	80,238	75,615	75,836	0	4,401	0	4,401	0	80,238	0	0	0	2,991	08/25/2049	2.B FE
..466365-AD-5	Jack in the Box Funding -JACK 2022-1A A2	.....	08/25/2023	PAYDOWN	.....	50,000	50,000	50,000	50,000	0	0	0	0	0	50,000	0	0	0	1,292	02/26/2052	2.B FE
..466365-AE-3	Jack in the Box Funding -JACK 2022-1A A2	.....	08/25/2023	PAYDOWN	.....	25,725	25,725	22,935	23,039	0	2,686	0	2,686	0	25,725	0	0	0	798	02/26/2052	2.B FE
..46651G-AC-3	JP Morgan Mortgage Trust-JPMMT 2019-7 A3	.....	09/01/2023	PAYDOWN	.....	12,579	12,579	12,736	12,750	0	(172)	0	(172)	0	12,579	0	0	0	305	02/01/2050	1.A
..472320-AA-8	Jefferies Resecuritizati-JMAC 2008-R1 A	.....	09/25/2023	PAYDOWN	.....	13,625	(3,083)	(2,865)	(2,865)	0	897	0	897	0	13,625	0	0	0	(243)	06/25/2047	1.A FM
..472321-AA-6	Jefferies Resecuritizati-JMAC 2008-R2 1A	.....	09/01/2023	PAYDOWN	.....	16,786	16,786	12,865	16,023	0	763	0	763	0	16,786	0	0	0	2,288	10/01/2035	1.A FM
..472321-AD-0	Jefferies Resecuritizati-JMAC 2008-R2 2A	.....	09/01/2023	PAYDOWN	.....	35,572	35,572	15,355	25,852	0	9,719	0	9,719	0	35,572	0	0	0	1,491	01/01/2037	1.A FM
..472321-AJ-7	Jefferies Resecuritizati-JMAC 2008-R2 3A	.....	07/01/2023	PAYDOWN	.....	436	436	368	436	0	0	0	0	0	436	0	0	0	(32)	01/01/2039	1.A FM
..472321-AK-4	Jefferies Resecuritizati-JMAC 2008-R2 3A	.....	09/01/2023	PAYDOWN	.....	28,773	30,990	10,724	17,658	0	11,950	0	11,950	0	28,773	0	0	0	826	01/01/2039	1.A FM
..47232A-AB-4	Jefferies Resecuritizati-JMAC 2008-R3 1A	.....	07/01/2023	PAYDOWN	.....	24,630	24,630	14,940	24,615	0	15	0	15	0	24,630	0	0	0	790	03/01/2036	1.A FM
..47232A-AC-2	Jefferies Resecuritizati-JMAC 2008-R3 1A	.....	09/01/2023	PAYDOWN	.....	176,146	164,549	61,901	73,511	0	98,559	0	98,559	0	176,146	0	0	0	1,690	03/01/2036	1.A FM
..47232A-AE-8	Jefferies Resecuritizati-JMAC 2008-R3 2A	.....	09/01/2023	PAYDOWN	.....	89,805	89,805	63,762	89,805	0	0	0	0	0	89,805	0	0	0	1,942	06/01/2036	1.A FM
..47232A-AH-1	Jefferies Resecuritizati-JMAC 2008-R3 3A	.....	09/01/2023	PAYDOWN	.....	24,627	24,568	4,798	7,807	0	16,797	0	16,797	0	24,627	0	0	0	600	05/01/2037	1.A FM
..47232C-AH-7	Jefferies Resecuritizati-JMAC 2009-R1 4A	.....	09/01/2023	PAYDOWN	.....	109,444	113,671	102,624	98,175	0	(505)	0	(505)	0	94,707	0	14,737	14,737	2,564	06/01/2037	1.A FM
..47232T-AB-3	Jefferies Resecuritizati-JMAC 2009-R3 1A	.....	09/01/2023	PAYDOWN	.....	293,175	293,175	256,528	273,516	0	19,658	0	19,658	0	293,175	0	0	0	8,300	12/01/2035	1.A FM
..472330-AB-7	Jefferies Resecuritizati-JMAC 2009-R11 1	.....	09/01/2023	PAYDOWN	.....	3,383	7,393	1,156	4,719	0	(756)	0	(756)	0	3,383	0	0	0	333	09/01/2036	1.A FM
..47760Q-AB-9	Jimmy Johns Funding LLC-JIMMY 2017-1A A2	.....	07/30/2023	PAYDOWN	.....	18,000	18,000	18,000	18,000	0	0	0	0	0	18,000	0	0	0	654	07/30/2047	2.B FE
..488401-AB-6	Kemper Corp-SENIOR UNSECURED	.....	09/29/2023	MORGAN	.....	967,910	1,000,000	1,021,650	1,006,330	0	(2,495)	0	(2,495)	0	1,003,835	0	(35,925)	(35,925)	49,300	02/15/2025	2.C FE
..488401-AC-4	Kemper Corp-SENIOR UNSECURED	.....	07/28/2023	VARIOUS	.....	14,500,691	18,754,000	16,589,901	16,757,565	0	124,386	0	124,386	0	16,881,951	0	(2,381,260)	(2,381,260)	365,242	09/30/2030	2.C FE
..50543L-AA-0	LABRADOR AVIATION FINANC-SERIES 2016-1A	.....	09/15/2023	PAYDOWN	.....	319,151	319,151	312,959	317,844	0	1,307	0	1,307	0	319,151	0	0	0	9,295	01/15/2042	3.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..52520M-CE-1	Lehman Mortgage Trust 20-LMT 2005-2 3A7		09/01/2023	PAYDOWN		7,589	7,589	5,490	4,152	0	3,437	0	3,437	0	7,589	0	0	0	285	12/01/2035	1.A FM
..525221-EM-5	Lehman XS Trust Series 2-LXS 2005-7N 1A1		09/25/2023	PAYDOWN		64,700	64,700	47,452	54,808	0	9,891	0	9,891	0	64,700	0	0	0	1,759	12/25/2035	1.A FM
..525221-GM-3	LEHMAN XS TRUST-SERIES 2005-9N CLASS 1A1		09/25/2023	PAYDOWN		135,995	135,995	115,979	123,869	0	12,126	0	12,126	0	135,995	0	0	0	4,169	02/25/2036	1.A FM
..52523M-AD-2	Lehman XS Trust 2006-15-LXS 2006-15 A4		09/25/2023	PAYDOWN		26,714	26,714	14,767	19,017	0	7,698	0	7,698	0	26,714	0	0	0	759	10/25/2036	1.A FM
..525241-AL-9	Lehman XS Trust 2007-1-LXS 2007-1 WF1		09/01/2023	PAYDOWN		4,160	4,160	2,687	2,803	0	1,357	0	1,357	0	4,160	0	0	0	72	01/01/2037	1.A FM
..526057-CR-3	Lennar Corp-SENIOR UNSECURED		08/30/2023	CALL 100		16,866,000	16,866,000	18,474,173	17,829,234	0	(463,605)	0	(463,605)	0	17,365,629	0	(499,629)	(499,629)	784,445	11/15/2024	2.B FE
..52605A-AB-3	Lendingpoint 2022-A Asse-LENDINGPOINT 20		09/15/2023	PAYDOWN		10,147,526	10,147,526	10,146,983	10,147,304	0	222	0	222	0	10,147,526	0	0	0	163,210	06/15/2029	1.E FE
..53946H-AA-6	Loan Asset Issuer LLC - Series 2022 NG-2		09/25/2023	CA_CASH_CLOSE		1,684,177	1,684,177	1,684,177	1,684,177	0	0	0	0	0	1,684,177	0	0	0	80,664	11/25/2047	1.G PL
..53946H-AB-4	Loan Asset Issuer LLC - Series 2022 NG-2		09/25/2023	CA_CASH_CLOSE		134,287	134,287	134,287	134,287	0	0	0	0	0	134,287	0	0	0	7,474	11/25/2047	2.C PL
..53948W-AA-1	Loan Asset Issuer LLC - Series 2021 NG-1		09/25/2023	CA_CASH_CLOSE		238,765	238,765	238,765	238,765	0	0	0	0	0	238,765	0	0	0	6,422	10/25/2046	1.G PL
..53950T-AA-3	Loan Asset Issuer LLC, Series 2021 M-2		07/10/2023	CA_CASH_CLOSE		1,658,639	1,658,639	1,658,639	1,658,639	0	0	0	0	0	1,658,639	0	0	0	28,842	11/10/2033	1.D PL
..53950T-AB-1	Loan Asset Issuer LLC, Series 2021 M-2		07/10/2023	CA_CASH_CLOSE		670,157	670,157	670,157	670,157	0	0	0	0	0	670,157	0	0	0	15,121	11/10/2033	1.G PL
..53950T-AC-9	Loan Asset Issuer LLC, Series 2021 M-2		07/10/2023	CA_CASH_CLOSE		335,079	335,079	335,079	335,079	0	0	0	0	0	335,079	0	0	0	9,288	11/10/2033	2.C PL
..53950T-AD-7	Loan Asset Issuer LLC, Series 2021 M-2		07/10/2023	CA_CASH_CLOSE		268,063	268,063	268,063	268,063	0	0	0	0	0	268,063	0	0	0	9,418	11/10/2033	3.C PL
..53950T-AE-5	Loan Asset Issuer LLC, Series 2021 M-2		07/10/2023	CA_CASH_CLOSE		268,063	268,063	268,063	268,063	0	0	0	0	0	268,063	0	0	0	12,608	11/10/2033	4.C PL
..53950T-AF-2	Loan Asset Issuer LLC, Series 2021 M-2		07/14/2023	DIRECT		2,980,000	2,980,000	2,980,000	2,980,000	0	0	0	0	0	2,980,000	0	0	0	367,802	11/10/2033	5.B PL
..53950U-AA-0	Loan Asset Issuer LLC - Series 2023 NG-1		09/25/2023	CA_CASH_CLOSE		2,587,959	2,587,959	2,587,959	0	0	0	0	0	0	2,587,959	0	0	0	42,485	08/25/2048	1.G PL
..53950U-AB-8	Loan Asset Issuer LLC - Series 2023 NG-1		09/25/2023	CA_CASH_CLOSE		1,267,867	1,267,867	1,267,867	0	0	0	0	0	0	1,267,867	0	0	0	23,966	08/25/2048	2.C PL
..53950U-AC-4	Loan Asset Issuer LLC - Series 2022 NG-1		09/25/2023	CA_CASH_CLOSE		324,070	324,070	324,070	324,070	0	0	0	0	0	324,070	0	0	0	8,433	02/25/2047	1.G PL
..55274Q-AK-1	MASTR Asset Securitizati-MASTR 2006-2 1A		09/01/2023	PAYDOWN		54,929	54,929	51,774	39,179	0	15,750	0	15,750	0	54,929	0	0	0	1,687	06/01/2036	2.C FM
..552758-AA-2	MFRA Trust-MFRA 2022-CHM1 A1		09/01/2023	PAYDOWN		601,363	601,363	601,362	601,363	0	0	0	0	0	601,363	0	0	0	17,012	09/01/2056	1.C FE
..55283A-AA-7	MCA Fund Holding LLC-MCA 2020-1 A		08/01/2023	PAYDOWN		950,368	950,368	952,366	951,817	0	(1,449)	0	(1,449)	0	950,368	0	0	0	23,165	11/01/2035	1.F FE
..55285P-AB-0	MFA 2023-NQM1 Trust-MFRA 2023-NQM1 A2		09/01/2023	PAYDOWN		57,347	57,347	56,535	0	0	811	0	811	0	57,347	0	0	0	2,055	11/01/2067	1.C FE
..55286E-AC-2	MFA 2022-NQM3 Trust-MFRA 2022-NQM3 A3		09/01/2023	PAYDOWN		181,872	181,872	177,186	177,622	0	4,250	0	4,250	0	181,872	0	0	0	8,694	09/01/2067	1.F FE
..55316P-AG-2	MKT 2020-525M Mortgage T-MKT 2020-525M C		08/04/2023	PERFTRUSTCP		4,500,000	10,000,000	8,219,922	8,300,967	0	118,564	0	118,564	0	8,419,531	0	(3,919,531)	(3,919,531)	203,582	02/01/2040	4.A FM
..55316P-AJ-6	MKT 2020-525M Mortgage T-SERIES 20-525M		08/04/2023	PERFTRUSTCP		4,200,000	12,000,000	9,535,859	9,645,702	0	161,373	0	161,373	0	9,807,074	0	(5,607,074)	(5,607,074)	244,299	02/01/2040	1.B
..55316P-AL-1	MKT 2020-525M Mortgage T-SERIES 20-525M		08/03/2023	PERFTRUSTCP		1,500,000	5,000,000	4,342,773	4,400,047	0	43,044	0	43,044	0	4,443,090	0	(2,943,090)	(2,943,090)	101,369	02/01/2040	3.A
..55400U-AB-9	MVW 2022-1 LLC-MVWOT 2022-1A B		09/20/2023	PAYDOWN		700,458	700,458	700,380	700,383	0	75	0	75	0	700,458	0	0	0	20,678	11/21/2039	1.F FE
..571903-BF-9	Marriott International I-SENIOR UNSECURE		08/21/2023	BOFAMILSEC		4,162,500	5,000,000	5,100,850	5,093,087	0	(5,395)	0	(5,395)	0	5,087,692	0	(925,192)	(925,192)	149,722	10/15/2032	2.B FE
..571903-BG-7	Marriott International I-SENIOR UNSECURE		08/21/2023	SUNTRUST CAPITAL MAR		8,163,900	10,000,000	9,775,200	9,795,113	0	14,130	0	14,130	0	9,809,243	0	(1,645,343)	(1,645,343)	243,833	04/15/2031	2.B FE
..576431-AJ-9	MASTR Adjustable Rate Mo-MARM 2007-1 2A1		09/01/2023	PAYDOWN		515	515	411	(16)	0	531	0	531	0	515	0	0	0	15	11/01/2036	1.A FM
..576433-C5-3	MASTR Adjustable Rate Mo-MARM 2005-6 5A2		09/01/2023	PAYDOWN		6,957	6,957	5,387	5,388	0	1,569	0	1,569	0	6,957	0	0	0	151	07/01/2035	1.A FM
..576433-GM-2	MASTR Adjustable Rate Mo-MARM 2003-6 6A1		09/01/2023	PAYDOWN		165,297	165,297	159,098	158,068	0	7,228	0	7,228	0	165,297	0	0	0	4,084	12/01/2033	1.A FM
..576433-HM-1	MASTR Adjustable Rate Mo-MARM 2003-7 4A1		09/01/2023	PAYDOWN		10,967	10,967	10,666	10,780	0	187	0	187	0	10,967	0	0	0	294	01/01/2034	1.A FM
..576433-QD-1	MASTR Adjustable Rate Mo-MARM 2004-7 5A1		09/01/2023	PAYDOWN		2,133	2,133	2,026	2,044	0	89	0	89	0	2,133	0	0	0	75	07/01/2034	1.A FM
..576433-XA-9	MASTR Adjustable Rate Mo-MARM 2005-1 3A1		09/01/2023	PAYDOWN		2,127	2,127	2,020	2,008	0	119	0	119	0	2,127	0	0	0	54	02/01/2035	1.A FM
..576433-XW-1	MASTR Adjustable Rate Mo-MARM 2005-2 3A1		09/01/2023	PAYDOWN		100,595	100,595	96,571	97,472	0	3,123	0	3,123	0	100,595	0	0	0	2,245	03/01/2035	1.A FM
..576434-J7-0	MASTR Alternative Loan T-MALT 2005-2 4A3		09/25/2023	PAYDOWN		49,404	49,404	41,067	48,656	0	748	0	748	0	49,404	0	0	0	1,863	03/25/2035	1.A FM
..576434-W5-9	MASTR Alternative Loan T-MALT 2005-6 3A1		09/01/2023	PAYDOWN		2,258	2,258	1,645	2,195	0	63	0	63	0	2,258	0	0	0	83	12/01/2035	4.A FM
..57643M-LZ-5	MASTR Asset Securitizati-MASTR 2006-1 1A		09/01/2023	PAYDOWN		20,546	20,546	14,679	15,251	0	5,721	426	5,295	0	20,546	0	0	0	831	05/01/2036	1.A FM
..57645T-AA-5	MASTR Adjustable Rate Mo-MARM 2007-HF2 A		09/25/2023	PAYDOWN		255,690	255,690	224,270	253,156	0	2,533	0	2,533	0	255,690	0	0	0	3,374	09/25/2037	1.A FM
..585495-AA-2	Mello Mortgage Capital A-MELLO 2021-MTG1		09/01/2023	PAYDOWN		305,981	305,981	309,742	309,772	0	(3,791)	0	(3,791)	0	305,981	0	0	0	5,604	04/01/2051	1.A
..59020U-W4-3	MERRILL LYNCH MORTGAGE I-SERIES 2005-A9C		09/01/2023	PAYDOWN		1,532	1,532	1,484	1,048	0	1,048	0	1,048	0	1,532	0	0	0	42	12/01/2035	1.A FM
..59023P-AB-9	Merrill Lynch Mortgage I-MLCC 2006-3 2A1		09/01/2023	PAYDOWN		18,149	18,149	15,592	15,741	0	2,752	343	2,409	0	18,149	0	0	0	575	10/01/2036	1.A FM
..59048B-AA-6	Mesa Air Group, Inc. Class A Notes		07/15/2023	SINKING PAYMENT		255,030	255,030	255,030	255,122	0	(92)	0	(92)	0	255,030	0	0	0	17,934	07/15/2029	2.B PL
..595481-AA-0	Mid-State Capital Corp 2-MDST 2005-1 A		09/01/2023	PAYDOWN		35,566	35,566	34,143	35,566	0	0	0	0	0	35,566	0	0	0	1,379	01/01/2040	1.E FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..59549W-AA-1	Mid-State Trust XI-MDST 11 A1		09/15/2023	PAYDOWN		55,055	55,055	55,054	55,055	0	0	0	0	0	55,055	0	0	0	1,791	07/15/2038	1.F FE
..59748T-AA-7	MIDLAND COGEN VENTURE-SENIOR SECURED NOT		09/15/2023	SINKING PAYMENT		397,600	397,600	397,600	397,605	0	(5)	0	(5)	0	397,600	0	0	0	23,856	03/15/2025	3.A FE
..610335-AB-7	Monroe Capital Corp-SENIOR UNSECURED		07/06/2023	RAYMOND JAMES		6,693,750	7,500,000	7,458,150	7,473,254	0	4,218	0	4,218	0	7,477,473	0	(783,723)	(783,723)	321,615	02/15/2026	2.A PL
..61748H-AW-1	Morgan Stanley Mortgage -MSM 2004-5AR 4A		09/01/2023	PAYDOWN		64,826	64,826	65,554	65,910	0	(1,084)	0	(1,084)	0	64,826	0	0	0	1,967	07/01/2034	1.A FM
..61748H-FK-2	MORGAN STANLEY MORTGAGE -SERIES 2004-10A		08/01/2023	PAYDOWN		308,661	308,661	292,601	301,211	0	7,449	0	7,449	0	308,661	0	0	0	9,415	11/01/2034	1.A FM
..61748H-UF-6	Morgan Stanley Mortgage -MSM 2006-1AR 1A		09/25/2023	PAYDOWN		4,814	4,814	3,708	3,200	0	1,614	0	1,614	0	4,814	0	0	0	94	02/25/2036	1.A FM
..61749L-AP-6	Morgan Stanley Mortgage -MSM 2006-8AR 5A		08/01/2023	PAYDOWN		8,732	8,732	6,391	7,228	0	1,504	0	1,504	0	8,732	0	0	0	325	06/01/2036	1.A FM
..61749L-BM-2	Morgan Stanley Mortgage -MSM 2006-8AR 6A		08/01/2023	PAYDOWN		22,286	22,286	17,299	14,079	0	8,207	0	8,207	0	22,286	0	0	0	695	06/01/2036	1.A FM
..61751D-AE-4	Morgan Stanley Mortgage -MSM 2006-17XS A		09/01/2023	PAYDOWN		66,548	66,548	20,498	21,304	0	46,980	1,736	45,244	0	66,548	0	0	0	507	10/01/2046	1.A FM
..61751M-AU-8	Morgan Stanley Mortgage -MSM 2007-10XS A		09/01/2023	PAYDOWN		78,395	78,395	71,413	71,298	0	7,097	0	7,097	0	78,395	0	0	0	868	02/01/2037	1.A FM
..61751Q-AB-1	Morgan Stanley Home Equi-MSHEL 2007-1 A2		09/25/2023	PAYDOWN		55,425	55,425	31,766	19,760	0	35,665	0	35,665	0	55,425	0	0	0	824	12/25/2036	1.A FM
..617526-AD-0	Morgan Stanley ABS Capit-MSAC 2007-HE1 A		09/25/2023	PAYDOWN		52,835	52,835	26,797	29,273	0	26,616	3,054	23,562	0	52,835	0	0	0	930	11/25/2036	1.A FM
..61759X-AC-6	Morgan Stanley Re-REMIC -MSRR 2010-RB 1C		09/01/2023	PAYDOWN		108,858	118,265	79,956	77,028	0	37,896	0	37,896	0	108,858	0	0	0	3,317	01/01/2037	3.B FM
..618933-AA-3	Mosaic Solar Loan Trust -MSAIC 2023-3A A		09/20/2023	PAYDOWN		860,440	860,440	844,778	0	0	15,662	0	15,662	0	860,440	0	0	0	11,627	11/20/2053	1.D FE
..61915R-AK-2	MortgageIT Trust 2005-3-MHL 2005-3 A1		09/25/2023	PAYDOWN		514	514	296	431	0	84	0	84	0	514	0	0	0	20	08/25/2035	1.A FM
..61915R-AU-0	MortgageIT Trust 2005-5-MHL 2005-5 A1		09/25/2023	PAYDOWN		33,683	33,683	21,726	29,190	0	4,494	0	4,494	0	33,683	0	0	0	1,284	12/25/2035	1.A FM
..61946K-AA-2	Mosaic Solar Loan Trust -MSAIC 2022-3A A		09/20/2023	PAYDOWN		88,617	88,617	88,613	88,613	0	4	0	4	0	88,617	0	0	0	6,589	06/20/2053	1.D FE
..61946Q-AB-7	Mosaic Solar Loan Trust -MSAIC 2022-1A B		09/20/2023	PAYDOWN		719,615	719,615	692,581	694,467	0	25,148	0	25,148	0	719,615	0	0	0	15,120	01/20/2053	1.G FE
..61946U-AB-8	Mosaic Solar Loan Trust -MSAIC 2022-2A B		09/20/2023	PAYDOWN		179,018	179,018	177,294	177,294	0	1,724	0	1,724	0	179,018	0	0	0	6,154	01/21/2053	1.G FE
..62942K-AA-4	NRP Mortgage Trust 2013--NRPMT 2013-1 A1		09/01/2023	PAYDOWN		155,434	155,434	148,618	149,668	0	5,766	0	5,766	0	155,434	0	0	0	3,142	07/01/2043	1.A
..62946A-AA-2	NP SPE II LLC-NPRL 2016-1A A1		09/20/2023	PAYDOWN		264,639	264,639	264,639	264,645	0	(7)	0	(7)	0	264,639	0	0	0	7,607	04/20/2046	1.G FE
..62946A-AC-8	NP SPE II LLC-NPRL 2017-1A A1		09/20/2023	PAYDOWN		357,835	357,835	357,832	357,836	0	0	0	0	0	357,835	0	0	0	8,254	10/21/2047	1.G FE
..62947A-AB-9	NP SPE II LLC-NPRL 2019-2A A2		09/19/2023	PAYDOWN		1,477,564	1,477,564	1,477,502	1,477,504	0	60	0	60	0	1,477,564	0	0	0	26,120	11/19/2049	1.F FE
..62953J-AA-3	NXT Capital CLO 2017-2 L-NXTC 2017-2A A		07/25/2023	PAYDOWN		1,172,140	1,172,140	1,172,140	1,172,140	0	0	0	0	0	1,172,140	0	0	0	56,521	10/25/2029	1.A FE
..62955M-AA-4	NRZ FHT Excess LLC-NZES 2020-FHT1 A		09/25/2023	PAYDOWN		130,833	130,833	130,830	130,808	0	24	0	24	0	130,833	0	0	0	3,208	11/25/2025	2.C FE
..638961-AA-0	Navient Private Educatio-NAVSL 2023-A A		09/15/2023	PAYDOWN		203,114	203,114	202,820	0	0	294	0	294	0	203,114	0	0	0	3,364	10/15/2071	1.A FE
..63942A-AB-2	Navient Private Educatio-NAVSL 2020-1A A		09/15/2023	PAYDOWN		284,190	284,190	276,374	276,398	0	7,792	0	7,792	0	284,190	0	0	0	11,174	04/15/2069	1.A FE
..63946A-AA-8	Navient Private Educatio-NAVSL 2022-A A		09/15/2023	PAYDOWN		35,952	35,952	31,117	0	0	4,835	0	4,835	0	35,952	0	0	0	67	07/15/2070	1.A FE
..64016N-AA-5	Neighborly Issuer LLC-NBLY 2021-1A A2		07/30/2023	PAYDOWN		4,000	4,000	3,503	3,520	0	480	0	480	0	4,000	0	0	0	72	04/30/2051	2.C FE
..64016N-AC-1	Neighborly Issuer 2022-1-NBLY 2022-1A A2		07/30/2023	PAYDOWN		10,000	10,000	8,841	8,922	0	1,078	0	1,078	0	10,000	0	0	0	277	01/30/2052	2.C FE
..64033N-AA-4	Nelnet Student Loan Trus-NSLT 2014-5A A		09/25/2023	PAYDOWN		651,149	651,149	627,545	627,709	0	23,440	0	23,440	0	651,149	0	0	0	23,632	07/25/2046	1.B FE
..64033Q-AB-5	Nelnet Student Loan Trus-NSLT 2015-2A A2		09/25/2023	PAYDOWN		268,500	268,500	259,438	259,438	0	9,062	0	9,062	0	268,500	0	0	0	14,796	09/25/2042	1.B FE
..643529-AC-4	New Century Alternative -NCAMT 2006-ALT2		09/01/2023	PAYDOWN		8,800	8,800	1,638	1,753	0	7,250	202	7,048	0	8,800	0	0	0	70	10/01/2036	1.A FM
..643529-AD-2	New Century Alternative -NCAMT 2006-ALT2		09/01/2023	PAYDOWN		4,015	4,015	2,670	3,174	0	3,174	0	3,174	0	4,015	0	0	0	28	10/01/2036	1.A FM
..64352V-MP-3	New Century Home Equity -NCHET 2005-A A5		09/01/2023	PAYDOWN		59,548	59,548	56,124	57,055	0	2,493	0	2,493	0	59,548	0	0	0	2,060	08/01/2035	1.A FM
..64830Y-AC-1	NRZ Excess Spread-Collat-NZES 2021-FNT1		09/25/2023	PAYDOWN		257,824	257,824	257,821	257,822	0	2	0	2	0	257,824	0	0	0	5,115	03/25/2026	2.C FE
..64831Q-AA-1	New Residential Mortgage-NRZT 2022-NQM3		09/01/2023	PAYDOWN		801,725	801,725	789,925	792,101	0	9,625	0	9,625	0	801,725	0	0	0	21,834	04/01/2062	1.A
..64831Q-AB-9	New Residential Mortgage-NRZT 2022-NQM3		09/01/2023	PAYDOWN		200,564	200,564	196,302	197,308	0	3,256	0	3,256	0	200,564	0	0	0	5,632	04/01/2062	2.A
..64831T-AA-5	New Residential Mortgage-NRZT 2021-NQM3		09/01/2023	PAYDOWN		251,853	251,853	234,225	235,329	0	16,524	0	16,524	0	251,853	0	0	0	2,258	11/01/2056	1.A
..64831V-AB-8	New Residential Mortgage-NRZT 2022-NQM5		09/01/2023	PAYDOWN		133,131	133,131	131,394	131,545	0	1,585	0	1,585	0	133,131	0	0	0	7,597	11/01/2052	1.D FE
..64831V-AC-6	New Residential Mortgage-NRZT 2022-NQM5		09/01/2023	PAYDOWN		186,383	186,383	182,253	182,573	0	3,810	0	3,810	0	186,383	0	0	0	8,617	11/01/2052	1.G FE
..650119-AA-8	New York University-UNSECURED		07/01/2023	CALL 100		392,000	392,000	425,320	409,029	0	820	0	820	0	409,849	0	(17,849)	(17,849)	20,525	07/01/2032	1.D FE
..65535V-KX-5	Nomura Asset Acceptance -NAA 2005-WF1 2A		09/01/2023	PAYDOWN		1,091	1,091	1,109	1,095	0	(3)	0	(3)	0	1,091	0	0	0	36	03/01/2035	1.A FM
..65535V-MJ-4	Nomura Asset Acceptance -NAA 2005-AR3 1A		09/25/2023	PAYDOWN		5,365	5,365	4,216	4,237	0	1,128	0	1,128	0	5,365	0	0	0	142	07/25/2035	1.A FM
..65535V-NL-8	Nomura Asset Acceptance -NAA 2005-AR4 5A		09/25/2023	PAYDOWN		12,102	12,102	7,046	6,768	0	0	25	(25)	0	6,744	0	5,358	5,358	172	08/25/2035	1.A FM
..65535V-SJ-8	Nomura Asset Acceptance -NAA 2006-AP2 A2		09/01/2023	PAYDOWN		13,127	13,127	4,909	4,975	0	8,296	144	8,152	0	13,127	0	0	0	184	01/01/2036	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..65539C-AK-2	Nomura Resecuritization -NMRR 2011-4RA 1		09/01/2023	PAYDOWN		40,317	37,644	31,278	32,206	0	5,986	0	5,986	0	40,317	0	0	0	760	12/01/2036	1.A FM
..65540E-BR-9	Nomura Resecuritization -NMRR 2014-1R 3A		09/26/2023	PAYDOWN		486,305	486,305	406,065	480,712	0	5,593	0	5,593	0	486,305	0	0	0	12,725	07/26/2036	6. *
..67087T-DE-8	Oakwood Mortgage Investo-OAK 2002-A A3		09/01/2023	PAYDOWN		18,767	18,767	18,765	18,767	0	0	0	0	0	18,767	0	0	0	762	05/01/2024	5.A FE
..67098A-AM-1	OBX 2019-INV1 Trust-OBX 2019-INV1 A12		09/01/2023	PAYDOWN		360,275	360,275	329,652	334,604	0	25,671	0	25,671	0	360,275	0	0	0	9,647	11/01/2048	1.A
..67113A-AP-5	OBX 2019-EXP3 Trust-OBX 2019-EXP3 1A8		09/01/2023	PAYDOWN		10,204	10,204	10,219	10,230	0	(26)	0	(26)	0	10,204	0	0	0	273	10/01/2059	1.A
..67113X-AB-6	OBX 2021-J1 Trust-OBX 2021-J1 A2		09/01/2023	PAYDOWN		891,365	891,365	885,934	884,132	0	7,233	0	7,233	0	891,365	0	0	0	13,380	05/01/2051	1.A
..67117D-AA-8	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		09/01/2023	PAYDOWN		187,414	187,414	187,414	187,414	0	0	0	0	0	187,414	0	0	0	6,378	08/01/2062	1.A FE
..67117D-AB-6	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		09/01/2023	PAYDOWN		88,596	88,596	88,393	88,425	0	171	0	171	0	88,596	0	0	0	3,363	08/01/2062	1.C FE
..67117D-AC-4	Onslow Bay Mortgage Loan-OBX 2022-NQM7 A		09/01/2023	PAYDOWN		89,448	89,448	88,393	88,558	0	890	0	890	0	89,448	0	0	0	3,395	08/01/2062	1.F FE
..67181D-AA-9	Oak Street Investment Gr-OAKIG 2020-1A A		09/20/2023	PAYDOWN		28,338	28,338	28,337	28,338	0	0	0	0	0	28,338	0	0	0	350	11/20/2050	1.A
..67181D-AB-7	Oak Street Investment Gr-SERIES 20-1A CL		09/20/2023	PAYDOWN		28,338	28,338	28,327	28,332	0	7	0	7	0	28,338	0	0	0	418	11/20/2050	1.A FE
..67190A-AA-4	Oak Street Investment Gr-OAKIG 2021-1A A		09/20/2023	PAYDOWN		39,201	39,201	37,604	37,636	0	1,565	0	1,565	0	39,201	0	0	0	387	01/20/2051	1.A FE
..67190A-AB-2	Oak Street Investment Gr-OAKIG 2021-1A A		09/20/2023	PAYDOWN		23,956	23,956	23,953	23,955	0	2	0	2	0	23,956	0	0	0	308	01/20/2051	1.A FE
..67448Q-AC-5	OBX 2019-EXP1 Trust-OBX 2019-EXP1 1A3		09/01/2023	PAYDOWN		19,248	19,248	19,152	19,117	0	131	0	131	0	19,248	0	0	0	566	01/01/2059	1.A
..69144A-AA-7	Oxford Finance Funding 2-OXFIN 2020-1A A		09/15/2023	PAYDOWN		679,055	679,055	676,138	676,261	0	2,795	0	2,795	0	679,055	0	0	0	12,664	02/15/2028	1.F FE
..69337B-AA-7	PHH Alternative Mortgage-PHAM 2007-1 21		09/01/2023	PAYDOWN		39,790	47,467	42,542	44,654	0	2,138	0	2,138	0	39,790	0	0	0	892	02/01/2037	3.C FM
..693456-AA-3	PMT Loan Trust 2013-J1-PMTLT 2013-J1 A1		09/01/2023	PAYDOWN		24,978	24,978	24,338	24,357	0	621	0	621	0	24,978	0	0	0	655	09/01/2043	1.A
..69346M-AA-7	PNMAC FMSR ISSUER TRUST -PNMSR 2018-FT1		08/25/2023	PAYDOWN		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	322,315	04/25/2025	2.C FE
..69368A-AA-0	PSMC 2020-1 Trust-PSMC 2020-1 A1		09/01/2023	PAYDOWN		50,072	50,072	51,191	51,592	0	(1,519)	0	(1,519)	0	50,072	0	0	0	1,221	01/01/2050	1.A
..693696-AA-4	Pvone 2023-1 LLC-PVONE 2023-1A A		09/15/2023	PAYDOWN		1,808,712	1,808,712	1,807,685	0	0	1,027	0	1,027	0	1,808,712	0	0	0	21,296	07/16/2035	1.A FE
..69374X-AA-8	PSMC 2019-2 Trust-PSMC 2019-2 A1		09/01/2023	PAYDOWN		5,030	5,030	5,131	5,203	0	(173)	0	(173)	0	5,030	0	0	0	135	10/01/2049	1.A
..69375B-AA-5	PSMC 2019-3 Trust-PSMC 2019-3 A1		09/01/2023	PAYDOWN		13,785	13,785	13,985	14,113	0	(328)	0	(328)	0	13,785	0	0	0	377	11/01/2049	1.A
..69403W-AA-5	Pacific Beacon LLC-FIRST LIEN		07/15/2023	SINKING PAYMENT		371,434	371,434	409,714	389,276	0	(17,841)	0	(17,841)	0	371,434	0	0	0	19,979	07/15/2026	2.B FE
..69546V-AA-5	PAGAYA AI Debt Trust 202-PAID 2022-2 A		09/15/2023	PAYDOWN		1,169,033	1,169,033	1,169,033	1,169,033	0	0	0	0	0	1,169,033	0	0	0	45,990	01/15/2030	1.G FE
..70215F-AA-8	Paristat (Varian 2020 I Pass-Thru Certif		09/15/2023	SINKING PAYMENT		146,757	146,757	146,757	146,757	0	0	0	0	0	146,757	0	0	0	3,577	03/15/2030	1.E
..70932A-AD-5	PennyMac Corp-SENIOR UNSECURED		08/04/2023	BOFAMILSEC		16,150,000	17,000,000	13,535,000	15,323,716	0	498,587	0	498,587	0	15,822,303	0	327,697	327,697	719,431	11/01/2024	2.A FE
..72703P-AC-7	Planet Fitness Master Is-2019-1A A2 FIXE		09/05/2023	PAYDOWN		27,500	27,500	27,841	27,800	0	(300)	0	(300)	0	27,500	0	0	0	796	12/05/2049	2.B FE
..74333H-AJ-1	Progress Residential Trust-PROG 2021-SFR		09/01/2023	PAYDOWN		19,385	19,385	19,384	19,384	0	1	0	1	0	19,385	0	0	0	447	12/01/2040	2.A FE
..74338*-AA-6	Project Axis Garner NC C Trust Certificat		09/15/2023	SINKING PAYMENT		109,941	109,941	109,941	109,943	0	(2)	0	(2)	0	109,941	0	0	0	2,588	11/15/2039	1.D
..74351@-AA-6	Project Arrow Oak Creek Trust Certificate		09/10/2023	SINKING PAYMENT		119,273	119,273	119,273	119,273	0	0	0	0	0	119,273	0	0	0	2,562	07/10/2040	1.D
..74387A-AC-3	Provident Funding Mortga-PFMT 2020-1 A2		09/01/2023	PAYDOWN		48,601	48,601	49,292	49,334	0	(734)	0	(734)	0	48,601	0	0	0	1,089	02/01/2050	1.A
..74387L-AC-5	Provident Funding Mortga-PFMT 2019-1 A2		09/01/2023	PAYDOWN		84,422	84,422	85,596	85,646	0	(1,224)	0	(1,224)	0	84,422	0	0	0	2,008	12/01/2049	1.A
..74387Y-AD-5	Provident Funding Mortga-PFMT 2021-1 A2A		09/01/2023	PAYDOWN		823,350	823,350	815,226	815,298	0	8,051	0	8,051	0	823,350	0	0	0	13,915	04/01/2051	1.A
..74922M-AA-9	RALI Series 2006-QA6 Tru-RALI 2006-QA6 A		09/25/2023	PAYDOWN		49,282	53,133	46,455	51,109	0	1,602	0	1,602	0	49,282	0	0	0	1,354	07/25/2036	3.A FM
..74922Q-AA-0	RALI Series 2006-QA8 Tru-RALI 2006-QA8 A		09/25/2023	PAYDOWN		14,897	14,300	10,947	13,250	0	1,253	0	1,253	0	14,897	0	0	0	322	09/25/2036	1.A FM
..74923G-AC-7	RALI Series 2007-QA1 Tru-RALI 2007-QA1 A		09/25/2023	PAYDOWN		86,229	90,157	67,481	67,632	0	21,112	0	21,038	0	86,229	0	0	0	3,095	01/25/2037	1.A FM
..74923H-AQ-4	RALI Series 2007-QS4 Tru-RALI 2007 QA 3A		09/01/2023	PAYDOWN		7,160	9,099	8,305	8,495	0	504	94	410	0	7,160	0	0	0	284	03/01/2037	4.A FM
..74927B-AK-6	RBSSP Resecuritization T-RBSSP 2009-8 7A		09/01/2023	PAYDOWN		49	49	52	61	0	(13)	0	(13)	0	49	0	0	0	11	09/01/2037	1.A FM
..74927T-AC-5	RBSSP Resecuritization T-RBSSP 2010-9 3A		09/26/2023	PAYDOWN		46,090	46,090	43,267	39,972	0	6,118	0	6,118	0	46,090	0	0	0	493	10/26/2034	1.A FM
..74928D-AV-7	RBSSP Resecuritization T-RBSSP 2009-1 7A		09/01/2023	PAYDOWN		12,091	12,091	5,585	7,705	0	4,387	0	4,387	0	12,091	0	0	0	304	06/01/2037	1.A FM
..74928F-AY-6	RBSSP Resecuritization T-RBSSP 2009-3 6A		09/01/2023	PAYDOWN		(15)	6,745	4,123	1,285	0	2,873	0	2,873	0	(15)	0	0	0	194	03/01/2036	1.A FM
..74928R-AB-0	RBSSP Resecuritization T-RBSSP 2009-10 1		09/01/2023	PAYDOWN		2,540	2,572	1,734	1,845	0	747	46	701	0	2,540	0	0	0	113	08/01/2035	1.A FM
..74928U-AM-9	RBSSP Resecuritization T-RBSSP 2009-12 5		09/01/2023	PAYDOWN		7,824	10,959	7,761	9,556	0	511	0	511	0	7,824	0	0	0	321	08/01/2036	1.A FM
..74928U-AX-5	RBSSP Resecuritization T-RBSSP 2009-12 8		09/01/2023	PAYDOWN		8,400	8,879	3,777	4,640	0	3,957	0	3,957	0	8,400	0	0	0	269	06/01/2036	1.A FM
..74928U-BV-8	RBSSP Resecuritization T-RBSSP 2009-12 1		09/26/2023	PAYDOWN		259,551	259,551	211,534	228,005	0	31,546	0	31,546	0	259,551	0	0	0	11,683	10/25/2035	1.A FM
..74928Y-BB-6	RBSSP Resecuritization T-RBSSP 2009-6 3A		09/26/2023	PAYDOWN		252,266	262,692	175,174	228,923	0	53,047	29,590	23,457	0	252,266	0	0	0	17,299	01/26/2036	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Design-ation, NAIC Design-ation Modifier and SVO Admini-strative Symbol
..74929F-AK-5	RBSSP Resecuritization T-RBSSP 2010-3 4A		09/01/2023	PAYDOWN		6,526	6,526	6,418	6,500	0	26	0	26	0	6,526	0	0	0	226	12/01/2035	1.A FM
..74930X-BB-2	RBSSP Resecuritization T-RBSSP 2012-1 4B		09/01/2023	PAYDOWN		311,003	311,003	297,008	312,284	0	(308)	0	(308)	0	311,003	0	0	0	275,192	01/01/2029	1.A FM
..749357-AA-7	RCKT Mortgage Trust 2019-RCKT 2019-1 A1		09/01/2023	PAYDOWN		172,759	172,759	175,432	176,995	0	(4,236)	0	(4,236)	0	172,759	0	0	0	4,099	09/01/2049	1.A
..749389-AA-0	RCKT Mortgage Trust 2020-RCKT 2020-1 A1		09/01/2023	PAYDOWN		62,820	62,820	59,993	57,643	0	5,177	0	5,177	0	62,820	0	0	0	1,417	02/01/2050	1.A
..749574-AC-3	RFMSI Series 2006-SA2 Tr-RFMSI 2006-SA2		09/01/2023	PAYDOWN		5,170	6,329	4,588	3,058	0	2,936	0	2,936	0	5,170	0	0	0	194	08/01/2036	1.A FM
..74958T-AB-9	RFMSI Series 2007-SA3 Tr-RFMSI 2007-SA3		09/01/2023	PAYDOWN		23,711	25,001	22,040	19,925	0	4,888	0	4,888	0	23,711	0	0	0	577	07/01/2037	1.A FM
..74958W-AC-0	RFMSI Series 2007-SA1 Tr-RFMSI 2007-SA1		09/01/2023	PAYDOWN		1,158	2,325	1,318	1,063	0	759	0	759	0	1,158	0	0	0	78	02/01/2037	1.A FM
..74958X-AF-1	RFMSI Series 2007-SA2 Tr-RFMSI 2007-SA2		09/01/2023	PAYDOWN		14,809	14,809	13,499	14,415	0	394	0	394	0	14,809	0	0	0	537	04/01/2037	1.A FM
..74958Y-AE-2	RFMSI Series 2007-S4 Tru-RFMSI 2007-S4 A		09/25/2023	PAYDOWN		1,837	3,312	2,647	2,875	0	300	194	106	0	1,837	0	0	0	84	04/25/2037	4.A FM
..749685-AY-9	RPM International Inc-SENIOR UNSECURED		08/21/2023	KEY CAPITAL MARKETS		4,717,560	6,000,000	5,988,900	5,989,728	0	581	0	581	0	5,990,309	0	(1,272,749)	(1,272,749)	195,683	01/15/2032	2.C FE
..74968R-AA-3	RMF Proprietary Issuance-PPIT 2019-1 A		09/25/2023	PAYDOWN		627,984	627,984	623,123	624,336	0	3,648	0	3,648	0	627,984	0	0	0	7,203	10/25/2063	1.A FE
..74969M-AA-3	RMF Proprietary Issuance-PPIT 2020-1 A		09/25/2023	PAYDOWN		284,298	284,298	284,298	284,298	0	0	0	0	0	284,298	0	0	0	4,378	04/26/2060	1.A FE
..75086F-AA-3	Rainier Gsa Portfolio I US Govt Lease Ba		09/15/2023	SINKING PAYMENT		64,549	64,549	64,549	64,549	0	0	0	0	0	64,549	0	0	0	0	07/15/2036	1.F
..75115D-AA-3	RALI Series 2006-QS13 Tr-RALI 2006-QS13		09/25/2023	PAYDOWN		1,184	3,077	2,237	2,385	0	215	27	188	0	1,184	0	0	0	160	09/25/2036	1.A FM
..75115L-AA-5	RALI Series 2007-QH7 Tru-RALI 2007-QH7 1		09/25/2023	PAYDOWN		91,080	91,080	83,794	87,527	0	3,553	0	3,553	0	91,080	0	0	0	2,579	08/25/2037	1.A FM
..75116C-ET-9	RESIDENTIAL ACCREDIT LOA-SERIES 2007-QS6		09/01/2023	PAYDOWN		7,545	8,882	5,288	5,543	0	2,778	0	2,778	0	7,545	0	0	0	360	04/01/2037	1.A FM
..75116F-BH-1	RALI Series 2007-QS9 Tru-RALI 2007-QS9 A		09/01/2023	PAYDOWN		53,268	65,485	60,685	63,179	0	1,981	857	1,124	0	53,268	0	0	0	2,873	07/01/2037	5.A FM
..75156V-AD-7	RAMP Series 2006-RS3 Tru-RAMP 2006-RS3 A		09/25/2023	PAYDOWN		70,643	67,191	52,861	57,669	0	10,268	0	10,268	0	70,643	0	0	0	2,327	05/25/2036	1.A FM
..75575R-AA-5	Ready Capital Mortgage F-RQMT 2023-FL11		07/25/2023	PAYDOWN		68,137	68,137	67,967	0	0	170	0	170	0	68,137	0	0	0	2,305	10/25/2039	1.A FE
..759509-AG-7	Reliance Steel & Aluminu-SENIOR UNSECURE		08/21/2023	U. S. BANCORP	7,938,500	10,000,000	9,498,900	9,548,522	9,548,522	0	34,660	0	34,660	0	9,583,182	0	(1,644,682)	(1,644,682)	219,778	08/15/2030	2.B FE
..75971F-AY-9	RENAISSANCE HOME EQUITY -RAMC 2007-3W AF		09/01/2023	PAYDOWN		19,449	19,449	14,003	15,128	0	4,321	0	4,321	0	19,449	0	0	0	1,523	09/01/2037	1.A FM
..759950-DM-7	Renaissance Home Equity -RAMC 2004-3 AF5		07/01/2023	PAYDOWN		40,675	40,675	35,896	35,506	0	5,169	0	5,169	0	40,675	0	0	0	913	11/01/2034	1.A FM
..759950-EM-6	Renaissance Home Equity -RAMC 2004-4 AF5		09/01/2023	PAYDOWN		125,192	125,192	113,025	113,333	0	11,858	0	11,858	0	125,192	0	0	0	2,826	02/01/2035	1.A FM
..76029F-AA-1	Republic Airways Holding Senoir Secured		09/15/2023	SINKING PAYMENT		281,250	281,250	281,250	0	0	0	0	0	0	281,250	0	0	0	0	12/15/2028	2.B PL
..760985-S6-9	RFSC Series 2004-RP1 Tru-RFSC 2004-RP1A		09/25/2023	PAYDOWN		68,936	68,936	68,592	61,476	0	7,460	0	7,460	0	68,936	0	0	0	3,919	11/25/2042	1.A FM
..76110H-HB-5	RALI Series 2004-QA6 Tru-RALI 2004-QA6 N		09/01/2023	PAYDOWN		22,284	22,500	18,357	18,354	0	3,950	0	3,950	0	22,284	0	0	0	517	12/01/2034	1.A FM
..76110H-T9-0	RALI Series 2005-QA2 Tru-RALI 2005-QA2 N		09/01/2023	PAYDOWN		7,813	4,998	4,998	5,773	0	2,040	0	2,040	0	7,813	0	0	0	233	02/01/2035	1.A FM
..761118-BU-1	RALI Series 2005-QA8 Tru-RALI 2005-QA8 N		09/01/2023	PAYDOWN		12,334	14,871	11,783	12,273	0	2,878	483	2,395	0	12,334	0	0	0	462	07/01/2035	1.A FM
..761118-FL-7	RALI Series 2005-QA9 Tru-RALI 2005-QA9 C		09/01/2023	PAYDOWN		70,835	71,721	69,533	65,832	0	5,617	0	5,617	0	70,835	0	0	0	1,526	08/01/2035	1.A FM
..761118-FM-5	RESIDENTIAL ACCREDIT LOA-SERIES 2005-QA9		09/01/2023	PAYDOWN		104,036	103,857	83,135	93,951	0	20,147	10,787	9,360	0	104,036	0	0	0	2,495	08/01/2035	1.A FM
..761118-GS-1	RALI Series 2005-QS13 Tr-RALI 2005-QS13		09/25/2023	PAYDOWN		41,811	43,016	35,485	36,054	0	6,578	32	6,546	0	41,811	0	0	0	746	09/25/2035	1.F FM
..761118-KH-0	RALI Series 2005-QS15 Tr-RALI 2005-QS15		09/01/2023	PAYDOWN		5,715	7,104	6,562	4,880	0	2,060	0	2,060	0	5,715	0	0	0	220	10/01/2035	1.A FM
..761118-SC-3	RALI Series 2006-QS1 Tru-RALI 2006-QS1 A		09/01/2023	PAYDOWN		23,770	30,209	27,293	28,013	0	1,568	73	1,495	0	23,770	0	0	0	936	01/01/2036	4.C FM
..761118-UG-1	RALI Series 2006-QS2 Tru-RALI 2006-QS2 1		09/01/2023	PAYDOWN		11,877	15,263	14,506	14,924	0	205	142	63	0	11,877	0	0	0	488	02/01/2036	4.C FM
..761118-UQ-9	RALI Series 2006-QS2 Tru-RALI 2006-QS2 1		09/01/2023	PAYDOWN		2,417	3,106	2,877	2,611	0	374	0	374	0	2,417	0	0	0	132	02/01/2036	3.A FM
..76112B-NM-8	GMACM Mortgage Loan Trus-GMACM 2005-AA1		09/01/2023	PAYDOWN		328,657	297,959	266,111	267,244	0	34,537	(72)	34,609	0	328,657	0	0	0	11,952	05/01/2035	1.A FM
..76971E-AA-2	RMF Buyout Issuance Trus-RBIT 2020-HB1 A		09/25/2023	PAYDOWN		4,260,298	4,260,298	4,260,292	4,275,078	0	(14,781)	0	(14,781)	0	4,260,298	0	0	0	45,418	10/25/2050	1.A FE
..78396N-BC-2	SACO I Inc-SACO 1999-3 1B1		08/01/2023	PAYDOWN		6,663	6,663	6,487	6,617	0	46	0	46	0	6,663	0	0	0	244	04/01/2039	1.A FM
..78433X-AA-8	Stonepeak 2021-1 ABS-SALTT 2021-1A AA		09/15/2023	PAYDOWN		205,501	205,501	191,597	193,218	0	12,283	0	12,283	0	205,501	0	0	0	2,804	02/28/2033	1.C FE
..78433X-AC-4	Stonepeak 2021-1 ABS-SALTT 2021-1A B		09/15/2023	PAYDOWN		252,368	252,368	232,307	234,527	0	17,841	0	17,841	0	252,368	0	0	0	4,903	02/28/2033	2.B FE
..78443C-BN-3	SLM Private Credit Stude-SLMA 2004-B A3		09/15/2023	PAYDOWN		59,402	59,402	47,225	59,212	0	190	0	190	0	59,402	0	0	0	2,439	03/15/2024	1.A FE
..78448R-AE-6	SMB Private Education Lo-SMB 2015-C B		09/15/2023	PAYDOWN		190,058	190,058	182,040	0	0	8,018	0	8,018	0	190,058	0	0	0	2,217	09/15/2043	1.B FE
..78449L-AC-2	SMB 2018-B A2B		09/15/2023	PAYDOWN		89,029	89,029	87,430	0	0	1,600	0	1,600	0	89,029	0	0	0	2,193	01/15/2037	1.A FE
..78449R-AL-9	SLG 2021-OVA E FIXED CO-SLG 2021-OVA E		07/11/2023	JP MORGAN SECURITIES		5,166,125	7,400,000	5,116,406	5,153,042	0	101,858	0	101,858	0	5,254,900	(88,775)	(88,775)	130,083	07/01/2041	1.A	
..78449R-AN-5	SLG 2021-OVA F		07/11/2023	JP MORGAN SECURITIES		3,561,449	5,275,000	4,072,699	4,124,840	0	55,634	0	55,634	0	4,180,473	(619,024)	(619,024)	92,728	07/01/2041	1.A	
..78449X-AA-0	SMB Private Education Lo-SMB 2020-B A1A		09/15/2023	PAYDOWN		286,508	286,508	281,046	282,025	0	4,482	0	4,482	0	286,508	0	0	0	2,476	07/15/2053	1.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..78449Y-AA-8	SMB Private Education Lo-SMB 2021-B A		09/15/2023	PAYDOWN		681,841	681,841	621,754	628,370	0	53,471	0	53,471	0	681,841	0	0	0	5,859	07/17/2051	1.A FE
..78473T-AJ-9	STARM Mortgage Loan Trus-STARM 2007-2 4A		09/01/2023	PAYDOWN		797	797	452	510	0	340	53	287	0	797	0	0	0	22	04/01/2037	1.A FM
..78488L-AA-8	SWC Funding LLC 2018-1-SWC 2018-1A A		08/15/2023	PAYDOWN		1,700,362	1,700,362	1,688,393	1,698,183	0	2,179	0	2,179	0	1,700,362	0	0	0	60,575	08/15/2033	1.G FE
..78518#-AA-5	Saber Midstream LLC Senior Secured Notes		09/30/2023	SINKING PAYMENT		909,567	909,567	907,293	907,500	0	2,067	0	2,067	0	909,567	0	0	0	36,943	03/31/2029	2.C PL
..78573N-AC-6	Sabre GLBL Inc-SECURED		09/07/2023	EXCHANGE OFFER		60,453	61,000	60,161	60,244	0	209	0	209	0	60,453	0	0	0	5,047	04/15/2025	4.C FE
..805564-EM-9	Saxon Asset Securities T-SAST 1999-3 BF1		08/01/2023	PAYDOWN		867	(4,818)	(4,818)	(4,034)	0	777	0	777	0	867	0	0	0	(74)	12/01/2032	1.A FM
..81378E-AA-1	SECURITIZED ASSET BACKED-SERIES 2007-BR4		09/25/2023	PAYDOWN		83,995	83,995	36,773	30,183	0	53,812	0	53,812	0	83,995	0	0	0	1,144	05/25/2037	1.A FM
..81743A-AA-7	SEQUOIA MORTGAGE TRUST 2-SEMT 2019-5 A1		09/01/2023	PAYDOWN		251,048	251,048	255,441	255,980	0	(4,932)	0	(4,932)	0	251,048	0	0	0	6,589	12/01/2049	1.A
..81745A-AB-3	Sequoia Mortgage Trust 2-SEMT 2013-5 A2		09/01/2023	PAYDOWN		25,095	25,095	23,758	23,905	0	1,190	0	1,190	0	25,095	0	0	0	565	05/01/2043	1.A
..81745C-AA-1	Sequoia Mortgage Trust 2-SEMT 2013-7 A1		09/01/2023	PAYDOWN		71,342	71,342	64,286	65,307	0	6,035	0	6,035	0	71,342	0	0	0	1,189	06/01/2043	1.A
..81745J-AA-6	Sequoia Mortgage Trust 2-SEMT 2013-11 A1		09/01/2023	PAYDOWN		45,950	45,950	45,333	45,380	0	571	0	571	0	45,950	0	0	0	1,101	09/01/2043	1.A
..81745M-AA-9	Sequoia Mortgage Trust 2-SEMT 2013-2 A		09/01/2023	PAYDOWN		43,389	43,389	38,868	39,045	0	4,344	0	4,344	0	43,389	0	0	0	583	02/01/2043	1.A
..81745R-AB-6	Sequoia Mortgage Trust 2-SEMT 2013-3 A2		09/01/2023	PAYDOWN		56,915	56,915	57,181	61,558	0	4,377	0	4,377	0	61,558	0	0	0	1,206	03/01/2043	1.A
..81748J-AA-3	Sequoia Mortgage Trust 2-SEMT 2019-4 A1		09/01/2023	PAYDOWN		151,962	151,962	155,144	157,173	0	(5,211)	0	(5,211)	0	151,962	0	0	0	3,949	11/01/2049	1.A
..81748K-AA-0	Sequoia Mortgage Trust 2-SEMT 2020-2 A1		09/01/2023	PAYDOWN		66,959	66,959	68,612	69,668	0	(2,709)	0	(2,709)	0	66,959	0	0	0	1,666	03/01/2050	1.A
..81748M-AA-6	Sequoia Mortgage Trust 2-SEMT 2020-1 A1		09/01/2023	PAYDOWN		58,560	58,560	59,905	60,055	0	(1,495)	0	(1,495)	0	58,560	0	0	0	1,616	02/01/2050	1.A
..81761T-AA-3	ServiceMaster Funding LL-SERV 2020-1 A2I		07/30/2023	PAYDOWN		7,500	7,500	7,091	7,126	0	374	0	374	0	7,500	0	0	0	107	01/30/2051	2.C FE
..81761T-AC-9	ServiceMaster Funding LL-SERIES 20-1 CLA		07/30/2023	PAYDOWN		12,500	12,500	10,969	10,969	0	1,531	0	1,531	0	12,500	0	0	0	1,081	01/30/2051	2.C FE
..81761T-AE-5	ServiceMaster Funding LL-SERV 2021-1 A2I		07/30/2023	PAYDOWN		37,500	37,500	31,748	31,984	0	5,516	0	5,516	0	37,500	0	0	0	806	07/30/2051	2.C FE
..81761T-AG-0	ServiceMaster Funding LL-SERV 2021-1 A2I		07/30/2023	PAYDOWN		57,500	57,500	57,500	57,500	0	0	0	0	0	57,500	0	0	0	1,342	07/30/2051	2.C FE
..817743-AA-5	SERVPRO Master Issuer LL-SPRO 2019-1A A2		07/25/2023	PAYDOWN		45,625	45,625	45,908	45,783	0	(158)	0	(158)	0	45,625	0	0	0	1,328	10/25/2049	2.C FE
..826525-AB-3	Sierra Timeshare 2020-2 -SPFC 2020-2A B		09/20/2023	PAYDOWN		456,812	456,812	431,890	0	0	24,982	0	24,982	0	456,812	0	0	0	1,278	07/20/2037	1.F FE
..82652R-AB-5	Sierra Timeshare 2021-2 -SPFC 2021-2A B		09/20/2023	PAYDOWN		68,475	68,475	63,082	63,184	0	5,291	0	5,291	0	68,475	0	0	0	694	09/20/2038	1.F FE
..826934-AC-5	Sierra Timeshare 2022-3 -SPFC 2022-3A C		09/20/2023	PAYDOWN		376,947	376,947	376,859	376,858	0	88	0	88	0	376,947	0	0	0	18,959	07/20/2039	2.B FE
..82817*-AA-9	Silver Spring Metro Cent Senior Note Tra		09/05/2023	SINKING PAYMENT		99,940	99,940	99,940	99,940	0	0	0	0	0	99,940	0	0	0	1,160	01/05/2029	1.B
..82817#-AA-7	Silver Spring Metro Cent Senior Note Tra		09/05/2023	SINKING PAYMENT		47,903	47,903	47,902	47,902	0	0	0	0	0	47,903	0	0	0	311	01/07/2029	1.B
..82922T-AA-7	Sinai Health System-SECURED		07/20/2023	CALL 100		105,000	105,000	105,000	105,000	0	0	0	0	0	105,000	0	0	0	3,186	01/20/2036	1.B FE
..83546D-AL-2	Sonic Capital LLC-SONIC 2020-1AW A2IW		09/20/2023	PAYDOWN		23,333	23,333	23,742	23,722	0	(389)	0	(389)	0	23,333	0	0	0	429	01/20/2050	1.C FE
..83546D-AM-0	Sonic Capital LLC-SONIC 2020-1AW A2IW		09/20/2023	PAYDOWN		43,750	43,750	46,495	45,897	0	(2,147)	0	(2,147)	0	43,750	0	0	0	667	01/20/2050	1.C FE
..83611M-HM-3	Soundview Home Loan Trus-SVHE 2005-B M2		09/01/2023	PAYDOWN		12,892	11,561	6,315	9,797	0	2,219	0	2,219	0	12,892	0	0	0	350	05/01/2035	1.A FM
..83611M-JX-7	Soundview Home Loan Trus-SVHE 2005-OPT4		09/25/2023	PAYDOWN		219,705	219,705	168,075	218,946	0	760	0	760	0	219,705	0	0	0	5,086	12/25/2030	1.A FM
..841215-AA-4	Southaven Combined Cycle-SECURED		08/15/2023	SINKING PAYMENT		127,701	127,701	127,701	127,704	0	(3)	0	(3)	0	127,701	0	0	0	4,911	08/15/2033	1.D FE
..841504-AB-9	Southeast Supply Header -SENIOR UNSECURE		07/14/2023	STIFEL NICOLAUS		4,712,500	5,000,000	4,993,950	4,998,940	0	281	0	281	0	4,999,221	0	(286,721)	(286,721)	125,729	06/15/2024	5.A FE
..84858#-AA-4	Spirit Airlines Pass Thr-FIRST LIEN		08/15/2023	SINKING PAYMENT		170,538	170,538	170,585	170,585	0	(47)	0	(47)	0	170,538	0	0	0	5,756	02/15/2030	1.G FE
..85172F-AP-4	OneMain Finance Corp-SENIOR UNSECURED		09/18/2023	CALL 100		500,000	500,000	491,250	493,000	0	4,095	0	4,095	0	497,095	0	2,905	2,905	30,753	03/15/2024	3.B FE
..85235*-AA-6	St Louis County Control Trust Certificat		09/15/2023	SINKING PAYMENT		279,084	279,084	279,084	279,084	0	0	0	0	0	279,084	0	0	0	4,409	12/15/2036	1.G
..85541-AC-2	SUNTRUST ADJUSTABLE RATE-SERIES 2007-G1		09/01/2023	PAYDOWN		16,198	16,198	14,082	14,082	0	2,164	47	2,117	0	16,198	0	0	0	493	01/01/2037	1.A FM
..85571R-AA-8	Starwood Mortgage Reside-STAR 2022-3 A1		09/01/2023	PAYDOWN		69,087	69,087	68,624	68,648	0	439	0	439	0	69,087	0	0	0	1,961	03/01/2067	1.A FE
..85571R-AB-6	Starwood Mortgage Reside-STAR 2022-3 A2		09/01/2023	PAYDOWN		180,386	180,386	176,264	176,919	0	3,466	0	3,466	0	180,386	0	0	0	5,156	03/01/2067	1.C FE
..85571R-AC-4	Starwood Mortgage Reside-STAR 2022-3 A3		09/01/2023	PAYDOWN		168,461	168,461	164,140	164,826	0	3,635	0	3,635	0	168,461	0	0	0	5,399	03/01/2067	1.F FE
..85573J-AA-4	Starwood Mortgage Reside-STAR 2021-3 A1		09/01/2023	PAYDOWN		163,456	163,456	151,401	153,539	0	9,917	0	9,917	0	163,456	0	0	0	1,505	06/01/2056	1.A
..85573T-AA-2	Starwood Mortgage Reside-STARWOOD MORTGA		09/01/2023	PAYDOWN		961,258	961,258	961,242	961,250	0	8	0	8	0	961,258	0	0	0	17,639	12/01/2066	1.A FE
..85917#-AA-0	Sterling Bancorp Inc/MI-SUBORDINATED		07/15/2023	CALL 100		7,500,000	7,500,000	7,601,800	7,601,800	0	(101,800)	0	(101,800)	0	7,500,000	0	0	0	1,116,842	04/15/2026	1.G FE
..86212V-AA-2	Store Master Funding I-V-STR 2016-1A A1		09/20/2023	PAYDOWN		59,427	59,427	59,396	59,414	0	13	0	13	0	59,427	0	0	0	1,569	10/20/2046	1.E FE
..86212V-AD-6	Store Master Funding I-V-STR 2018-1A A1		09/20/2023	PAYDOWN		28,575	28,575	28,422	28,430	0	145	0	145	0	28,575	0	0	0	754	10/20/2048	1.A FE
..86212V-AE-4	Store Master Funding I-V-SERIES 18-1A CL		09/20/2023	PAYDOWN		33,125	33,125	33,113	33,117	0	8	0	8	0	33,125	0	0	0	947	10/20/2048	1.A FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-ign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..86213C-AB-1	STORE MASTER FUNDING LLC-SERIES 2015-1A .....	.....	09/20/2023	PAYDOWN	.....	26,875	26,875	26,739	26,836	0	39	0	39	0	26,875	0	0	0	747	04/20/2045	1.E FE
..863572-LV-3	Structured Asset Securit-SASC 1996-4 A .....	.....	09/01/2023	PAYDOWN	.....	1,161	1,161	1,089	1,120	0	41	0	41	0	1,161	0	0	0	83	09/01/2031	1.A FM
..863579-C3-0	Structured Adjustable Ra-SARM 2005-21 6A .....	.....	09/01/2023	PAYDOWN	.....	7,920	7,933	6,965	6,766	0	1,165	0	1,165	0	7,920	0	0	0	170	11/01/2035	1.A FM
..863579-J9-0	Structured Adjustable Ra-SARM 2005-22 1A .....	.....	09/01/2023	PAYDOWN	.....	16,075	16,057	12,749	13,124	0	3,338	399	2,939	0	16,075	0	0	0	370	12/01/2035	1.A FM
..863579-PP-5	Structured Adjustable Ra-SARM 2005-11 1A .....	.....	09/01/2023	PAYDOWN	.....	6,218	22,381	17,461	19,107	0	1	607	(606)	0	6,218	0	0	0	667	05/01/2035	1.A FM
..863579-SU-3	Structured Adjustable Ra-SARM 2005-12 3A .....	.....	09/01/2023	PAYDOWN	.....	3,561	3,561	2,735	2,759	0	801	0	801	0	3,561	0	0	0	123	06/01/2035	1.A FM
..863579-UL-0	Structured Adjustable Ra-SARM 2005-15 1A .....	.....	09/01/2023	PAYDOWN	.....	1,012	1,543	1,029	.....	.....0	459	5	454	0	1,012	0	0	0	39	07/01/2035	1.A FM
..863579-UU-0	Structured Adjustable Ra-SARM 2005-15 4A .....	.....	09/01/2023	PAYDOWN	.....	56,104	56,131	49,482	48,468	0	7,660	0	7,660	0	56,104	0	0	0	1,490	07/01/2035	1.A FM
..863579-VH-8	Structured Adjustable Ra-SARM 2005-17 1A .....	.....	08/01/2023	PAYDOWN	.....	6,995	6,995	6,695	6,958	0	37	0	37	0	6,995	0	0	0	222	08/01/2035	1.A FM
..863579-XC-7	Structured Adjustable Ra-SARM 2005 - 18 .....	.....	09/01/2023	PAYDOWN	.....	78,517	88,870	61,555	60,639	0	18,057	(34,981)	53,038	0	78,517	0	0	0	(73,962)	09/01/2035	1.A FM
..863579-XR-4	Structured Adjustable Ra-SARM 2005-18 8A .....	.....	09/01/2023	PAYDOWN	.....	103,881	104,093	91,038	93,257	0	15,176	4,367	10,809	0	103,881	0	0	0	3,398	09/01/2035	1.A FM
..863579-ZL-5	Structured Adjustable Ra-SARM 2005-20 3A .....	.....	09/01/2023	PAYDOWN	.....	12,993	13,003	11,046	10,509	0	2,494	0	2,494	0	12,993	0	0	0	370	10/01/2035	1.A FM
..86358R-DX-2	Structured Asset Securit-SASC 2001-SB1 A .....	.....	09/01/2023	PAYDOWN	.....	62,168	67,069	60,115	64,045	0	1,761	0	1,761	0	62,168	0	0	0	1,512	08/01/2031	1.A FM
..86358R-KY-8	Structured Asset Securit-SASC 2002-AL1 A .....	.....	09/01/2023	PAYDOWN	.....	34,862	35,388	27,873	30,276	0	452	0	452	0	34,862	0	0	0	1,149	02/01/2032	6. *
..86358R-KZ-5	Structured Asset Securit-SASC 2002-AL1 A .....	.....	09/01/2023	PAYDOWN	.....	61,204	67,699	33,134	38,765	0	28,434	4,830	23,604	0	61,204	0	0	0	1,708	02/01/2032	6. *
..86358R-YB-7	Structured Asset Securit-SASC 2002-AL1 A .....	.....	09/01/2023	PAYDOWN	.....	10,799	11,381	8,031	8,068	2,100	1,004	0	3,104	0	10,799	0	0	0	6	02/01/2032	6. *
..86359A-ME-0	Structured Asset Securit-SASC 2003-AL1 A .....	.....	09/01/2023	PAYDOWN	.....	19,776	19,776	17,245	18,757	0	1,019	0	1,019	0	19,776	0	0	0	496	04/01/2031	6. *
..86359A-MG-5	Structured Asset Securit-SASC 2003-AL1 A .....	.....	09/01/2023	PAYDOWN	.....	5,834	5,834	4,109	5,321	0	513	0	513	0	5,834	0	0	0	0	04/01/2031	6. *
..86359A-WR-0	Structured Asset Securit-SASC 2003-AL2 A .....	.....	09/01/2023	PAYDOWN	.....	140,266	140,266	121,729	123,452	0	16,814	0	16,814	0	140,266	0	0	0	3,079	01/01/2031	6. *
..86359A-WT-6	Structured Asset Securit-SASC 2003-AL2 A .....	.....	09/25/2023	PAYDOWN	.....	22,083	22,083	17,168	18,292	0	3,791	0	3,791	0	22,083	0	0	0	0	01/25/2031	6. *
..86359B-4U-2	Structured Asset Securit-SASC 2005-4XS 1 .....	.....	09/01/2023	PAYDOWN	.....	314,115	314,115	293,697	314,115	0	0	0	0	0	314,115	0	0	0	12,700	03/01/2035	1.A FM
..86359B-LE-9	Structured Adjustable Ra-SARM 2004-2 4A1 .....	.....	09/01/2023	PAYDOWN	.....	27,029	26,049	26,257	.....	.....0	772	0	772	0	27,029	0	0	0	989	03/01/2034	1.A FM
..86359F-AB-8	Structured Asset Securit-SASC 2006-S2 A2 .....	.....	09/25/2023	PAYDOWN	.....	2,649	2,649	2,060	1,105	0	1,544	0	1,544	0	2,649	0	0	0	100	06/25/2036	1.A FM
..86359L-NA-3	Structured Asset Mortgag-SAMI 2005-AR6 2 .....	.....	09/25/2023	PAYDOWN	.....	8,178	8,178	5,756	6,869	0	1,309	0	1,309	0	8,178	0	0	0	266	09/25/2045	1.A FM
..86360B-AG-3	Structured Adjustable Ra-SARM 2006-4 4A1 .....	.....	09/01/2023	PAYDOWN	.....	7,998	8,239	6,164	6,406	0	2,112	340	1,772	0	7,998	0	0	0	228	05/01/2036	1.A FM
..86360B-AJ-7	Structured Adjustable Ra-SARM 2006-4 5A1 .....	.....	09/01/2023	PAYDOWN	.....	18,795	18,278	13,495	13,777	0	4,851	259	4,592	0	18,795	0	0	0	345	05/01/2036	1.A FM
..86363G-AF-1	Structured Adjustable Ra-SARM 2007-3 3A1 .....	.....	08/01/2023	PAYDOWN	.....	76,825	76,835	38,357	38,366	0	38,468	4	38,464	0	76,825	0	0	0	1,443	04/01/2047	1.A FM
..86669P-AA-3	Sun Country Pass Through Series 2022-1A .....	.....	09/15/2023	SINKING PAYMENT	.....	1,286,188	1,286,188	1,286,188	1,286,188	0	0	0	0	0	1,286,188	0	0	0	117,265	03/15/2031	1.G PL
..86669Q-AA-1	Sun Country Pass Through Series 2022-1B .....	.....	09/15/2023	SINKING PAYMENT	.....	427,198	427,198	427,198	427,198	0	0	0	0	0	427,198	0	0	0	46,605	03/15/2029	2.B PL
..86744V-AA-9	Helios Issuer LLC-SNVA 2022-B A .....	.....	09/20/2023	PAYDOWN	.....	117,087	117,087	116,275	116,329	0	757	0	757	0	117,087	0	0	0	3,973	08/20/2049	1.G FE
..86744V-AB-7	Helios Issuer LLC-SNVA 2022-B B .....	.....	09/20/2023	PAYDOWN	.....	142,789	142,789	135,500	135,910	0	6,879	0	6,879	0	142,789	0	0	0	5,814	08/20/2049	2.C FE
..86744W-AA-7	Sunnova Helios X Issuer -SNVA 2022-C A .....	.....	09/20/2023	PAYDOWN	.....	130,210	130,210	123,200	123,292	0	6,917	0	6,917	0	130,210	0	0	0	4,615	11/22/2049	1.D FE
..86745X-AA-4	Sunnova Sol V Issuer LLC-SNVA 2023-1A A .....	.....	07/30/2023	PAYDOWN	.....	39,297	39,297	37,329	.....	.....0	1,968	0	1,968	0	39,297	0	0	0	554	04/30/2058	1.G FE
..86745Y-AA-2	Sunnova Helios XII Issue-SNVA 2023-B A .....	.....	09/20/2023	PAYDOWN	.....	147,150	147,150	140,925	.....	.....0	6,225	0	6,225	0	147,150	0	0	0	433	08/22/2050	1.D FE
..86772R-AA-3	Sunrun Jupiter Issuer 20-SUNRN 2022-1A A .....	.....	07/30/2023	PAYDOWN	.....	61,337	61,337	60,838	60,853	0	484	0	484	0	61,337	0	0	0	2,185	07/30/2057	1.G FE
..86909#-AA-5	Susquehanna (18 Properti Trust Certifica .....	.....	09/23/2023	SINKING PAYMENT	.....	49,158	49,158	49,158	49,158	0	0	0	0	0	49,158	0	0	0	0	12/23/2036	1.G
..869507-AA-1	SUTTONPARK STRUCTURED SE-SERIES 17-1A CL .....	.....	09/15/2023	PAYDOWN	.....	81,295	81,295	81,254	81,263	0	32	0	32	0	81,295	0	0	0	2,274	01/15/2071	1.A FE
..872225-AD-9	TBW Mortgage-Backed Trus-TBW 2006-5 A3 .....	.....	09/01/2023	PAYDOWN	.....	311,654	311,654	283,010	285,383	0	26,271	0	26,271	0	311,654	0	0	0	5,858	11/01/2036	1.A FM
..87222E-AB-4	TBW Mortgage-Backed Trus-TBW 2007-1 A2 .....	.....	09/25/2023	PAYDOWN	.....	24,873	24,873	6,263	6,530	0	18,733	390	18,343	0	24,873	0	0	0	199	03/25/2037	1.A FM
..87222E-AC-2	TBW Mortgage-Backed Trus-TBW 2007-1 A3 .....	.....	09/01/2023	PAYDOWN	.....	26,639	26,639	8,110	8,544	0	18,776	681	18,095	0	26,639	0	0	0	238	03/01/2037	1.A FM
..87267C-AA-6	TRP 2021 LLC-TRP 2021-1 A .....	.....	09/17/2023	PAYDOWN	.....	342,119	342,119	297,181	213,538	0	42,032	0	42,032	0	342,119	0	0	0	4,113	06/19/2051	1.F FE
..87342R-AC-8	TACO BELL FUNDING LLC-SERIES 2016-1A CLA .....	.....	08/25/2023	PAYDOWN	.....	29,625	29,625	29,852	29,669	0	(44)	0	(44)	0	29,625	0	0	0	1,104	05/25/2046	2.B FE
..87342R-AF-1	Taco Bell Funding LLC-BELL 2016-1AW A2W .....	.....	08/25/2023	PAYDOWN	.....	17,500	17,500	17,500	17,503	0	(3)	0	(3)	0	17,500	0	0	0	602	11/25/2048	1.C FE
..87407R-AA-4	TAL Advantage VII LLC-TAL 2020-1A A .....	.....	09/20/2023	PAYDOWN	.....	307,388	307,388	270,283	235,130	0	36,483	0	36,483	0	307,388	0	0	0	4,201	09/20/2045	1.F FE
..87407R-AC-0	TAL Advantage VII LLC-TAL 2020-1A B .....	.....	09/20/2023	PAYDOWN	.....	111,563	111,563	110,421	110,623	0	940	0	940	0	111,563	0	0	0	2,448	09/20/2045	2.B FE
..87819#-AA-2	TD Bank (Miami, FL) CTL Trust Certificat .....	.....	09/15/2023	SINKING PAYMENT	.....	45,486	45,486	45,486	45,486	0	0	0	0	0	45,486	0	0	0	527	01/15/2038	1.D

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..881561-OH-5	Terwin Mortgage Trust Se-TMTS 2003-6HE M		09/25/2023	PAYDOWN		15,636	15,636	14,825	15,585	0	51	0	51	0	15,636	0	0	0	283	11/25/2033	1.A FM
..881561-LE-2	Terwin Mortgage Trust Se-TMTS 2004-11HE		09/25/2023	PAYDOWN		13,418	13,418	10,751	12,627	0	792	0	792	0	13,418	0	0	0	508	10/25/2035	1.A FM
..881561-LR-3	Terwin Mortgage Trust 20-TMTS 2004-19HE		09/25/2023	PAYDOWN		3,936	3,936	2,898	3,634	0	302	0	302	0	3,936	0	0	0	161	10/25/2034	1.A FM
..881561-VY-7	Terwin Mortgage Trust Se-TMTS 2005-12AL		09/01/2023	PAYDOWN		43,440	43,440	41,943	42,304	0	1,136	0	1,136	0	43,440	0	0	0	1,390	07/01/2036	1.A FM
..88156E-AB-2	Terwin Mortgage Trust 20-TMTS 2006-17HE		09/25/2023	PAYDOWN		167,914	167,914	144,885	176,489	0	(8,575)	0	(8,575)	0	167,914	0	0	0	5,718	01/25/2038	1.A FM
..88157V-AB-3	Terwin Mortgage Trust 20-TMTS 2007-6ALT		09/25/2023	PAYDOWN		51,894	51,894	26,985	34,176	0	17,718	0	17,718	0	51,894	0	0	0	447	08/25/2038	1.A FM
..88338Q-AA-8	Theorem Funding Trust 20-THRM 2023-1A A		09/15/2023	PAYDOWN		5,038,967	5,038,967	5,038,921	0	0	45	0	45	0	5,038,967	0	0	0	115,380	04/15/2029	1.G FE
..885220-DX-8	Thornburg Mortgage Secur-TMST 2003-4 M1		09/25/2023	PAYDOWN		9,857	9,857	8,329	9,018	0	839	0	839	0	9,857	0	0	0	305	09/25/2043	1.A FM
..885220-GB-3	Thornburg Mortgage Secur-TMST 2004-4 1A		09/25/2023	PAYDOWN		34,315	34,315	32,728	33,485	0	830	0	830	0	34,315	0	0	0	1,129	12/25/2044	1.A FM
..885220-GK-3	Thornburg Mortgage Secur-TMST 2004-4 5A		09/01/2023	PAYDOWN		18,663	18,663	17,753	17,328	0	1,335	0	1,335	0	18,663	0	0	0	377	12/01/2044	1.A FM
..885220-HM-8	Thornburg Mortgage Secur-TMST 2005-2 A1		09/25/2023	PAYDOWN		15,383	15,383	15,393	15,383	0	0	0	0	0	15,383	0	0	0	701	07/25/2045	1.A FM
..885220-KW-2	Thornburg Mortgage Secur-TMST 2006-2 A2B		08/25/2023	PAYDOWN		15,295	15,295	14,152	14,153	0	1,178	37	1,141	0	15,295	0	0	0	879	04/25/2036	1.A FM
..89171D-AD-9	Towd Point Mortgage Trus-TPMT 2015-1 A4		09/01/2023	PAYDOWN		1,652,647	1,652,647	1,692,414	1,663,138	0	(10,491)	0	(10,491)	0	1,652,647	0	0	0	43,810	10/01/2053	1.A
..89171U-AG-4	Towd Point Mortgage Trus-TPMT 2015-4 M2		09/01/2023	PAYDOWN		1,878,687	1,878,687	1,857,437	1,871,861	0	6,826	0	6,826	0	1,878,687	0	0	0	46,725	04/01/2055	1.A
..89441#-AA-4	Traverse City Control Tr Trust Certifica		09/15/2023	SINKING PAYMENT		95,403	95,403	96,357	97,133	0	(1,731)	0	(1,731)	0	95,403	0	0	0	1,831	11/15/2039	1.A
..89609M-AA-7	Tribute Rail LLC-TRP 2022-1 A		09/17/2023	PAYDOWN		407,582	407,582	400,699	226,696	0	6,877	0	6,877	0	407,582	0	0	0	9,906	05/17/2052	1.F FE
..89655Y-AA-4	TRINITY RAIL LEASING L.P-SERIES 2009-1A		08/16/2023	PAYDOWN		128,259	128,259	131,064	129,267	0	(1,008)	0	(1,008)	0	128,259	0	0	0	5,329	11/16/2039	2.C FE
..89656C-AA-1	Trinity Rail Leasing 201-TRL 2010-1A A		09/16/2023	PAYDOWN		299,780	299,780	314,107	307,621	0	(7,841)	0	(7,841)	0	299,780	0	0	0	10,627	10/16/2040	1.F FE
..89656R-AA-8	Trinity Rail Leasing 202-TRL 2022-1 A		09/21/2023	PAYDOWN		76,975	76,975	76,313	67,726	0	662	0	662	0	76,975	0	0	0	2,097	05/20/2052	1.F FE
..89657A-AC-0	Trinity Rail Leasing 201-TRL 2020-1A A		09/17/2023	PAYDOWN		138,627	138,627	138,593	138,601	0	25	0	25	0	138,627	0	0	0	1,807	10/17/2050	1.F FE
..89657B-AA-2	Trinity Rail Leasing 201-TRL 2019-1A A		09/17/2023	PAYDOWN		468,050	468,050	442,275	449,393	0	18,657	0	18,657	0	468,050	0	0	0	15,701	04/17/2049	1.F FE
..89657B-AB-0	Trinity Rail Leasing 201-TRL 2019-2A A1		09/17/2023	PAYDOWN		506,174	506,174	506,054	506,098	0	76	0	76	0	506,174	0	0	0	9,073	10/18/2049	1.F FE
..89680H-AA-0	Triton Container Finance-TCF 2020-1A A		09/20/2023	PAYDOWN		538,121	538,121	462,393	171,007	0	74,663	0	74,663	0	538,121	0	0	0	2,977	09/20/2045	1.F FE
..89680H-AB-8	Triton Container Finance-TCF 2020-1A B		09/20/2023	PAYDOWN		68,000	68,000	62,560	62,847	0	5,153	0	5,153	0	68,000	0	0	0	1,695	09/20/2045	2.B FE
..89683L-AA-8	TRP - TRIP Rail Master F-TRP 2021-2 A		09/17/2023	PAYDOWN		283,648	283,648	246,424	46,013	0	37,137	0	37,137	0	283,648	0	0	0	2,828	06/19/2051	1.F FE
..90229*-AA-4	2015 ESA Project Company Senior Secured		08/24/2023	VARIOUS		10,976,755	10,976,755	10,976,755	10,976,755	0	0	0	0	0	10,976,755	0	0	0	649,636	06/30/2031	2.B PL
..90253@-AA-1	UA (Portland OR) CTL Pas Trust Certifica		09/15/2023	SINKING PAYMENT		231,166	231,166	233,450	232,592	0	(1,426)	0	(1,426)	0	231,166	0	0	0	3,753	02/15/2032	3.B
..90265E-AR-1	UDR Inc-SENIOR UNSECURED		07/28/2023	VARIOUS		8,446,523	10,000,000	10,163,200	10,148,629	0	(9,150)	0	(9,150)	0	10,139,479	0	(1,692,956)	(1,692,956)	288,333	08/15/2031	2.A FE
..90272*-AA-0	UHC (Senior Note) CTL Pa Trust Certifica		09/15/2023	SINKING PAYMENT		59,067	59,067	59,067	59,053	0	14	0	14	0	59,067	0	0	0	172	05/15/2033	1.F
..90319#-AA-1	UOA Fayetteville (Univer Senior Secured		09/15/2023	SINKING PAYMENT		112,336	112,336	113,460	113,386	0	(1,050)	0	(1,050)	0	112,336	0	0	0	3,686	03/15/2041	1.C
..90352Y-AD-6	ITE Rail Fund Levered LP-SERIES 21-1A CL		08/28/2023	PAYDOWN		97,026	97,026	97,024	97,023	0	3	0	3	0	97,026	0	0	0	1,353	02/28/2051	1.F FE
..90378@-AA-1	U.S. Department of Agric Trust Certifica		09/15/2023	SINKING PAYMENT		45,300	45,300	45,300	45,300	0	0	0	0	0	45,300	0	0	0	0	04/15/2038	1.B
..90783X-AA-9	Union Pacific Railroad C-FIRST LIEN		07/02/2023	SINKING PAYMENT		13,684	13,684	13,684	13,690	0	(6)	0	(6)	0	13,684	0	0	0	423	01/02/2031	1.C FE
..909319-AA-3	UNITED AIR 2013-1 A PTT-FIRST LIEN		08/15/2023	SINKING PAYMENT		174,500	174,500	174,500	174,540	0	(39)	0	(39)	0	174,500	0	0	0	7,504	08/15/2025	2.C FE
..90932Q-AA-4	UNITED AIR 2014-2 A PASS THRU TR-1ST LIE		09/03/2023	SINKING PAYMENT		109,023	109,023	109,023	109,045	0	(22)	0	(22)	0	109,023	0	0	0	4,088	09/03/2026	1.F FE
..911312-BX-3	United Parcel Service Inc-SENIOR UNSECURE		09/29/2023	SG COWEN SECURITIES		22,443,530	23,000,000	22,975,850	22,988,455	0	4,445	0	4,445	0	22,992,899	0	(549,369)	(549,369)	547,733	04/01/2025	1.F FE
..91841@-AA-8	Virginia (Lafayette, IN) Trust Certifica		09/15/2023	SINKING PAYMENT		75,724	75,724	75,724	0	0	0	0	0	0	75,724	0	0	0	1,911	08/15/2036	1.B
..91845#-AA-2	VZ (Senior Note) CTL Pas Trust Certifica		09/15/2023	SINKING PAYMENT		100,364	100,364	100,364	100,367	0	(3)	0	(3)	0	100,364	0	0	0	2,551	05/15/2035	2.A
..91854*-AA-4	VZ (Irving TX)(Senior No Trust Certifica		09/15/2023	SINKING PAYMENT		91,383	91,383	91,383	91,383	0	0	0	0	0	91,383	0	0	0	1,378	08/15/2036	2.A
..91855*-AA-3	VA (Ponce, PR) CTL Trust Certificate		09/15/2023	SINKING PAYMENT		56,104	56,104	56,104	56,104	0	0	0	0	0	56,104	0	0	0	1,220	08/15/2042	1.B
..92212K-AA-4	Vantage Data Centers Iss-VDC 2019-1A A2		09/15/2023	PAYDOWN		22,500	22,500	22,500	22,500	0	0	0	0	0	22,500	0	0	0	478	07/15/2044	1.G FE
..92257B-AA-0	Velocity Commercial Capi-VCC 2022-3 A		09/01/2023	PAYDOWN		450,152	450,152	449,282	449,386	0	766	0	766	0	450,152	0	0	0	15,770	06/01/2052	1.A FE
..92257C-AA-8	Velocity Commercial Capi-VCC 2019-1 A		09/01/2023	PAYDOWN		103,907	103,907	103,883	103,910	0	(3)	0	(3)	0	103,907	0	0	0	2,513	03/01/2049	1.A FE
..92257P-AA-9	Velocity Commercial Capi-VCC 2022-5 A		09/01/2023	PAYDOWN		196,787	196,787	198,109	0	0	(1,322)	0	(1,322)	0	196,787	0	0	0	1,757	10/01/2052	1.A FE
..92258X-AA-1	Velocity Commercial Capi-VCC 2022-1 A		09/01/2023	PAYDOWN		65,104	65,104	64,658	64,750	0	354	0	354	0	65,104	0	0	0	1,652	02/01/2052	1.A FE
..92258X-AB-9	Velocity Commercial Capi-VCC 2022-1 M1		09/01/2023	PAYDOWN		329,541	329,541	326,760	327,274	0	2,266	0	2,266	0	329,541	0	0	0	9,653	02/01/2052	1.D FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..92259K-AD-2	Velocity Commercial Capi-VCC 2022-4 M1 .....	.....	09/01/2023	PAYDOWN	.....	206,073	206,073	206,072	206,073	0	0	0	0	0	206,073	0	0	0	11,304	08/01/2052	1.D FE
..92259U-AA-6	Velocity Commercial Capi-VCC 2022-2 A .....	.....	09/01/2023	PAYDOWN	.....	157,732	157,732	157,704	157,708	0	24	0	24	0	157,732	0	0	0	5,394	04/01/2052	1.A FE
..92259U-AB-4	Velocity Commercial Capi-VCC 2022-2 M1 .....	.....	09/01/2023	PAYDOWN	.....	158,671	158,671	158,636	158,641	0	30	0	30	0	158,671	0	0	0	7,153	04/01/2052	1.D FE
..92259V-AA-4	Velocity Commercial Capi-VCC 2023-1 A .....	.....	09/01/2023	PAYDOWN	.....	580,699	580,699	580,564	0	0	135	0	135	0	580,699	0	0	0	26,316	01/01/2053	1.A FE
..92537M-AA-8	Verus Securitization Tru-VERUS 2019-INV3 .....	.....	09/01/2023	PAYDOWN	.....	656,928	656,928	649,538	651,904	0	5,024	0	5,024	0	656,928	0	0	0	11,645	11/01/2059	1.A FE
..92538K-AB-9	Verus Securitization Tru-VERUS 2021-5 A2 .....	.....	09/01/2023	PAYDOWN	.....	208,168	208,168	174,471	0	0	33,697	0	33,697	0	208,168	0	0	0	1,529	09/01/2066	1.C FE
..92538Q-AA-8	Verus Securitization Tru-VERUS 2021-7 A1 .....	.....	09/01/2023	PAYDOWN	.....	153,173	153,173	141,542	142,527	0	10,647	0	153,173	0	153,173	0	0	0	2,082	10/01/2066	1.A FE
..92539A-AA-2	Verus Securitization Tru-VERUS 2022-6 A1 .....	.....	09/01/2023	PAYDOWN	.....	167,427	167,427	165,881	166,031	0	1,396	0	1,396	0	167,427	0	0	0	5,848	06/01/2067	1.A FE
..92539A-AB-0	Verus Securitization Tru-VERUS 2022-6 A2 .....	.....	09/01/2023	PAYDOWN	.....	170,400	170,400	166,433	166,795	0	3,606	0	3,606	0	170,400	0	0	0	5,956	06/01/2067	1.C FE
..92539B-AB-8	Verus Securitization Tru-VERUS 2023-1 A2 .....	.....	09/01/2023	PAYDOWN	.....	116,642	116,642	116,640	0	0	2	0	2	0	116,642	0	0	0	4,558	12/01/2067	1.C FE
..92539G-AB-7	Verus Securitization Tru-VERUS 2023-3 A2 .....	.....	09/01/2023	PAYDOWN	.....	235,510	235,510	235,507	0	0	3	0	3	0	235,510	0	0	0	5,300	03/01/2068	1.C FE
..92539J-AA-3	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	09/01/2023	PAYDOWN	.....	99,902	99,902	99,900	99,902	0	0	0	0	0	99,902	0	0	0	3,363	08/01/2067	1.A FE
..92539J-AB-1	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	09/01/2023	PAYDOWN	.....	89,911	89,911	89,911	89,911	0	0	0	0	0	89,911	0	0	0	3,822	08/01/2067	1.C FE
..92539J-AC-9	Verus Securitization Tru-VERUS 2022-INV1 .....	.....	09/01/2023	PAYDOWN	.....	99,902	99,902	98,866	99,042	0	860	0	860	0	99,902	0	0	0	4,860	08/01/2067	1.F FE
..92539N-AA-4	Verus Securitization Tru-VERUS 2022-7 A1 .....	.....	09/01/2023	PAYDOWN	.....	112,135	112,135	112,134	112,135	0	0	0	0	0	112,135	0	0	0	3,716	07/01/2067	1.A FE
..92539N-AB-2	Verus Securitization Tru-VERUS 2022-7 A2 .....	.....	09/01/2023	PAYDOWN	.....	128,957	128,957	127,388	127,480	0	1,477	0	1,477	0	128,957	0	0	0	4,437	07/01/2067	1.B FE
..92868K-AC-7	Volkswagen Auto Loan Enh-VALET 2021-1 A3 .....	.....	09/20/2023	PAYDOWN	.....	1,727,138	1,727,138	1,656,568	0	0	70,570	0	70,570	0	1,727,138	0	0	0	4,367	06/22/2026	1.A FE
..929227-4T-0	WaMu Mortgage Pass-Throu-WAMU 2003-SA 24 .....	.....	09/01/2023	PAYDOWN	.....	29,640	29,640	29,760	29,685	0	(46)	0	(46)	0	29,640	0	0	0	1,191	06/01/2033	1.A FM
..929227-R5-7	WaMu Mortgage Pass-Throu-WAMU 2003-AR5 A .....	.....	09/01/2023	PAYDOWN	.....	72,266	72,266	59,078	63,616	0	8,650	0	8,650	0	72,266	0	0	0	2,151	06/01/2033	1.A FM
..92922F-3N-6	WaMu Mortgage Pass-Throu-WAMU 2005-AR12 .....	.....	09/01/2023	PAYDOWN	.....	42,531	42,531	40,469	41,309	0	1,222	0	1,222	0	42,531	0	0	0	1,161	10/01/2035	1.A FM
..92922F-3Q-9	WaMu Mortgage Pass-Throu-WAMU 2005-AR12 .....	.....	09/01/2023	PAYDOWN	.....	1,310	1,310	1,275	1,305	0	5	0	5	0	1,310	0	0	0	39	09/01/2035	1.C FM
..92922F-7C-6	WaMu Mortgage Pass-Throu-WAMU 2005-AR16 .....	.....	09/01/2023	PAYDOWN	.....	1,288	1,288	1,461	1,233	0	206	0	206	0	1,288	0	0	0	45	12/01/2035	1.A FM
..92922F-8T-8	WaMu Mortgage Pass-Throu-WAMU 2005-AR18 .....	.....	09/01/2023	PAYDOWN	.....	14,364	14,458	14,006	14,356	0	99	0	99	0	14,364	0	0	0	289	01/01/2036	1.A FM
..92922F-GY-8	WaMu Mortgage Pass-Throu-WAMU 2003-S11 3 .....	.....	08/25/2023	PAYDOWN	.....	1,156	1,156	1,159	1,167	0	(11)	0	(11)	0	1,156	0	0	0	52	11/25/2033	1.A FM
..92922F-J5-8	WaMu Mortgage Pass-Throu-WAMU 2005-AR6 2 .....	.....	09/25/2023	PAYDOWN	.....	111,820	111,820	92,986	100,984	0	10,836	0	10,836	0	111,820	0	0	0	3,539	04/25/2045	1.A FM
..92925C-CC-4	WaMu Mortgage Pass-Throu-WAMU 2006-AR1 1 .....	.....	09/01/2023	PAYDOWN	.....	6,552	6,552	5,291	5,238	0	1,314	0	1,314	0	6,552	0	0	0	167	01/01/2046	1.A FM
..92925G-AD-5	WaMu Mortgage Pass-Throu-WAMU 2006-AR16 .....	.....	09/01/2023	PAYDOWN	.....	58,875	59,324	55,820	60,174	0	(812)	0	(812)	0	58,875	0	0	0	1,349	12/01/2036	3.C FM
..92925V-AF-7	WaMu Mortgage Pass-Throu-WAMU 2007-HY1 2 .....	.....	09/01/2023	PAYDOWN	.....	30,056	39,711	35,549	39,128	0	(7,924)	0	(7,924)	0	30,056	0	0	0	2,671	02/01/2037	1.E FM
..92925V-AP-5	WaMu Mortgage Pass-Throu-WAMU 2007-HY1 5 .....	.....	09/01/2023	PAYDOWN	.....	62,027	54,781	47,712	49,682	0	6,114	0	6,114	0	62,027	0	0	0	1,630	02/01/2037	1.A FM
..92927X-AC-8	WAMU MORTGAGE PASS-THROU-SERIES 2007-HY6 .....	.....	09/01/2023	PAYDOWN	.....	22,135	23,607	20,397	21,902	0	1,462	0	1,462	0	22,135	0	0	0	117	06/01/2037	1.A FM
..92977Y-BW-0	Wachovia Mortgage Loan T-WMLT 2005-B 244 .....	.....	07/01/2023	PAYDOWN	.....	8,270	8,302	7,703	7,830	0	469	0	469	0	8,270	0	0	0	383	10/01/2035	1.A FM
..92979D-AC-9	Wachovia Mortgage Loan T-WMLT 2007-A 241 .....	.....	09/01/2023	PAYDOWN	.....	252,510	252,510	224,717	229,603	0	29,901	6,941	22,960	0	252,510	0	0	0	6,212	03/01/2037	1.A FM
..92981@-AA-6	WEC 99J-58 LLC Senior Secured Note .....	.....	09/15/2023	SINKING PAYMENT	.....	31,569	31,569	32,241	32,111	0	(542)	0	(542)	0	31,569	0	0	0	783	09/15/2030	2.B
..92982@-AA-5	Wec 2000B-CSF-11 LLC Senior Secured Note .....	.....	09/15/2023	SINKING PAYMENT	.....	32,466	32,466	33,157	33,023	0	(558)	0	(558)	0	32,466	0	0	0	920	09/15/2030	2.B
..92983*-AA-6	WEC 99J-4 LLC Senior Secured Note .....	.....	09/15/2023	SINKING PAYMENT	.....	19,394	19,394	19,807	19,755	0	(361)	0	(361)	0	19,394	0	0	0	550	09/15/2034	2.B
..92990G-AD-5	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 2 .....	.....	09/01/2023	PAYDOWN	.....	74,175	74,175	70,987	73,460	0	715	0	715	0	74,175	0	0	0	1,946	05/01/2037	1.A FM
..92990G-AG-8	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 2 .....	.....	09/01/2023	PAYDOWN	.....	74,315	76,853	59,531	67,977	0	8,395	0	8,395	0	74,315	0	0	0	(2,242)	05/01/2037	1.A FM
..92990G-AJ-2	WaMu Mortgage Pass-Throu-WAMU 2007-HY5 3 .....	.....	09/01/2023	PAYDOWN	.....	165,906	165,956	150,907	156,219	0	9,770	0	9,770	0	165,906	0	0	0	4,950	05/01/2037	1.A FM
..93363@-AA-0	WaMu Mortgage Pass-Throu-WAMU 2007-HY4 4 .....	.....	09/01/2023	PAYDOWN	.....	42,600	43,617	38,796	42,919	0	554	0	554	0	42,600	0	0	0	1,134	04/01/2037	1.A FM
..93363@-AG-7	WaMu Mortgage Pass-Throu-WAMU 2007-HY4 3 .....	.....	09/01/2023	PAYDOWN	.....	11,028	16,356	15,488	16,150	0	(37)	0	(37)	0	11,028	0	0	0	173	04/01/2037	3.A FM
..93363@-AL-6	WAMU MORTGAGE PASS-THROU-SERIES 2007-HY4 .....	.....	09/01/2023	PAYDOWN	.....	60,719	63,860	61,188	64,304	0	(612)	0	(612)	0	60,719	0	0	0	1,331	11/01/2036	2.C FM
..93363@-AA-6	WaMu Mortgage Pass-Throu-WAMU 2006-AR19 .....	.....	09/01/2023	PAYDOWN	.....	10,419	10,762	10,403	10,519	0	270	0	270	0	10,419	0	0	0	172	01/01/2047	1.A FM
..93363E-AB-1	WaMu Mortgage Pass-Throu-WAMU 2006-AR10 .....	.....	09/01/2023	PAYDOWN	.....	6,202	6,439	6,172	6,291	0	(2)	0	(2)	0	6,202	0	0	0	298	09/01/2036	3.C FM
..93363N-AB-1	WaMu Mortgage Pass-Throu-WAMU 2006-AR12 .....	.....	09/01/2023	PAYDOWN	.....	34,381	31,935	30,188	32,196	0	(101)	0	(101)	0	34,381	0	0	0	591	10/01/2036	2.C FM
..93363P-AA-8	WaMu Mortgage Pass-Throu-WAMU 2006-AR14 .....	.....	09/01/2023	PAYDOWN	.....	20,159	15,052	14,008	14,327	0	1,426	0	1,426	0	20,159	0	0	0	363	11/01/2036	1.A FM
..93363P-AC-4	WaMu Mortgage Pass-Throu-WAMU 2006-AR14 .....	.....	09/01/2023	PAYDOWN	.....	178,341	165,954	155,854	169,463	0	(722)	0	(722)	0	178,341	0	0	0	1,979	11/01/2036	2.B FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident- ification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..93363P-AD-2	WaMu Mortgage Pass-Throu-WAMU 2006-AR14		09/01/2023	PAYDOWN		2,694	2,562	2,344	2,438	0	149	0	149	0	2,694	0	0	0	42	11/01/2036	1.A FM
..93364F-AH-4	WaMu Mortgage Pass-Throu-WAMU 2007-HY7 3		09/01/2023	PAYDOWN		26,044	26,554	26,817	27,542	0	(994)	0	(994)	0	26,044	0	0	0	515	07/01/2037	4.B FM
..939336-TX-1	Washington Mutual MSC Mo-WAMMS 2003-MS7		09/01/2023	PAYDOWN		1	1	1	1	0	0	0	0	0	1	0	0	0	0	03/01/2033	1.A FM
..939336-X9-9	WaMu Mortgage Pass-Throu-WAMU 2005-AR1 A		09/25/2023	PAYDOWN		71,682	71,682	59,995	65,287	0	12,105	5,711	6,394	0	71,682	0	0	0	2,357	01/25/2045	1.A FM
..93934F-KP-6	Washington Mutual Mortga-WMALT 2006-1 3A		09/01/2023	PAYDOWN		2,452	2,709	2,717	2,848	0	(132)	0	(132)	0	2,452	0	0	0	60	02/01/2036	4.B FM
..93934F-MD-1	Washington Mutual Mortga-WMALT 2006-2 2C		09/01/2023	PAYDOWN		39,042	48,802	31,956	32,662	0	12,527	0	12,527	0	39,042	0	0	0	2,576	03/01/2036	2.C FM
..93934N-AC-9	Washington Mutual Mortga-WMALT 2006-5 1A		09/01/2023	PAYDOWN		8,671	11,698	10,223	10,672	0	692	0	692	0	8,671	0	0	0	312	07/01/2036	4.B FM
..93934N-AR-6	Washington Mutual Mortga-WMALT 2006-5 2C		09/25/2023	PAYDOWN		(208)	2,724	2,152	1,357	0	782	0	782	0	(208)	0	0	0	106	07/25/2036	1.A FM
..93936N-AA-1	Washington Mutual Mortga-WMALT 2007-4 1A		09/01/2023	PAYDOWN		5,071	6,131	6,336	6,264	0	(116)	0	(116)	0	5,071	0	0	0	208	06/01/2037	2.C FM
..94353W-AA-3	WAVE 2017-1 TRUST-WAAV 2017-1A A		09/15/2023	PAYDOWN		87,353	87,353	87,353	87,354	0	(2)	0	(2)	0	87,353	0	0	0	2,215	11/15/2042	3.B FE
..94354K-AA-8	WAVE 2019-1 LLC-WAAV 2019-1 A		09/15/2023	PAYDOWN		185,974	185,974	185,966	185,971	0	3	0	3	0	185,974	0	0	0	4,590	09/15/2044	2.A FE
..94984D-AC-8	Wells Fargo Mortgage Bac-WFMB 2006-AR13		09/01/2023	PAYDOWN		62,836	63,692	50,191	58,506	0	4,993	(2)	4,995	0	62,836	0	0	0	1,518	09/01/2036	1.A FM
..94985A-AA-7	Wells Fargo Mortgage Bac-WFMB 2006-AR15		09/01/2023	PAYDOWN		1,397	2,402	2,238	2,372	0	(55)	0	(55)	0	1,384	0	13	13	15	10/01/2036	3.B FM
..94986C-AA-2	Wells Fargo Mortgage Bac-WFMB 2007-AR4		09/01/2023	PAYDOWN		2,086	3,408	2,857	3,101	0	157	(13)	170	0	2,086	0	0	0	147	08/01/2037	1.A FM
..94986M-AA-0	Wells Fargo Mortgage Bac-WFMB 2007-AR10		09/01/2023	PAYDOWN		49,315	51,419	51,709	49,927	0	543	0	543	0	49,315	0	0	0	1,852	01/01/2038	4.A FM
..94986M-AF-9	Wells Fargo Mortgage Bac-WFMB 2007-AR10		09/01/2023	PAYDOWN		21,470	16,102	13,301	14,140	0	289	0	289	0	18,845	0	2,625	2,625	550	01/01/2038	1.A FM
..95002F-AA-2	Wells Fargo Mortgage Bac-WFMB 2019-4 A1		09/01/2023	PAYDOWN		30,157	30,157	30,694	30,963	0	(806)	0	(806)	0	30,157	0	0	0	758	09/01/2049	1.A
..95002K-AA-1	Wells Fargo Mortgage Bac-WFMB 2020-1 A1		08/01/2023	PAYDOWN		53,547	53,547	54,182	54,534	0	(987)	0	(987)	0	53,547	0	0	0	1,104	12/01/2049	1.A
..95040Q-AM-6	Welltower Inc-SENIOR UNSECURED		07/28/2023	CITIGROUP GLOBAL MAR		14,863,556	18,000,000	17,913,420	17,926,608	0	4,377	0	4,377	0	17,930,985	0	(3,067,429)	(3,067,429)	336,000	06/01/2031	2.A FE
..95058X-AE-8	Wendy's Funding LLC-WEN 2018-1A A211		09/15/2023	PAYDOWN		20,000	20,000	19,123	19,459	0	541	0	541	0	20,000	0	0	0	583	03/15/2048	2.B FE
..95058X-AG-3	Wendy's Funding LLC-WEN 2019-1A A21		09/15/2023	PAYDOWN		62,500	62,500	62,500	62,500	0	0	0	0	0	62,500	0	0	0	1,773	06/15/2049	2.B FE
..95058X-AL-2	Wendy's Funding LLC-WEN 2021-1A A211		09/15/2023	PAYDOWN		15,000	15,000	15,000	15,000	0	0	0	0	0	15,000	0	0	0	312	06/15/2051	2.B FE
..96034L-AA-9	Westgate Resorts 2020-1 -WESTR 2020-1A A		09/01/2023	PAYDOWN		387,802	387,802	387,292	387,727	0	74	0	74	0	387,802	0	0	0	7,021	03/01/2034	1.A FE
..96038#-AA-8	Westin (St Louis MO) Lea Trust Certifica		09/15/2023	SINKING PAYMENT		47,962	47,962	47,962	47,962	0	0	0	0	0	47,962	0	0	0	178	07/15/2047	1.F Z
..96042#-AA-4	Westkin Portfolio (LAS & Trust Certifica		09/15/2023	SINKING PAYMENT		85,542	85,542	86,397	86,299	0	(757)	0	(757)	0	85,542	0	0	0	3,452	11/15/2038	1.D PL
..96524V-AA-7	WhiteHorse Finance, Inc. Senior Note Ser		08/07/2023	MATURITY		14,000,000	14,000,000	14,000,000	14,000,000	0	0	0	0	0	14,000,000	0	0	0	1,440,000	08/07/2023	2.A PL
..96928*-CQ-8	William Blair & Company, Trust Certificat		09/15/2023	SINKING PAYMENT		41,092	41,092	41,092	41,092	0	0	0	0	0	41,092	0	0	0	1,825	06/15/2033	2.B
..96928*-CR-6	William Blair & Company, Trust Certificat		09/15/2023	SINKING PAYMENT		50,311	50,311	50,311	50,311	0	0	0	0	0	50,311	0	0	0	2,233	05/15/2034	2.B
..96928*-CX-3	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		105,099	105,099	106,158	105,724	0	(625)	0	(625)	0	105,099	0	0	0	4,339	01/15/2035	1.F
..96928*-DA-2	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		205,225	205,225	207,436	206,269	0	(1,045)	0	(1,045)	0	205,225	0	0	0	7,343	08/15/2031	1.A
..96928*-DJ-3	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		144,230	144,230	144,230	144,230	0	0	0	0	0	144,230	0	0	0	5,050	09/15/2031	1.A
..96928*-DZ-7	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		195,324	195,324	197,119	196,087	0	(763)	0	(763)	0	195,324	0	0	0	7,295	10/15/2029	1.F
..96928*-EN-3	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		120,206	120,206	121,500	120,904	0	(698)	0	(698)	0	120,206	0	0	0	3,809	02/15/2034	1.A
..96928*-EZ-6	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		133,126	133,126	133,126	133,126	0	0	0	0	0	133,126	0	0	0	14,828	09/15/2033	2.A
..96928*-FH-5	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		364,880	364,880	364,880	364,880	0	0	0	0	0	364,880	0	0	0	26,317	04/15/2025	2.A
..96928*-FK-8	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		124,131	124,131	124,131	124,139	0	(8)	0	(8)	0	124,131	0	0	0	6,109	11/15/2032	1.D
..96928*-FQ-5	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		135,611	135,611	135,611	135,611	0	0	0	0	0	135,611	0	0	0	4,244	09/15/2033	1.A
..96928*-FV-4	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		61,009	61,009	61,009	61,009	0	0	0	0	0	61,009	0	0	0	1,664	09/15/2044	1.E
..96928*-FX-0	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		226,404	226,404	226,404	226,404	0	0	0	0	0	226,404	0	0	0	6,054	02/15/2036	1.B
..96928*-FY-8	William Blair & Company, Trust Certifica		09/15/2023	SINKING PAYMENT		84,976	84,976	84,976	84,976	0	0	0	0	0	84,976	0	0	0	4,390	01/15/2035	2.B
..96930#-AA-9	William Blair & Company Trust Certificat		09/15/2023	SINKING PAYMENT		131,668	131,668	131,668	131,668	0	0	0	0	0	131,668	0	0	0	6,932	08/15/2035	2.B
..97063Q-AA-0	WILLIS ENGINE STRUCTURED-SERIES 17-A CLA		09/15/2023	PAYDOWN		202,928	202,928	202,756	202,836	0	92	0	92	0	202,928	0	0	0	6,026	08/15/2042	2.B FE
..97064E-AA-6	Willis Engine Structured-WESTF 2018-A A		09/15/2023	PAYDOWN		259,070	259,070	259,058	259,073	0	(2)	0	(2)	0	259,070	0	0	0	8,210	09/15/2043	2.A FE
..97064F-AA-3	Willis Engine Structured-WESTF 2020-A A		09/15/2023	PAYDOWN		158,236	158,236	158,234	158,236	0	0	0	0	0	158,236	0	0	0	3,386	03/15/2045	1.F FE
..97652P-AL-5	WinWater Mortgage Loan T-WIN 2014-1 A11		09/01/2023	PAYDOWN		6,349	6,349	6,310	6,306	0	43	0	43	0	6,349	0	0	0	148	06/01/2044	1.A
..98920M-AA-0	ZAXBY'S FUNDING LLC-ZAXBY 2021-1A A2		07/30/2023	PAYDOWN		65,003	65,003	60,311	60,663	0	4,340	0	4,340	0	65,003	0	0	0	1,579	07/30/2051	2.B FE

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Design-ation, NAIC Design-ation Modifier and SVO Administrative Symbol
..G7256K-AB-0	Prop 2017-1 Ltd-ABS SNNR 5.30 03/15/42		09/15/2023	PAYDOWN		72,965	72,965	72,921	72,844	0	121	0	121	0	72,965	0	0	0	322	03/15/2042	2.B FE
..000825-AA-7	ACAM 2019-FL1 Ltd-ACAM 2019-FL1 A	D	09/18/2023	PAYDOWN		2,482	2,482	2,482	2,482	0	0	0	0	0	2,482	0	0	0	136	11/17/2034	1.A FE
..01448Q-AA-8	ALESCO Preferred Funding-ALESC 4A A1	D	07/31/2023	PAYDOWN		2,858,482	2,858,482	2,687,967	2,784,468	0	74,014	0	74,014	0	2,858,482	0	0	0	76,666	07/30/2034	1.C FE
..01448X-AA-3	ALESCO Preferred Funding-ALESC 6A A1	D	09/25/2023	PAYDOWN		115,141	115,141	103,894	103,921	0	11,220	0	11,220	0	115,141	0	0	0	4,918	03/23/2035	1.D FE
..014495-AB-1	ALESCO Preferred Funding-ALESC 13A A1	D	09/25/2023	PAYDOWN		618,027	618,027	475,881	493,614	0	124,413	0	124,413	0	618,027	0	0	0	25,687	09/23/2037	1.B FE
..03328R-AL-3	Anchorage Capital CLO 6 -ANCHC 2015-6A E	D	09/11/2023	JP MORGAN SECURITIES		5,910,765	6,150,000	6,008,025	6,047,570	0	(43,756)	0	(43,756)	0	6,003,814	0	(93,049)	(93,049)	776,130	07/15/2030	3.C FE
..03665L-AA-1	Antares CLO 2018-3 LTD-ANTR 2018-3A A1	D	07/20/2023	PAYDOWN		727,227	727,227	727,227	731,367	0	(4,140)	0	(4,140)	0	727,227	0	0	0	34,274	01/20/2031	1.A FE
..04017A-AG-5	Ares XLIII CLO Ltd-ARES 2017-43A ER	D	09/11/2023	WELLS FARGO		9,118,848	9,600,000	9,464,160	9,503,919	0	(89,568)	0	(89,568)	0	9,414,351	0	(295,503)	(295,503)	1,034,395	07/15/2034	3.C FE
..04017X-AA-8	Ares LIV CLO Ltd-ARES 2019-54A E	D	09/11/2023	WELLS FARGO		5,093,724	5,300,000	4,959,405	4,982,000	0	(26,954)	0	(26,954)	0	4,955,046	0	138,678	138,678	594,463	10/15/2032	3.C FE
..04019T-AA-5	ARES CLO-ARES 2022-66A E	D	08/23/2023	PAYDOWN		8,000,000	8,000,000	7,598,400	7,618,577	0	381,423	0	381,423	0	8,000,000	0	0	0	967,086	07/25/2034	3.C FE
..04686J-AB-7	Athene Holding Ltd-SENIOR UNSECURED	D	07/27/2023	VARIOUS		17,688,583	17,443,000	19,680,865	19,451,343	0	(143,514)	0	(143,514)	0	19,307,828	0	(1,619,245)	(1,619,245)	869,907	04/03/2030	2.A FE
..04965H-AA-5	Atrium XIV LLC-ATRM 14A E	D	09/06/2023	DEUTSCHE BANK SECURI		4,944,000	5,150,000	4,686,500	4,713,327	0	(5,380)	0	(5,380)	0	4,707,947	0	236,053	236,053	598,815	08/23/2030	3.C FE
..05682X-AE-1	Bain Capital Credit Clo -BOC 2019-44 ER	D	09/11/2023	BOFAMILSEC		7,213,500	7,500,000	7,425,000	7,389,831	0	(69,852)	0	(69,852)	0	7,319,979	0	(106,479)	(106,479)	1,048,450	04/23/2035	3.C FE
..05684W-AA-9	Bain Capital Credit CLO -BOC 2022-1A E	D	09/19/2023	CITIGROUP GLOBAL MAR		4,584,500	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(415,500)	(415,500)	524,138	04/18/2035	3.C FE
..05685K-AA-4	BAIN CAPITAL CREDIT CLO -BOC 2022-5A E	D	09/08/2023	VARIOUS		7,991,000	8,000,000	7,690,000	7,694,600	0	(57,715)	0	(57,715)	0	7,636,885	0	354,115	354,115	864,283	07/24/2034	3.C FE
..05875K-AE-6	Ballyrock CLO 2019-1 Ltd-BALLY 2019-1A D	D	08/15/2023	NOMURA SECURITIES IN		1,284,101	1,300,000	1,217,138	1,221,781	0	(5,917)	0	(5,917)	0	1,215,863	0	68,238	68,238	158,187	07/15/2032	3.C FE
..05876D-AA-9	BALLYROCK LTD-BALLY 2022-20A D	D	08/15/2023	WELLS FARGO		7,517,250	7,500,000	7,194,750	7,247,407	0	(48,058)	0	(48,058)	0	7,199,349	0	317,901	317,901	974,839	07/15/2034	3.C FE
..07403K-AA-1	Bear Mountain Park CLO L-BMNTN 2022-1A E	D	09/06/2023	BOFAMILSEC		9,262,879	9,125,000	8,745,236	8,764,792	0	(72,147)	0	(72,147)	0	8,692,645	0	570,234	570,234	1,219,104	07/15/2035	3.C FE
..08186U-AS-1	Benefit Street Partners -BSP 2020-22A DR	D	09/21/2023	MITSUBISHI UFJ SEC I		4,929,500	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(70,500)	(70,500)	380,194	04/20/2035	2.C FE
..12482Q-AA-2	CBAM 2019-10 Ltd-CBAM 2019-10A E	D	09/11/2023	SMBC NIKKO SECURITIE		5,980,650	6,500,000	6,444,750	6,491,241	0	(59,513)	0	(59,513)	0	6,431,728	0	(451,078)	(451,078)	704,912	04/20/2032	3.C FE
..12567W-AJ-8	CIFC Funding 2022-IV Ltd-CIFC 2022-4A D	D	09/21/2023	JP MORGAN SECURITIES		5,466,450	5,500,000	5,500,000	5,500,000	0	0	0	0	0	5,500,000	0	(33,550)	(33,550)	537,848	07/16/2035	2.C FE
..12807C-AA-1	CAL Funding IV Ltd-CAI 2020-1A A	D	09/25/2023	PAYDOWN		173,273	173,273	154,774	155,538	0	17,734	0	17,734	0	173,273	0	0	0	2,564	09/25/2045	1.F FE
..13876Q-AE-6	Canyon CLO 2020-2 Ltd-CANYC 2020-2A ER	D	08/15/2023	PERFTRUSTOP		1,442,850	1,500,000	1,292,250	1,299,702	0	(5,234)	0	(5,234)	0	1,294,467	0	148,383	148,383	143,461	10/15/2034	3.C FE
..14315J-AU-3	Carlyle US Clo 2017-2 Lt-CGMS 2017-2A A2	D	08/15/2023	RBC CAPITAL MARKETS		294,375	300,000	300,000	300,000	0	0	0	0	0	300,000	0	(5,625)	(5,625)	19,461	07/20/2031	1.C FE
..14855W-AB-2	Castlelake Secured Aviat Notes Class B	C	09/15/2023	SINKING PAYMENT		480,098	480,098	428,576	0	0	51,522	0	51,522	0	480,098	0	0	0	7,821	07/31/2036	2.B PL
..15672R-AA-3	Cerberus Loan Funding XX-CERB 2018-3A A1	D	07/17/2023	PAYDOWN		1,155,868	1,155,868	1,155,868	1,155,868	0	0	0	0	0	1,155,868	0	0	0	79,530	07/15/2030	1.A FE
..24460R-AA-1	Deerpath Capital CLO 202-DPATH 2020-1A A	D	07/31/2023	PAYDOWN		5,000,000	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	0	0	735,710	04/17/2032	1.A FE
..28851Q-AE-3	Ellington Clo I Ltd-EQLO 2017-1A AR	D	07/17/2023	PAYDOWN		1,000,256	1,000,256	1,000,256	1,000,256	0	0	0	0	0	1,000,256	0	0	0	48,000	10/15/2029	1.A FE
..28852E-AA-7	Ellington Clo II Ltd-EQLO 2017-2A A	D	08/15/2023	PAYDOWN		624,125	624,125	624,125	624,125	0	0	0	0	0	624,125	0	0	0	31,384	02/15/2029	1.A FE
..29002U-AG-5	ELM16 2022-3A D-ELM16 2022-3A D	D	09/21/2023	BARCLAYS CAPITAL INC		9,969,000	10,000,000	10,000,000	10,000,000	0	0	0	0	0	10,000,000	0	(31,000)	(31,000)	784,000	04/20/2034	2.C FE
..29359U-AC-3	Enstar Group Ltd-SENIOR UNSECURED	D	07/27/2023	VARIOUS		2,750,462	3,520,000	3,361,882	3,375,107	0	8,239	0	8,239	0	3,383,346	0	(632,884)	(632,884)	98,694	09/01/2031	2.B FE
..30259A-AA-0	FDF I Ltd-SERIES 17-3A CLASS A1	D	07/25/2023	PAYDOWN		2,582,450	2,582,450	2,582,450	2,582,450	0	0	0	0	0	2,582,450	0	0	0	100,716	01/25/2036	1.A FE
..34960J-AS-4	Fortress Credit Opportun-FCO 2015-6A A1T	D	07/10/2023	PAYDOWN		1,710,873	1,710,873	1,599,666	1,697,622	0	13,251	0	13,251	0	1,710,873	0	0	0	91,933	07/10/2030	1.A FE
..34961W-AC-9	Fortress Credit Opportun-FCO 2018-11A A1	D	07/17/2023	PAYDOWN		1,080,734	1,080,734	992,924	1,056,139	0	24,595	0	24,595	0	1,080,734	0	0	0	49,239	04/15/2031	1.A FE
..36321P-AE-0	Galaxy Pipeline Assets B-SECURED	D	09/30/2023	SINKING PAYMENT		19,290	19,290	17,469	17,520	0	1,770	0	1,770	0	19,290	0	0	0	586	09/30/2040	1.C FE
..36655L-AB-1	Garrison Funding 2018-2 -GRMIL 2018-2RA	D	08/21/2023	PAYDOWN		795,261	795,261	795,261	795,261	0	0	0	0	0	795,261	0	0	0	39,616	11/20/2029	1.A FE
..38136Z-AL-6	GoldenTree Credit Oppor1-GTCOP 2012-1A A	D	09/15/2023	PAYDOWN		3,406,896	3,406,896	3,406,814	3,406,896	0	0	0	0	0	3,406,896	0	0	0	180,985	06/15/2034	1.A FE
..38138F-AL-5	GoldenTree Loan Managem-GLM 2022-12A D	D	09/21/2023	CITIGROUP GLOBAL MAR		4,927,750	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(72,250)	(72,250)	507,163	04/20/2034	2.C FE
..38175C-AA-0	Golub Capital Partners C-GOCAP 2014-21A	D	07/25/2023	PAYDOWN		288,515	288,515,														

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..48661F-AA-3	Rad CLO 7 Ltd-RAD 2020-7A E	D.....	08/15/2023	WELLS FARGO		6,832,560	7,000,000	6,496,000	6,517,014	0	(30,668)	0	(30,668)	0	6,486,346	0	346,214	346,214	667,711	04/17/2033	3.C FE
..48662A-AA-3	Rad CLO 4 Ltd-RAD 2019-4A E	D.....	08/15/2023	GOLDMAN		3,872,400	4,000,000	3,553,950	3,574,530	0	(3,090)	0	(3,090)	0	3,571,440	0	300,960	300,960	382,209	04/25/2032	3.C FE
..49255P-AA-1	Kestrel Aircraft Funding-KSTRL 2018-1A A	D.....	09/15/2023	PAYDOWN		1,233,383	1,233,383	1,198,587	1,218,091	0	0	0	15,291	0	1,233,383	0	0	0	31,769	12/15/2038	2.B FE
..50188Q-AE-1	LCM XIX LTD PARTNERSHIP DEF MEZZ NT CL C	D.....	07/17/2023	PAYDOWN		327,040	327,040	257,680	0	0	0	0	69,360	0	327,040	0	0	0	18,372	07/15/2027	1.B FE
..50188Q-AL-5	LCM XVIII LP-LCM 19A BR	D.....	07/17/2023	PAYDOWN		1,938,945	1,938,945	1,527,722	0	0	0	0	411,223	0	1,938,945	0	0	0	153,938	07/15/2027	1.A FE
..55312H-AA-7	MMcApS Funding XVII Ltd-MMCAP 17A A1	D.....	09/01/2023	PAYDOWN		42,303	42,303	40,311	41,999	0	0	0	304	0	42,303	0	0	0	1,747	12/01/2035	1.A FE
..55448M-AA-5	MACH 1 Cayman 2019-1 Ltd	D.....	09/15/2023	PAYDOWN		253,012	253,012	253,003	253,009	0	2	0	0	0	253,012	0	0	0	5,969	10/15/2039	2.A FE
..55820E-AA-9	Madison Park Funding XXI-MDPK 2018-29A E	D.....	09/11/2023	RBC CAPITAL MARKETS		3,870,880	4,000,000	3,731,200	3,747,960	0	(14,634)	0	(14,634)	0	3,733,326	0	137,554	137,554	388,304	10/18/2030	3.C FE
..55954U-AA-1	Magnetite XXXV Ltd-MAGNE 2022-35A E	D.....	08/15/2023	BARCLAYS CAPITAL INC		12,072,720	12,000,000	11,700,000	11,764,980	0	(81,327)	0	(81,327)	0	11,683,653	0	389,067	389,067	1,497,716	10/25/2035	3.C FE
..61033C-AL-0	Monroe Capital MML CLO V-MOMML 2018-2A A	D.....	08/22/2023	PAYDOWN		1,516,485	1,516,485	1,516,485	1,516,203	0	282	0	282	0	1,516,485	0	0	0	26,046	11/22/2030	1.A FE
..61034H-AA-2	Monroe Capital MML CLO V-MOMML 2018-1A A	D.....	07/17/2023	PAYDOWN		463,103	463,103	463,103	465,743	0	(2,640)	0	(2,640)	0	463,103	0	0	0	22,081	04/15/2030	1.A FE
..617923-AA-5	Morgan Stanley Eaton Van-MSEV 2022-17A E	D.....	09/06/2023	MIZUHO SECURITIES		10,070,000	10,000,000	9,500,000	9,529,862	0	(74,772)	0	(74,772)	0	9,455,090	0	614,910	614,910	1,349,963	07/20/2035	3.B FE
..64131P-AA-0	Neuberger Berman Loan Ad-NEUB 2017-26A E	D.....	09/11/2023	CITIGROUP GLOBAL MAR		3,791,080	4,000,000	3,734,000	3,751,952	0	(13,013)	0	(13,013)	0	3,738,939	0	52,141	52,141	395,637	10/18/2030	3.C FE
..64133J-AL-8	Neuberger Berman Loan Ad-NEUB 2020-36A E	D.....	08/15/2023	BARCLAYS CAPITAL INC		3,254,625	3,300,000	3,132,173	3,141,803	0	(18,682)	0	(18,682)	0	3,123,121	0	131,504	131,504	319,826	04/20/2033	3.C FE
..64134W-AA-2	Neuberger Berman Loan Ad-NEUB 2022-50A E	D.....	09/06/2023	CITIGROUP GLOBAL MAR		9,855,300	9,750,000	9,652,500	9,696,876	0	(86,895)	0	(86,895)	0	9,609,982	0	245,318	245,318	1,301,803	07/23/2036	3.C FE
..64135J-AG-7	Neuberger Berman Loan Ad-NEUB 2022-49A D	D.....	09/21/2023	JP MORGAN SECURITIES		7,940,800	8,000,000	8,000,000	8,000,000	0	0	0	0	0	8,000,000	0	(59,200)	(59,200)	936,191	07/25/2034	2.B FE
..67115V-AG-7	OHA Credit Funding 11 Lt-OAKC 2022-11A D	D.....	09/21/2023	CITIGROUP GLOBAL MAR		7,484,025	7,500,000	7,500,000	7,500,000	0	0	0	0	0	7,500,000	0	(15,975)	(15,975)	760,957	07/19/2033	2.C FE
..67116D-AA-9	Oak Hill Credit Partners-OAKC 2022-13A E	D.....	09/06/2023	CITIGROUP GLOBAL MAR		6,313,590	6,150,000	5,995,850	6,015,983	0	(37,280)	0	(37,280)	0	5,978,702	0	334,888	334,888	826,258	07/20/2035	3.C FE
..67577N-AG-6	Octagon Investment Partn-OCT45 2019-1A E	D.....	09/19/2023	MORGAN		4,562,500	5,000,000	4,975,000	5,000,000	0	25,000	0	25,000	0	5,000,000	0	(437,500)	(437,500)	1,053,851	04/15/2035	3.C FE
..675931-AA-7	Octagon 59 Ltd-OCT59 2022-1A E	D.....	09/15/2023	PERFTRUSTCP		4,802,000	5,000,000	4,950,000	4,985,453	0	(50,266)	0	(50,266)	0	4,935,187	0	(133,187)	(133,187)	793,017	05/15/2035	3.C FE
..69120L-AA-1	Owl Rock Technology Fina-ORTF 2020-1A A	D.....	08/23/2023	VARIOUS		10,759,828	10,759,828	10,759,828	10,759,828	0	0	0	0	0	10,759,828	0	0	0	741,946	01/15/2031	1.F FE
..69688Y-AG-4	Palmer Square CLO 2014-1-PLMRS 2014-1A D	D.....	09/11/2023	BOFAMILSEC		3,902,380	4,100,000	3,836,370	3,859,643	0	(11,754)	0	(11,754)	0	3,847,889	0	54,491	54,491	398,044	01/17/2031	3.C FE
..69702A-AA-1	Palmer Square CLO 2021-2-PLMRS 2021-2A E	D.....	08/15/2023	CITIGROUP GLOBAL MAR		976,900	1,000,000	876,500	881,549	0	(3,598)	0	(3,598)	0	877,951	0	98,949	98,949	94,121	07/15/2034	3.C FE
..70469Q-AL-3	Peaks CLO 1 Ltd-PEAKS 2014-1A A2R	D.....	07/25/2023	PAYDOWN		1,570,067	1,570,067	1,474,113	1,543,449	0	26,617	0	26,617	0	1,570,067	0	0	0	74,595	07/25/2030	1.A FE
..70469Y-AN-4	Peaks CLO 2 Ltd-PEAKS 2017-2A A1AR	D.....	07/20/2023	PAYDOWN		249,880	249,880	229,890	243,595	0	6,285	0	6,285	0	249,880	0	0	0	12,440	07/20/2031	1.A FE
..72353P-AA-4	Pioneer Aircraft Finance-SERIES 19-1 CLA	D.....	09/15/2023	PAYDOWN		218,394	218,394	218,393	218,391	0	3	0	0	0	218,394	0	0	0	5,816	06/15/2044	2.C FE
..74040T-AC-7	Preferred Term Securitie-PRETSL FLOAT 12	D.....	09/30/2023	PAYDOWN		15,251	15,251	14,560	14,944	0	307	0	307	0	15,251	0	0	0	316	12/23/2031	3.A FE
..74040Y-AB-8	Preferred Term Securitie-SECURED	D.....	07/03/2023	PAYDOWN		1,072,392	1,072,392	1,059,992	1,072,392	0	0	0	0	0	1,072,392	0	0	0	13,194	07/03/2033	1.A FE
..74041N-AA-3	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		1,022,024	1,022,024	971,552	1,022,024	0	0	0	0	0	1,022,024	0	0	0	31,385	12/24/2033	1.A FE
..74041N-AL-9	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		16,163	16,163	13,508	16,163	0	0	0	0	0	16,163	0	0	0	0	12/24/2033	1.A FE
..74042D-AA-4	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		772,732	772,732	711,396	726,187	0	46,545	0	46,545	0	772,732	0	0	0	19,866	03/22/2038	1.A FE
..74042E-AA-2	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		1,264,749	1,264,749	1,017,838	1,059,878	0	204,872	0	204,872	0	1,264,749	0	0	0	882	06/23/2035	1.B FE
..74042F-AA-9	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		1,114,214	1,114,214	893,923	974,947	0	139,267	0	139,267	0	1,114,214	0	0	0	14,183	06/22/2037	1.C FE
..74042H-AA-5	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		452,941	452,941	349,385	379,740	0	73,201	0	73,201	0	452,941	0	0	0	5,937	12/22/2035	1.A FE
..74042H-AB-3	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		14,159	14,159	12,045	14,159	0	0	0	0	0	14,159	0	0	0	376	12/22/2035	1.B FE
..74042J-AA-1	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		2,195,614	2,195,614	1,854,571	1,984,640	0	210,975	0	210,975	0	2,195,614	0	0	0	25,100	03/22/2038	1.A FE
..74043A-AD-3	Preferred Term Securitie-SECURED	D.....	09/30/2023	PAYDOWN		480,526	480,526	445,988	462,889	0	17,636	0	17,636	0	480,526	0	0	0	2,735	12/22/2036	1.A FE
..74951P-DQ-8	RESI Finance LP 2005-A-RESIF 2005-A B3	D.....	09/11/2023	PAYDOWN		24,052	24,052	34,044	6,204	0	13,292	0	41,442	0	3,452	0	0	0	3,452	03/10/2037	1.A FM

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Design-ation, NAIC Design-ation Modifier and SVO Administrative Symbol
..87268R-AA-2	TruPS Financials Note Se-TFINS 2019-2A A	D.....	08/28/2023	PAYDOWN		568,966	568,966	568,966	568,966	0	0	0	0	0	568,966	0	0	0	37,250	02/28/2039	1.B FE
..87974K-AS-3	Telos CLO 2014-5 Ltd-TELOS 2014-5A A2R	D.....	07/17/2023	PAYDOWN		374,627	374,627	367,837	374,627	0	0	0	0	0	374,627	0	0	0	16,926	04/17/2028	1.A FE
..88315L-AJ-7	Textainer Marine Contain-SERIES 2020-3A	D.....	09/20/2023	PAYDOWN		81,900	81,900	71,765	81,900	0	0	0	0	0	81,900	0	0	0	144	09/20/2045	1.F FE
..88315L-AS-7	Textainer Marine Contain-TMCL 2021-3A A	C.....	09/20/2023	PAYDOWN		39,333	39,333	32,258	39,333	0	0	0	0	0	39,333	0	0	0	95	08/20/2046	1.F FE
..88606W-AA-0	Thunderbolt Aircraft Lea-SERIES 17-A CLA	D.....	09/15/2023	PAYDOWN		934,571	934,571	934,532	934,763	0	(191)	0	0	0	934,571	0	0	0	23,730	05/17/2032	2.A FE
..89412K-AA-8	Trapeza Cdo XI Ltd-TRAP 2006-11A A1	D.....	07/10/2023	PAYDOWN		129,759	129,759	122,784	127,495	0	2,263	0	0	0	129,759	0	0	0	10,929	10/10/2041	1.A FE
..89413C-AA-5	Trapeza CDO X Ltd-TRAP 2006-10A A1	D.....	07/06/2023	PAYDOWN		153,765	153,765	143,194	145,876	0	7,888	0	0	0	153,765	0	0	0	5,736	07/06/2041	1.A FE
..89413G-AA-6	Trapeza Cdo Xii Ltd-SERIES 2007-12A CLAS	D.....	07/06/2023	PAYDOWN		24,189	24,189	20,107	19,917	0	4,272	0	0	0	24,189	0	0	0	893	04/06/2042	1.B FE
..89707W-AB-4	Tropic CDO III Ltd-TROPC 2004-1A A2L	D.....	07/17/2023	PAYDOWN		82,499	82,499	67,748	72,669	0	9,829	0	0	0	82,499	0	0	0	3,496	07/15/2034	1.A FE
..89707Y-AA-2	Tropic CDO IV Ltd-TROPC 2004-4A A1L	D.....	07/17/2023	PAYDOWN		15,709	15,709	12,196	13,064	0	2,645	0	0	0	15,709	0	0	0	612	04/15/2035	1.A FE
..89708B-AA-1	Tropic CDO V Ltd-TROPC 2006-5A A1L1	D.....	07/17/2023	PAYDOWN		75,428	75,428	67,936	68,218	0	7,210	0	0	0	75,428	0	0	0	2,859	07/15/2036	1.E FE
..89820X-AA-6	TruPS Financials Note Se-TFINS 2020-2A A	D.....	07/15/2023	PAYDOWN		724,365	724,365	724,365	724,365	0	0	0	0	0	724,365	0	0	0	16,315	07/15/2041	1.C FE
..89821J-AA-6	TruPS Financials Note Se-TFINS 2019-1A A	D.....	08/02/2023	PAYDOWN		2,825,279	2,825,279	2,825,279	2,825,279	0	0	0	0	0	2,825,279	0	0	0	148,007	02/02/2039	1.C FE
..89822P-AA-1	TruPS Financials Note Se-2020-1A A1	D.....	07/15/2023	PAYDOWN		618,739	618,739	618,739	618,739	0	0	0	0	0	618,739	0	0	0	9,985	04/15/2040	1.C FE
..90390K-AB-0	US Capital Funding II Lt-USCAP FLOAT 08/	D.....	09/30/2023	CALL 100		854,796	854,796	844,194	843,171	0	79	0	0	0	843,250	0	11,545	11,545	19,053	08/01/2034	1.C FE
..92919P-AA-9	VOYA 2022-2A E-VOYA 2022-2A E	D.....	08/18/2023	PAYDOWN		7,500,000	7,500,000	7,125,000	7,160,518	0	339,482	0	0	0	7,500,000	0	0	0	875,948	07/20/2034	3.C FE
..94949V-AE-8	Wellfleet CLO X LTD-WELF 2019-XA DR	D.....	08/15/2023	CITIGROUP GLOBAL MAR		1,728,375	2,062,500	2,031,563	2,047,696	0	(17,224)	0	0	0	2,030,472	0	(302,097)	(302,097)	197,477	07/20/2032	3.C FE
..94950B-AE-8	Wellfleet CLO 2020-2 Ltd-WELF 2020-2A ER	D.....	09/11/2023	DEUTSCHE BANK SECURI		2,615,382	2,970,000	2,950,695	2,970,000	0	0	0	0	0	2,970,000	0	(354,618)	(354,618)	330,666	07/15/2034	3.C FE
..94952D-AA-0	Wellfleet CLO 2017-2A Lt-WELF 2017-2A D	D.....	08/15/2023	BOFAMLSEC		3,078,097	4,363,000	4,219,235	4,247,211	0	(7,231)	0	0	0	4,239,981	0	(1,161,884)	(1,161,884)	422,848	10/20/2029	3.C FE
..97314F-AA-1	THL Credit Wind River 20-WINDR 2019-2A E	D.....	09/15/2023	PERFTRUSTCP		4,605,500	5,000,000	5,000,000	5,000,000	0	0	0	0	0	5,000,000	0	(394,500)	(394,500)	545,430	01/15/2035	3.C FE
..97315M-AA-5	WIND RIVER CLO LTD-WINDR 2022-2A E	D.....	09/18/2023	MORGAN		3,496,000	3,800,000	3,705,000	3,738,495	0	(32,475)	0	0	0	3,706,021	0	(210,021)	(210,021)	602,536	07/20/2035	3.C FE
..98878C-AA-4	Z Capital Credit Partner-ZOCP 2018-1A A1	D.....	07/17/2023	PAYDOWN		1,920,064	1,920,064	1,920,064	1,920,064	0	0	0	0	0	1,920,064	0	0	0	94,323	01/16/2031	1.A FE
..98878C-AC-0	Z Capital Credit Partner-ZOCP 2018-1A A2	D.....	07/17/2023	PAYDOWN		512,017	512,017	503,697	512,017	0	0	0	0	0	512,017	0	0	0	24,337	01/16/2031	1.A FE
..98944P-AB-3	Zephyrus Capital Aviatio-ZCAP 2018-1 A	C.....	09/15/2023	PAYDOWN		1,083,720	1,083,720	1,067,665	1,074,455	0	9,266	0	0	0	1,083,720	0	0	0	39,672	10/15/2038	2.C FE
..F0265P-BY-3	Alice France SA/France-FIRST LIEN	B.....	07/19/2023	VARIOUS		199,874	224,259	188,269	199,812	0	3,650	0	0	(8,960)	194,502	18,452	(13,080)	5,372	4,319	02/15/2025	4.C FE
..G8664B-AB-4	TalkTalk Telecom Group L-SENIOR UNSECURE	B.....	09/12/2023	GOLDMAN SACHS INTERN		99,863	125,220	107,296	109,948	0	3,514	0	0	(740)	112,723	4,611	(17,471)	5,124	5,124	02/20/2025	4.C FE
..P4900*-AA-4	Gran Americas Usme Provi Senior Secured	D.....	08/31/2023	SINKING PAYMENT		140,110	140,110	140,110	140,110	0	0	0	0	0	140,110	0	0	0	3,255	03/31/2031	2.B PL
..P4900*-AB-2	Gran Americas Usme Provi Senior Secured	D.....	08/31/2023	SINKING PAYMENT		12,460	12,460	12,460	12,460	0	0	0	0	0	12,460	0	0	0	131	03/31/2031	2.B PL
..Y5008*-AA-2	Knausen Holding LLC Senior Secured Notes	D.....	07/15/2023	SINKING PAYMENT		752,400	752,400	752,400	752,400	0	0	0	0	0	752,400	0	0	0	35,795	07/15/2027	2.B FE
..581557-BE-4	McKesson Corp	D.....	07/31/2023	CASH TENDER		(24,811,900)	(24,811,900)	(24,811,900)	(24,811,900)	0	0	0	0	0	(24,811,900)	0	0	0	0	03/15/2024	2.
..72303#-AA-7			08/25/2023	PAYDOWN		200,704	200,704	200,704	200,704	0	0	0	0	0	200,704	0	0	0	0	12/31/2031	1.
..55903V-BA-0	Warnermedia Holdings Inc-SENIOR UNSECURE		09/30/2023	2Q adjustment		28,386,761	30,000,000	28,386,761	28,386,761	0	0	0	0	0	28,386,761	0	0	0	0	03/15/2027	2.
..55903V-BB-8	Warnermedia Holdings Inc-SENIOR UNSECURE		09/30/2023	2Q adjustment		9,912,407	11,500,000	9,912,407	9,912,407	0	0	0	0	0	9,912,407	0	0	0	0	03/15/2029	2.
1109999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated)						931,428,904	1,027,118,498	977,076,445	898,265,035	34,348	10,232,527	104,930	10,161,945	(9,700)	989,772,951	23,063	(58,367,110)	(58,344,047)	60,555,141	XXX	XXX
..369604-BQ-5	General Electric Co-GE FLOAT PERP		09/15/2023	CALL 100		12,393,000	12,393,000	11,928,710	11,928,443	0	(5,775)	0	0	(5,775)	11,922,667	0	470,333	470,333	791,914	01/01/9999	3.A FE
..759351-70-3	Reinsurance Group of Ame-SUBORDINATED		07/21/2023	VARIOUS		4,950,000	0	4,950,000	0	0	0	0	0	0	0	0	4,950,000	4,950,000	0	09/15/2042	2.B FE
..89356B-AB-4	Transcanada Trust-TRPCN 5 7/8 08/15/2076	A.....	07/28/2023	SEAPORT GROUP		10,285,000	11,000,000	10,170,000	10,170,000	0	1,139	0	0	0	10,171,139	0	113,861	113,861	297,993	08/15/2076	2.C FE
..89356B-AG-3	Transcanada Trust-TRPCN 5.6 03/07/2082	A.....	08/16/2023	VARIOUS		3,355,000	4,000,000	3,800,000	3,799,907	0	411	0	0	0	3,800,319	0	(445,319)	(445,319)	207,200	03/07/2082	2.C FE
..29265W-AA-6	Enel SpA-ENELIM 8 3/4 09/24/73	D.....	09/24/2023	CALL 100		16,423,000	16,423,000	16,623,343	4,483,258	0	(193,121)	0	0	0	16,403,905	0	19,095	19,095	1,447,072	09/24/2073	2.C FE
1309999999. Subtotal - Bonds - Hybrid Securities						47,406,000	43,816,000	42,522,053	20,211,608	0	(197,346)	0	(197,346)	0	42,298,030	0	5,107,970	5,107,970	2,744,179	XXX	XXX
..06763C-AE-7	Babson CLO Ltd/Cayman Is-BABSN LP-2A D	D.....	07/20/2023	PAYDOWN		3,163,338	3,163,338	3,163,338	3,163,338	0	0	0	0	0	3,163,338	0	0	0	53,381	01/20/2034	2.C
1509999999. Subtotal - Bonds - Parent, Subsidiaries and Affiliates						3,163,338	3,163,338	3,163,338	3,163,338												

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..00453@-AB-6	Accurus Aerospace Corporation - 2022 A-1		09/29/2023	CA_CASH_CLOSE		9,997	9,997	9,847	9,847	0	0	0	0	0	9,847	0	150	150	3,137	04/05/2028	5.A
..00777Y-AD-8	Adviser Investments - 2022 1st Lien Term		09/30/2023	CA_CASH_CLOSE		1,095	1,095	1,073	1,073	0	0	0	0	0	1,073	0	22	22	142	08/31/2028	4.B PL
..00797*-AA-5	Aero Operating LLC/Term Loan 1/20		07/03/2023	CA_CASH_CLOSE		1,113	1,113	1,113	1,113	0	0	0	0	0	1,113	0	0	0	0	02/07/2026	3.A PL
..00797*-AB-3	Aero Operating LLC/Delayed Draw Term Loa		07/03/2023	CA_CASH_CLOSE		319	319	319	319	0	0	0	0	0	319	0	0	0	0	02/07/2026	3.A PL
..00843@-AA-7	AffiniPay Midco, LLC/Term Loan 2/20		07/03/2023	CA_CASH_CLOSE		1,883	1,883	1,883	1,883	0	0	0	0	0	1,883	0	0	0	139	03/02/2026	3.A PL
..00843@-AB-5	AFFINIPAY MIDCO LLC - INCREMENTAL TERM		07/03/2023	CA_CASH_CLOSE		189	189	189	189	0	0	0	0	0	189	0	0	0	14	03/02/2026	3.A PL
..00843@-AC-3	AFFINIPAY MIDCO LLC - 2ND AMENDMENT TL		07/03/2023	CA_CASH_CLOSE		469	469	469	469	0	0	0	0	0	469	0	0	0	35	03/02/2026	3.A PL
..00910#-AG-0	Air Comm Corporation LLC - 2021 Incremen		09/29/2023	CA_CASH_CLOSE		12,500	12,500	12,500	12,500	0	0	0	0	0	12,500	0	0	0	2,575	06/01/2027	4.B PL
..02124T-AA-1	Qatar Airways Senior Term Loa		08/15/2023	CA_CASH_CLOSE		572,296	572,296	570,013	570,013	0	0	0	0	0	570,013	0	2,282	2,282	585,916	05/06/2031	1.D PL
..03233*-AA-1	Amtech Software - Term Loan		09/29/2023	CA_CASH_CLOSE		6,818	6,818	6,818	6,818	0	0	0	0	0	6,818	0	0	0	1,762	11/02/2027	5.A
..03272*-AA-3	ANAQUA PARENT HOLDINGS INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		373	373	373	373	0	0	0	0	0	373	0	0	0	0	04/10/2026	3.B PL
..03272*-AB-1	ANAQUA PARENT HOLDINGS INC. - DELAYED D		09/29/2023	CA_CASH_CLOSE		53	53	53	53	0	0	0	0	0	53	0	0	0	4	04/10/2026	3.B PL
..04965@-AA-1	Atreides Funding Trust - Pass-Through In		09/18/2023	CA_CASH_CLOSE		2,017,211	2,017,211	2,017,211	2,017,211	0	0	0	0	0	2,017,211	0	0	0	10,369	11/18/2083	1.F Z
..05351K-A*-6	Avant Credit Card Master Avant Master Tr		08/28/2023	CA_CASH_CLOSE		5,138,532	5,138,532	5,138,532	1,417,917	0	0	0	0	0	5,138,532	0	0	0	239,820	12/18/2023	3.A Z
..05351K-A*-0	Avant Cr Card Master Tr 2021-VFN1 CI A		08/28/2023	CA_CASH_CLOSE		69,127,800	69,127,800	69,127,800	21,516,600	0	0	0	0	0	69,127,800	0	0	0	1,322,365	12/31/2023	1.F Z
..05351K-A*-8	Avant Credit Card Master Avant Master Tr		08/28/2023	CA_CASH_CLOSE		6,971,670	6,971,670	6,971,670	2,169,990	0	0	0	0	0	6,971,670	0	0	0	116,033	12/18/2023	2.B Z
..05365@-AA-4	Avetta, LLC/Term Loan 4/18		09/29/2023	CA_CASH_CLOSE		10,512	10,512	10,300	10,426	0	0	0	0	0	10,426	0	87	87	778	04/10/2024	3.B PL
..05365@-AD-8	Avetta, LLC/Second Amendment Tranche B T		09/29/2023	CA_CASH_CLOSE		8,133	8,133	7,979	8,061	0	0	0	0	0	8,061	0	72	72	602	04/10/2024	3.B PL
..05365@-AE-6	AVETTA LLC - THIRD AMENDMENT TRANCHE B		09/29/2023	CA_CASH_CLOSE		1,045	1,045	1,045	1,045	0	0	0	0	0	1,045	0	0	0	77	04/10/2024	5.B GI
..05464#-AA-2	Axiom Merger Sub Inc./Facility B Term Lo		09/29/2023	CA_CASH_CLOSE		3,516	3,516	3,389	3,439	0	0	0	0	0	3,439	0	77	77	172	04/10/2024	3.B PL
..05631*-AA-4	BREDIF MM LSA LLC - Term Loan Series 202		09/28/2023	CA_CASH_CLOSE		9,610,402	9,610,402	9,610,402	9,610,402	0	0	0	0	0	9,610,402	0	0	0	468,042	10/20/2028	1.E PL
..05631*-AC-0	BREDIF MM LSA LLC - Term Loan Series 202		09/28/2023	CA_CASH_CLOSE		492,094	492,094	492,094	492,094	0	0	0	0	0	492,094	0	0	0	25,382	10/20/2027	1.E PL
..06683@-AA-7	BANYAN SOFTWARE HOLDINGS LLC - TERM LOA		09/29/2023	CA_CASH_CLOSE		1,050	1,050	1,050	1,050	0	0	0	0	0	1,050	0	0	0	44	10/30/2026	3.B PL
..06683@-AB-5	BANYAN SOFTWARE HOLDINGS LLC - DELAYED		09/29/2023	CA_CASH_CLOSE		600	600	600	600	0	0	0	0	0	600	0	0	0	25	10/30/2026	3.B PL
..07363@-AD-8	BEACON MOBILITY CORP AMEND NO 4 DDTL		09/01/2023	CA_CASH_CLOSE		365,607	365,607	365,607	365,607	0	0	0	0	0	365,607	0	0	0	24,860	05/22/2024	4.C Z
..08890@-AA-2	Beyond Risk - Term Loan		09/29/2023	CA_CASH_CLOSE		4,001	4,001	3,921	3,927	0	(3)	0	(3)	0	3,924	0	77	77	1,135	10/08/2027	4.C
..08890@-AB-0	Beyond Risk - Delayed Draw Term Loan		09/29/2023	CA_CASH_CLOSE		2,184	2,184	2,184	2,184	0	0	0	0	0	2,184	0	0	0	662	10/08/2027	4.C
..10483*-AC-9	BRAGG LIVE FOOD PRODUCTS LLC - TERM LOAN		09/22/2023	CA_CASH_CLOSE		136,744	136,744	136,744	136,744	0	0	0	0	0	136,744	0	0	0	11,909	12/29/2025	2.C PL
..10947U-AC-2	BrightSign - Term Loan		09/29/2023	CA_CASH_CLOSE		5,580	5,580	5,524	5,526	0	0	0	0	0	5,526	0	54	54	1,181	10/14/2027	3.A PL
..12464@-AA-0	CAI Software - Term Loan		09/29/2023	CA_CASH_CLOSE		9,873	9,873	9,676	9,676	0	0	0	0	0	9,676	0	197	197	2,230	12/10/2028	5.A
..12721*-AA-7	CVP Holdco, Inc./Delayed Draw Term Loan		09/29/2023	CA_CASH_CLOSE		1,289	1,289	1,289	1,289	0	0	0	0	0	1,289	0	0	0	84	10/31/2025	3.B PL
..12721*-AB-5	CVP Holdco Inc./Term Loan 10/19		09/29/2023	CA_CASH_CLOSE		1,892	1,892	1,892	1,892	0	0	0	0	0	1,892	0	0	0	129	10/31/2025	3.B PL
..12721*-AC-3	CVP HOLDCO INC. - DELAYED DRAW TERM LOA		09/29/2023	CA_CASH_CLOSE		1,109	1,109	1,109	1,109	0	0	0	0	0	1,109	0	0	0	0	10/31/2025	3.B PL
..12756@-AA-7	Cogency Global - Term Loan		09/29/2023	CA_CASH_CLOSE		11,122	11,122	10,900	10,900	0	0	0	0	0	10,900	0	222	222	10,741	02/14/2028	4.C
..14979@-AA-4	CAZ GP OWNERSHIP CD AGGREGATOR - Secured		09/30/2023	CA_CASH_CLOSE		1,300,000	1,300,000	1,300,000	1,300,000	0	0	0	0	0	1,300,000	0	0	0	26,091	12/07/2040	1.G PL
..15644G-B*-4	CENTRIC BRANDS INC. - REVOLVING LOAN (FI)		09/26/2023	CA_CASH_CLOSE		91,275	91,275	91,275	0	0	0	0	0	0	91,275	0	0	0	1,435	10/09/2024	4.A PL
..15674@-AA-9	Cerberus SWIC II		09/30/2023	VARIOUS		9,485,000	9,485,000	9,484,235	138,679	0	0	0	0	0	9,484,443	0	557	557	241,065	11/20/2026	1.D
..16117L-BW-8	Charter Communications O-QHTR TL B1 1L U		09/29/2023	CA_CASH_CLOSE		10,204	10,204	8,673	9,179	0	0	0	0	0	9,179	0	1,025	1,025	160	04/30/2025	2.C FE
..18539@-AA-6	Cleaver-Brooks Inc - 2022 Term Loan		07/27/2023	CA_CASH_CLOSE		230,657	230,657	226,044	226,044	0	0	0	0	0	226,044	0	4,613	4,613	11,274	07/14/2028	4.C Z
..18539@-AA-8	Cleaver-Brooks Inc - 2022 Fixed PIK Term		07/27/2023	CA_CASH_CLOSE		215,783	215,783	212,890	125,690	0	0	0	0	0	212,890	0	2,893	2,893	0	07/14/2029	4.C Z
..19076*-AA-7	COBALT BUYER SUB INC. - CLOSING DATE TE		09/29/2023	CA_CASH_CLOSE		1,406	1,406	1,406	1,406	0	0	0	0	0	1,406	0	0	0	88	10/02/2028	3.A PL
..19076*-AB-5	COBALT BUYER SUB INC. - DELAYED DRAW TE		09/29/2023	CA_CASH_CLOSE		698	698	698	698	0	0	0	0	0	698	0	0	0	35	10/02/2028	3.A PL
..21079#-AA-6	CONTINENTAL ACQUISITION HOLDINGS INC. -		09/29/2023	CA_CASH_CLOSE		1,526	1,526	1,526	1,526	0	0	0	0	0	1,526	0	0	0	0	01/20/2027	3.A PL
..21079#-AB-4	CONTINENTAL ACQUISITION HOLDINGS INC. -		09/29/2023	CA_CASH_CLOSE		550	550	550	550	0	0	0	0	0	550	0	0	0	0	01/20/2027	3.A PL
..21257@-AC-8	Convey Health Solutions Inc./Term Loan		09/29/2023	CA_CASH_CLOSE		3,454	3,454	3,454	3,454	0	0	0	0	0	3,454	0	0	0	291	09/04/2026	2.C PL
..23344U-AC-4	DS Admiral Bidco LLC-DSADBI TL 1L USD		07/21/2023	CA_CASH_CLOSE		56,250	56,250	56,250	56,250	0	0	0	0	0	56,250	0	0	0	3,736	03/16/2028	3.A PL

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..23345U-AB-5	Disa Holdings Corp. - Delayed Draw Term		07/03/2023	CA_CASH_CLOSE		116	116	116	116	0	0	0	0	0	116	0	0	0	6	09/09/2028	3.A PL
..23345U-AD-1	Disa Holdings Corp. - Term Loan A		07/03/2023	CA_CASH_CLOSE		1,066	1,066	1,034	1,034	0	0	0	0	0	1,034	0	32	32	43	09/09/2028	3.A PL
..23363#-AB-5	DRS Holdings III Inc./Term Loan 11/19		09/29/2023	CA_CASH_CLOSE		6,656	6,656	6,656	6,656	0	0	0	0	0	6,656	0	0	0	0	11/01/2025	4.A PL
..23363#-AC-3	DRS HOLDINGS III INC. - 2021 TERM LOAN		09/29/2023	CA_CASH_CLOSE		4,794	4,794	4,794	4,794	0	0	0	0	0	4,794	0	0	0	200	11/01/2025	3.A PL
..24360@-AC-6	DECOPAC INC. - TERM B LOAN		09/29/2023	CA_CASH_CLOSE		2,121	2,121	2,121	2,121	0	0	0	0	0	2,121	0	0	0	13	05/15/2028	3.B PL
..24823@-AA-1	DENALI HOLDCO LLC		09/29/2023	CA_CASH_CLOSE		937	937	937	937	0	0	0	0	0	937	0	0	0	0	09/15/2027	3.B PL
..25403#-AN-6	DILIGENT CORPORATION (FKA DIAMOND MERGER		09/29/2023	CA_CASH_CLOSE		14,100	14,100	14,100	14,100	0	0	0	0	0	14,100	0	0	0	0	08/04/2025	3.C PL
..25403#-AT-3	DILIGENT CORPORATION (FKA DIAMOND MERGER		09/29/2023	CA_CASH_CLOSE		469	469	464	465	0	0	0	0	0	465	0	4	4	172	08/04/2025	3.C PL
..25403#-AU-0	DILIGENT CORPORATION (FKA DIAMOND MERGER		09/29/2023	CA_CASH_CLOSE		469	469	469	469	0	0	0	0	0	469	0	0	0	10	08/04/2025	3.C PL
..25403#-AW-6	Diligent Corporation - 2022 Delayed Draw		09/29/2023	CA_CASH_CLOSE		307	307	307	307	0	0	0	0	0	307	0	0	0	7	08/04/2025	3.C PL
..26745L-AC-2	Dwyer Instruments Inc - Term Loan		09/30/2023	CA_CASH_CLOSE		3,376	3,376	3,309	3,309	0	0	0	0	0	3,309	0	68	68	101	07/01/2027	5.A
..26789#-AA-6	DYNAMIC NC AEROSPACE HOLDINGS LLC - TER		07/03/2023	CA_CASH_CLOSE		26,736	26,736	26,736	26,736	0	0	0	0	0	26,736	0	0	0	0	12/30/2026	2.C PL
..26869@-AB-3	Standard Elevator Systems - Delayed Draw		09/29/2023	CA_CASH_CLOSE		(4,244)	(4,244)	(4,244)	(4,244)	0	0	0	0	0	(4,244)	0	0	0	330	12/02/2027	5.B GI
..26887@-AA-9	EP WEALTH ADVISORS LLC - TERM LOAN		09/29/2023	CA_CASH_CLOSE		1,275	1,275	1,275	1,275	0	0	0	0	0	1,275	0	0	0	52	09/04/2026	1.G PL
..26887@-AB-7	EP WEALTH ADVISORS LLC - DELAYED DRAW T		09/29/2023	CA_CASH_CLOSE		1,329	1,329	1,329	1,329	0	0	0	0	0	1,329	0	0	0	0	09/04/2026	1.G PL
..26888#-AA-0	EPS Nass Parent Inc. - Term Loan		09/29/2023	CA_CASH_CLOSE		1,142	1,142	1,142	1,142	0	0	0	0	0	1,142	0	0	0	51	04/19/2028	2.C PL
..26888#-AB-8	EPS Nass Parent Inc. - Delayed Draw Term		09/29/2023	CA_CASH_CLOSE		128	128	128	128	0	0	0	0	0	128	0	0	0	14	04/19/2028	2.C PL
..28619#-AA-2	ELEMICA PARENT INC. - DELAYED DRAW TERM		09/29/2023	CA_CASH_CLOSE		1,185	1,185	1,185	1,185	0	0	0	0	0	1,185	0	0	0	32	09/18/2025	3.B PL
..28619#-AB-3	Elemica Parent Inc./Term Loan 9/19		09/29/2023	CA_CASH_CLOSE		6,120	6,120	5,967	6,025	0	0	0	0	0	6,025	0	95	95	0	09/18/2025	3.B PL
..28619#-AC-8	ELEMICA PARENT INC. - AMENDMENT NO. 1 T		09/29/2023	CA_CASH_CLOSE		664	664	664	664	0	0	0	0	0	664	0	0	0	37	09/18/2025	3.B PL
..28619#-AD-6	ELEMICA PARENT INC. - AMENDMENT NO. 1 D		09/29/2023	CA_CASH_CLOSE		1,716	1,716	1,716	1,716	0	0	0	0	0	1,716	0	0	0	0	09/18/2025	3.B PL
..28622@-AA-5	ELEVATION SERVICES PARENT HOLDINGS LLC		09/29/2023	CA_CASH_CLOSE		450	450	450	450	0	0	0	0	0	450	0	0	0	49	12/18/2026	3.A PL
..28622@-AB-3	ELEVATION SERVICES PARENT HOLDINGS LLC		09/29/2023	CA_CASH_CLOSE		605	605	605	605	0	0	0	0	0	605	0	0	0	46	12/18/2026	3.A PL
..29251@-AB-9	Encina Business Credit SPV LLC Revolving		09/15/2023	CA_CASH_CLOSE		18,080,000	18,080,000	18,080,000	0	0	0	0	0	0	18,080,000	0	0	0	592,476	07/07/2028	2.B PL
..29427*-AA-2	Goldcup 17308 AB/USD Term Loan 10/18		09/29/2023	CA_CASH_CLOSE		7,344	7,344	7,178	7,266	0	0	0	0	0	7,266	0	78	78	313	04/09/2026	3.B PL
..29643*-AA-0	EShipping LLC - Term Loan		08/31/2023	CA_CASH_CLOSE		124,482	124,482	121,993	122,054	0	0	0	0	0	122,054	0	2,428	2,428	21,384	11/05/2027	4.C
..29668#-AA-6	ESSENTIAL SERVICES HOLDING CORPORATION -		09/29/2023	CA_CASH_CLOSE		6,567	6,567	6,567	6,567	0	0	0	0	0	6,567	0	0	0	332	11/16/2026	3.B PL
..29668#-AB-4	ESSENTIAL SERVICES HOLDING CORPORATION -		09/29/2023	CA_CASH_CLOSE		3,504	3,504	3,504	3,504	0	0	0	0	0	3,504	0	0	0	177	11/16/2026	3.B PL
..29668#-AC-2	ESSENTIAL SERVICES HOLDING CORPORATION -		09/29/2023	CA_CASH_CLOSE		2,628	2,628	2,628	2,628	0	0	0	0	0	2,628	0	0	0	232	11/16/2026	3.B PL
..30301*-AA-1	FS CREIT FINANCE MM-1 LLC - Secured Term		07/10/2023	CA_CASH_CLOSE		15,019,810	15,019,810	15,019,810	10,604,090	0	0	0	0	0	15,019,810	0	0	0	334,125	09/20/2029	1.F PL
..30319*-AA-1	FSS Buyer LLC Initial Term Loan		09/29/2023	CA_CASH_CLOSE		18,633	18,633	18,260	18,278	0	0	0	0	0	18,278	0	355	355	0	08/31/2028	4.C
..31168@-AA-9	Fasanara Apex 3 12/22/25		08/15/2023	CA_CASH_CLOSE		27,334,754	27,334,754	27,358,230	0	0	0	0	0	0	27,358,230	0	(23,476)	(23,476)	557,101	12/22/2025	2.B Z
..32013#-AA-2	FIRST EAGLE DIRECT LENDING V-B, LLC - Se		09/06/2023	CA_CASH_CLOSE		804,348	804,348	804,348	804,348	0	0	0	0	0	804,348	0	0	0	22,449	06/16/2029	1.D PL
..35042#-AC-6	FOUNDATION CONSUMER BRANDS LLC - TERM L		09/18/2023	CA_CASH_CLOSE		5,072	5,072	5,072	5,072	0	0	0	0	0	5,072	0	0	0	276	10/01/2026	2.C PL
..35042@-AA-2	Foundation Finance Trust - Fixed Class A		09/15/2023	CA_CASH_CLOSE		6,273,080	6,273,080	6,254,199	6,254,199	0	0	0	0	0	6,254,199	0	18,881	18,881	2,366,235	10/15/2042	1.D PL
..36152#-AA-4	GB EAGLE BUYER INC INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		5,242	5,242	5,085	5,085	0	0	0	0	0	5,085	0	157	157	0	12/01/2028	4.C Z
..36457W-AC-5	Galway Borrower LLC-TL SR SEC0		09/29/2023	CA_CASH_CLOSE		(52)	(52)	(52)	(52)	0	0	0	0	0	(52)	0	0	0	11	09/30/2028	3.B PL
..36457W-AD-3	GALWAY BORROWER LLC - CLOSING DATE TERM		07/03/2023	CA_CASH_CLOSE		929	929	929	929	0	0	0	0	0	929	0	0	0	0	09/29/2028	4.A PL
..40348#-AB-9	Gutter Buyer, Inc. - Term Loan Tranche A		07/05/2023	CA_CASH_CLOSE		2,163	2,163	3,441	3,410	0	0	0	0	0	3,410	0	(1,247)	(1,247)	0	03/08/2025	3.A PL
..40481#-AA-8	HH - STELLA INC. - INITIAL TERM LOAN		09/29/2023	CA_CASH_CLOSE		2,407	2,407	2,407	2,407	0	0	0	0	0	2,407	0	0	0	0	04/24/2028	3.A PL
..40481#-AB-6	HH - STELLA INC. - DELAYED DRAW TERM LO		07/03/2023	CA_CASH_CLOSE		213	213	213	213	0	0	0	0	0	213	0	0	0	3	04/24/2028	3.A PL
..40490#-AA-9	HTI Technology & Industries - 2022 Term		09/30/2023	CA_CASH_CLOSE		1,378	1,378	1,358	1,358	0	0	0	0	0	1,358	0	21	21	268	07/07/2025	4.C Z
..40490#-AB-7	HTI Technology & Industries - 2022 Delay		09/29/2023	CA_CASH_CLOSE		591	591	9	9	0	0	0	0	0	9	0	582	582	34	07/07/2025	5.A
..40490#-AE-1	HTI Technology & Industries - 2023 Incre		09/30/2023	CA_CASH_CLOSE		569	569	551	0	0	0	0	0	0	551	0	17	17	0	07/27/2025	4.C Z
..41902@-AA-9	Sigma Electric Manufacturing Corporation		09/29/2023	CA_CASH_CLOSE		5,496	5,496	5,385	5,458	0	0	0	0	0	5,458	0	37	37	102	10/31/2023	3.A PL
..41902@-AB-7	Sigma Electric Manufacturing Corporation		09/29/2023	CA_CASH_CLOSE		1,912	1,912	1,893	1,903	0	0	0	0	0	1,903	0	8	8	104	10/31/2023	3.A PL

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..42258@-AA-7	HEAVY CONSTR SYS SPECIALISTS LLC INITIAL		09/29/2023	CA_CASH_CLOSE		22,807	22,807	22,351	22,360	0	0	0	0	0	22,360	0	447	447	2,544	11/16/2028	5.A
..42981#-AA-9	HIGH STREET BUYER INC. - DELAYED DRAW T		09/29/2023	CA_CASH_CLOSE		939	939	939	939	0	0	0	0	0	939	0	0	0	0	04/14/2028	3.B PL
..42983#-AA-7	HIGH STREET BUYER INC. - TERM LOAN B		09/29/2023	CA_CASH_CLOSE		700	700	700	700	0	0	0	0	0	700	0	0	0	6	04/14/2028	3.B PL
..42983#-AB-5	HIGH STREET BUYER INC. - DELAYED DRAW T		09/29/2023	CA_CASH_CLOSE		405	405	405	405	0	0	0	0	0	405	0	0	0	3	04/14/2028	3.B PL
..42983#-AC-3	HIGH STREET BUYER INC. - DELAYED DRAW T		09/29/2023	CA_CASH_CLOSE		921	921	921	921	0	0	0	0	0	921	0	0	0	0	04/14/2028	3.B PL
..44961*-AB-1	Implus Footcare LLC/Initial Term Loan 0		09/29/2023	CA_CASH_CLOSE		2,209	2,209	2,209	2,209	0	0	0	0	0	2,209	0	0	0	56	04/30/2024	3.C PL
..45054@-AB-4	ITI Intermodal INC - Delayed Draw Term L		09/30/2023	CA_CASH_CLOSE		462	462	462	0	0	0	0	0	0	462	0	0	0	19	12/21/2027	2.C PL
..45054@-AD-0	ITI Intermodal Inc. - 2023 Incremental T		09/30/2023	CA_CASH_CLOSE		941	941	912	0	0	0	0	0	0	912	0	28	28	27	12/20/2027	4.C
..45321*-AA-5	Implus Footcare LLC/Spenco Incremental		09/29/2023	CA_CASH_CLOSE		344	344	343	344	0	0	0	0	0	344	0	0	0	0	04/30/2024	3.C PL
..45686@-AB-0	Infrastripe LLC		09/29/2023	CA_CASH_CLOSE		6,245	6,245	6,141	6,183	0	0	0	0	0	6,183	0	62	62	0	09/30/2024	3.A PL
..45763F-AN-8	lnmar Inc-INMARI TL 1L USD		09/14/2023	CA_CASH_CLOSE		915,123	915,123	869,367	893,990	0	0	0	0	0	893,990	0	21,133	21,133	0	05/01/2024	4.C FE
..46126#-AA-6	IntraPac International LLC/U.S. Term Loa		07/21/2023	CA_CASH_CLOSE		290,896	290,896	284,351	287,126	0	0	0	0	0	287,126	0	3,770	3,770	0	01/11/2026	3.B PL
..46126#-AB-4	INTRAPAC PARENT INC. - FIRST AMENDMENT T		07/21/2023	CA_CASH_CLOSE		130,001	130,001	130,001	130,001	0	0	0	0	0	130,001	0	0	0	0	01/11/2026	5.B GI
..46127*-AA-9	Invesco Private Credit Opportunities Hol		08/11/2023	CA_CASH_CLOSE		4,000,000	4,000,000	4,000,000	100,000	0	0	0	0	0	4,000,000	0	0	0	97,684	09/23/2032	1.F Z
..47235#-AA-2	JEFFERIES DIRECT LENDING FUND II SPE LLC		09/20/2023	CA_CASH_CLOSE		2,521,383	2,521,383	2,521,383	2,521,383	0	0	0	0	0	2,521,383	0	0	0	64,991	06/17/2031	2.C PL
..47236#-AA-1	JEFFERIES DIRECT LENDING OFFSHORE FD II		09/20/2023	CA_CASH_CLOSE		941,487	941,487	941,487	941,487	0	0	0	0	0	941,487	0	0	0	12,141	06/17/2031	2.C PL
..47236*-AA-5	JEFFERIES DIRECT LENDING OFFSHORE FUND I		09/20/2023	CA_CASH_CLOSE		496,477	496,477	496,477	496,477	0	0	0	0	0	496,477	0	0	0	40,916	06/17/2031	2.C PL
..47236#-AA-3	JEFFERIES DIRECT LENDING FD II C SPE LLC		09/20/2023	CA_CASH_CLOSE		500,465	500,465	500,465	500,465	0	0	0	0	0	500,465	0	0	0	5,338	06/17/2031	2.C PL
..47237#-AA-0	JEFFERIES DIRECT LENDING OFFSHORE FUND I		09/20/2023	CA_CASH_CLOSE		260,109	260,109	260,109	260,109	0	0	0	0	0	260,109	0	0	0	18,323	06/17/2031	2.B PL
..48240@-AB-3	K2 Insurance Services LLC/Delayed Draw		09/11/2023	CA_CASH_CLOSE		801,798	801,798	801,798	801,798	0	0	0	0	0	801,798	0	0	0	59,226	07/01/2026	2.B Z
..48773#-AA-8	Kellermeyer Bergensons Services LLC/Ter		09/29/2023	CA_CASH_CLOSE		900	900	891	894	0	0	0	0	0	894	0	6	6	24	11/07/2026	4.A PL
..48773#-AB-6	Kellermeyer Bergensons Services LLC/202		09/29/2023	CA_CASH_CLOSE		198	198	198	198	0	0	0	0	0	198	0	0	0	5	11/07/2026	4.A PL
..48773*-AC-4	KELLERMAYER BERGENSONS SERVICES LLC - 2		09/29/2023	CA_CASH_CLOSE		3,620	3,620	3,620	3,620	0	0	0	0	0	3,620	0	0	0	0	11/07/2026	4.A PL
..48881#-AB-5	Kene Acquisition Inc./Term Loan 8/19		09/29/2023	CA_CASH_CLOSE		3,081	3,081	3,003	3,030	0	0	0	0	0	3,030	0	51	51	137	08/10/2026	3.B PL
..48881#-AC-3	Kene Acquisition Inc./Delayed Draw Term		09/29/2023	CA_CASH_CLOSE		1,026	1,026	1,026	1,026	0	0	0	0	0	1,026	0	0	0	0	08/10/2026	3.B PL
..49375@-AA-0	DistroKid Senior Term Loa		09/29/2023	CA_CASH_CLOSE		17,414	17,414	17,065	17,080	0	0	0	0	0	17,080	0	334	334	3,713	09/30/2027	5.A
..000000-00-0	Technosylva - Tranche A Term Loan		08/31/2023	CA_CASH_CLOSE		1,494	1,494	1,464	1,464	0	0	0	0	0	1,464	0	30	30	143	09/15/2028	4.C Z
..50050@-AC-6	KONA BUYER LLC 2022 INCREMENTAL TERM LN		09/29/2023	CA_CASH_CLOSE		12,500	12,500	12,500	12,250	0	0	0	0	0	12,250	0	250	250	12,009	12/11/2027	4.B
..50541#-AA-5	Laboratories Bidco LLC/Term Loan 9/19		09/29/2023	CA_CASH_CLOSE		1,133	1,133	1,133	1,133	0	0	0	0	0	1,133	0	0	0	110	07/23/2027	3.C PL
..50541#-AB-3	Laboratories Bidco LLC/Second Amendment		09/29/2023	CA_CASH_CLOSE		180	180	180	180	0	0	0	0	0	180	0	0	0	18	07/23/2027	3.C PL
..50541#-AC-1	LABORATORIES BIDCO LLC - THIRD AMENDMENT		09/29/2023	CA_CASH_CLOSE		1,151	1,151	1,151	1,151	0	0	0	0	0	1,151	0	0	0	81	07/23/2027	3.C PL
..50541#-AD-9	LABORATORIES BIDCO LLC - TL		09/29/2023	CA_CASH_CLOSE		5,445	5,445	5,445	5,445	0	0	0	0	0	5,445	0	0	0	449	07/23/2027	3.C PL
..51206#-AA-9	LAKERS BUYER INC. - TERM LOAN		09/13/2023	CA_CASH_CLOSE		1,177	1,177	1,177	1,177	0	0	0	0	0	1,177	0	0	0	29	03/22/2027	3.B PL
..51206#-AB-7	LAKERS BUYER INC. - INITIAL DELAYED DRA		09/29/2023	CA_CASH_CLOSE		196	196	196	196	0	0	0	0	0	196	0	0	0	3	03/22/2027	3.B PL
..52172*-AA-1	LeadsOnline - Term Loan		09/29/2023	CA_CASH_CLOSE		10,438	10,438	10,255	10,255	0	0	0	0	0	10,255	0	183	183	1,168	02/07/2028	5.B GI
..53173#-AA-4	LIDO ADVISORS LLC - INITIAL TERM LOAN		09/29/2023	CA_CASH_CLOSE		558	558	558	558	0	0	0	0	0	558	0	0	0	29	06/15/2027	2.C PL
..53173#-AB-2	LIDO ADVISORS LLC - DELAYED DRAW TERM L		09/29/2023	CA_CASH_CLOSE		698	698	698	698	0	0	0	0	0	698	0	0	0	13	06/15/2027	2.C PL
..53186*-AB-1	LIFE EXTENSION INSTITUTE INC RESTATEMENT		09/30/2023	CA_CASH_CLOSE		9,441	9,441	9,441	9,441	0	0	0	0	0	9,441	0	0	0	1,272	02/19/2024	5.A
..54288@-AC-2	LONG TERM CARE GROUP INC AMENDMENT NO 1		09/30/2023	CA_CASH_CLOSE		839	839	822	822	0	0	0	0	0	822	0	17	17	121	09/08/2027	4.C
..55183*-AC-7	Lynx Franchising LLC - 2021-09 Increment		09/29/2023	CA_CASH_CLOSE		7,378	7,378	7,231	7,231	0	0	0	0	0	7,231	0	148	148	1,133	12/23/2026	4.C
..55343@-AC-2	MUX VENTURE SENIOR TL L+1.682 04/30/2031		07/20/2023	CA_CASH_CLOSE		102,588	102,588	102,588	102,599	0	0	0	0	0	102,599	0	(11)	(11)	0	04/30/2031	1.F PL
..55343@-AF-5	MUX Venture Mgmt III LLC Senior TL		07/28/2023	CA_CASH_CLOSE		50,000	50,000	50,000	0	0	0	0	0	0	50,000	0	0	0	(616)	07/30/2032	1.F PL
..55371*-AU-9	MRI Software LLC/Term Loan 2/20		09/29/2023	CA_CASH_CLOSE		1,762	1,762	1,762	1,762	0	0	0	0	0	1,762	0	0	0	0	02/10/2026	4.A PL
..55417#-AA-5	M360 MM Series LLC - Series 2022-1 Secur		08/08/2023	CA_CASH_CLOSE		4,943,779	4,943,779	4,943,779	4,875,795	0	0	0	0	0	4,943,779	0	0	0	259,340	06/24/2027	1.F PL
..56629@-AA-9	MARCONI YELLOWSTONE BUYER INC. - TERM LO		09/29/2023	CA_CASH_CLOSE		816	816	800	801	0	0	0	0	0	801	0	15	15	0	06/23/2028	3.C PL
..56629@-AB-7	MARCONI YELLOWSTONE BUYER INC. - DELAYED		09/29/2023	CA_CASH_CLOSE		549	549	549	549	0	0	0	0	0	549	0	0	0	22	06/23/2028	3.C PL

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Ident-ification	Description	For-eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid-eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/(Decrease)	Current Year's (Amor-tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn-ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con-tractual Maturity Date	NAIC Desig-nation, NAIC Desig-nation Modifier and SVO Admini-strative Symbol
..57780@-AA-2	MAVERICK ACQUISITION INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		1,561	1,561	1,561	1,561	0	0	0	0	0	1,561	0	0	0	0	06/01/2027	5.B PL
..57780@-AB-0	MAVERICK ACQUISITION INC. - DELAYED DRA		09/29/2023	CA_CASH_CLOSE		354	354	350	350	0	0	0	0	0	350	0	4	4	0	06/01/2027	5.B PL
..59509#-AA-6	Micromeritics Instrument Corp./Term Loan ...		09/29/2023	CA_CASH_CLOSE		1,381	1,381	1,381	1,381	0	0	0	0	0	1,381	0	0	0	29	12/18/2025	2.B PL
..60937@-AA-8	MONICA HOLDOO (US) INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		3,958	3,958	3,958	3,958	0	0	0	0	0	3,958	0	0	0	0	01/07/2028	2.C PL
..62900*-AA-9	NCWS INTERMEDIATE INC. - DELAYED DRAW T		09/29/2023	CA_CASH_CLOSE		216	216	216	216	0	0	0	0	0	216	0	0	0	2	12/29/2026	3.A PL
..62900*-AB-7	NCWS INTERMEDIATE INC. - CLOSING DATE T		09/29/2023	CA_CASH_CLOSE		722	722	722	722	0	0	0	0	0	722	0	0	0	35	12/29/2026	3.A PL
..62931*-AA-2	NMC Skincare Intermediate Holdings II L		09/29/2023	CA_CASH_CLOSE		1,459	1,459	1,425	1,442	0	0	0	0	0	1,442	0	16	16	163	10/31/2024	3.B PL
..62931*-AC-8	NMC Skincare Intermediate Holdings II L		09/29/2023	CA_CASH_CLOSE		487	487	487	487	0	0	0	0	0	487	0	0	0	50	10/31/2024	3.B PL
..63086*-AA-3	Narda-MITEQ - Incremental Term Loan		09/29/2023	CA_CASH_CLOSE		4,152	4,152	4,079	4,079	0	0	0	0	0	4,079	0	73	73	568	12/06/2027	5.B GI
..64027*-AA-3	NELIPAK HOLDINGS US TL L+425 07/02/2026		09/29/2023	CA_CASH_CLOSE		3,145	3,145	3,082	3,105	0	0	0	0	0	3,105	0	41	41	139	07/02/2026	3.A PL
..64027*-AB-1	NELIPAK HOLDING INC TL L+425 07/02/2026		09/29/2023	CA_CASH_CLOSE		469	469	459	463	0	0	0	0	0	463	0	6	6	21	07/02/2026	3.A PL
..65658*-AA-2	NORTH HAVEN FALCON BUYER LLC - TERM LOA		09/29/2023	CA_CASH_CLOSE		705	705	705	705	0	0	0	0	0	705	0	0	0	0	05/19/2027	3.B PL
..65658*-AB-0	NORTH HAVEN FALCON BUYER LLC - DELAYED		09/29/2023	CA_CASH_CLOSE		117	117	117	117	0	0	0	0	0	117	0	0	0	2	05/19/2027	3.B PL
..65716*-AB-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		09/29/2023	CA_CASH_CLOSE		305	305	305	305	0	0	0	0	0	305	0	0	0	5	09/15/2027	2.C PL
..65716@-AA-4	NORTH AMERICAN SCIENCE ASSOCIATES INC.		09/29/2023	CA_CASH_CLOSE		963	963	963	963	0	0	0	0	0	963	0	0	0	75	09/15/2027	2.C PL
..65716@-AB-2	NORTH AMERICAN SCIENCE ASSOCIATES INC.		09/29/2023	CA_CASH_CLOSE		140	140	140	140	0	0	0	0	0	140	0	0	0	0	09/15/2027	2.C PL
..66703*-AA-9	Northstar Recycling - Senior Term Loan		09/29/2023	CA_CASH_CLOSE		3,232	3,232	3,167	3,170	0	0	0	0	0	3,170	0	62	62	770	10/01/2027	4.B
..67096@-AA-0	OMH-HealthEdge Holdings LLC/Term Loan 9		09/29/2023	CA_CASH_CLOSE		861	861	861	861	0	0	0	0	0	861	0	0	0	38	10/24/2025	2.A PL
..67096@-AC-6	OMH-HEALTHEDGE HOLDINGS LLC - FIRST AME		09/29/2023	CA_CASH_CLOSE		500	500	500	500	0	0	0	0	0	500	0	0	0	35	10/24/2025	2.A PL
..67100*-AA-2	OC III LVS XXVI LP - Secured Loan Facili		09/20/2023	CA_CASH_CLOSE		7,588,055	7,588,055	7,588,055	7,588,055	0	0	0	0	0	7,588,055	0	0	0	333,366	11/09/2030	1.F PL
..67115E-AC-4	Omega Holdings - Senior Term Loan		09/30/2023	CA_CASH_CLOSE		1,015	1,015	995	995	0	0	0	0	0	995	0	20	20	1,044	03/31/2029	5.B GI
..67116#-AA-4	OSP HAMILTON PURCHASER LLC INITIAL TERM		09/29/2023	CA_CASH_CLOSE		21,984	21,984	21,544	21,546	0	(1)	0	(1)	0	21,545	0	439	439	2,598	12/27/2027	5.B GI
..67119*-AA-5	OT-MM REDF3 Seller, LLC - Series 2022-2		09/15/2023	CA_CASH_CLOSE		4,296,764	4,296,764	4,296,764	4,296,764	0	0	0	0	0	4,296,764	0	0	0	70,474	11/16/2027	1.F PL
..67119*-AB-3	OT-MM REDF3 Seller, LLC - Series 2022-1		09/15/2023	CA_CASH_CLOSE		187,702	187,702	187,702	187,702	0	0	0	0	0	187,702	0	0	0	2,953	11/02/2027	1.F PL
..68687@-AA-3	ORO Funding I LLC - Term Loan		09/15/2023	CA_CASH_CLOSE		17,939	17,939	17,939	17,939	0	0	0	0	0	17,939	0	0	0	21,057	05/25/2029	1.E PL
..69398*-AD-7	PDI TA Holdings Inc. - 2019 1st Lien Ter		09/29/2023	CA_CASH_CLOSE		28,000	28,000	27,969	27,984	0	0	0	0	0	27,984	0	16	16	0	10/24/2024	5.A
..69451*-AA-7	PPW AERO BUYER INC INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		7,626	7,626	7,321	0	0	0	0	0	0	7,321	0	305	305	339	02/15/2029	5.B GI
..70466@-AA-6	Polymer Solutions Group Holdings LLC - T		07/03/2023	VARIOUS		2,071,509	2,071,509	2,071,509	2,071,509	0	0	0	0	0	2,071,509	0	0	0	232,672	09/30/2023	3.B Z
..70476@-AJ-4	PetVet Care Centers, LLC - 2020 Incremen		07/07/2023	CA_CASH_CLOSE		366,358	366,358	366,358	366,358	0	0	0	0	0	366,358	0	0	0	0	02/14/2025	4.B FE
..70559@-AD-8	Pegasus Global Enterprise Holdings LLC		07/05/2023	CA_CASH_CLOSE		1,196	1,196	1,196	1,196	0	0	0	0	0	1,196	0	0	0	93	05/29/2025	3.A Z
..71571E-AD-1	PES Holdings LLC-PHIENE PIK-TERM C-EXIT		09/30/2023	MATURITY TY		10,242	10,242	10,242	10,242	0	0	0	0	0	10,242	0	0	0	0	0	6 *
..73103@-AA-9	Polara - Term Loan		09/29/2023	CA_CASH_CLOSE		7,267	7,267	7,122	7,124	0	(1)	0	(1)	0	7,123	0	145	145	940	12/03/2027	5.A
..73103@-AB-7	Polara - 2022 Incremental Term Loan		09/29/2023	CA_CASH_CLOSE		6,684	6,684	6,550	6,550	0	0	0	0	0	6,550	0	134	134	453	12/03/2027	5.A
..74066*-AA-4	PREMIER SPECIALTIES INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		1,478	1,478	1,478	1,478	0	0	0	0	0	1,478	0	0	0	0	08/20/2027	3.A PL
..74140#-AA-0	Project Potter Buyer LLC - Term Loan		09/29/2023	CA_CASH_CLOSE		3,419	3,419	3,419	3,419	0	0	0	0	0	3,419	0	0	0	317	04/17/2027	4.C Z
..74140#-AB-8	PROJECT POTTER BUYER LLC - 2020 INCREME		09/29/2023	CA_CASH_CLOSE		751	751	751	751	0	0	0	0	0	751	0	0	0	55	04/23/2027	3.C Z
..74140#-AC-6	PROJECT POTTER BUYER LLC - TERM LOAN		09/29/2023	CA_CASH_CLOSE		854	854	854	854	0	0	0	0	0	854	0	0	0	54	04/23/2027	3.C Z
..74140#-AD-4	PROJECT POTTER BUYER LLC - DELAYED DRAW		09/29/2023	CA_CASH_CLOSE		290	290	290	290	0	0	0	0	0	290	0	0	0	21	04/23/2027	3.C Z
..74273J-AE-3	Pro Mach Inc. First Lien Term		09/29/2023	CA_CASH_CLOSE		5,187	5,187	5,187	5,187	0	0	0	0	0	5,187	0	0	0	799	08/31/2028	4.C FE
..74309#-AB-5	PRG 9/20 Last Out		07/27/2023	CA_CASH_CLOSE		2,742	2,742	2,742	2,742	0	0	0	0	0	2,742	0	0	0	0	08/21/2024	4.C PL
..74309#-AC-3	PRODUCTION RESOURCE GROUP L.L.C. - DELA		07/05/2023	CA_CASH_CLOSE		355	355	355	355	0	0	0	0	0	355	0	0	0	0	08/21/2024	5.B GI
..74309#-AD-1	PRODUCTION RESOURCE GROUP L.L.C. - SECO		07/05/2023	CA_CASH_CLOSE		3,456	3,456	3,456	0	0	0	0	0	0	3,456	0	0	0	0	08/21/2024	5.B GI
..74588@-AB-6	Puma Buyer TL 2029		08/30/2029	CA_CASH_CLOSE		100,000	100,000	93,000	93,000	0	0	0	0	0	93,000	0	7,000	7,000	0	07/14/2029	4.C PL
..74923@-AB-3	RoadOne IntermodaLogistics - Term Loan		09/29/2023	CA_CASH_CLOSE		3,062	3,062	2,916	0	0	0	0	0	0	2,916	0	145	145	67,225	12/30/2028	4.C
..74923@-AC-1	R1 HLDGS LLC DELAYED DRAW TERM LN		09/29/2023	CA_CASH_CLOSE		239	239	239	0	0	0	0	0	0	239	0	0	0	27	12/30/2028	4.C
..75000#-AE-8	RSC Acquisition Inc./Term Loan 10/19		09/29/2023	CA_CASH_CLOSE		3,222	3,222	3,222	3,222	0	0	0	0	0	3,222	0	0	0	152	10/30/2026	3.C PL

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..75279*-AA-4	RANDYS HLDGS INC INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		4,137	4,137	4,013	4,013	0	0	0	0	0	4,013	0	124	124	578	10/31/2028	3.B PL
..75333*-AA-8	RFS ASSET SECURITIZATION III, LLC - 1st		09/30/2023	CA_CASH_CLOSE		1,692,283	1,692,283	1,692,283	1,692,283	0	0	0	0	0	1,692,283	0	0	0	59,623	03/30/2029	1.F PL
..75333*-AB-6	RFS ASSET SECURITIZATION III, LLC - 1st		09/30/2023	CA_CASH_CLOSE		230,481	230,481	230,481	230,481	0	0	0	0	0	230,481	0	0	0	(395,364)	03/30/2029	2.B PL
..75458-AA-1	RAWLINGS SPORTING GOODS COMPANY INC - T		09/29/2023	CA_CASH_CLOSE		4,235	4,235	4,235	4,235	0	0	0	0	0	4,235	0	0	0	209	12/31/2026	3.B PL
..75734@-AB-9	Reddy Ice Holdings Inc./Term Loan 7/19		09/29/2023	CA_CASH_CLOSE		11,843	11,843	11,465	11,622	0	0	0	0	0	11,622	0	221	221	971	07/01/2025	3.B Z
..75734@-AC-7	Reddy Ice Holdings Inc./Delayed Draw Te		09/29/2023	CA_CASH_CLOSE		4,555	4,555	4,555	4,555	0	0	0	0	0	4,555	0	0	0	81	07/01/2025	3.B Z
..75988*-AA-6	RENOVATION ACQUISITION INC TERM LOAN		09/29/2023	CA_CASH_CLOSE		24,272	24,272	23,665	23,677	0	0	0	0	0	23,677	0	595	595	2,641	11/15/2027	4.C
..76028@-AA-4	REPAIRIFY INC. - INITIAL TERM LOAN		09/29/2023	CA_CASH_CLOSE		938	938	938	938	0	0	0	0	0	938	0	0	0	0	06/14/2027	1.G PL
..78013#-AA-5	ROYAL BUYER LLC INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		4,550	4,550	4,459	4,459	0	0	0	0	0	4,459	0	91	91	0	08/31/2028	5.B GI
..78029#-AB-5	RMA Companies - Term Loan		09/30/2023	CA_CASH_CLOSE		5,547	5,547	5,436	5,436	0	0	0	0	0	5,436	0	111	111	671	12/30/2026	2.B PL
..78432@-AB-8	SFE Intermediate HoldCo LLC/Incremental		09/29/2023	CA_CASH_CLOSE		1,818	1,818	1,781	1,802	0	0	0	0	0	1,802	0	16	16	72	07/31/2024	2.B PL
..78472Z-MM-6	SPV FACILITY I LLC - Senior Secured Revo		09/01/2023	CA_CASH_CLOSE		3,700,000	3,700,000	3,700,000	0	0	0	0	0	0	3,700,000	0	0	0	27,165	03/31/2033	1.F Z
..78488C-AH-3	SeaWorld Parks & Entertainment Inc. - 2		09/29/2023	CA_CASH_CLOSE		7,500	7,500	7,425	7,429	0	0	0	0	0	7,429	0	71	71	1,142	08/25/2028	3.B FE
..78494*-AA-7	SPC RECEIVABLES FDG II TR SEC'D REV LN FA		09/21/2023	CA_CASH_CLOSE		12,302,557	12,302,557	12,302,557	12,302,557	0	0	0	0	0	12,302,557	0	0	0	299,840	10/19/2029	1.G PL
..78642*-AA-4	SAFE HOME SECURITY INC. - TERM LOAN		07/03/2023	CA_CASH_CLOSE		1,440	1,440	1,440	1,440	0	0	0	0	0	1,440	0	0	0	100	08/04/2024	2.C PL
..78642*-AB-2	SAFE HOME SECURITY INC. - DELAYED DRAW T		07/03/2023	CA_CASH_CLOSE		113	113	113	113	0	0	0	0	0	113	0	0	0	5	08/04/2024	2.C PL
..79400@-AA-6	Saldon Holdings Inc./First Amendment Te		09/29/2023	CA_CASH_CLOSE		875	875	866	870	0	0	0	0	0	870	0	5	5	67	03/13/2025	3.B PL
..79400@-AB-4	Saldon Holdings Inc./Term Loan 3/19		09/29/2023	CA_CASH_CLOSE		5,426	5,426	5,290	5,353	0	0	0	0	0	5,353	0	72	72	454	03/13/2025	3.B PL
..79400@-AC-2	SALDON HOLDINGS INC. - SECOND AMENMENT		09/29/2023	CA_CASH_CLOSE		469	469	469	469	0	0	0	0	0	469	0	0	0	39	03/13/2025	5.B GI
..80586#-AA-8	Scaled Agile Inc. - 2021 Delayed Draw Te		09/29/2023	CA_CASH_CLOSE		425	425	425	425	0	0	0	0	0	425	0	0	0	4	12/15/2028	2.B PL
..80586#-AB-6	Scaled Agile Inc. - 2021 Unitranche Term		09/29/2023	CA_CASH_CLOSE		8,740	8,740	8,567	8,567	0	(1)	0	(1)	0	8,566	0	174	174	2,115	12/16/2028	2.B PL
..82565#-AA-9	SHUR-CO ACQUISITION INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		4,219	4,219	4,219	4,219	0	0	0	0	0	4,219	0	0	0	0	06/30/2027	4.C
..000000-00-0	Smartling Inc. - Delayed Draw Term Loan		09/29/2023	CA_CASH_CLOSE		2,167	2,167	2,167	0	0	0	0	0	0	2,167	0	0	0	45	10/26/2027	4.C Z
..83176*-AA-2	Smartling Inc. - Term Loan		09/29/2023	CA_CASH_CLOSE		15,172	15,172	15,172	15,172	0	0	0	0	0	15,172	0	0	0	1,879	11/08/2027	5.B GI
..83425*-AA-1	SOLO BUYER LP INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		5,652	5,652	5,510	5,510	0	0	0	0	0	5,510	0	141	141	(28)	12/01/2029	5.B GI
..84724*-AA-3	Sparus Holdings LLC - 1st Lien Term Loan		09/29/2023	CA_CASH_CLOSE		3,226	3,226	3,153	3,153	0	0	0	0	0	3,153	0	73	73	434	03/19/2027	4.C
..84724*-AB-1	Sparus Holdings LLC - Delayed Draw Term		09/29/2023	CA_CASH_CLOSE		509	509	509	0	0	0	0	0	0	509	0	0	0	44	03/19/2027	4.C
..84724@-AA-5	Spatial Business Systems - Senior Term L		09/29/2023	CA_CASH_CLOSE		2,539	2,539	2,476	2,476	0	0	0	0	0	2,476	0	63	63	401	09/30/2028	5.B GI
..84967#-AA-9	SPRING INSURANCE SOLUTIONS LLC - INITIA		09/29/2023	CA_CASH_CLOSE		1,108	1,108	1,108	1,108	0	0	0	0	0	1,108	0	0	0	0	11/24/2025	3.A PL
..84967#-AB-7	SPRING INSURANCE SOLUTIONS LLC - DELAYE		09/29/2023	CA_CASH_CLOSE		188	188	188	188	0	0	0	0	0	188	0	0	0	0	11/24/2025	3.A PL
..85789#-AA-2	STEALTH HOLDING LLC - U.S. INITIAL TERM		07/03/2023	CA_CASH_CLOSE		575	575	575	575	0	0	0	0	0	575	0	0	0	0	03/02/2026	4.A PL
..86662#-AA-2	SUN ACQUIRER CORP		09/29/2023	CA_CASH_CLOSE		2,484	2,484	2,484	2,484	0	0	0	0	0	2,484	0	0	0	204	09/08/2028	3.B PL
..86662#-AB-0	SUN ACQUIRER CORP		09/29/2023	CA_CASH_CLOSE		1,729	1,729	1,729	0	0	0	0	0	0	1,729	0	0	0	84	09/08/2028	3.B PL
..86738*-AA-6	Sunk Rock Foundry Partners LP/Term Loan		09/29/2023	CA_CASH_CLOSE		3,055	3,055	2,994	3,034	0	0	0	0	0	3,034	0	21	21	81	10/31/2023	3.A PL
..86822@-AA-1	SUPERJET BUYER LLC INITIAL TERM LN		09/29/2023	CA_CASH_CLOSE		11,587	11,587	11,356	11,356	0	0	0	0	0	11,356	0	232	232	2,469	12/30/2027	5.A
..87300*-AB-0	THG Acquisition LLC - 2019 Term Loan		09/29/2023	CA_CASH_CLOSE		1,063	1,063	1,063	1,063	0	0	0	0	0	1,063	0	0	0	134	12/02/2026	4.C
..87300*-AC-8	THG ACQUISITION LLC Delayed Draw Term LN		09/29/2023	CA_CASH_CLOSE		298	298	298	298	0	0	0	0	0	298	0	0	0	45	12/02/2026	4.C
..87304@-AA-6	SECOND AMENDMENT INCREMENTAL TERM LOAN -		09/29/2023	CA_CASH_CLOSE		376	376	376	376	0	0	0	0	0	376	0	0	0	9	08/30/2026	3.B PL
..87304@-AB-4	TOP HAWKER INTERMEDIATE LLC - DELAYED DR		09/29/2023	CA_CASH_CLOSE		418	418	418	418	0	0	0	0	0	418	0	0	0	17	08/28/2026	3.B PL
..87326#-AC-4	TA/WEG HOLDINGS LLC - AUGUST 2021 DELAY		07/03/2023	CA_CASH_CLOSE		130	130	130	130	0	0	0	0	0	130	0	0	0	0	10/04/2027	3.A PL
..87593F-AN-8	Tank Holding Corp. - 2022 Term Loan		09/29/2023	CA_CASH_CLOSE		23,691	23,691	23,158	23,158	0	0	0	0	0	23,158	0	533	533	2,503	03/31/2028	4.B PL
..88033#-AA-0	Tencarva Machinery Company - Senior Term		09/29/2023	CA_CASH_CLOSE		6,238	6,238	6,120	6,120	0	0	0	0	0	6,120	0	117	117	832	12/20/2027	5.A
..88033#-AB-8	Tencarva Machinery Company		09/29/2023	CA_CASH_CLOSE		1,056	1,056	1,056	1,056	0	0	0	0	0	1,056	0	0	0	593	12/20/2027	5.A
..88167#-AA-8	Tetragon Financial Group (Delaware) LLC		08/04/2023	CA_CASH_CLOSE		5,000,000	5,000,000	5,000,000	1,500,000	0	0	0	0	0	5,000,000	0	0	0	453,236	07/15/2032	1.F PL
..88233F-AK-6	Vistra Operations Co LLC-VST TL B3 1L US		09/29/2023	CA_CASH_CLOSE		27,391	27,391	24,925	25,678	0	0	0	0	0	25,678	0	1,713	1,713	1,819	12/31/2025	2.C FE
..88732#-AA-4	TIMECLOCK PLUS LLC - DELAYED DRAW TERM		09/29/2023	CA_CASH_CLOSE		420	420	420	420	0	0	0	0	0	420	0	0	0	17	08/28/2026	4.C PL

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..88732#-AC-0	TimeClock Plus LLC/Term Loan 8/19		09/29/2023	CA_CASH_CLOSE		2,007	2,007	1,967	1,980	0	0	0	0	0	1,980	0	27	27	82	08/28/2026	4.C PL
..89617#-AB-4	Trident Maritime Systems Inc. - 2021 Ter		09/29/2023	CA_CASH_CLOSE		6,068	6,068	5,977	5,977	0	0	0	0	0	5,977	0	91	91	848	02/26/2027	4.B
..89989#-AF-1	Portfolio Group - Agency 1st Lien Term L		09/30/2023	CA_CASH_CLOSE		3,503	3,503	3,433	3,433	0	0	0	0	0	3,433	0	68	68	258	12/02/2025	4.B PL
..89989#-AG-9	TURBO BUYER INC AMEND NO 4 DDTL		09/30/2023	CA_CASH_CLOSE		2,627	2,627	2,627	2,627	0	0	0	0	0	2,627	0	0	0	192	12/02/2025	4.B PL
..89989#-AH-7	TURBO BUYER INC AMEND NO 5 - Delayed Dra		09/30/2023	CA_CASH_CLOSE		525	525	525	525	0	0	0	0	0	525	0	0	0	27	12/02/2025	4.B PL
..90139#-AA-1	Twin Brook Capital Funding XIII WSPV, LL		09/06/2023	CA_CASH_CLOSE		319,600	319,600	319,600	319,600	0	0	0	0	0	319,600	0	0	0	18,343	10/18/2028	1.E PL
..90140#-AA-0	Twin Brook Capital Funding XIV WSPV, LLC		09/06/2023	CA_CASH_CLOSE		295,542	295,542	295,542	295,542	0	0	0	0	0	295,542	0	0	0	19,230	10/18/2028	1.E PL
..90380#-AA-7	US SALT INVESTORS LLC - INITIAL TERM LO		09/29/2023	CA_CASH_CLOSE		8,438	8,438	8,438	8,438	0	0	0	0	0	8,438	0	0	0	798	07/19/2028	3.A PL
..90385P-AC-4	Ultimus Group Midco LLC-/ULTGRP TL 1L US		09/29/2023	CA_CASH_CLOSE		2,894	2,894	2,836	2,860	0	0	0	0	0	2,860	0	34	34	202	02/01/2026	4.B PL
..91839#-AE-6	VPROP OPERATING LLC - TRANCHE A		09/29/2023	CA_CASH_CLOSE		108,566	108,566	108,123	108,123	0	0	0	0	0	108,123	0	444	444	5,767	11/06/2024	5.A PL
..91860#-AA-6	VPC ASSET BACKED OPPORTUNISTIC CREDIT Ho		09/14/2023	CA_CASH_CLOSE		1,000,000	1,000,000	1,000,000	0	0	0	0	0	0	1,000,000	0	0	0	0	06/14/2029	1.F PL
..91867#-AA-7	VPC LEGAL FINANCE FUND HOLDINGS - Secure		09/13/2023	CA_CASH_CLOSE		142,857	142,857	142,857	142,857	0	0	0	0	0	142,857	0	0	0	5,069	10/14/2030	1.F Z
..92840#-AC-3	VistaPharm Inc./Term B-1 Loans 10/17		09/30/2023	MATURITY		(2,222,371)	(2,222,371)	(933,396)	0	0	0	(1,288,975)	1,288,975	0	(893,048)	0	(1,329,323)	(1,329,323)	0	04/30/2022	6. Z
..92843#-A#-0	Visual Edge Technology, Inc./Last Out T		09/29/2023	CA_CASH_CLOSE		2,014,228	2,014,228	2,013,872	0	0	0	0	0	0	2,013,872	0	356	356	0	12/31/2025	6. Z
..92943#-AB-5	W.R. Grace & Co. TL B		09/29/2023	CA_CASH_CLOSE		872	872	870	870	0	0	0	0	0	870	0	2	2	185	09/22/2028	4.A FE
..92974#-AB-7	WSHP FC ACQUISITION 2A TL L+625 03/30/20		09/29/2023	CA_CASH_CLOSE		3,337	3,337	3,337	3,337	0	0	0	0	0	3,337	0	0	0	0	03/28/2024	3.B PL
..92974#-AB-5	WSHP FC ACQUISITION LLC - SECOND AMENDME		09/29/2023	CA_CASH_CLOSE		4,161	4,161	4,161	4,161	0	0	0	0	0	4,161	0	0	0	0	03/28/2024	3.B PL
..92974#-AC-3	WSHP FC Acquisition LLC/Third Amendment		09/29/2023	CA_CASH_CLOSE		1,992	1,992	1,992	1,992	0	0	0	0	0	1,992	0	0	0	0	03/30/2027	3.B PL
..92974#-AD-1	WSHP FC ACQUISITION 1A TL L+650 03/30/20		09/29/2023	CA_CASH_CLOSE		833	833	806	821	0	0	0	0	0	821	0	12	12	0	03/28/2024	3.B PL
..92974#-AE-9	WSHP FC ACQUISITION 1A DDTL L+625 03/30/		09/29/2023	CA_CASH_CLOSE		524	524	524	524	0	0	0	0	0	524	0	0	0	0	03/28/2024	3.B PL
..92975#-AA-4	TA/WEG Holdings LLC/Term Loan 9/19		07/03/2023	CA_CASH_CLOSE		3,770	3,770	3,770	3,770	0	0	0	0	0	3,770	0	0	0	0	10/02/2025	3.A PL
..93000#-AA-9	WIEC Holdings II Corp - Term Loan		09/29/2023	CA_CASH_CLOSE		4,503	4,503	4,391	4,391	0	0	0	0	0	4,391	0	113	113	576	10/03/2028	4.C Z
..93279#-AA-3	WALNUT PARENT INC. - INITIAL TERM LOAN		09/11/2023	CA_CASH_CLOSE		3,693	3,693	3,693	3,693	0	0	0	0	0	3,693	0	0	0	118	11/09/2027	3.B PL
..94184#-AA-5	WATERMILL EXPRESS LLC - TERM LOAN FACIL		09/29/2023	CA_CASH_CLOSE		856	856	856	856	0	0	0	0	0	856	0	0	0	20	04/20/2027	3.B PL
..94184#-AB-3	WATERMILL EXPRESS LLC - DELAYED DRAW TE		09/29/2023	CA_CASH_CLOSE		82	82	82	82	0	0	0	0	0	82	0	0	0	1	04/20/2027	3.B PL
..94979#-AA-6	WELLNESS ACQUISITIONCO INC. - TERM LOAN		09/29/2023	CA_CASH_CLOSE		1,072	1,072	1,072	1,072	0	0	0	0	0	1,072	0	0	0	36	01/20/2027	2.C PL
..000000-00-0	Kings III - Delayed Draw Term Loan		09/29/2023	CA_CASH_CLOSE		52	52	52	0	0	0	0	0	0	52	0	0	0	140	07/07/2028	5.B GI
..96524K-AD-2	WHITEHORSE LIQUIDITY PARTNERS V-R LP, -C		09/15/2023	CA_CASH_CLOSE		483,710	483,710	483,710	483,710	0	0	0	0	0	483,710	0	0	0	39,984	12/15/2032	1.F Z
..96811#-AA-5	Wildcat BuyerCo Inc./Term Loan 2/20		09/29/2023	CA_CASH_CLOSE		615	615	615	615	0	0	0	0	0	615	0	0	0	0	02/27/2026	2.C PL
..96811#-AB-3	Wildcat BuyerCo Inc./Delayed Draw Term		09/29/2023	CA_CASH_CLOSE		322	322	322	322	0	0	0	0	0	322	0	0	0	0	02/27/2026	2.C PL
..97383#-AA-1	WINEBOW HOLDINGS INC. (VINTNER GROUP I		09/29/2023	CA_CASH_CLOSE		1,875	1,875	1,875	1,875	0	0	0	0	0	1,875	0	0	0	178	07/01/2025	3.C PL
..97959#-AA-3	Woodland Foods Inc - Term Loan		09/29/2023	CA_CASH_CLOSE		8,706	8,706	8,531	8,534	0	0	0	0	0	8,534	0	172	172	759	12/02/2027	5.A
..98415D-A#-3	XIFIN Inc./Term Loan 02/20		09/29/2023	CA_CASH_CLOSE		813	813	813	813	0	0	0	0	0	813	0	0	0	78	02/06/2026	3.A PL
..98876#-AA-3	ZB Holdco LLC - Term Loan		09/29/2023	CA_CASH_CLOSE		1,199	1,199	1,175	1,175	0	0	0	0	0	1,175	0	24	24	155	02/09/2028	5.A
..98876#-AB-1	ZB Holdco LLC - Delayed Draw Term Loan		09/29/2023	CA_CASH_CLOSE		599	599	599	0	0	0	0	0	0	599	0	0	0	51	02/09/2028	5.A
..000000-00-0	Technosylva - Tranche A Term Loan		08/31/2023	CA_CASH_CLOSE		99	99	97	97	0	0	0	0	0	97	0	2	2	10	12/14/2028	4.C Z
..000000-00-0	Cogeneity Global - Incremental Term Loan		09/29/2023	CA_CASH_CLOSE		1,223	1,223	1,186	0	0	0	0	0	0	1,186	0	37	37	48	02/14/2028	4.C Z
..000000-00-0	SBP Holding LP - Term Loan		08/31/2023	CA_CASH_CLOSE		5,081	5,081	4,903	0	0	0	0	0	0	4,903	0	178	178	156	01/31/2028	4.C Z
..000000-00-0	SBP Holding LP - Delayed Draw Term Loan		08/31/2023	CA_CASH_CLOSE		114	114	114	0	0	0	0	0	0	114	0	0	0	5	01/31/2028	4.C Z
..000000-00-0	VitalSource - 2023 Incremental Term Loan		07/11/2023	CA_CASH_CLOSE		12,500	12,500	12,125	0	0	0	0	0	0	12,125	0	375	375	274	06/01/2028	4.C Z
..000000-00-0	Luxury Line of Credit		07/11/2023	Bank Loan Barings		2,500,000	2,500,000	2,500,000	0	0	0	0	0	0	2,500,000	0	0	0	0	06/01/2026	3.
..000000-00-0	Conrex ML Portfolio 2019-01 - Term Loan		07/11/2023	CA_CASH_CLOSE		(1,129,761)	(1,129,761)	(1,129,761)	0	0	0	0	0	0	(1,129,761)	0	0	0	0	11/15/2024	2.A Z
..000000-00-0	HemaSource Inc. - 2023 Senior Term Loan		09/28/2023	CA_CASH_CLOSE		46,423	46,423	45,262	0	0	0	0	0	0	45,262	0	1,161	1,161	0	08/31/2029	4.C Z
..C9300#-AA-9	STEALTH HOLDING LLC - CANADIAN INITIAL T		07/03/2023	CA_CASH_CLOSE		703	703	703	703	0	0	0	0	0	703	0	0	0	0	03/02/2026	4.A PL
..C4800#-AA-5	IntraPac Canada Corporation/Canadian Ter		07/21/2023	CA_CASH_CLOSE		148,228	148,228	144,893	146,133	0	0	0	0	0	146,133	0	2,095	2,095	0	01/11/2026	3.B PL
..C8655#-AA-6	Syntax Systems Ltd - Senior Term Loan	A	09/29/2023	CA_CASH_CLOSE		3,373	3,373	3,339	3,339	0	0	0	0	0	3,339	0	34	34	740	10/29/2028	4.C

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

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
										11	12	13	14	15							
CUSIP Identification	Description	For- eign	Disposal Date	Name of Purchaser	Number of Shares of Stock	Consid- eration	Par Value	Actual Cost	Prior Year Book/ Adjusted Carrying Value	Unrealized Valuation Increase/ (Decrease)	Current Year's (Amor- tization)/ Accretion	Current Year's Other Than Temporary Impairment Recogn- ized	Total Change in Book/ Adjusted Carrying Value (11 + 12 - 13)	Total Foreign Exchange Change in Book /Adjusted Carrying Value	Book/ Adjusted Carrying Value at Disposal Date	Foreign Exchange Gain (Loss) on Disposal	Realized Gain (Loss) on Disposal	Total Gain (Loss) on Disposal	Bond Interest/ Stock Dividends Received During Year	Stated Con- tractual Maturity Date	NAIC Desig- nation, NAIC Desig- nation Modifier and SVO Admini- strative Symbol
..03979*-AA-9	RTI Surgical	C.....	09/29/2023	CA_CASH_CLOSE		15,573	15,573	15,573	15,573	0	0	0	0	0	15,573	0	0	0	1,259	07/20/2026	3.B PL
.000000-00-0	ION Trading Technologies EUR TLB (Mar '21)	B.....	09/29/2023	CA_CASH_CLOSE		5,428	5,428	5,139	0	0	0	0	0	0	5,139	(64)	353	289	0	04/01/2028	4.C Z
.000000-00-0	NF Holdco LLC - Term Loan	C.....	07/11/2023	CA_CASH_CLOSE		1,465	1,465	1,421	0	0	0	0	0	0	1,421	0	44	42	0	04/02/2029	4.C Z
..G3166*-AA-5	CIP VIII Holdings SPV L.P - Term Loan	C.....	09/15/2023	CA_CASH_CLOSE		2,040,512	2,040,512	2,040,512	2,040,512	0	0	0	0	0	2,040,512	0	0	0	111,198	12/14/2026	1.F PL
..G4301U-AF-1	Harbour Aircraft Investm Series 2017-1 C	C.....	09/30/2023	Bank Loan Barings		(5,709,373)	(5,746,148)	(5,709,441)	0	0	0	0	0	0	(5,709,441)	0	69	69	0	11/15/2037	3.C Z
..G6684@-AA-9	OHA Credit Solutions Master Fund I SPV,	C.....	08/17/2023	CA_CASH_CLOSE		2,843,095	2,843,095	2,843,095	2,843,095	0	0	0	0	0	2,843,095	0	0	0	1,048	12/16/2032	1.F PL
..G7349*-AA-6	Radius Aerospace Europe Limited/U.K. Ter	C.....	09/29/2023	CA_CASH_CLOSE		2,033	2,033	2,033	2,033	0	0	0	0	0	2,033	0	0	0	90	03/29/2025	3.B Z
..G7567*-AB-5	Lernen Bidco Limited EUR TLB1 (Nov'1	B.....	07/21/2023	Bank Loan Barings		1,101,276	1,112,400	1,014,000	0	0	0	0	0	0	1,014,000	28,875	58,401	87,276	0	10/25/2025	4.C Z
..70466@-AA-6	Polymer Solutions Group Holdings LLC - T		09/30/2023	Bank Loan Barings		2,074,524	2,074,524	2,074,524	2,074,524	0	0	0	0	0	2,074,524	0	0	0	0	09/30/2023	3.B Z
..28931@-AB-9	ELM II INC		08/25/2023	PAYDOWN		60,000	60,000	60,000	60,000	0	0	0	0	0	60,000	0	0	0	0	03/06/2025	3.
1909999999. Subtotal - Bonds - Unaffiliated Bank Loans						235,588,485	235,562,834	236,702,935	109,457,447	0	(6)	(1,288,975)	1,288,969	0	236,774,461	28,811	(1,214,787)	(1,185,976)	9,039,621	XXX	XXX
2509999997. Total - Bonds - Part 4						2,667,360,327	2,774,528,576	2,714,395,830	1,087,577,704	34,414	10,456,496	(1,184,045)	11,674,955	(9,700)	2,731,152,950	51,874	(63,844,492)	(63,792,618)	78,694,745	XXX	XXX
2509999998. Total - Bonds - Part 5						XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
2509999999. Total - Bonds						2,667,360,327	2,774,528,576	2,714,395,830	1,087,577,704	34,414	10,456,496	(1,184,045)	11,674,955	(9,700)	2,731,152,950	51,874	(63,844,492)	(63,792,618)	78,694,745	XXX	XXX
..45822P-20-4	Integrlys Holding Inc-INTEGRYS HOLDING IN		08/01/2023	CALL 25	200,000,000	5,000,000	200,000.00	4,982,000	0	0	0	0	0	0	4,982,000	0	18,000	18,000	0	0	2.B FE
..23281*-12-4	Cyprium Parallel Investors V LP		08/18/2023		29,888,000	2,988,773	2,988,773.00	2,988,773					0		2,988,773		0	0	0	0	2.A
4029999999. Subtotal - Preferred Stocks - Industrial and Miscellaneous (Unaffiliated) Redeemable Preferred						7,988,773	XXX	7,970,773	0	0	0	0	0	0	7,970,773	0	18,000	18,000	0	XXX	XXX
4509999997. Total - Preferred Stocks - Part 4						7,988,773	XXX	7,970,773	0	0	0	0	0	0	7,970,773	0	18,000	18,000	0	XXX	XXX
4509999998. Total - Preferred Stocks - Part 5						XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
4509999999. Total - Preferred Stocks						7,988,773	XXX	7,970,773	0	0	0	0	0	0	7,970,773	0	18,000	18,000	0	XXX	XXX
..013091-10-3	Albertsons Cos Inc-COMMON STOCK		08/08/2023	JONES TRADING INST	786,786,000	15,876,311	15,129,101	15,129,101	0	0	0	0	0	0	15,129,101	0	747,203	747,203	0		
..03743Q-10-8	APA Corp-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	4,236,000	167,142	163,223	163,223	0	0	0	0	0	0	163,223	0	3,919	3,919	2,118		
..127097-10-3	CABOT OIL & GAS CORP-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	2,191,000	58,834	61,501	53,833	7,669	0	0	0	7,669	0	61,501	0	(2,667)	(2,667)	1,687		
..25179M-10-3	DEVON ENERGY CORP-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	2,899,000	153,252	163,487	178,317	(14,830)	0	0	0	(14,830)	0	163,487	0	(10,235)	(10,235)	8,581		
..26875P-10-1	EOG Resources Inc-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	640,000	81,106	73,634	82,893	(9,259)	0	0	0	(9,259)	0	73,634	0	7,473	7,473	3,184		
..293792-10-7	ENTERPRISE PRODS PARTNERS L P COMMON UN1		08/24/2023	RILY	44,100,000	1,165,211	1,175,133	1,063,692	111,441	0	0	0	111,441	0	1,175,133	0	(9,922)	(9,922)	65,268		
..302491-30-3	FMC CORP-COMMON STOCK		08/17/2023	BLOOMBERG TRADEBOOK	1,000,000	88,399	110,510	124,800	(14,290)	0	0	0	(14,290)	0	110,510	0	(22,111)	(22,111)	1,740		
..42809H-10-7	HESS CORP-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	1,383,000	201,971	142,659	196,137	(53,478)	0	0	0	(53,478)	0	142,659	0	59,312	59,312	1,729		
..559080-10-6	MAGELLAN MIDSTREAM PARTNERS LP COMMON UN		09/25/2023	VARIOUS	150,668,000	8,235,589	7,826,784	6,510,630	(117,306)	0	0	0	(117,306)	0	7,826,784	0	408,805	408,805	436,823		
..58463J-30-4	Medical Properties Trust-COMMON STOCK RE		08/17/2023	BLOOMBERG TRADEBOOK	9,750,000	73,135	119,152	0	0	0	0	0	0	0	119,152	0	(46,017)	(46,017)	5,655		
..674599-10-5	Occidental Petroleum Cor-COMMON STOCK		07/24/2023	BLOOMBERG TRADEBOOK	2,587,000	161,513	157,764	162,955	(5,191)	0	0	0	(5,191)	0	157,764	0	3,749	3,749	1,268		
..682680-10-3	ONEOK INC COMMON STK		09/27/2023	VARIOUS	42,580,000	2,750,686	2,273,597	657,000	(21,872)	0	0	0	(21,872)	0	2,273,597	0	477,089	477,089	28,650		
..87484T-10-8	Talos Energy Inc-COMMON STOCK		08/22/2023	JONES TRADING INST	488,292,000	6,242,421	2,778,800	0	0	0	0	0	0	0	2,778,800	0	3,463,622	3,463,622	0		
..G9456A-10-0	Golar LNG Ltd-COMMON STOCK	C.....	07/18/2023	BLOOMBERG TRADEBOOK	9,500,000	225,916	257,443	216,505	40,938	0	0	0	40,938	0	257,443	0	(31,527)	(31,527)	2,375		
5019999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Publicly Traded						35,481,486	XXX	30,432,788	9,246,762	(76,178)	0	0	(76,178)	0	30,432,788	0	5,048,693	5,048,693	559,078	XXX	XXX
..31336Q-ZZ-5	FEDERAL HOME LOAN BANK CINCINNATI-R		09/12/2023	CALL 100	790,100	790,100	790,100	790,100	0	0	0	0	0	0	790,100	0	0	0	30,529		
5029999999. Subtotal - Common Stocks - Industrial and Miscellaneous (Unaffiliated) Other						790,100	XXX	790,100	790,100	0	0	0	0	0	790,100	0	0	0	30,529	XXX	XXX
5989999997. Total - Common Stocks - Part 4						36,271,586	XXX	31,222,888	10,036,862	(76,178)	0	0	(76,178)	0	31,222,888	0	5,048,693	5,048,693	589,607	XXX	XXX
5989999998. Total - Common Stocks - Part 5						XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
5989999999. Total - Common Stocks						36,271,586	XXX	31,222,888	10,036,862	(76,178)	0	0	(76,178)	0	31,222,888	0	5,048,693	5,048,693	589,607	XXX	XXX
5999999999. Total - Preferred and Common Stocks						44,260,359	XXX	39,193,661	10,036,862	(76,178)	0	0	(76,178)	0	39,193,661	0	5,066,693	5,066,693	589,607	XXX	XXX
6009999999 - Totals						2,711,620,686	XXX	2,753,589,491	1,097,614,566	(41,764)	10,456,496	(1,184,045)	11,598,777	(9,700)	2,770,346,611	51,874	(58,777,799)	(58,725,925)	79,284,352	XXX	XXX

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
0079999999. Subtotal - Purchased Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0149999999. Subtotal - Purchased Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
141932 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/06/2021	04/06/2028	.....	2,560,103	4073.94000000	61,186	.....	(66,382)	39,507	.....	44,590	.....	.....	(6,509)	.....	.....	.....	0003
141936 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/06/2021	04/06/2026	.....	643,934	4073.94000000	14,875	.....	(16,757)	7,494	.....	15,258	.....	.....	(2,216)	.....	.....	.....	0003
141931 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2021	04/20/2028	.....	2,131,255	4134.94000000	55,626	.....	(60,558)	36,221	.....	68,451	.....	.....	(5,917)	.....	.....	.....	0003
141935 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	04/20/2021	04/20/2026	.....	1,033,297	4134.94000000	25,316	.....	(28,543)	12,949	.....	27,648	.....	.....	(3,771)	.....	.....	.....	0003
141929 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2026	.....	2,934,227	4201.62000000	71,302	.....	(69,008)	37,096	.....	62,381	.....	.....	(10,621)	.....	.....	.....	0003
141934 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/06/2021	05/06/2028	.....	3,525,201	4201.62000000	93,418	.....	(87,403)	61,414	.....	52,123	.....	.....	(9,937)	.....	.....	.....	0003
139414 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/20/2026	.....	3,238,121	4159.12000000	79,334	.....	37,724	41,883	.....	68,589	.....	.....	(11,818)	.....	.....	.....	0003
141933 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2021	05/19/2028	.....	4,387,198	4159.12000000	117,577	.....	61,310	77,925	.....	66,305	.....	.....	(12,512)	.....	.....	.....	0003
142030 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/04/2021	06/05/2026	.....	3,793,322	4229.89000000	92,936	.....	40,279	49,851	.....	71,883	.....	.....	(13,836)	.....	.....	.....	0003
142031 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/04/2021	06/06/2028	.....	3,756,297	4229.89000000	99,542	.....	35,659	66,595	.....	43,282	.....	.....	(10,580)	.....	.....	.....	0003
142042 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/19/2026	.....	4,246,800	4166.45000000	104,896	.....	48,525	57,070	.....	99,752	.....	.....	(15,617)	.....	.....	.....	0003
142043 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/18/2021	06/20/2028	.....	5,895,992	4166.45000000	159,192	.....	81,131	107,372	.....	151,277	.....	.....	(16,921)	.....	.....	.....	0003
142044 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2021	07/06/2026	.....	4,766,527	4343.54000000	116,303	.....	56,067	64,394	.....	116,137	.....	.....	(17,324)	.....	.....	.....	0003
142045 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2021	07/06/2028	.....	3,597,757	4343.54000000	92,822	.....	47,395	63,237	.....	90,869	.....	.....	(9,874)	.....	.....	.....	0003
142024 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/20/2021	07/20/2026	.....	4,182,637	4323.06000000	98,710	.....	54,955	55,410	.....	84,176	.....	.....	(14,704)	.....	.....	.....	0003
142025 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/20/2021	07/20/2028	.....	2,039,052	4323.06000000	50,365	.....	27,370	34,587	.....	38,742	.....	.....	(5,358)	.....	.....	.....	0003
142046 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/06/2021	08/06/2026	.....	4,064,101	4436.52000000	95,100	.....	42,757	54,268	.....	87,017	.....	.....	(14,166)	.....	.....	.....	0003
142047 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/06/2021	08/04/2028	.....	3,826,358	4436.52000000	97,189	.....	46,633	67,367	.....	84,203	.....	.....	(10,347)	.....	.....	.....	0003
142048 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/20/2021	08/20/2026	.....	1,809,340	4441.67000000	41,977	.....	11,551	24,276	.....	34,913	.....	.....	(6,253)	.....	.....	.....	0003
142049 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/20/2021	08/18/2028	.....	2,137,781	4441.67000000	56,010	.....	8,837	39,130	.....	44,362	.....	.....	(5,963)	.....	.....	.....	0003
142050 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/03/2021	09/04/2026	.....	1,540,167	4535.43000000	43,125	.....	7,506	25,280	.....	15,706	.....	.....	(6,420)	.....	.....	.....	0003
142051 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/03/2021	09/06/2028	.....	2,111,925	4535.43000000	61,246	.....	15,504	43,159	.....	10,150	.....	.....	(6,507)	.....	.....	.....	0003
142217 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	09/20/2021	09/18/2026	.....	1,174,913	4357.73000000	27,141	.....	(4,047)	16,144	.....	26,456	.....	.....	(4,047)	.....	.....	.....	0003
142219 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	09/20/2021	09/20/2028	.....	1,873,140	4357.73000000	46,454	.....	(4,942)	33,028	.....	42,404	.....	.....	(4,942)	.....	.....	.....	0003
142231 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	10/06/2026	.....	1,802,801	4363.55000000	42,366	.....	(6,311)	25,591	.....	68,374	.....	.....	(6,311)	.....	.....	.....	0003
142232 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2021	10/06/2028		2,272,930	4363.55000000	59,551		(6,335)	42,713		93,974			(6,335)				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
142242 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.10/20/2021	.10/20/2026	.....	.....2,142,624	..4536.19000000	51,423	.....	.....(7,660)	31,456	.....	.....67,565	.....	.....	.....(7,660)	.....	.....	.....	0003
142243 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.10/20/2021	.10/20/2028	.....	.....2,133,416	..4536.19000000	55,255	.....	.....(5,878)	39,934	.....	.....67,486	.....	.....	.....(5,878)	.....	.....	.....	0003
143735 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.11/05/2021	.11/06/2028	.....	.....3,225,894	..4697.53000000	80,325	.....	.....(8,541)	58,564	.....	.....122,733	.....	.....	.....(8,541)	.....	.....	.....	0003
143737 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.11/05/2021	.11/06/2026	.....	.....1,317,530	..4697.53000000	30,567	.....	.....(4,551)	18,972	.....	.....48,090	.....	.....	.....(4,551)	.....	.....	.....	0003
143909 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.11/19/2021	.11/20/2026	.....	.....1,146,967	..4697.96000000	26,495	.....	.....(3,945)	16,648	.....	.....37,093	.....	.....	.....(3,945)	.....	.....	.....	0003
143911 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.11/19/2021	.11/20/2028	.....	.....2,303,354	..4697.96000000	60,118	.....	.....(6,392)	44,160	.....	.....84,421	.....	.....	.....(6,392)	.....	.....	.....	0003
144235 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.12/06/2021	.12/04/2026	.....	.....729,148	..4591.67000000	16,916	.....	.....(2,523)	10,777	.....	.....19,962	.....	.....	.....(2,523)	.....	.....	.....	0003
144237 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.12/06/2021	.12/06/2028	.....	.....752,619	..4591.67000000	18,966	.....	.....(2,018)	14,056	.....	.....22,721	.....	.....	.....(2,018)	.....	.....	.....	0003
144701 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.12/20/2021	.12/18/2026	.....	.....1,060,073	..4568.02000000	24,594	.....	.....(3,667)	15,856	.....	.....33,539	.....	.....	.....(3,667)	.....	.....	.....	0003
144703 Call Options – S&P 500 – USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.12/20/2021	.12/20/2028	.....	.....1,687,120	..4568.02000000	44,371	.....	.....(4,720)	33,127	.....	.....57,094	.....	.....	.....(4,720)	.....	.....	.....	0003
145280 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.01/06/2022	.01/06/2027	.....	.....840,780	..4696.05000000	20,431	.....	.....(22,861)	13,371	.....	.....22,165	.....	.....	.....(3,043)	.....	.....	.....	0003
145291 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.01/06/2022	.01/05/2029	.....	.....2,075,217	..4696.05000000	55,408	.....	.....(59,642)	41,730	.....	.....46,812	.....	.....	.....(5,896)	.....	.....	.....	0003
145768 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.01/20/2022	.01/20/2027	.....	.....1,067,105	..4482.73000000	26,998	.....	.....(30,209)	17,875	.....	.....31,797	.....	.....	.....(4,022)	.....	.....	.....	0003
145772 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.01/20/2022	.01/19/2029	.....	.....2,284,303	..4482.73000000	66,016	.....	.....(71,061)	50,080	.....	.....78,149	.....	.....	.....(7,025)	.....	.....	.....	0003
146459 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.02/04/2022	.02/05/2027	.....	.....875,187	..4500.53000000	23,367	.....	.....(26,145)	15,668	.....	.....22,257	.....	.....	.....(3,479)	.....	.....	.....	0003
146461 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.02/04/2022	.02/06/2029	.....	.....2,205,498	..4500.53000000	62,195	.....	.....(66,940)	47,564	.....	.....57,118	.....	.....	.....(6,611)	.....	.....	.....	0003
147150 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.02/18/2022	.02/19/2027	.....	.....1,589,414	..4348.87000000	43,391	.....	.....(48,549)	29,426	.....	.....46,170	.....	.....	.....(6,460)	.....	.....	.....	0003
147153 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.02/18/2022	.02/20/2029	.....	.....2,507,570	..4348.87000000	70,713	.....	.....(76,108)	54,465	.....	.....65,728	.....	.....	.....(7,516)	.....	.....	.....	0003
147912 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.03/04/2022	.03/04/2027	.....	.....2,313,933	..4328.87000000	67,104	.....	.....(75,087)	46,010	.....	.....72,344	.....	.....	.....(9,996)	.....	.....	.....	0003
147914 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.03/04/2022	.03/02/2029	.....	.....3,147,487	..4328.87000000	96,628	.....	.....(104,016)	74,920	.....	.....92,507	.....	.....	.....(10,287)	.....	.....	.....	0003
148494 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.03/18/2022	.03/19/2027	.....	.....3,484,463	..4463.12000000	103,140	.....	.....(50,721)	71,526	.....	.....90,466	.....	.....	.....49,324	.....	.....	.....	0003
148496 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.03/18/2022	.03/20/2029	.....	.....2,690,653	..4463.12000000	83,679	.....	.....(34,876)	65,367	.....	.....54,189	.....	.....	.....46,293	.....	.....	.....	0003
149311 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.04/06/2022	.10/06/2023	.....	.....9,410,415	..4481.15000000	1,005,963	.....	.....(499,310)	12,850	.....	.....390	.....	.....	.....(499,310)	.....	.....	.....	0003
149383 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPU8MPR08K5P83	.04/06/2022	.04/06/2029	.....	.....1,256,634	..4481.15000000	38,830	.....	.....(41,796)	30,614	.....	.....28,004	.....	.....	.....(4,131)	.....	.....	.....	0003
149385 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.04/06/2022	.04/06/2027	.....	.....3,034,169	..4481.15000000	81,923	.....	.....(91,668)	57,651	.....	.....89,227	.....	.....	.....(12,203)	.....	.....	.....	0003
149978 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.04/20/2022	.10/20/2023		7,213,078	..4459.45000000	642,685		(318,997)	24,628		11,317			(318,997)				0003

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	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
150021 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2027	.....	3,978,366	4459.45000000	125,716	.....	(140,672)	89,434	.....	102,918	.....	.....	(18,727)	.....	.....	.....	0003
150023 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	04/20/2022	04/20/2029	.....	2,397,649	4459.45000000	76,485	.....	(82,327)	60,721	.....	60,112	.....	.....	(8,136)	.....	.....	.....	0003
150374 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/06/2022	11/06/2023	.....	8,246,680	4123.34000000	923,620	.....	(457,604)	63,930	.....	234,548	.....	.....	(457,604)	.....	.....	.....	0003
150452 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	05/06/2022	05/06/2027	.....	2,560,850	4123.34000000	78,874	.....	(80,479)	56,802	.....	67,158	.....	.....	(11,749)	.....	.....	.....	0003
150453 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	05/06/2022	05/04/2029	.....	1,806,435	4123.34000000	58,890	.....	(57,915)	47,112	.....	33,896	.....	.....	(6,269)	.....	.....	.....	0003
151057 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/20/2022	11/20/2023	.....	6,632,312	3901.36000000	814,453	.....	(403,518)	77,143	.....	253,147	.....	.....	(403,518)	.....	.....	.....	0003
151098 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2022	05/20/2027	.....	5,069,803	3901.36000000	173,894	.....	75,471	126,564	.....	174,334	.....	.....	(25,903)	.....	.....	.....	0003
151099 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	05/20/2022	05/18/2029	.....	1,272,358	3901.36000000	44,660	.....	19,277	35,973	.....	34,209	.....	.....	(4,754)	.....	.....	.....	0003
151636 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/06/2022	12/06/2023	.....	4,945,716	4121.43000000	586,068	.....	(290,895)	72,724	.....	161,429	.....	.....	(290,895)	.....	.....	.....	0003
151704 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/06/2022	06/04/2027	.....	4,053,241	4121.43000000	143,079	.....	(5,860)	105,427	.....	122,328	.....	.....	(21,336)	.....	.....	.....	0003
151705 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	06/06/2022	06/06/2029	.....	1,853,944	4121.43000000	65,073	.....	531	52,858	.....	(8,726)	.....	.....	(6,922)	.....	.....	.....	0003
152997 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	06/17/2022	12/20/2023	.....	5,592,728	3674.84000000	601,217	.....	(296,789)	89,473	.....	238,787	.....	.....	(296,789)	.....	.....	.....	0003
153001 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	06/17/2022	06/18/2027	.....	3,972,298	3674.84000000	129,483	.....	59,370	96,244	.....	102,202	.....	.....	(19,277)	.....	.....	.....	0003
153006 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	06/17/2022	06/20/2029	.....	1,273,169	3674.84000000	42,519	.....	22,236	34,730	.....	34,712	.....	.....	(4,518)	.....	.....	.....	0003
153786 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2022	01/05/2024	.....	5,767,620	3845.08000000	712,305	.....	(353,553)	127,383	.....	195,118	.....	.....	(353,553)	.....	.....	.....	0003
153829 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2022	07/06/2029	.....	4,331,917	3845.08000000	156,815	.....	69,875	129,218	.....	(25,930)	.....	.....	(16,681)	.....	.....	.....	0003
153837 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2022	07/06/2027	.....	4,143,069	3845.08000000	145,007	.....	68,682	109,272	.....	105,566	.....	.....	(21,600)	.....	.....	.....	0003
154434 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2022	01/19/2024	.....	4,751,880	3959.90000000	594,456	.....	(295,058)	121,495	.....	139,470	.....	.....	(295,058)	.....	.....	.....	0003
154458 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2022	07/20/2027	.....	2,557,974	3959.90000000	91,064	.....	37,144	69,320	.....	53,270	.....	.....	(13,565)	.....	.....	.....	0003
154462 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2022	07/20/2029	.....	1,734,536	3959.90000000	63,657	.....	27,164	52,803	.....	(21,984)	.....	.....	(6,772)	.....	.....	.....	0003
155031 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	08/05/2022	08/06/2029	.....	2,584,672	4145.19000000	90,464	.....	45,705	75,610	.....	62,163	.....	.....	(9,619)	.....	.....	.....	0003
155058 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	08/05/2022	02/06/2024	.....	7,750,577	4145.19000000	1,131,584	.....	(559,620)	267,465	.....	240,979	.....	.....	(559,620)	.....	.....	.....	0003
155103 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/05/2022	08/06/2027		1,336,139	4145.19000000	48,101		21,487	37,043		29,516			(7,161)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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155746 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/19/2022	08/20/2027		1,556,207	4228.48000000	56,023		(12,522)	43,574		16,432			(8,341)				0003
155753 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/19/2022	08/20/2029	.....	1,396,739	4228.48000000	51,540	.....	(10,493)	43,359	.....	(8,107)	.....	.....	(5,480)	.....	.....	.....	0003
155777 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/19/2022	02/20/2024	.....	5,735,110	4228.48000000	724,230	.....	(358,164)	189,617	.....	145,111	.....	.....	(358,164)	.....	.....	.....	0003
156455 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/06/2022	03/06/2024	.....	4,689,828	3908.19000000	599,364	.....	(298,038)	174,221	.....	132,075	.....	.....	(298,038)	.....	.....	.....	0003
156500 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	09/06/2022	09/06/2027	.....	1,564,291	3908.19000000	54,750	.....	22,910	43,117	.....	32,869	.....	.....	(8,156)	.....	.....	.....	0003
156505 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/06/2022	09/06/2029	.....	987,646	3908.19000000	36,049	.....	15,691	30,579	.....	45,397	.....	.....	(3,835)	.....	.....	.....	0003
156979 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/20/2022	09/20/2027	.....	1,181,616	3855.93000000	45,492	.....	19,393	36,175	.....	55,119	.....	.....	(6,777)	.....	.....	.....	0003
156984 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	09/20/2022	09/20/2029	.....	908,253	3855.93000000	35,059	.....	16,292	29,931	.....	47,363	.....	.....	(3,729)	.....	.....	.....	0003
156998 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	09/20/2022	03/20/2024	.....	7,326,267	3855.93000000	961,210	.....	(477,969)	304,002	.....	215,086	.....	.....	(477,969)	.....	.....	.....	0003
157991 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	45,325,656	3744.52000000	5,204,948	.....	(3,878,756)	99,821	.....	1,369,115	.....	.....	(3,878,756)	.....	.....	.....	0003
158005 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	63,021,991	3744.52000000	7,140,392	.....	(5,321,059)	136,939	.....	2,329,439	.....	.....	(5,321,059)	.....	.....	.....	0003
158016 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	50,422,349	3744.52000000	5,712,348	.....	(4,256,873)	109,552	.....	2,024,278	.....	.....	(4,256,873)	.....	.....	.....	0003
158019 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	62,122,194	3744.52000000	7,133,770	.....	(5,316,124)	136,812	.....	2,699,355	.....	.....	(5,316,124)	.....	.....	.....	0003
158030 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	37,651,671	3744.52000000	4,323,710	.....	(3,222,052)	82,920	.....	1,647,265	.....	.....	(3,222,052)	.....	.....	.....	0003
158038 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	43,939,507	3744.52000000	5,045,770	.....	(3,760,136)	96,768	.....	2,599,993	.....	.....	(3,760,136)	.....	.....	.....	0003
158041 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	46,394,151	3744.52000000	5,327,648	.....	(3,970,193)	102,174	.....	2,948,187	.....	.....	(3,970,193)	.....	.....	.....	0003
158061 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	63,962,154	3744.52000000	7,345,061	.....	(5,473,579)	140,864	.....	6,190,163	.....	.....	(5,473,579)	.....	.....	.....	0003
158073 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	10/06/2022	10/06/2023	.....	10,955,312	498.42000000	632,121	.....	(471,060)	12,123	.....	75,808	.....	.....	(471,060)	.....	.....	.....	0003
158074 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	10/06/2022	10/06/2023	.....	18,551,640	3744.52000000	352,481	.....	(262,671)	6,760	.....	817,928	.....	.....	(262,671)	.....	.....	.....	0003
158075 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	42,815,454	1110.16000000	2,680,247	.....	(1,997,335)	51,402	.....	3,880,807	.....	.....	(1,997,335)	.....	.....	.....	0003
158076 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2027		2,932,137	3744.52000000	137,810		(20,528)	110,792		144,878			(20,528)				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
158083 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	10/06/2022	10/05/2029	.....	2,188,606	..3744.52000000	108,555	.....	.....(11,552)	83,350	.....	.....67,918	.....	.....	.....(11,552)	.....	.....	.....	0003
158086 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	34,614,121	...159.63000000	3,239,585	.....	.....(2,414,157)	62,129	.....	.....2,027,430	.....	.....	.....(2,414,157)	.....	.....	.....	0003
158094 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	46,775,196	..3744.52000000	3,915,130	.....	.....(2,917,576)	75,085	.....	.....2,354,282	.....	.....	.....(2,917,576)	.....	.....	.....	0003
158110 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	10/06/2022	10/06/2023	.....	38,412,021	..3744.52000000	2,612,300	.....	.....(1,946,700)	50,099	.....	.....1,231,580	.....	.....	.....(1,946,700)	.....	.....	.....	0003
158130 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/06/2022	10/06/2023	.....	23,095,663	80.52000000	2,498,950	.....	.....(1,862,231)	47,925	.....	.....38,224	.....	.....	.....(1,862,231)	.....	.....	.....	0003
158140 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	10/06/2022	10/06/2023	.....	1,449,217	57.75000000	147,675	.....	.....(110,048)	2,832	.....	.....76,047	.....	.....	.....(110,048)	.....	.....	.....	0003
158141 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	10/06/2022	04/05/2024	.....	6,051,642	..3744.52000000	846,625	.....	.....(420,991)	292,527	.....	.....184,941	.....	.....	.....(420,991)	.....	.....	.....	0003
158143 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	10/06/2022	10/06/2023	.....	63,435,360	..3744.52000000	10,301,901	.....	.....(7,677,033)	197,571	.....	.....1,264,848	.....	.....	.....(7,677,033)	.....	.....	.....	0003
158151 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL 4PQUJN3JPF6NF3BB653	10/06/2022	10/06/2023	.....	49,425,607	..3744.52000000	5,675,764	.....	.....(4,229,610)	108,850	.....	.....1,015,210	.....	.....	.....(4,229,610)	.....	.....	.....	0003
158397 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	10/14/2022	10/13/2023	.....	1,552,292	..3583.15000000	129,338	.....	.....(96,648)	4,975	.....	.....268,011	.....	.....	.....(96,648)	.....	.....	.....	0003
158672 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023	.....	28,660,761	...151.45000000	2,782,961	.....	.....(2,073,878)	160,116	.....	.....1,778,143	.....	.....	.....(2,073,878)	.....	.....	.....	0003
158690 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023	.....	18,630,293	78.33000000	2,090,320	.....	.....(1,557,718)	120,265	.....	.....324,006	.....	.....	.....(1,557,718)	.....	.....	.....	0003
158703 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	10/20/2022	10/20/2023	.....	788,916	56.96000000	82,678	.....	.....(61,612)	4,757	.....	.....37,644	.....	.....	.....(61,612)	.....	.....	.....	0003
158715 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	58,410,257	..3665.78000000	6,892,410	.....	.....(5,136,262)	396,550	.....	.....4,952,499	.....	.....	.....(5,136,262)	.....	.....	.....	0003
158720 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	10/20/2022	10/20/2023	.....	29,295,136	..3665.78000000	2,079,662	.....	.....(1,549,775)	119,652	.....	.....884,366	.....	.....	.....(1,549,775)	.....	.....	.....	0003
158726 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	39,211,139	..3665.78000000	4,626,914	.....	.....(3,448,002)	266,206	.....	.....4,232,932	.....	.....	.....(3,448,002)	.....	.....	.....	0003
158729 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	10/20/2022	10/20/2027	.....	6,530,815	..3665.78000000	321,316	.....	.....(47,863)	260,783	.....	.....477,811	.....	.....	.....(47,863)	.....	.....	.....	0003
158732 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	10/20/2022	10/19/2029	.....	3,668,206	..3665.78000000	186,345	.....	.....(19,830)	161,266	.....	.....103,152	.....	.....	.....(19,830)	.....	.....	.....	0003
158743 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	04/19/2024	.....	5,498,670	..3665.78000000	780,810	.....	.....(388,264)	289,770	.....	.....173,826	.....	.....	.....(388,264)	.....	.....	.....	0003
158752 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		59,019,058	..3665.78000000	6,881,623		(5,128,223)	395,929		1,158,496			(5,128,223)				0003

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158755 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023		72,927,027	..3665.78000000	8,503,292		(6,336,700)	489,231		1,864,987			(6,336,700)				0003
158769 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023	.....	38,430,560	..1103.30000000	2,505,673	.....	(1,867,241)	144,162		3,831,713	.....	.....	.....(1,867,241)	.....	.....	.....	0003
158771 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	10/20/2022	10/20/2023	.....	8,641,892	..496.73000000	532,341	.....	(396,703)	30,628		109,257	.....	.....	.....(396,703)	.....	.....	.....	0003
158774 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/20/2022	10/20/2023	.....	17,015,922	..3665.78000000	318,198	.....	(237,123)	18,307		216,348	.....	.....	.....(237,123)	.....	.....	.....	0003
158776 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023	.....	43,043,589	..3665.78000000	5,018,883	.....	(3,740,099)	288,758		1,530,682	.....	.....	.....(3,740,099)	.....	.....	.....	0003
158792 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023	.....	79,898,021	..3665.78000000	9,316,110	.....	(6,942,417)	535,995		3,314,903	.....	.....	.....(6,942,417)	.....	.....	.....	0003
158810 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023	.....	31,755,149	..3665.78000000	3,702,651	.....	(2,759,236)	213,029		1,358,194	.....	.....	.....(2,759,236)	.....	.....	.....	0003
158821 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023	.....	48,197,272	..3665.78000000	5,619,803	.....	(4,187,908)	323,331		2,408,341	.....	.....	.....(4,187,908)	.....	.....	.....	0003
158828 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/20/2022	10/20/2023	.....	58,285,902	..3665.78000000	6,796,137	.....	(5,064,519)	391,011		3,507,096	.....	.....	.....(5,064,519)	.....	.....	.....	0003
159728 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	38,842,841	..3770.55000000	4,481,240	.....	(3,321,246)	463,998		1,309,045	.....	.....	.....(3,321,246)	.....	.....	.....	0003
159745 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	43,403,478	..3770.55000000	5,007,355	.....	(3,711,174)	518,473		1,606,234	.....	.....	.....(3,711,174)	.....	.....	.....	0003
159748 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	53,801,564	..3770.55000000	6,206,978	.....	(4,600,267)	642,684		2,142,997	.....	.....	.....(4,600,267)	.....	.....	.....	0003
159760 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	56,716,378	..3770.55000000	6,543,353	.....	(4,849,569)	677,513		2,418,849	.....	.....	.....(4,849,569)	.....	.....	.....	0003
159769 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023	.....	45,692,708	..1115.53000000	3,024,857	.....	(2,241,856)	313,201		4,138,054	.....	.....	.....(2,241,856)	.....	.....	.....	0003
159771 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	11/04/2022	11/06/2023	.....	13,151,244	..503.66000000	825,882	.....	(612,098)	85,514		98,257	.....	.....	.....(612,098)	.....	.....	.....	0003
159794 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	42,547,547	..3770.55000000	4,908,605	.....	(3,637,985)	508,248		2,013,069	.....	.....	.....(3,637,985)	.....	.....	.....	0003
159810 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	53,553,142	..3770.55000000	6,178,318	.....	(4,579,026)	639,717		2,850,861	.....	.....	.....(4,579,026)	.....	.....	.....	0003
159815 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	50,254,079	..3770.55000000	5,797,556	.....	(4,296,826)	600,292		2,946,661	.....	.....	.....(4,296,826)	.....	.....	.....	0003
159820 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	51,856,153	..3770.55000000	5,982,495	.....	(4,433,893)	619,441		3,658,810	.....	.....	.....(4,433,893)	.....	.....	.....	0003
159831 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		76,202,158	..3770.55000000	8,791,372		(6,515,676)	910,278		7,507,412			(6,515,676)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
159834 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/05/2027	.....	11,680,363	..3770.55000000	496,415	.....	.....(73,905)	407,023	.....	1,182,493	.....	.....	.....(73,905)	.....	.....	.....	0003
159838 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/06/2029	.....	7,664,623	..3770.55000000	344,908	.....	.....(36,661)	300,565	.....	767,682	.....	.....	.....(36,661)	.....	.....	.....	0003
159842 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	05/06/2024	.....	8,295,210	..3770.55000000	1,154,692	(572,088)	462,718	.....	242,322	.....	.....	.....(572,088)	.....	.....	.....	0003
159850 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	82,197,990	..3770.55000000	9,271,976	(6,871,873)	960,041	.....	1,581,385	.....	.....	.....(6,871,873)	.....	.....	.....	0003
159852 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/04/2022	11/06/2023	.....	47,814,156	..3770.55000000	5,393,462	(3,997,334)	558,451	.....	979,644	.....	.....	.....(3,997,334)	.....	.....	.....	0003
159862 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023	.....	30,915,219	..156.47000000	2,986,410	.....	.....(2,213,361)	309,220	.....	1,778,802	.....	.....	.....(2,213,361)	.....	.....	.....	0003
159884 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023	.....	24,333,525	..82.65000000	2,569,620	.....	.....(1,904,460)	266,064	.....	119,542	.....	.....	.....(1,904,460)	.....	.....	.....	0003
159894 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XB11	11/04/2022	11/06/2023	.....	1,151,938	..60.75000000	116,000	(85,973)	12,011	.....	53,643	.....	.....	.....(85,973)	.....	.....	.....	0003
159900 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	11/04/2022	11/06/2023	.....	40,610,293	..3770.55000000	649,765	(481,569)	67,278	.....	1,263,598	.....	.....	.....(481,569)	.....	.....	.....	0003
159907 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5I70UK5573	11/04/2022	11/06/2023	.....	57,344,121	..3770.55000000	6,615,877	(4,903,320)	685,023	.....	1,643,948	.....	.....	.....(4,903,320)	.....	.....	.....	0003
159911 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50	11/04/2022	11/06/2023	.....	21,552,501	..3770.55000000	362,082	(268,355)	37,491	.....	809,922	.....	.....	.....(268,355)	.....	.....	.....	0003
160252 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFX09	11/11/2022	11/11/2023	.....	1,236,181	..3742.94162740	131,801	(98,219)	15,527	.....	149,726	.....	.....	.....(98,219)	.....	.....	.....	0003
160843 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJWSPUB8MPRO8K5P83	11/18/2022	11/19/2027	.....	12,068,585	..3965.34000000	582,913	(86,783)	482,410	.....	780,138	.....	.....	.....(86,783)	.....	.....	.....	0003
160847 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJWSPUB8MPRO8K5P83	11/18/2022	11/20/2029	.....	7,589,428	..3965.34000000	380,230	(40,415)	333,426	.....	467,623	.....	.....	.....(40,415)	.....	.....	.....	0003
160852 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFX09	11/18/2022	11/20/2023	.....	39,938,226	..1138.09000000	2,643,911	(1,959,520)	374,614	.....	2,865,611	.....	.....	.....(1,959,520)	.....	.....	.....	0003
160853 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	29,389,556	..162.79000000	2,729,714	(2,023,112)	386,771	.....	1,284,229	.....	.....	.....(2,023,112)	.....	.....	.....	0003
160854 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50	11/18/2022	11/20/2023	.....	11,578,651	..508.36000000	722,508	(535,483)	102,372	.....	61,934	.....	.....	.....(535,483)	.....	.....	.....	0003
160855 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL MORGAN STANLEY & CO. INTERNATIONAL	W22LR0WP21HZNB6K528	11/18/2022	11/20/2023	.....	18,373,857	..86.59000000	1,803,823	(1,336,893)	255,583	.....	24,232	.....	.....	.....(1,336,893)	.....	.....	.....	0003
160872 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC	4PQUHN3JPFGFNF3BB653	11/18/2022	05/20/2024	.....	6,584,397	..3965.34000000	737,256	(365,271)	314,240	.....	190,095	.....	.....	.....(365,271)	.....	.....	.....	0003
160874 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023		1,027,143	..65.15000000	96,487	(71,511)	13,671		44,368			(71,511)				0003

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SCHEDULE DB - PART A - SECTION 1

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
160893 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	68,905,179	3965.34000000	7,620,277		(5,647,726)	1,079,712		1,206,463			(5,647,726)				0003
160896 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	47,256,107	3965.34000000	5,169,840		(3,831,598)	732,511		1,334,978			(3,831,598)				0003
160908 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	60,874,627	3965.34000000	6,732,172		(4,989,512)	953,877		1,289,049			(4,989,512)				0003
160909 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	46,984,640	3965.34000000	5,140,141		(3,809,587)	728,303		1,756,398			(3,809,587)				0003
160921 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	32,843,563	3965.34000000	3,593,101		(2,663,007)	509,104		1,353,690			(2,663,007)				0003
160932 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	65,871,276	3965.34000000	7,206,348		(5,340,944)	1,021,063		2,704,802			(5,340,944)				0003
160936 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	45,564,355	3965.34000000	5,038,997		(3,734,625)	713,972		1,599,148			(3,734,625)				0003
160943 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	11/18/2022	11/20/2023	.....	50,496,533	3965.34000000	5,662,772		(4,196,932)	802,355		3,920,023			(4,196,932)				0003
160972 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	11/18/2022	11/20/2023	.....	34,842,921	3965.34000000	2,132,684		(1,580,627)	302,179		1,040,291			(1,580,627)				0003
160985 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	45,997,944	3965.34000000	5,032,196		(3,729,584)	713,009		2,251,905			(3,729,584)				0003
160992 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	51,071,041	3965.34000000	5,587,195		(4,140,918)	791,646		2,763,384			(4,140,918)				0003
160993 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCENIK50	11/18/2022	11/20/2023	.....	17,723,482	3965.34000000	342,063		(253,518)	48,467		144,316			(253,518)				0003
161833 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	12/06/2022	12/06/2023	.....	18,574,287	86.37000000	1,727,409		(1,287,274)	321,819		53,115			(1,287,274)				0003
161845 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2023	.....	16,030,576	3941.26000000	312,596		(232,948)	58,237		483,500			(232,948)				0003
161847 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	.....	28,693,189	164.84000000	2,579,672		(1,922,385)	480,596		1,093,906			(1,922,385)				0003
161858 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	.....	786,120	66.53000000	69,833		(52,040)	13,010		32,610			(52,040)				0003
161868 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	12/06/2022	12/06/2023	.....	41,734,898	1137.22000000	2,739,896		(2,041,785)	510,446		3,137,736			(2,041,785)				0003
161869 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	06/06/2024		6,306,016	3941.26000000	831,136		(412,535)	380,685		189,213			(412,535)				0003

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SCHEDULE DB - PART A - SECTION 1

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
161871 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	12/06/2023		10,850,695	511.36000000	671,658		(500,523)	125,131		54,624			(500,523)				0003	
161874 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO	12/06/2022	12/06/2023		42,938,254	3941.26000000	4,585,843		(3,417,395)	854,349		811,933			(3,417,395)				0003	
161884 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	12/06/2023		62,999,881	3941.26000000	6,868,308		(5,118,301)	1,279,575		1,077,857			(5,118,301)				0003	
161886 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO	12/06/2022	12/06/2023		42,233,596	3941.26000000	4,510,585		(3,361,313)	840,328		1,102,840			(3,361,313)				0003	
161899 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/06/2022	12/06/2023		49,507,062	3941.26000000	5,397,308		(4,022,104)	1,005,526		1,574,648			(4,022,104)				0003	
161902 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO	12/06/2022	12/06/2023		29,559,450	3941.26000000	1,658,250		(1,235,737)	308,934		857,432			(1,235,737)				0003	
161925 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		38,579,747	3941.26000000	4,206,002		(3,134,335)	783,584		1,382,947			(3,134,335)				0003	
161940 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		50,076,725	3941.26000000	5,459,413		(4,068,385)	1,017,096		1,867,127			(4,068,385)				0003	
161942 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		42,726,240	3941.26000000	4,658,056		(3,471,209)	867,802		1,714,684			(3,471,209)				0003	
161957 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		59,655,691	3941.26000000	6,503,721		(4,846,609)	1,211,652		2,717,974			(4,846,609)				0003	
161962 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		66,457,345	3941.26000000	7,245,244		(5,399,196)	1,349,799		3,407,892			(5,399,196)				0003	
161964 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	12/06/2022	12/06/2023		52,186,877	3941.26000000	5,689,464		(4,239,820)	1,059,955		3,949,124			(4,239,820)				0003	
161965 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	12/06/2022	12/06/2027		8,250,589	3941.26000000	391,903		(58,378)	328,160		608,788			(58,378)				0003	
161970 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	12/06/2022	12/06/2029		10,495,862	3941.26000000	524,793		(55,825)	463,837		907,426			(55,825)				0003	
162048 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	12/09/2022	12/09/2023		2,301,254	3937.33544339	157,725		(117,538)	30,681		164,689			(117,538)				0003	
162527 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	12/20/2022	12/20/2023		29,854,890	3821.62000000	1,916,684		(1,428,323)	430,597		857,596			(1,428,323)				0003	
162533 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	12/20/2022	12/20/2027		6,695,471	3821.62000000	321,383		(47,873)	271,574		463,680			(47,873)				0003	
162536 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	12/20/2022	12/20/2029		10,151,085	3821.62000000	507,554		(53,991)	451,380		710,709			(53,991)				0003	
162540 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	12/20/2023		27,730,919	169.08000000	2,496,242		(1,860,213)	560,800		743,165			(1,860,213)				0003	
162559 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO	12/20/2022	12/20/2023		511,690	65.52000000	47,795		(35,617)	10,738		18,676			(35,617)				0003	
162574 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	12/20/2022	06/20/2024		6,114,592	3821.62000000	813,248		(403,656)	393,268		181,395			(403,656)				0003	

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
162578 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	52,356,194	..3821.62000000	5,654,401	.....	(4,213,691)	1,270,304	.....	.....925,134	.....	.....	.....(4,213,691)	.....	.....	.....	0003
162586 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	47,703,372	..3821.62000000	5,151,902	.....	(3,839,226)	1,157,414	.....	.....932,619	.....	.....	.....(3,839,226)	.....	.....	.....	0003
162587 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	12/20/2022	12/20/2023	.....	41,531,267	..1123.49000000	2,707,839	.....	(2,017,896)	608,336	.....	.....3,727,020	.....	.....	.....(2,017,896)	.....	.....	.....	0003
162590 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	12/20/2022	12/20/2023	.....	10,505,238	..508.98000000	650,274	.....	(484,588)	146,089	.....	.....85,909	.....	.....	.....(484,588)	.....	.....	.....	0003
162601 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	44,369,085	..3821.62000000	4,791,804	.....	(3,570,878)	1,076,515	.....	.....1,197,295	.....	.....	.....(3,570,878)	.....	.....	.....	0003
162614 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	45,763,135	..3821.62000000	4,942,359	.....	(3,683,073)	1,110,338	.....	.....1,498,780	.....	.....	.....(3,683,073)	.....	.....	.....	0003
162625 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	49,857,963	..3821.62000000	5,384,595	.....	(4,012,630)	1,209,690	.....	.....1,805,911	.....	.....	.....(4,012,630)	.....	.....	.....	0003
162644 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	63,641,591	..3821.62000000	6,873,209	.....	(5,121,953)	1,544,118	.....	.....2,863,600	.....	.....	.....(5,121,953)	.....	.....	.....	0003
162656 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	49,681,060	..3821.62000000	5,365,490	.....	(3,998,393)	1,205,398	.....	.....2,559,209	.....	.....	.....(3,998,393)	.....	.....	.....	0003
162660 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	47,089,467	..3821.62000000	5,085,601	.....	(3,789,818)	1,142,519	.....	.....2,767,803	.....	.....	.....(3,789,818)	.....	.....	.....	0003
162677 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	12/20/2022	12/20/2023	.....	19,054,087	83.29000000	1,953,043	.....	(1,455,418)	438,766	.....	.....138,971	.....	.....	.....(1,455,418)	.....	.....	.....	0003
162692 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP517OUK5573	12/20/2022	12/20/2023	.....	32,587,007	..3821.62000000	3,588,735	.....	(2,674,345)	806,236	.....	.....2,925,387	.....	.....	.....(2,674,345)	.....	.....	.....	0003
162698 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	12/20/2022	12/20/2023	.....	19,414,179	..3821.62000000	423,229	.....	(315,393)	95,082	.....	.....625,862	.....	.....	.....(315,393)	.....	.....	.....	0003
162699 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	52,322,182	..3821.62000000	5,650,728	.....	(4,210,953)	1,269,479	.....	.....2,043,371	.....	.....	.....(4,210,953)	.....	.....	.....	0003
163181 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRMYMCUFXT09	01/06/2023	01/05/2024	.....	47,226,592	..1134.16000000	.....	3,088,619	(2,265,553)	823,066	.....	.....3,908,189	.....	.....	.....(2,265,553)	.....	.....	.....	0003
163183 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	01/06/2023	01/05/2024	.....	10,898,213	..515.20000000	.....	.....671,330	(492,432)	178,898	.....	.....58,819	.....	.....	.....(492,432)	.....	.....	.....	0003
163191 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E57QDZIWZ7FF32TWEFA76	01/06/2023	01/05/2024		44,067,947	..3895.08000000		4,600,961	(3,374,881)	1,226,080		1,121,089			(3,374,881)				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
163210 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/05/2024	.....	64,654,254	..3895.08000000	.....	6,750,297	(4,951,454)	1,798,843	.....	2,057,823	.....	.....	.....(4,951,454)	.....	.....	.....	0003
163272 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/05/2024	.....	61,909,679	..3895.08000000	.....	6,463,746	(4,741,264)	1,722,482	.....	2,388,902	.....	.....	.....(4,741,264)	.....	.....	.....	0003
163301 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6GFNF38B653	.01/06/2023	.01/05/2024	.....	34,125,791	..3895.08000000	.....	3,541,300	(2,597,602)	943,698	.....	1,390,478	.....	.....	.....(2,597,602)	.....	.....	.....	0003
163312 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.01/06/2023	.01/05/2024	.....	52,694,569	..3895.08000000	.....	5,476,141	(4,016,839)	1,459,301	.....	2,511,000	.....	.....	.....(4,016,839)	.....	.....	.....	0003
163325 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.01/06/2023	.01/05/2024	.....	49,352,385	..3895.08000000	.....	5,131,438	(3,763,994)	1,367,444	.....	2,653,442	.....	.....	.....(3,763,994)	.....	.....	.....	0003
163331 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.01/06/2023	.01/05/2024	.....	41,945,284	..3895.08000000	.....	4,366,468	(3,202,876)	1,163,592	.....	3,408,995	.....	.....	.....(3,202,876)	.....	.....	.....	0003
163342 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHHG71XBU11	.01/06/2023	.01/05/2024	.....	29,739,668	..3895.08000000	.....	1,775,458	(1,302,328)	473,130	.....	838,687	.....	.....	.....(1,302,328)	.....	.....	.....	0003
163348 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MIPRO8K5P83	.01/06/2023	.01/05/2024	.....	19,861,310	..3895.08000000	.....	436,949	(320,509)	116,440	.....	724,332	.....	.....	.....(320,509)	.....	.....	.....	0003
163350 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	.01/06/2023	.01/05/2024	.....	17,147,318	..86.21000000	.....	1,637,610	(1,201,214)	436,396	.....	68,274	.....	.....	.....(1,201,214)	.....	.....	.....	0003
163351 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/06/2028	.....	11,272,223	..3895.08000000	.....	516,268	(75,489)	440,778	.....	699,680	.....	.....	.....(75,489)	.....	.....	.....	0003
163356 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/04/2030	.....	13,719,968	..3895.08000000	.....	684,626	(71,544)	613,082	.....	626,007	.....	.....	.....(71,544)	.....	.....	.....	0003
163360 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQF5U7RNE97	.01/06/2023	.01/05/2024	.....	1,090,695	..68.13000000	.....	100,998	(74,084)	26,914	.....	28,514	.....	.....	.....(74,084)	.....	.....	.....	0003
163368 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/05/2024	.....	53,847,905	..3895.08000000	.....	5,622,048	(4,123,865)	1,498,183	.....	933,451	.....	.....	.....(4,123,865)	.....	.....	.....	0003
163374 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIFA76	.01/06/2023	.01/05/2024	.....	50,082,847	..3895.08000000	.....	5,228,953	(3,835,523)	1,393,430	.....	872,457	.....	.....	.....(3,835,523)	.....	.....	.....	0003
163380 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.01/05/2024	.....	33,147,219	..173.71000000	.....	3,026,394	(2,219,910)	806,484	.....	548,892	.....	.....	.....(2,219,910)	.....	.....	.....	0003
163386 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.07/05/2024	.....	4,284,588	..3895.08000000	.....	539,858	(263,996)	275,862	.....	137,688	.....	.....	.....(263,996)	.....	.....	.....	0003
163389 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.01/06/2023	.01/05/2024	.....	34,115,603	..3895.08000000	.....	3,479,808	(2,552,496)	927,311	.....	1,205,163	.....	.....	.....(2,552,496)	.....	.....	.....	0003
163622 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.01/13/2023	.01/13/2024	.....	963,504	..3969.61000000	.....	55,881	(39,806)	16,075	.....	74,013	.....	.....	.....(39,806)	.....	.....	.....	0003
163820 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MIPRO8K5P83	.01/20/2023	.01/19/2024	.....	33,921,132	..1145.17000000	.....	2,201,481	(1,530,151)	671,331	.....	2,565,730	.....	.....	.....(1,530,151)	.....	.....	.....	0003
163821 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.01/20/2023	.01/19/2024	.....	7,682,400	..515.67000000	.....	470,163	(326,789)	143,374	.....	48,076	.....	.....	.....(326,789)	.....	.....	.....	0003
163825 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MIPRO8K5P83	.01/20/2023	.01/19/2024	.....	48,503,638	..3972.61000000	.....	4,753,405	(3,303,878)	1,449,527	.....	859,524	.....	.....	.....(3,303,878)	.....	.....	.....	0003
163846 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MIPRO8K5P83	.01/20/2023	.01/19/2024	.....	47,719,167	..3972.61000000	.....	4,680,773	(3,253,394)	1,427,379	.....	1,207,982	.....	.....	.....(3,253,394)	.....	.....	.....	0003
163857 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJFSFPU8MIPRO8K5P83	.01/20/2023	.01/19/2024		53,349,235	..3972.61000000		5,233,026	(3,637,241)	1,595,786		1,741,265			(3,637,241)				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
163871 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.01/20/2023	.01/19/2024	.....	66,289,577	..3972.61000000	.....	6,502,345	(4,519,487)	1,982,858	.....	2,481,180	.....	.....	.....(4,519,487)	.....	.....	.....	0003
163880 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	63,650,291	..3972.61000000	.....	6,158,165	(4,280,263)	.....	1,877,902	.....	.....	.....(4,280,263)	.....	.....	.....	0003
163905 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/19/2024	.....	59,390,723	..3972.61000000	.....	5,746,052	(3,993,822)	.....	1,752,230	.....	.....	.....(3,993,822)	.....	.....	.....	0003
163907 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	.01/20/2023	.01/19/2024	.....	46,072,459	..3972.61000000	.....	4,549,655	(3,162,260)	.....	1,387,395	.....	.....	.....(3,162,260)	.....	.....	.....	0003
163916 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHI6C71XB11	.01/20/2023	.01/19/2024	.....	23,818,982	..3972.61000000	.....	1,310,044	(910,553)	.....	399,491	.....	.....	.....(910,553)	.....	.....	.....	0003
163921 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	.01/20/2023	.01/19/2024	.....	16,019,215	..3972.61000000	.....	402,082	(279,469)	.....	122,613	.....	.....	.....(279,469)	.....	.....	.....	0003
163922 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.01/20/2023	.01/20/2028	.....	5,705,912	..3972.61000000	.....	263,613	(36,525)	.....	227,088	.....	.....	.....(36,525)	.....	.....	.....	0003
163924 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8P8K5P83	.01/20/2023	.01/18/2030	.....	18,090,591	..3972.61000000	.....	891,866	(88,314)	.....	803,552	.....	.....	.....(88,314)	.....	.....	.....	0003
163946 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROIIP21HZNB6K528	.01/20/2023	.01/19/2024	.....	17,685,682	89.47000000	.....	1,651,228	(1,147,694)	.....	503,534	.....	.....	.....(1,147,694)	.....	.....	.....	0003
163954 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8P8K5P83	.01/20/2023	.07/19/2024	.....	4,043,828	..3972.61000000	.....	500,343	(231,844)	.....	268,499	.....	.....	.....(231,844)	.....	.....	.....	0003
163964 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUIWSPUBM8P8K5P83	.01/20/2023	.01/19/2024	.....	50,655,583	..3972.61000000	.....	4,964,298	(3,450,460)	.....	1,513,838	.....	.....	.....(3,450,460)	.....	.....	.....	0003
163966 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.01/20/2023	.01/19/2024	.....	27,288,691	179.29000000	.....	2,512,891	(1,746,598)	.....	766,294	.....	.....	.....(1,746,598)	.....	.....	.....	0003
163973 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.01/20/2023	.01/19/2024	.....	946,734	71.01000000	.....	77,328	(53,747)	.....	23,581	.....	.....	.....(53,747)	.....	.....	.....	0003
164455 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.02/06/2023	.02/06/2024	.....	53,904,509	..1167.94000000	.....	3,557,698	(2,300,320)	.....	1,257,378	.....	.....	.....(2,300,320)	.....	.....	.....	0003
164461 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFM8T61CT2L1QCEMIK50	.02/06/2023	.02/06/2024	.....	12,080,110	..518.61000000	.....	758,631	(490,512)	.....	268,119	.....	.....	.....(490,512)	.....	.....	.....	0003
164465 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	.02/06/2023	.02/06/2024	.....	63,985,221	..4111.08000000	.....	6,068,998	(3,924,065)	.....	2,144,934	.....	.....	.....(3,924,065)	.....	.....	.....	0003
164494 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	49,998,347	..4111.08000000	.....	4,726,583	(3,056,092)	.....	1,670,491	.....	.....	.....(3,056,092)	.....	.....	.....	0003
164511 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	33,114,718	..4111.08000000	.....	3,130,493	(2,024,100)	.....	1,106,393	.....	.....	.....(2,024,100)	.....	.....	.....	0003
164536 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	50,710,941	..4111.08000000	.....	4,793,948	(3,099,649)	.....	1,694,299	.....	.....	.....(3,099,649)	.....	.....	.....	0003
164563 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	73,739,809	..4111.08000000	.....	6,970,977	(4,507,262)	.....	2,463,715	.....	.....	.....(4,507,262)	.....	.....	.....	0003
164571 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	37,982,426	..4111.08000000	.....	3,590,661	(2,321,633)	.....	1,269,028	.....	.....	.....(2,321,633)	.....	.....	.....	0003
164575 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6GKMZ0031MB27	.02/06/2023	.02/06/2024	.....	50,489,635	..4111.08000000	.....	4,773,027	(3,086,122)	.....	1,686,905	.....	.....	.....(3,086,122)	.....	.....	.....	0003
164581 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHI6C71XB11	.02/06/2023	.02/06/2024	.....	45,021,501	..4111.08000000	.....	4,268,038	(2,759,608)	.....	1,508,430	.....	.....	.....(2,759,608)	.....	.....	.....	0003
164584 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHI6C71XB11	.02/06/2023	.02/06/2024	.....	49,629,481	..4111.08000000	.....	4,704,875	(3,042,056)	.....	1,662,819	.....	.....	.....(3,042,056)	.....	.....	.....	0003
164592 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RHI6C71XB11	.02/06/2023	.02/06/2024		47,789,942	..4111.08000000		4,530,486	(2,929,301)		1,601,186			(2,929,301)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
164600 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.02/06/2023	.02/04/2028	.....	5,580,626	..4111.08000000	.....	257,825	(33,359)	224,466	.....	256,663	.....	.....	.....(33,359)	.....	.....	.....	0003
164603 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.02/06/2023	.02/06/2030	.....	20,840,541	..4111.08000000	.....	1,025,355	(94,636)	930,719	.....	789,525	.....	.....	.....(94,636)	.....	.....	.....	0003
164605 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/06/2023	.02/06/2024	.....	2,425,221	...70.69000000	.....	190,409	(123,113)	67,295	.....	52,165	.....	.....	.....(123,113)	.....	.....	.....	0003
164615 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	.02/06/2023	.02/06/2024	.....	45,132,548	...173.82000000	.....	3,874,646	(2,505,250)	1,369,395	.....	852,541	.....	.....	.....(2,505,250)	.....	.....	.....	0003
164621 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57PNE97	.02/06/2023	.02/06/2024	.....	28,017,318	...92.74000000	.....	2,482,333	(1,605,015)	877,318	.....	29,538	.....	.....	.....(1,605,015)	.....	.....	.....	0003
164628 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.02/06/2023	.08/06/2024	.....	6,804,276	..4111.08000000	.....	819,228	(353,451)	465,777	.....	188,482	.....	.....	.....(353,451)	.....	.....	.....	0003
164633 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.02/06/2023	.02/06/2024	.....	66,315,525	..4111.08000000	.....	6,290,028	(4,066,977)	2,223,051	.....	1,001,985	.....	.....	.....(4,066,977)	.....	.....	.....	0003
164639 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.02/06/2023	.02/06/2024	.....	29,689,385	..4111.08000000	.....	1,591,351	(1,028,928)	562,423	.....	729,326	.....	.....	.....(1,028,928)	.....	.....	.....	0003
164641 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/06/2023	.02/06/2024	.....	21,353,699	..4111.08000000	.....	565,873	(365,880)	199,993	.....	639,268	.....	.....	.....(365,880)	.....	.....	.....	0003
164704 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXT09	.02/10/2023	.02/10/2024	.....	1,214,990	..4114.28506883	.....	61,767	(39,260)	22,507	.....	49,900	.....	.....	.....(39,260)	.....	.....	.....	0003
165119 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB6K528	.02/17/2023	.02/20/2024	.....	26,009,908	...90.66000000	.....	2,412,753	(1,475,189)	937,564	.....	63,728	.....	.....	.....(1,475,189)	.....	.....	.....	0003
165129 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPR08K5P83	.02/17/2023	.02/20/2024	.....	998,293	...71.02000000	.....	86,442	(52,852)	33,590	.....	20,887	.....	.....	.....(52,852)	.....	.....	.....	0003
165141 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.02/17/2023	.02/20/2024	.....	51,453,325	...4079.09000000	.....	5,067,714	(3,098,466)	1,969,248	.....	1,446,745	.....	.....	.....(3,098,466)	.....	.....	.....	0003
165170 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	48,983,356	...4079.09000000	.....	4,801,643	(2,935,787)	1,865,856	.....	1,652,049	.....	.....	.....(2,935,787)	.....	.....	.....	0003
165187 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.02/17/2023	.02/20/2024	.....	36,822,879	...4079.09000000	.....	3,633,785	(2,221,743)	1,412,041	.....	2,368,916	.....	.....	.....(2,221,743)	.....	.....	.....	0003
165229 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.08/20/2024	.....	6,934,453	...4079.09000000	.....	835,601	(341,837)	493,764	.....	185,565	.....	.....	.....(341,837)	.....	.....	.....	0003
165236 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57PNE97	.02/17/2023	.02/20/2024	.....	43,532,760	...1163.41000000	.....	2,934,108	(1,793,952)	1,140,156	.....	2,877,952	.....	.....	.....(1,793,952)	.....	.....	.....	0003
165237 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	10,435,563	...517.77000000	.....	672,050	(410,900)	261,150	.....	79,191	.....	.....	.....(410,900)	.....	.....	.....	0003
165239 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024	.....	56,699,351	...4079.09000000	.....	5,465,758	(3,341,836)	2,123,922	.....	854,159	.....	.....	.....(3,341,836)	.....	.....	.....	0003
165240 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024		56,699,351	...4079.09000000		5,465,758	(3,341,836)	2,123,922		854,159			(3,341,836)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
165249 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	54,847,444	..4079.09000000	.....	5,287,236	(3,232,685)	2,054,551	.....	.....895,072	.....	.....	.....(3,232,685)	.....	.....	.....	0003
165257 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	44,430,264	..4079.09000000	.....	4,283,031	(2,618,701)	1,664,330	.....	.....999,461	.....	.....	.....(2,618,701)	.....	.....	.....	0003
165270 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	62,410,077	..4079.09000000	.....	6,016,266	(3,678,424)	2,337,842	.....	.....2,017,010	.....	.....	.....(3,678,424)	.....	.....	.....	0003
165272 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	51,804,443	..4079.09000000	.....	4,993,894	(3,053,332)	1,940,562	.....	.....1,884,721	.....	.....	.....(3,053,332)	.....	.....	.....	0003
165277 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	48,949,080	..4079.09000000	.....	4,718,640	(2,885,038)	1,833,602	.....	.....2,035,189	.....	.....	.....(2,885,038)	.....	.....	.....	0003
165279 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	02/17/2023	02/20/2024	.....	48,137,667	..4079.09000000	.....	4,640,421	(2,837,214)	1,803,207	.....	.....2,231,970	.....	.....	.....(2,837,214)	.....	.....	.....	0003
165301 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	02/17/2023	02/20/2024	.....	39,453,793	...171.26000000	.....	3,431,310	(2,097,947)	1,333,362	.....	.....966,488	.....	.....	.....(2,097,947)	.....	.....	.....	0003
165307 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	02/17/2023	02/20/2024	.....	17,306,899	..4079.09000000	.....	418,827	(256,076)	162,751	.....	.....281,652	.....	.....	.....(256,076)	.....	.....	.....	0003
165308 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	02/17/2023	02/18/2028	.....	8,592,432	..4079.09000000	.....	391,815	(48,253)	343,562	.....	.....417,104	.....	.....	.....(48,253)	.....	.....	.....	0003
165310 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	02/17/2023	02/20/2030	.....	16,958,688	..4079.09000000	.....	827,584	(72,737)	754,847	.....	.....783,326	.....	.....	.....(72,737)	.....	.....	.....	0003
165807 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	03/06/2023	03/06/2024	.....	46,548,743	...171.62000000	.....	3,881,504	(2,205,882)	1,675,622	.....	.....1,139,319	.....	.....	.....(2,205,882)	.....	.....	.....	0003
165815 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	28,758,645	...87.97000000	.....	2,734,948	(1,554,287)	1,180,661	.....	.....151,613	.....	.....	.....(1,554,287)	.....	.....	.....	0003
165823 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	03/06/2023	03/06/2024	.....	1,417,975	...70.70000000	.....	119,821	(68,095)	51,726	.....	.....26,069	.....	.....	.....(68,095)	.....	.....	.....	0003
165834 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/06/2023	09/06/2024	.....	4,453,262	..4048.42000000	.....	498,762	(188,623)	310,139	.....	.....97,960	.....	.....	.....(188,623)	.....	.....	.....	0003
165836 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	50,425,583	...1159.79000000	.....	3,474,323	(1,974,478)	1,499,844	.....	.....3,612,706	.....	.....	.....(1,974,478)	.....	.....	.....	0003
165837 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/06/2023	03/06/2024		65,584,404	..4048.42000000		5,804,298	(3,298,617)	2,505,681		1,027,694			(3,298,617)				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
165839 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO JPMORGAN CHASE BANK, N.A.	BFMBT61CT2L1QCEMIK50	03/06/2023	03/06/2024	11,534,942	513.13000000		753,232	(428,066)	325,166		146,275			(428,066)				0003	
165843 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	THROUGH CBO JPMORGAN CHASE BANK, N.A.	9R7GPT507KV3UQJZ0078	03/06/2023	03/06/2024	52,562,742	4048.42000000		4,651,865	(2,643,683)	2,008,182		1,182,035			(2,643,683)				0003	
165863 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWIFA76	03/06/2023	03/06/2030	13,812,465	4048.42000000		661,617	(53,819)	607,798		491,490			(53,819)				0003	
165865 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	66,124,379	4048.42000000		6,407,452	(3,641,394)	2,766,059		1,024,727			(3,641,394)				0003	
165878 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	79,354,071	4048.42000000		7,693,377	(4,372,193)	3,321,185		2,951,389			(4,372,193)				0003	
165890 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	48,172,219	4048.42000000		4,667,888	(2,652,789)	2,015,099		1,361,783			(2,652,789)				0003	
165901 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	51,019,893	4048.42000000		4,948,930	(2,812,506)	2,136,423		2,326,612			(2,812,506)				0003	
165917 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	37,733,652	4048.42000000		3,658,278	(2,079,021)	1,579,256		1,356,644			(2,079,021)				0003	
165918 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	64,612,671	4048.42000000		6,264,198	(3,559,982)	2,704,217		2,106,811			(3,559,982)				0003	
165919 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	43,155,522	4048.42000000		4,186,086	(2,378,978)	1,807,108		2,802,119			(2,378,978)				0003	
165920 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	03/06/2023	03/06/2024	30,804,472	4048.42000000		1,712,729	(973,354)	739,375		791,723			(973,354)				0003	
165938 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	03/06/2023	03/06/2024	16,729,080	4048.42000000		418,227	(237,681)	180,546		638,921			(237,681)				0003	
165942 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	31,127,643	4048.42000000		3,017,825	(1,715,048)	1,302,777		1,254,976			(1,715,048)				0003	
165944 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	03/06/2023	03/06/2024	45,097,973	4048.42000000		4,374,503	(2,486,057)	1,888,447		1,944,493			(2,486,057)				0003	
166106 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	03/10/2023	03/08/2024	1,446,382	3992.55380987		65,531	(36,726)	28,805		118,390			(36,726)				0003	
166342 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	03/20/2023	03/20/2024	52,175,511	1142.99000000		3,323,580	(1,761,679)	1,561,901		4,499,385			(1,761,679)				0003	
166343 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	BFMBT61CT2L1QCEMIK50	03/20/2023	03/20/2024	11,228,864	514.00000000		666,995	(353,544)	313,451		150,573			(353,544)				0003	
166351 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL	02RNE81BX4R0TD8PU41	03/20/2023	03/20/2024	45,143,279	183.84000000		4,062,895	(2,153,556)	1,909,339		394,245			(2,153,556)				0003	
166358 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	SOCIETE GENERAL	02RNE81BX4R0TD8PU41	03/20/2023	03/20/2024	30,747,590	82.99000000		2,767,283	(1,466,811)	1,300,472		494,101			(1,466,811)				0003	
166366 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1GC71XBU11	03/20/2023	03/20/2024	905,560	68.23000000		80,595	(42,720)	37,875		28,854			(42,720)				0003	
166374 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWIFA76	03/20/2023	03/20/2024	60,473,792	3951.57000000		6,032,485	(3,197,547)	2,834,938		4,142,694			(3,197,547)				0003	
166385 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	03/20/2023	03/20/2024	19,494,043	3951.57000000		432,768	(229,391)	203,377		605,227			(229,391)				0003	
166386 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWIFA76	03/20/2023	03/20/2028	10,912,967	3951.57000000		538,009	(57,129)	480,881		672,949			(57,129)				0003	

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
166390 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/20/2023	.03/20/2030	.....	13,135,985	..3951.57000000	.....	.....650,231	(49,333)	600,898	.....	.....1,091,065	.....	.....	.....(49,333)	.....	.....	.....	0003
166392 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	43,793,472	..3951.57000000	.....	.....3,972,097	(2,105,428)	1,866,668	.....	.....1,445,906	.....	.....	.....(2,105,428)	.....	.....	.....	0003
166399 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	50,089,943	..3951.57000000	.....	.....4,543,191	(2,408,139)	2,135,051	.....	.....1,755,421	.....	.....	.....(2,408,139)	.....	.....	.....	0003
166405 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	47,813,997	..3951.57000000	.....	.....4,336,761	(2,298,720)	2,038,041	.....	.....1,821,717	.....	.....	.....(2,298,720)	.....	.....	.....	0003
166411 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	49,789,782	..3951.57000000	.....	.....4,515,966	(2,393,709)	2,122,257	.....	.....2,089,660	.....	.....	.....(2,393,709)	.....	.....	.....	0003
166415 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	72,687,075	..3951.57000000	.....	.....6,592,766	(3,494,526)	3,098,240	.....	.....3,360,377	.....	.....	.....(3,494,526)	.....	.....	.....	0003
166441 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XB011	.03/20/2023	.03/20/2024	.....	27,545,458	..3951.57000000	.....	.....1,647,218	(873,116)	774,103	.....	.....720,836	.....	.....	.....(873,116)	.....	.....	.....	0003
166443 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.09/20/2024	.....	4,741,884	..3951.57000000	.....	.....401,640	(141,669)	259,971	.....	.....98,862	.....	.....	.....(141,669)	.....	.....	.....	0003
166445 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	74,684,673	..3951.57000000	.....	.....6,773,949	(3,590,563)	3,183,386	.....	.....1,179,103	.....	.....	.....(3,590,563)	.....	.....	.....	0003
166450 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	66,260,242	..3951.57000000	.....	.....6,009,848	(3,185,548)	2,824,300	.....	.....1,098,406	.....	.....	.....(3,185,548)	.....	.....	.....	0003
166456 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	47,837,944	..3951.57000000	.....	.....4,338,933	(2,299,872)	2,039,061	.....	.....1,133,753	.....	.....	.....(2,299,872)	.....	.....	.....	0003
166466 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	49,316,779	..3951.57000000	.....	.....4,473,064	(2,370,969)	2,102,096	.....	.....1,452,526	.....	.....	.....(2,370,969)	.....	.....	.....	0003
167352 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFX09	.04/06/2023	.04/05/2024	.....	54,827,848	..1169.34000000	.....	.....3,492,534	(1,693,640)	1,798,894	.....	.....3,802,427	.....	.....	.....(1,693,640)	.....	.....	.....	0003
167353 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.04/06/2023	.04/05/2024	.....	15,849,534	..520.90000000	.....	.....950,972	(461,156)	489,816	.....	.....148,458	.....	.....	.....(461,156)	.....	.....	.....	0003
167359 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.04/06/2023	.04/05/2024	.....	37,855,997	..84.22000000	.....	.....3,690,942	(1,789,854)	1,901,088	.....	.....518,825	.....	.....	.....(1,789,854)	.....	.....	.....	0003
167368 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFX09	.04/06/2023	.04/05/2024		1,762,377	..71.94000000		141,519	(68,627)	72,892		41,474			(68,627)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
167376 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBMPRO8K5P83	.04/06/2023	.10/04/2024	.....	3,676,167	..4105.02000000	.....	.....433,677	(140,331)	293,347	.....	.....69,740	.....	.....	.....(140,331)	.....	.....	.....	0003	.....
167378 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBMPRO8K5P83	.04/06/2023	.04/05/2024	.....	82,950,604	..4105.02000000	.....	.....7,818,924	(3,791,643)	4,027,281	.....	.....1,191,737	.....	.....	.....(3,791,643)	.....	.....	.....	0003	.....
167385 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBMPRO8K5P83	.04/06/2023	.04/05/2024	.....	80,874,035	..4105.02000000	.....	.....7,621,569	(3,695,939)	3,925,630	.....	.....1,219,421	.....	.....	.....(3,695,939)	.....	.....	.....	0003	.....
167389 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6GNF3BB653	.04/06/2023	.04/05/2024	.....	30,213,841	..4105.02000000	.....	.....1,533,667	(743,724)	789,944	.....	.....934,465	.....	.....	.....(743,724)	.....	.....	.....	0003	.....
167395 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6GNF3BB653	.04/06/2023	.04/05/2024	.....	38,084,070	..4105.02000000	.....	.....2,253,069	(1,092,584)	1,160,485	.....	.....1,546,644	.....	.....	.....(1,092,584)	.....	.....	.....	0003	.....
167400 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6GNF3BB653	.04/06/2023	.04/05/2024	.....	75,924,474	..4105.02000000	.....	.....4,954,863	(2,402,769)	2,552,094	.....	.....3,617,537	.....	.....	.....(2,402,769)	.....	.....	.....	0003	.....
167409 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.04/06/2023	.04/05/2024	.....	21,883,054	..4105.02000000	.....	.....538,323	(261,050)	277,273	.....	.....720,895	.....	.....	.....(261,050)	.....	.....	.....	0003	.....
167410 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.04/06/2023	.04/06/2028	.....	17,613,170	..4105.02000000	.....	.....864,807	(83,783)	781,024	.....	.....937,574	.....	.....	.....(83,783)	.....	.....	.....	0003	.....
167414 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.04/06/2023	.04/05/2030	.....	19,509,223	..4105.02000000	.....	.....963,756	(66,739)	897,017	.....	.....880,727	.....	.....	.....(66,739)	.....	.....	.....	0003	.....
167418 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	69,624,834	..4105.02000000	.....	.....6,384,592	(3,096,090)	3,288,502	.....	.....2,059,350	.....	.....	.....(3,096,090)	.....	.....	.....	0003	.....
167429 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	44,737,329	..4105.02000000	.....	.....4,102,409	(1,989,388)	2,113,022	.....	.....1,467,350	.....	.....	.....(1,989,388)	.....	.....	.....	0003	.....
167430 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUBMPRO8K5P83	.04/06/2023	.04/05/2024	.....	35,993,766	..4105.02000000	.....	.....1,960,221	(950,573)	1,009,648	.....	.....793,026	.....	.....	.....(950,573)	.....	.....	.....	0003	.....
167441 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	47,207,730	..4105.02000000	.....	.....4,328,945	(2,099,242)	2,229,703	.....	.....1,732,190	.....	.....	.....(2,099,242)	.....	.....	.....	0003	.....
167444 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	54,186,264	..4105.02000000	.....	.....4,968,876	(2,409,565)	2,559,311	.....	.....2,015,463	.....	.....	.....(2,409,565)	.....	.....	.....	0003	.....
167447 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	40,229,196	..4105.02000000	.....	.....3,689,014	(1,788,919)	1,900,095	.....	.....2,600,460	.....	.....	.....(1,788,919)	.....	.....	.....	0003	.....
167450 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	50,527,459	..186.49000000	.....	.....4,698,086	(2,278,250)	2,419,836	.....	.....400,882	.....	.....	.....(2,278,250)	.....	.....	.....	0003	.....
167459 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	46,540,418	..4105.02000000	.....	.....4,267,753	(2,069,568)	2,198,185	.....	.....1,251,846	.....	.....	.....(2,069,568)	.....	.....	.....	0003	.....
167471 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	58,174,701	..4105.02000000	.....	.....5,334,615	(2,586,923)	2,747,692	.....	.....1,242,535	.....	.....	.....(2,586,923)	.....	.....	.....	0003	.....
167612 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.04/14/2023	.04/14/2024		1,501,343	..4088.73484766		92,018	(42,489)	49,529		103,529			(42,489)				0003	

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
167989 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.04/20/2023	.04/19/2024	.....	18,066,330	..4129.79000000	.....	.....439,012	(196,052)	242,960	.....	.....454,153	.....	.....	.....(196,052)	.....	.....	.....	0003
167991 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.04/20/2023	.04/20/2028	.....	15,613,951	..4129.79000000	.....	.....757,277	(67,562)	689,714	.....	.....748,177	.....	.....	.....(67,562)	.....	.....	.....	0003
167995 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.04/20/2023	.04/18/2030	.....	14,700,848	..4129.79000000	.....	.....721,812	(46,049)	675,763	.....	.....606,321	.....	.....	.....(46,049)	.....	.....	.....	0003
167999 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	1,381,870	...73.26000000	.....	.....98,274	(43,887)	54,387	.....	.....22,784	.....	.....	.....(43,887)	.....	.....	.....	0003
168016 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.10/18/2024	.....	3,716,811	..4129.79000000	.....	.....422,226	(125,819)	296,407	.....	.....58,747	.....	.....	.....(125,819)	.....	.....	.....	0003
168019 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	65,250,682	..4129.79000000	.....	.....5,944,276	(2,654,567)	3,289,709	.....	.....911,835	.....	.....	.....(2,654,567)	.....	.....	.....	0003
168026 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	48,407,333	..4129.79000000	.....	.....4,409,863	(1,969,336)	2,440,527	.....	.....1,118,957	.....	.....	.....(1,969,336)	.....	.....	.....	0003
168032 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.04/20/2023	.04/19/2024	.....	46,993,198	..1174.71000000	.....	.....3,045,159	(1,359,893)	1,685,266	.....	.....3,159,865	.....	.....	.....(1,359,893)	.....	.....	.....	0003
168035 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.04/20/2023	.04/19/2024	.....	10,195,645	...520.20000000	.....	.....633,150	(282,749)	350,401	.....	.....113,799	.....	.....	.....(282,749)	.....	.....	.....	0003
168045 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	64,826,553	..4129.79000000	.....	.....5,905,638	(2,637,312)	3,268,326	.....	.....1,844,770	.....	.....	.....(2,637,312)	.....	.....	.....	0003
168059 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	54,513,228	..4129.79000000	.....	.....4,966,104	(2,217,740)	2,748,364	.....	.....1,695,396	.....	.....	.....(2,217,740)	.....	.....	.....	0003
168067 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	49,611,663	..4129.79000000	.....	.....4,519,576	(2,018,331)	2,501,245	.....	.....1,788,536	.....	.....	.....(2,018,331)	.....	.....	.....	0003
168080 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	51,513,349	..4129.79000000	.....	.....4,692,818	(2,095,697)	2,597,121	.....	.....2,027,984	.....	.....	.....(2,095,697)	.....	.....	.....	0003
168092 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024	.....	59,272,728	..4129.79000000	.....	.....5,399,690	(2,411,368)	2,988,322	.....	.....2,450,825	.....	.....	.....(2,411,368)	.....	.....	.....	0003
168103 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4R0TD8PU41	.04/20/2023	.04/19/2024	.....	40,258,312	...186.09000000	.....	.....3,703,765	(1,654,010)	2,049,755	.....	.....369,599	.....	.....	.....(1,654,010)	.....	.....	.....	0003
168104 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/20/2023	.04/19/2024		65,599,814	..4129.79000000		5,976,082	(2,668,771)	3,307,311		3,469,890			(2,668,771)				0003

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168117 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	.04/20/2023	.04/19/2024		27,892,298	84.25000000		2,677,661	(1,195,777)	1,481,883		439,213			(1,195,777)				0003
168123 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.04/20/2023	.04/19/2024	.....	61,413,075	..4129.79000000	.....	5,735,981	(2,561,548)	3,174,433		908,137	.....		.....(2,561,548)			.....	0003
168129 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPUBMPRO8K5P83	.04/20/2023	.04/19/2024	.....	26,374,394	..4129.79000000	.....	1,404,964	(627,422)	777,542		585,383	.....		.....(627,422)			.....	0003
170968 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPUBMPRO8K5P83	.05/05/2023	.05/06/2024	.....	35,484,164	..4136.25000000	.....	1,920,403	(774,440)	1,145,963		794,415	.....		.....(774,440)			.....	0003
170973 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/05/2023	.05/06/2024	.....	19,049,411	..4136.25000000	.....	485,760	(195,892)	289,868		613,935	.....		.....(195,892)			.....	0003
170976 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWIEFA76	.05/05/2023	.05/05/2028	.....	15,646,372	..4136.25000000	.....	765,108	(61,979)	703,128		746,782	.....		.....(61,979)			.....	0003
170979 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPUBMPRO8K5P83	.05/05/2023	.05/06/2030	.....	15,930,319	..4136.25000000	.....	767,841	(44,426)	723,416		773,959	.....		.....(44,426)			.....	0003
171005 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/05/2023	.05/06/2024	.....	51,935,962	..187.46000000	.....	4,756,964	(1,918,340)	2,838,624		464,781	.....		.....(1,918,340)			.....	0003
171015 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/05/2023	.11/06/2024	.....	3,722,625	..4136.25000000	.....	418,419	(112,388)	306,031		66,507	.....		.....(112,388)			.....	0003
171018 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/05/2023	.05/06/2024	.....	67,834,500	..4136.25000000	.....	6,186,572	(2,494,857)	3,691,715		2,034,382	.....		.....(2,494,857)			.....	0003
171024 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/05/2023	.05/06/2024	.....	47,542,926	..4136.25000000	.....	4,335,961	(1,748,562)	2,587,399		1,690,341	.....		.....(1,748,562)			.....	0003
171037 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.05/05/2023	.05/06/2024	.....	48,299,819	..4136.25000000	.....	4,404,990	(1,776,399)	2,628,591		2,129,569	.....		.....(1,776,399)			.....	0003
171064 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSRPFMYMCJFXT09	.05/05/2023	.05/06/2024	.....	49,157,145	..1177.53000000	.....	3,175,552	(1,280,604)	1,894,948		3,349,600	.....		.....(1,280,604)			.....	0003
171067 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	.05/05/2023	.05/06/2024	.....	14,753,987	..521.41000000	.....	899,993	(362,940)	537,053		173,642	.....		.....(362,940)			.....	0003
171076 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/05/2023	.05/06/2024	.....	43,453,573	..4136.25000000	.....	4,097,164	(1,652,262)	2,444,902		2,528,815	.....		.....(1,652,262)			.....	0003
171088 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/05/2023	.05/06/2024	.....	56,879,950	..4136.25000000	.....	5,363,114	(2,162,782)	3,200,332		2,336,008	.....		.....(2,162,782)			.....	0003
171105 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROTDBPU41	.05/05/2023	.05/06/2024	.....	35,729,781	85.14000000	.....	3,572,978	(1,440,874)	2,132,104		517,345	.....		.....(1,440,874)			.....	0003
171111 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPUBMPRO8K5P83	.05/05/2023	.05/06/2024	.....	1,852,405	73.88000000	.....	147,266	(59,388)	87,878		31,762	.....		.....(59,388)			.....	0003
171118 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.05/05/2023	.05/06/2024		75,733,365	..4136.25000000		7,140,771	(2,879,657)	4,261,114		1,059,115			(2,879,657)				0003

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171124 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024		61,715,852	..4136.25000000		5,819,083	(2,346,660)		3,472,423				(2,346,660)				0003
171128 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	36,230,353	..4136.25000000	.....	3,416,099	(1,377,609)	.....	2,038,489	.....	.....	.....	.....(1,377,609)	.....	.....	.....	0003
171139 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	43,678,050	..4136.25000000	.....	4,118,329	(1,660,798)	.....	2,457,532	.....	.....	.....	.....(1,660,798)	.....	.....	.....	0003
171147 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	54,739,763	..4136.25000000	.....	5,161,319	(2,081,404)	.....	3,079,915	.....	.....	.....	.....(2,081,404)	.....	.....	.....	0003
171149 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	51,001,825	..4136.25000000	.....	4,808,876	(1,939,274)	.....	2,869,602	.....	.....	.....	.....(1,939,274)	.....	.....	.....	0003
171349 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/12/2023	.05/12/2024	.....	1,395,983	..4137.71599488	.....	70,853	(27,296)	.....	43,557	.....	.....	.....	.....(27,296)	.....	.....	.....	0003
171603 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGGFU57RNE97	.05/19/2023	.05/20/2024	.....	45,781,883	..1190.69000000	.....	2,998,713	(1,094,898)	.....	1,903,815	.....	.....	.....	.....(1,094,898)	.....	.....	.....	0003
171604 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L10CEMIK50	.05/19/2023	.05/20/2024	.....	11,590,433	..514.34000000	.....	723,243	(264,072)	.....	459,171	.....	.....	.....	.....(264,072)	.....	.....	.....	0003
171605 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFMBT61CT2L10CEMIK50	.05/19/2023	.05/20/2024	.....	17,832,253	..4191.98000000	.....	465,422	(169,936)	.....	295,486	.....	.....	.....	.....(169,936)	.....	.....	.....	0003
171609 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32WFEA76	.05/19/2023	.05/20/2030	.....	20,432,234	..4191.98000000	.....	974,618	(51,055)	.....	923,563	.....	.....	.....	.....(51,055)	.....	.....	.....	0003
171613 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/19/2023	.05/20/2024	.....	66,998,195	..4191.98000000	.....	5,969,612	(2,179,640)	.....	3,789,972	.....	.....	.....	.....(2,179,640)	.....	.....	.....	0003
171627 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/19/2023	.05/20/2024	.....	40,925,295	..4191.98000000	.....	3,646,488	(1,331,415)	.....	2,315,073	.....	.....	.....	.....(1,331,415)	.....	.....	.....	0003
171636 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPUR8MPR08K5P83	.05/19/2023	.11/20/2024	.....	2,088,258	..4191.98000000	.....	243,742	(59,277)	.....	184,465	.....	.....	.....	.....(59,277)	.....	.....	.....	0003
171641 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	69,645,168	..4191.98000000	.....	6,373,226	(2,327,009)	.....	4,046,217	.....	.....	.....	.....(2,327,009)	.....	.....	.....	0003
171644 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	64,722,568	..4191.98000000	.....	5,923,242	(2,162,710)	.....	3,760,533	.....	.....	.....	.....(2,162,710)	.....	.....	.....	0003
171648 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	43,887,976	..4191.98000000	.....	4,017,000	(1,466,698)	.....	2,550,303	.....	.....	.....	.....(1,466,698)	.....	.....	.....	0003
171660 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	82,522,946	..4191.98000000	.....	7,565,059	(2,762,174)	.....	4,802,885	.....	.....	.....	.....(2,762,174)	.....	.....	.....	0003
171673 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	46,379,406	..4191.98000000	.....	4,250,962	(1,552,122)	.....	2,698,839	.....	.....	.....	.....(1,552,122)	.....	.....	.....	0003
171685 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	46,457,408	..4191.98000000	.....	4,258,262	(1,554,788)	.....	2,703,474	.....	.....	.....	.....(1,554,788)	.....	.....	.....	0003
171695 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	.05/19/2023	.05/20/2024	.....	61,931,663	..4191.98000000	.....	5,654,361	(2,064,535)	.....	3,589,826	.....	.....	.....	.....(2,064,535)	.....	.....	.....	0003
171713 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROIWP21HZNBB6K528	.05/19/2023	.05/20/2024		44,144,370	..183.64000000		3,929,378	(1,434,705)		2,494,673				(1,434,705)				0003

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
171716 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.05/19/2023	.05/20/2024	.....	28,520,583	...82.56000000	.....	2,837,798	(1,036,144)	1,801,654	.....	588,355	.....	.....	.....(1,036,144)	.....	.....	.....	0003
171722 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.05/19/2023	.05/20/2024	.....	2,004,582	...73.66000000	.....	156,157	(57,016)	99,140	.....	37,161	.....	.....	.....(57,016)	.....	.....	.....	0003
171729 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	.05/19/2023	.05/20/2024	.....	30,123,905	...4191.98000000	.....	1,545,356	(564,245)	981,112	.....	619,498	.....	.....	.....(564,245)	.....	.....	.....	0003
171734 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.05/19/2023	.05/19/2028	.....	15,669,739	...4191.98000000	.....	756,848	(55,511)	701,338	.....	645,337	.....	.....	.....(55,511)	.....	.....	.....	0003
171736 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	.05/19/2023	.05/20/2024	.....	56,172,532	...4191.98000000	.....	5,005,034	(1,827,451)	3,177,583	.....	2,154,847	.....	.....	.....(1,827,451)	.....	.....	.....	0003
172259 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.06/06/2023	.06/06/2024	.....	52,847,749	...1211.64000000	.....	3,561,938	(1,128,920)	2,433,018	.....	2,701,803	.....	.....	.....(1,128,920)	.....	.....	.....	0003
172262 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	.06/06/2023	.06/06/2024	.....	12,423,651	...513.78000000	.....	795,114	(252,003)	543,110	.....	277,931	.....	.....	.....(252,003)	.....	.....	.....	0003
172265 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.06/06/2023	.06/06/2024	.....	2,498,944	...72.83000000	.....	195,018	(61,809)	133,209	.....	57,519	.....	.....	.....(61,809)	.....	.....	.....	0003
172301 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	.06/06/2023	.06/06/2024	.....	19,174,909	...4283.85000000	.....	1,700,915	(539,088)	1,161,827	.....	359,844	.....	.....	.....(539,088)	.....	.....	.....	0003
172310 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.06/06/2023	.06/06/2024	.....	51,407,480	...182.34000000	.....	4,349,072	(1,378,394)	2,970,677	.....	787,545	.....	.....	.....(1,378,394)	.....	.....	.....	0003
172317 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	.06/06/2023	.06/06/2024	.....	61,630,714	...4283.85000000	.....	5,466,968	(1,732,700)	3,734,268	.....	1,457,736	.....	.....	.....(1,732,700)	.....	.....	.....	0003
172320 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	.06/06/2023	.06/06/2024	.....	28,290,792	...84.28000000	.....	2,618,274	(829,836)	1,788,439	.....	546,118	.....	.....	.....(829,836)	.....	.....	.....	0003
172334 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E57ODZVZ7FF32TWEFA76	.06/06/2023	.06/06/2028	.....	19,270,434	...4283.85000000	.....	920,163	(58,423)	861,740	.....	686,729	.....	.....	.....(58,423)	.....	.....	.....	0003
172335 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	.06/06/2023	.06/06/2024	.....	49,713,238	...4283.85000000	.....	4,419,507	(1,400,718)	3,018,789	.....	1,489,578	.....	.....	.....(1,400,718)	.....	.....	.....	0003
172337 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.06/06/2023	.06/06/2030	.....	17,649,477	...4283.85000000	.....	831,290	(37,712)	793,578	.....	647,152	.....	.....	.....(37,712)	.....	.....	.....	0003
172357 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.06/06/2023	.12/06/2024	.....	4,283,850	...4283.85000000	.....	472,080	(99,747)	372,333	.....	69,762	.....	.....	.....(99,747)	.....	.....	.....	0003
172360 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	.06/06/2023	.06/06/2024	.....	41,520,598	...4283.85000000	.....	3,691,181	(1,169,883)	2,521,299	.....	1,351,333	.....	.....	.....(1,169,883)	.....	.....	.....	0003
172361 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.06/06/2023	.06/06/2024	.....	89,960,850	...4283.85000000	.....	7,727,580	(2,449,178)	5,278,402	.....	1,122,986	.....	.....	.....(2,449,178)	.....	.....	.....	0003
172371 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	.06/06/2023	.06/06/2024		71,111,910	...4283.85000000		6,108,468	(1,936,017)	4,172,451		926,695			(1,936,017)				0003

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SCHEDULE DB - PART A - SECTION 1

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
172372 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	.06/06/2023	.06/06/2024	.....	63,682,625	..4283.85000000	.....	5,648,983	(1,790,388)	3,858,595	.....	2,377,980	.....	.....	.....(1,790,388)	.....	.....	.....	0003
172381 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	.06/06/2023	.06/06/2024	.....	63,586,612	..4283.85000000	.....	5,652,850	(1,791,614)	3,861,236	.....	2,581,827	.....	.....	.....(1,791,614)	.....	.....	.....	0003
172389 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... ROYAL BANK OF CANADA	.06/06/2023	.06/06/2024	.....	47,373,463	..4283.85000000	.....	4,263,612	(1,351,309)	2,912,303	.....	2,309,081	.....	.....	.....(1,351,309)	.....	.....	.....	0003
172391 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	.06/06/2023	.06/06/2024	.....	29,049,620	..4283.85000000	.....	1,406,002	(445,618)	960,384	.....	486,249	.....	.....	.....(445,618)	.....	.....	.....	0003
172392 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	.06/06/2023	.06/06/2024	.....	17,253,840	..4283.85000000	.....	484,833	(153,663)	331,170	.....	396,717	.....	.....	.....(153,663)	.....	.....	.....	0003
172398 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.06/06/2023	.06/06/2024	.....	44,980,425	..4283.85000000	.....	3,863,790	(1,224,589)	2,639,201	.....	1,199,118	.....	.....	.....(1,224,589)	.....	.....	.....	0003
172406 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.06/06/2023	.06/06/2024	.....	50,121,045	..4283.85000000	.....	4,305,366	(1,364,542)	2,940,824	.....	1,758,797	.....	.....	.....(1,364,542)	.....	.....	.....	0003
172412 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.06/06/2023	.06/06/2024	.....	43,363,186	..4283.85000000	.....	3,724,870	(1,180,560)	2,544,310	.....	1,207,402	.....	.....	.....(1,180,560)	.....	.....	.....	0003
172527 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.06/09/2023	.06/09/2024	.....	1,140,207	..4267.08371000	.....	60,010	(18,528)	41,482	.....	44,703	.....	.....	.....(18,528)	.....	.....	.....	0003
172786 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.06/20/2023	.06/20/2024	.....	46,758,408	..1235.41000000	.....	3,146,841	(876,988)	2,269,852	.....	1,898,917	.....	.....	.....(876,988)	.....	.....	.....	0003
172790 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	.06/20/2023	.06/20/2024	.....	9,374,058	..514.14000000	.....	609,314	(169,809)	439,505	.....	221,291	.....	.....	.....(169,809)	.....	.....	.....	0003
172805 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	.06/20/2023	.06/20/2024	.....	23,744,426	..84.91000000	.....	2,006,405	(559,162)	1,447,243	.....	372,040	.....	.....	.....(559,162)	.....	.....	.....	0003
172815 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	.06/20/2023	.06/20/2024	.....	1,616,767	..72.42000000	.....	129,898	(36,201)	93,697	.....	31,554	.....	.....	.....(36,201)	.....	.....	.....	0003
172829 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.06/20/2023	.06/20/2024	.....	44,290,751	..4388.71000000	.....	3,946,458	(1,099,833)	2,846,625	.....	833,002	.....	.....	.....(1,099,833)	.....	.....	.....	0003
172838 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.06/20/2023	.06/20/2024	.....	45,128,233	..4388.71000000	.....	4,026,154	(1,122,043)	2,904,111	.....	1,162,949	.....	.....	.....(1,122,043)	.....	.....	.....	0003
172854 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	.06/20/2023	.06/20/2024	.....	49,445,911	..4388.71000000	.....	4,411,496	(1,229,433)	3,182,063	.....	1,365,975	.....	.....	.....(1,229,433)	.....	.....	.....	0003
172861 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	.06/20/2023	.06/20/2024	.....	29,754,826	..4388.71000000	.....	1,452,036	(404,666)	1,047,370	.....	366,096	.....	.....	.....(404,666)	.....	.....	.....	0003
172864 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	.06/20/2023	.06/20/2024	.....	15,722,268	..4388.71000000	.....	455,946	(127,067)	328,879	.....	268,536	.....	.....	.....(127,067)	.....	.....	.....	0003
172868 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.06/20/2023	.06/20/2028	.....	17,848,623	..4388.71000000	.....	846,025	(47,233)	798,792	.....	573,009	.....	.....	.....(47,233)	.....	.....	.....	0003
172870 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	.06/20/2023	.06/20/2030	.....	9,849,798	..4388.71000000	.....	459,001	(18,310)	440,691	.....	237,379	.....	.....	.....(18,310)	.....	.....	.....	0003
172873 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	.06/20/2023	.06/20/2024		44,258,717	..179.75000000		3,722,903	(1,037,530)	2,685,373		758,468			(1,037,530)				0003

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SCHEDULE DB - PART A - SECTION 1

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
172879 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	44,764,842	..4388.71000000	.....	3,849,786	(1,072,891)	2,776,895	.....	1,092,900	.....	.....	.....(1,072,891)	.....	.....	.....	0003
172885 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	52,225,649	..4388.71000000	.....	4,491,417	(1,251,706)	3,239,711	.....	1,622,551	.....	.....	.....(1,251,706)	.....	.....	.....	0003
172889 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	12/20/2024	.....	3,510,968	..4388.71000000	.....	390,416	(72,536)	317,880	.....	61,819	.....	.....	.....(72,536)	.....	.....	.....	0003
172892 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	53,700,431	..4388.71000000	.....	4,618,249	(1,287,053)	3,331,196	.....	1,784,035	.....	.....	.....(1,287,053)	.....	.....	.....	0003
172894 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	72,852,586	..4388.71000000	.....	6,265,338	(1,746,078)	4,519,260	.....	819,816	.....	.....	.....(1,746,078)	.....	.....	.....	0003
172902 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	65,649,879	..4388.71000000	.....	5,645,904	(1,573,449)	4,072,455	.....	2,487,933	.....	.....	.....(1,573,449)	.....	.....	.....	0003
172906 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	62,138,955	..4388.71000000	.....	5,343,963	(1,489,301)	3,854,662	.....	729,662	.....	.....	.....(1,489,301)	.....	.....	.....	0003
172916 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	60,795,659	..4388.71000000	.....	5,228,440	(1,457,106)	3,771,334	.....	1,385,316	.....	.....	.....(1,457,106)	.....	.....	.....	0003
173429 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/06/2023	07/05/2024	.....	53,459,892	..1242.07000000	.....	3,715,463	(875,424)	2,840,039	.....	2,111,383	.....	.....	.....(875,424)	.....	.....	.....	0003
173431 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	07/06/2023	07/05/2024	.....	11,358,299	...509.30000000	.....	749,648	(176,629)	573,018	.....	356,656	.....	.....	.....(176,629)	.....	.....	.....	0003
173433 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	35,320,558	..4411.59000000	.....	3,154,126	(743,164)	2,410,962	.....	636,943	.....	.....	.....(743,164)	.....	.....	.....	0003
173450 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	40,238,615	..4411.59000000	.....	3,593,308	(846,643)	2,746,666	.....	848,457	.....	.....	.....(846,643)	.....	.....	.....	0003
173462 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	32,100,705	..4411.59000000	.....	2,824,862	(665,584)	2,159,278	.....	727,212	.....	.....	.....(665,584)	.....	.....	.....	0003
173478 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	64,052,663	..4411.59000000	.....	5,718,622	(1,347,401)	4,371,221	.....	1,455,614	.....	.....	.....(1,347,401)	.....	.....	.....	0003
173482 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	46,418,338	..4411.59000000	.....	4,084,814	(962,449)	3,122,365	.....	1,153,134	.....	.....	.....(962,449)	.....	.....	.....	0003
173493 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	58,191,264	..4411.59000000	.....	5,120,831	(1,206,552)	3,914,279	.....	1,668,951	.....	.....	.....(1,206,552)	.....	.....	.....	0003
173500 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	07/06/2023	07/05/2024	.....	51,691,277	...177.31000000	.....	4,300,075	(1,013,168)	3,286,907	.....	1,151,122	.....	.....	.....(1,013,168)	.....	.....	.....	0003
173508 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024		52,068,401	..4411.59000000		4,582,019	(1,079,599)	3,502,420		1,658,064			(1,079,599)				0003

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173514 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL BANK OF AMERICA, N.A.	07/06/2023	07/05/2024		25,582,286	86.88000000		2,155,414	(507,851)	1,647,563		361,068			(507,851)				0003	
173518 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/06/2023	07/05/2024	.....	89,247,208	4411.59000000	.....	7,907,303	(1,863,090)	6,044,212		3,245,222			(1,863,090)				0003	.....
173530 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/06/2023	07/05/2024	.....	59,171,224	4411.59000000	.....	5,242,570	(1,235,236)	4,007,335		2,369,802			(1,235,236)				0003	.....
173538 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/06/2023	07/05/2024	.....	17,545,575	4411.59000000	.....	587,777	(138,490)	449,287		358,244			(138,490)				0003	.....
173539 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2023	07/06/2028	.....	16,509,643	4411.59000000	.....	789,161	(37,147)	752,014		407,336			(37,147)				0003	.....
173541 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2023	07/05/2030	.....	14,571,363	4411.59000000	.....	690,683	(23,239)	667,444		281,857			(23,239)				0003	.....
173543 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2023	01/06/2025	.....	3,970,431	4411.59000000	.....	447,867	(70,030)	377,837		55,612			(70,030)				0003	.....
173552 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUB8MPRO8K5P83	07/06/2023	07/05/2024	.....	92,074,134	4411.59000000	.....	8,222,220	(1,937,290)	6,284,930		1,034,939			(1,937,290)				0003	.....
173555 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2023	07/05/2024	.....	2,737,328	70.37000000	.....	193,717	(45,643)	148,074		80,027			(45,643)				0003	.....
173556 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUB8MPRO8K5P83	07/06/2023	07/05/2024	.....	73,279,913	4411.59000000	.....	6,543,896	(1,541,850)	5,002,047		827,591			(1,541,850)				0003	.....
173566 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	07/06/2023	07/05/2024	.....	28,000,413	4411.59000000	.....	1,346,820	(317,333)	1,029,487		319,611			(317,333)				0003	.....
173838 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/14/2023	07/12/2024	.....	1,393,454	4471.78914150	.....	76,578	(16,410)	60,169		22,581			(16,410)				0003	.....
174110 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUB8MPRO8K5P83	07/20/2023	07/19/2024	.....	75,164,825	4534.87000000	.....	6,485,973	(1,279,425)	5,206,548		811,830			(1,279,425)				0003	.....
174116 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	07/20/2023	07/19/2024	.....	58,890,728	4534.87000000	.....	5,055,281	(997,206)	4,058,075		1,098,297			(997,206)				0003	.....
174135 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	07/20/2023	07/19/2024	.....	54,369,681	4534.87000000	.....	4,667,695	(920,751)	3,746,944		1,110,990			(920,751)				0003	.....
174150 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	07/20/2023	07/19/2024	.....	49,321,405	4534.87000000	.....	4,233,871	(835,174)	3,398,696		1,166,938			(835,174)				0003	.....
174153 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	07/20/2023	07/19/2024	.....	51,657,563	4534.87000000	.....	4,434,871	(874,824)	3,560,047		1,410,543			(874,824)				0003	.....
174156 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	07/20/2023	07/19/2024	.....	50,863,709	4534.87000000	.....	4,368,563	(861,744)	3,506,819		1,571,230			(861,744)				0003	.....
174160 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/20/2023	07/19/2024	.....	31,135,872	4534.87000000	.....	2,581,158	(509,160)	2,071,998		1,062,781			(509,160)				0003	.....
174161 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BNP PARIBAS LONDON	07/20/2023	07/19/2024	.....	20,517,215	88.73000000	.....	1,764,485	(348,063)	1,416,422		243,767			(348,063)				0003	.....
174170 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUWSPFUB8MPRO8K5P83	07/20/2023	07/19/2024	.....	85,929,753	4534.87000000	.....	7,414,878	(1,462,661)	5,952,217		823,631			(1,462,661)				0003	.....
174179 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/20/2023	07/19/2024	.....	24,291,529	4534.87000000	.....	1,146,560	(226,171)	920,389		153,714			(226,171)				0003	.....
174182 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	01/17/2025		3,549,896	4534.87000000		383,032	(50,417)	332,615		48,480			(50,417)				0003	

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
174183 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024		38,795,702	182.74000000		3,184,500	(628,175)	2,556,325		630,849			(628,175)				0003	
174188 Call Options – Ishares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024		2,495,454	73.83000000		166,972	(32,937)	134,035		45,454			(32,937)				0003	
174196 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024		46,709,161	4534.87000000		3,839,531	(757,387)	3,082,144		782,912			(757,387)				0003	
174198 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	07/20/2023	07/19/2024		40,365,295	1273.42000000		2,777,132	(547,818)	2,229,314		1,142,206			(547,818)				0003	
174199 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	07/20/2023	07/19/2024		8,188,697	519.60000000		540,454	(106,610)	433,844		170,458			(106,610)				0003	
174676 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		43,705,560	180.19000000		3,565,524	(552,269)	3,013,255		854,076			(552,269)				0003	
174686 Call Options – IShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		21,075,524	85.75000000		1,649,175	(255,443)	1,393,732		380,146			(255,443)				0003	
174697 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	02/06/2025		4,925,833	4478.03000000		548,735	(56,663)	492,072		73,646			(56,663)				0003	
174705 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		50,472,548	4478.03000000		4,305,354	(666,862)	3,638,492		825,948			(666,862)				0003	
174713 Call Options – S&P Equal Weight Energy – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	JPMORGAN CHASE BANK, N.A.	08/04/2023	08/06/2024		45,819,727	1257.07000000		3,198,217	(495,376)	2,702,841		1,680,292			(495,376)				0003	
174714 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		47,087,381	4478.03000000		4,016,596	(622,136)	3,394,460		897,703			(622,136)				0003	
174715 Call Options – S&P U.S. Retiree Spending Index – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	UBS AG	08/04/2023	08/06/2024		10,625,339	517.99000000		699,147	(108,292)	590,855		260,353			(108,292)				0003	
174724 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		48,732,430	4478.03000000		4,156,920	(643,871)	3,513,049		1,004,977			(643,871)				0003	
174734 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		46,123,709	4478.03000000		3,934,394	(609,403)	3,324,991		1,013,356			(609,403)				0003	
174740 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		46,916,679	4478.03000000		4,002,035	(619,880)	3,382,155		1,112,272			(619,880)				0003	

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
174753 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	46,290,605	..4478.03000000	.....	3,948,630	 (611,609)	 3,337,022	.....	1,285,174	.....	.....	..... (611,609)	.....	.....	.....	0003
174762 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	52,758,358	..4478.03000000	.....	4,500,336	 (697,063)	 3,803,273	.....	1,660,611	.....	.....	..... (697,063)	.....	.....	.....	0003
174771 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	49,706,133	..4478.03000000	.....	4,239,978	 (656,736)	 3,583,242	.....	1,772,809	.....	.....	..... (656,736)	.....	.....	.....	0003
174774 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	30,450,604	..4478.03000000	.....	2,597,464	 (402,325)	 2,195,139	.....	1,221,520	.....	.....	..... (402,325)	.....	.....	.....	0003
174777 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/04/2023	08/04/2028	.....	18,175,824	..4478.03000000	.....	..885,163	 (27,616)	857,547	.....	417,078	.....	.....	..... (27,616)	.....	.....	.....	0003
174779 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2030	.....	12,413,995	..4478.03000000	.....	..615,734	 (13,715)	602,019	.....	256,282	.....	.....	..... (13,715)	.....	.....	.....	0003
174782 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/04/2023	08/06/2024	.....	16,420,632	..4478.03000000	.....	..525,460	 (81,389)	444,071	.....	228,049	.....	.....	..... (81,389)	.....	.....	.....	0003
174789 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	08/04/2023	08/06/2024	.....	2,434,010	..72.16000000	.....	.....197,269	 (30,555)	 166,714	.....	63,268	.....	.....	..... (30,555)	.....	.....	.....	0003
174799 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2024	.....	89,894,379	..4478.03000000	.....	8,061,728	 (1,248,692)	 6,813,036	.....	940,706	.....	.....	..... (1,248,692)	.....	.....	.....	0003
174818 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2024	.....	70,805,946	..4478.03000000	.....	6,349,877	 (983,541)	 5,366,336	.....	772,978	.....	.....	..... (983,541)	.....	.....	.....	0003
174823 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	08/04/2023	08/06/2024	.....	32,284,068	..4478.03000000	.....	1,481,041	 (229,400)	 1,251,641	.....	305,238	.....	.....	..... (229,400)	.....	.....	.....	0003
175024 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/11/2023	08/11/2024	.....	1,278,375	..4469.21784133	.....	..62,197	 (8,497)	53,700	.....	25,111	.....	.....	..... (8,497)	.....	.....	.....	0003
175304 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	08/18/2023	08/20/2024	.....	35,259,793	..1226.67000000	.....	2,464,660	 (287,990)	 2,176,669	.....	1,848,142	.....	.....	..... (287,990)	.....	.....	.....	0003
175305 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	08/18/2023	08/20/2024	.....	7,360,918	...508.53000000	.....	..485,821	 (56,767)	429,054	.....	281,682	.....	.....	..... (56,767)	.....	.....	.....	0003
175351 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	08/18/2023	08/20/2024	.....	2,002,777	...69.84000000	.....	.....172,639	 (20,173)	152,467	.....	76,960	.....	.....	..... (20,173)	.....	.....	.....	0003
175362 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/18/2023	08/18/2028	.....	22,097,696	..4369.71000000	.....	1,082,787	 (25,484)	 1,057,303	.....	664,916	.....	.....	..... (25,484)	.....	.....	.....	0003
175364 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/18/2023	08/20/2030	.....	14,097,552	..4369.71000000	.....	..696,419	 (11,702)	 684,717	.....	350,299	.....	.....	..... (11,702)	.....	.....	.....	0003
175372 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/18/2023	08/20/2024	.....	61,455,820	..4369.71000000	.....	5,574,005	 (651,310)	 4,922,695	.....	1,463,969	.....	.....	..... (651,310)	.....	.....	.....	0003
175384 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/18/2023	08/20/2024		48,503,781	..4369.71000000		4,399,263	 (514,044)	 3,885,219		1,311,000			 (514,044)				0003

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175385 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	G5GSEF7VJP5I70UK5573	.08/18/2023	.08/20/2024		26,255,234	..4369.71000000		1,308,609	 (152,908)	 1,155,701		360,898			 (152,908)				0003
175387 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	52,496,691	..4369.71000000	.....	4,761,417	 (556,361)	 4,205,056	.....	1,714,514	.....	.....	..... (556,361)	.....	.....	.....	0003
175399 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	E570DZIWZ7F32TWIFA76	.08/18/2023	.08/20/2024	.....	13,952,290	..4369.71000000	.....	435,311	 (50,865)	 384,446	.....	354,699	.....	.....	..... (50,865)	.....	.....	.....	0003
175400 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	49,769,249	00000000	.....	4,514,040	 (527,456)	 3,986,584	.....	1,992,722	.....	.....	..... (527,456)	.....	.....	.....	0003
175404 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	31,693,243	..175.33000000	.....	2,563,225	 (299,507)	 2,263,717	.....	858,536	.....	.....	..... (299,507)	.....	.....	.....	0003
175408 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	50,688,636	..4369.71000000	.....	4,597,428	 (537,199)	 4,060,229	.....	2,450,653	.....	.....	..... (537,199)	.....	.....	.....	0003
175419 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	17,145,389	83.13000000	.....	1,383,923	 (161,708)	 1,222,215	.....	405,277	.....	.....	..... (161,708)	.....	.....	.....	0003
175426 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.02/20/2025	.....	3,932,739	..4369.71000000	.....	458,955	 (35,752)	 423,203	.....	60,735	.....	.....	..... (35,752)	.....	.....	.....	0003
175432 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	69,041,418	..4369.71000000	.....	6,262,014	 (731,703)	 5,530,311	.....	811,265	.....	.....	..... (731,703)	.....	.....	.....	0003
175434 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	62,486,853	..4369.71000000	.....	5,667,519	 (662,237)	 5,005,282	.....	783,368	.....	.....	..... (662,237)	.....	.....	.....	0003
175438 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	61,634,148	..4369.71000000	.....	5,590,179	 (653,200)	 4,936,979	.....	1,242,015	.....	.....	..... (653,200)	.....	.....	.....	0003
175910 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	36,786,381	..177.83000000	.....	2,982,959	 (195,604)	 2,787,355	.....	886,324	.....	.....	..... (195,604)	.....	.....	.....	0003
175967 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	19,890,491	84.16000000	.....	1,536,219	 (100,736)	 1,435,483	.....	430,401	.....	.....	..... (100,736)	.....	.....	.....	0003
175973 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	1,548,938	70.72000000	.....	107,979	 (7,081)	 100,898	.....	46,019	.....	.....	..... (7,081)	.....	.....	.....	0003
175981 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO	9R7GPTS07KV3UQJZ0078	.09/06/2023	.03/06/2025		4,018,932	..4465.48000000		450,117	 (19,749)	 430,368		66,100			 (19,749)				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
175985 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		71,001,132	..4465.48000000		6,283,521	(412,034)	5,871,487		760,168			(412,034)				0003	
175989 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		67,875,296	..4465.48000000		6,006,888	(393,894)	5,612,994		761,487			(393,894)				0003	
175992 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		36,170,388	..4465.48000000		3,201,039	(209,904)	2,991,135		601,738			(209,904)				0003	
175997 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		50,069,195	..4465.48000000		4,431,068	(290,562)	4,140,506		1,004,167			(290,562)				0003	
176006 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		49,838,329	..4465.48000000		4,410,637	(289,222)	4,121,414		1,085,811			(289,222)				0003	
176014 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		47,656,406	..4465.48000000		4,217,539	(276,560)	3,940,979		1,114,621			(276,560)				0003	
176024 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		46,846,547	..4465.48000000		4,145,867	(271,860)	3,874,007		1,236,897			(271,860)				0003	
176036 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		49,826,183	..4465.48000000		4,409,562	(289,152)	4,120,410		1,530,356			(289,152)				0003	
176040 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFTX09	09/06/2023	09/06/2024		44,820,899	..1251.62000000		3,146,427	(206,323)	2,940,104		1,906,165			(206,323)				0003	
176042 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L1QCEMIK50	09/06/2023	09/06/2024		9,627,469	..505.07000000		637,338	(41,793)	595,546		438,654			(41,793)				0003	
176046 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		51,543,964	..4465.48000000		4,561,583	(299,120)	4,262,463		1,836,712			(299,120)				0003	
176053 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		41,975,512	..4465.48000000		3,714,786	(243,593)	3,471,193		1,711,368			(243,593)				0003	
176056 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	09/06/2023	09/06/2024		37,510,032	..4465.48000000		3,319,596	(217,678)	3,101,918		1,718,332			(217,678)				0003	
176065 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	09/06/2023	09/06/2024		29,235,625	..4465.48000000		1,420,851	(93,171)	1,327,681		324,128			(93,171)				0003	
176069 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUH3JPF6NF3BB653	09/06/2023	09/06/2024		17,112,153	..4465.48000000		586,947	(38,488)	548,459		401,433			(38,488)				0003	
176071 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZ1Z7FF3Z2WEFA76	09/06/2023	09/06/2028		17,149,201	..4465.48000000		874,609	(11,489)	863,120		449,449			(11,489)				0003	

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
176074 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZFF32TWEFA76	.09/06/2023	.09/06/2030	.....	18,278,088	..4465.48000000	.....	.....939,494	(8,818)	930,676	.....	.....395,523	.....	.....	.....(8,818)	.....	.....	.....	0003	.....
176415 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWISFPU8MPRO8K5P83	.09/15/2023	.09/15/2024	.....	705,893	..4465.13073992	.....	.....35,049	(1,436)	33,612	.....	.....17,557	.....	.....	.....(1,436)	.....	.....	.....	0003	.....
176715 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	31,259,701	..179.35000000	.....	.....2,459,294	(67,194)	2,392,100	.....	.....701,866	.....	.....	.....(67,194)	.....	.....	.....	0003	.....
176721 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	18,214,000	83.63000000	.....	.....1,374,272	(37,548)	1,336,723	.....	.....427,549	.....	.....	.....(37,548)	.....	.....	.....	0003	.....
176728 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	1,146,091	71.02000000	.....	.....80,527	(2,200)	78,326	.....	.....33,623	.....	.....	.....(2,200)	.....	.....	.....	0003	.....
176735 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.03/20/2025	.....	6,163,080	..4402.20000000	.....	.....687,190	(12,563)	674,627	.....	.....87,093	.....	.....	.....(12,563)	.....	.....	.....	0003	.....
176739 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	63,831,900	..4402.20000000	.....	.....5,438,515	(148,593)	5,289,922	.....	.....729,199	.....	.....	.....(148,593)	.....	.....	.....	0003	.....
176745 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	62,071,020	..4402.20000000	.....	.....5,288,487	(144,494)	5,143,993	.....	.....743,462	.....	.....	.....(144,494)	.....	.....	.....	0003	.....
176748 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	53,706,840	..4402.20000000	.....	.....4,575,854	(125,023)	4,450,831	.....	.....1,020,946	.....	.....	.....(125,023)	.....	.....	.....	0003	.....
176755 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	54,335,122	..4402.20000000	.....	.....4,629,384	(126,486)	4,502,898	.....	.....1,222,119	.....	.....	.....(126,486)	.....	.....	.....	0003	.....
176766 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	45,818,714	..4402.20000000	.....	.....3,903,781	(106,661)	3,797,120	.....	.....1,128,288	.....	.....	.....(106,661)	.....	.....	.....	0003	.....
176774 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	48,712,940	..4402.20000000	.....	.....4,150,371	(113,398)	4,036,973	.....	.....1,465,682	.....	.....	.....(113,398)	.....	.....	.....	0003	.....
176780 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	46,444,971	..4402.20000000	.....	.....3,957,139	(108,119)	3,849,020	.....	.....1,674,912	.....	.....	.....(108,119)	.....	.....	.....	0003	.....
176786 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	48,864,420	..4402.20000000	.....	.....4,163,277	(113,751)	4,049,526	.....	.....2,197,030	.....	.....	.....(113,751)	.....	.....	.....	0003	.....
176789 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024		33,896,940	..4402.20000000		2,888,039	(78,908)	2,809,131		1,770,546			(78,908)				0003	

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
176794 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.09/20/2023	.09/20/2028	.....	19,904,336	..4402.20000000	.....	1,100,710	 (6,025)	1,094,685	.....	..663,235	.....	.....	..... (6,025)	.....	.....	.....	0003
176797 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.09/20/2023	.09/20/2030	.....	16,076,508	..4402.20000000	.....	..901,892	 (3,527)	..898,365	.....	..438,728	.....	.....	..... (3,527)	.....	.....	.....	0003
176799 Call Options - S&P Equal Weight Energy - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.09/20/2023	.09/20/2024	.....	37,589,737	..1236.49000000	.....	2,631,282	 (71,893)	2,559,389	.....	1,932,283	.....	.....	..... (71,893)	.....	.....	.....	0003
176801 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	.09/20/2023	.09/20/2024	.....	13,691,679	..4402.20000000	.....	..455,933	 (12,457)	..443,476	.....	..318,287	.....	.....	..... (12,457)	.....	.....	.....	0003
176802 Call Options - S&P U.S. Retiree Spending Index - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG BFM8T61CT2L10CEWIK50	.09/20/2023	.09/20/2024	.....	8,260,357	..505.76000000	.....	..547,662	 (14,963)	..532,698	.....	..381,992	.....	.....	..... (14,963)	.....	.....	.....	0003
176834 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHI GC71XBUI1	.09/20/2023	.09/20/2024	.....	28,159,475	..4402.20000000	.....	1,348,839	 (36,854)	1,311,985	.....	..359,444	.....	.....	..... (36,854)	.....	.....	.....	0003
0159999999. Subtotal - Purchased Options - Hedging Other - Call Options and Warrants										451,723,095	1,145,924,921	(764,634,384)	768,640,381	XXX	596,477,344	0	0	(764,701,743)	0	0	XXX	XXX
0219999999. Subtotal - Purchased Options - Hedging Other										451,723,095	1,145,924,921	(764,634,384)	768,640,381	XXX	596,477,344	0	0	(764,701,743)	0	0	XXX	XXX
0289999999. Subtotal - Purchased Options - Replications										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0359999999. Subtotal - Purchased Options - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0429999999. Subtotal - Purchased Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0439999999. Total Purchased Options - Call Options and Warrants										451,723,095	1,145,924,921	(764,634,384)	768,640,381	XXX	596,477,344	0	0	(764,701,743)	0	0	XXX	XXX
0449999999. Total Purchased Options - Put Options										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0459999999. Total Purchased Options - Caps										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0469999999. Total Purchased Options - Floors										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0479999999. Total Purchased Options - Collars										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0489999999. Total Purchased Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0499999999. Total Purchased Options										451,723,095	1,145,924,921	(764,634,384)	768,640,381	XXX	596,477,344	0	0	(764,701,743)	0	0	XXX	XXX
0569999999. Subtotal - Written Options - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0639999999. Subtotal - Written Options - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
141924 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.04/06/2021	.04/06/2028	.....	2,662,509	..4236.90000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141928 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.04/06/2021	.04/06/2026	.....	669,047	..4232.82000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141923 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.04/20/2021	.04/20/2028	.....	2,225,032	..4316.88000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141927 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFU57RNE97	.04/20/2021	.04/20/2026	.....	1,074,629	..4300.34000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141922 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.05/06/2021	.05/06/2026	.....	3,051,593	..4369.68000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141926 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.05/06/2021	.05/06/2028	.....	3,678,547	..4384.39000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141921 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.05/20/2021	.05/20/2026	.....	3,369,262	..4327.56000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
141925 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.05/20/2021	.05/19/2028	.....	4,582,427	..4344.20000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
142028 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.06/04/2021	.06/05/2026	.....	3,946,952	..4401.20000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
142029 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.06/04/2021	.06/06/2028	.....	3,919,696	..4413.89000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
142032 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.06/18/2021	.06/19/2026	.....	4,418,795	..4335.19000000	 0	.....	..... 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
142033 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPUB8MPR08K5P83	.06/18/2021	.06/20/2028		6,158,364	..4351.86000000	 0		 0	 0					 0				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
142034 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.07/06/2021	.07/06/2026	.....	4,959,571	..4519.45000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142035 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.07/06/2021	.07/06/2028	.....	3,750,662	..4528.14000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142026 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.07/20/2021	.07/20/2026	.....	4,354,125	..4500.31000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142027 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.07/20/2021	.07/20/2028	.....	2,123,673	..4502.47000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142036 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.08/06/2021	.08/06/2026	.....	4,218,537	..4605.11000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142037 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.08/06/2021	.08/04/2028	.....	3,983,239	..4618.42000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142038 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.08/20/2021	.08/20/2026	.....	1,876,286	..4606.01000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142039 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.08/20/2021	.08/18/2028	.....	2,228,637	..4630.44000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142040 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.09/03/2021	.09/04/2026	.....	1,597,923	..4705.51000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142041 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.09/03/2021	.09/06/2028	.....	2,196,401	..4716.85000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142220 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.09/20/2021	.09/18/2026	.....	1,218,385	..4518.96601000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142222 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.09/20/2021	.09/20/2028	.....	1,947,129	..4529.86033500	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142233 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.10/06/2021	.10/06/2026	.....	1,870,404	..4527.18312500	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142234 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.10/06/2021	.10/06/2028	.....	2,368,393	..4546.81910000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142244 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.10/20/2021	.10/20/2026	.....	2,221,902	..4704.02903000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
142245 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.10/20/2021	.10/20/2028	.....	2,219,393	..4718.99845700	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
143734 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.11/05/2021	.11/06/2028	.....	3,354,930	..4885.43120000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
143736 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.11/05/2021	.11/06/2026	.....	1,366,674	..4872.75000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
143910 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.11/19/2021	.11/20/2026	.....	1,189,404	..4871.78000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
143912 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.11/19/2021	.11/20/2028	.....	2,401,016	..4897.15000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
144236 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.12/06/2021	.12/04/2026	.....	755,616	..4758.35000000	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
144238 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.12/06/2021	.12/06/2028	.....	782,197	..4772.12000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
144702 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.12/20/2021	.12/18/2026	.....	1,098,660	..4734.30000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
144704 Call Options - S&P 500 - USD	Liability Hedge	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.12/20/2021	.12/20/2028	.....	1,756,967	..4757.14000000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
145287 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/06/2027	.....	872,078	..4870.86049988	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
145292 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	.01/06/2022	.01/05/2029	.....	2,158,669	..4884.89463634	0	.....	.....0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
145771 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	.01/20/2022	.01/20/2027		1,109,017	..4658.79505485	0		0	0					0				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
145774 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.01/20/2022	.01/19/2029	.....	2,388,575	..4687.35252513	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
146460 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.02/04/2022	.02/05/2027	.....	911,857	..4689.10220700	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
146462 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.02/04/2022	.02/06/2029	.....	2,301,878	..4697.20316100	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
147152 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.02/18/2022	.02/19/2027	.....	1,656,805	..4533.26208800	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
147156 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.02/18/2022	.02/20/2029	.....	2,616,900	..4538.48073200	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
147913 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.03/04/2022	.03/04/2027	.....	2,419,217	..4525.83358500	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
147915 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.03/04/2022	.03/02/2029	.....	3,298,567	..4536.65576000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
148495 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.03/18/2022	.03/19/2027	.....	3,639,522	..4661.72884000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
148497 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.03/18/2022	.03/20/2029	.....	2,815,500	..4670.20876800	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
149329 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.04/06/2022	.10/06/2023	.....	9,739,780	..4637.99025000	(814,275)	404,166	(10,401)	.....	.....	.....	.....	.....404,166	.....	.....	.....	0003
149384 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.04/06/2022	.04/06/2029	.....	1,315,067	..4689.52347500	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
149386 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGQFUS7RNE97	.04/06/2022	.04/06/2027	.....	3,167,976	..4678.76871500	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
149980 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC BNP PARIBAS LONDON	G5GSEF7VJP5170UK5573	.04/20/2022	.10/20/2023	.....	7,445,339	..4603.04429000	(507,224)	251,761	(19,437)	.....	.....	.....	.....	.....251,761	.....	.....	.....	0003
150022 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.04/20/2022	.04/20/2027	.....	4,166,941	..4670.82793000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
150024 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.04/20/2022	.04/20/2029	.....	2,515,134	..4677.96305000	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
150390 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/06/2022	.11/06/2023	.....	8,569,125	..4284.56259400	(743,600)	368,414	(51,470)	.....	.....	.....	.....	.....368,414	.....	.....	.....	0003
150454 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.05/06/2022	.05/06/2027	.....	2,684,539	..4322.49732200	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
150455 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	.05/06/2022	.05/04/2029	.....	1,896,215	..4328.26998800	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
151058 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/20/2022	.11/20/2023	.....	6,916,838	..4068.72834400	(658,648)	326,325	(62,386)	.....	.....	.....	.....	.....326,325	.....	.....	.....	0003
151100 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.05/20/2022	.05/20/2027	.....	5,349,149	..4116.32493600	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
151101 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.05/20/2022	.05/18/2029	.....	1,342,084	..4115.15452800	0	.....	.....0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
151638 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.06/06/2022	.12/06/2023	.....	5,173,219	..4311.01578000	(460,296)	228,468	(57,117)	.....	.....	.....	.....	.....228,468	.....	.....	.....	0003
151706 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPUBMPRO8K5P83	.06/06/2022	.06/04/2027		4,280,628	..4352.64222300	0		0	0					0				0003

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151708 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIWSPUBM8MPRO8K5P83	.06/06/2022	.06/06/2029		1,953,500	4342.75079100	0		0	0					0				0003
152998 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... JPMORGAN CHASE	.06/17/2022	.12/20/2023	.....	5,850,553	3844.25012400	(461,399)		227,769	(68,666)					227,769				0003
153004 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. JPMORGAN CHASE	.06/17/2022	.06/18/2027	.....	4,183,227	3674.84000000	0		0	0					0				0003
153008 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.06/17/2022	.06/20/2029	.....	1,343,448	3877.69116800	0		0	0					0				0003
153789 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO BNP PARIBAS LONDON	.07/06/2022	.01/05/2024	.....	5,991,404	3994.26910400	(589,455)		292,576	(105,413)					292,576				0003
153848 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUIWSPUBM8MPRO8K5P83	.07/06/2022	.07/06/2029	.....	4,579,270	4064.63406800	0		0	0					0				0003
153854 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.07/06/2022	.07/06/2027	.....	4,382,124	4066.94111600	0		0	0					0				0003
154440 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO BNP PARIBAS LONDON	.07/20/2022	.01/19/2024	.....	4,921,522	4101.26843000	(499,176)		247,766	(102,021)					247,766				0003
154460 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUIWSPUBM8MPRO8K5P83	.07/20/2022	.07/20/2027	.....	2,701,988	4182.84237000	0		0	0					0				0003
154465 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIWSPUBM8MPRO8K5P83	.07/20/2022	.07/20/2029	.....	1,833,751	4186.40628000	0		0	0					0				0003
155028 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. JPMORGAN CHASE	.08/05/2022	.08/06/2027	.....	1,414,170	4387.26909600	0		0	0					0				0003
155035 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. JPMORGAN CHASE	.08/05/2022	.08/06/2029	.....	2,732,774	4382.70938700	0		0	0					0				0003
155061 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... BNP PARIBAS LONDON	.08/05/2022	.02/06/2024	.....	8,098,578	4331.30903100	(935,495)		462,645	(221,117)					462,645				0003
155751 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUIWSPUBM8MPRO8K5P83	.08/19/2022	.08/20/2027	.....	1,644,288	4467.81200000	0		0	0					0				0003
155755 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIWSPUBM8MPRO8K5P83	.08/19/2022	.08/20/2029	.....	1,477,052	4471.61760000	0		0	0					0				0003
155782 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUIWSPUBM8MPRO8K5P83	.08/19/2022	.02/20/2024	.....	5,965,661	4398.46489600	(591,003)		292,278	(154,735)					292,278				0003
156459 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO JPMORGAN CHASE	.09/06/2022	.03/06/2024	.....	4,851,158	4042.63173600	(510,252)		253,727	(148,318)					253,727				0003
156503 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. JPMORGAN CHASE	.09/06/2022	.09/06/2027	.....	1,651,422	4125.87618300	0		0	0					0				0003
156506 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. JPMORGAN CHASE	.09/06/2022	.09/06/2029	.....	1,044,140	4131.73846800	0		0	0					0				0003
156982 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. JPMORGAN CHASE	.09/20/2022	.09/20/2027	.....	1,254,640	4094.22647400	0		0	0					0				0003
156986 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK, N.A. X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	.09/20/2022	.09/20/2029	.....	964,383	4094.22647400	0		0	0					0				0003
156999 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO MORGAN STANLEY & CO. INTERNATIONAL	.09/20/2022	.03/20/2024	.....	7,584,884	3992.04432900	(819,888)		407,696	(259,306)					407,696				0003
157994 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	PLC 4PQUH3JPF6FNF3BB653	.10/06/2022	.10/06/2023		46,699,024	3857.97895600	(4,438,944)		3,307,926	(85,130)					3,307,926				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
158009 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	65,360,107	3883.44169200	(5,844,659)	.....	4,355,472	(112,089)	.....	.....	.....	.....	4,355,472	.....	.....	.....	0003	.....
158018 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2023	.....	52,454,369	3895.42415600	(4,591,459)	.....	3,421,580	(88,055)	.....	.....	.....	.....	3,421,580	.....	.....	.....	0003	.....
158023 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	64,830,722	3907.78107200	(5,649,049)	.....	4,209,702	(108,338)	.....	.....	.....	.....	4,209,702	.....	.....	.....	0003	.....
158034 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	39,304,579	3908.90442800	(3,416,305)	.....	2,545,849	(65,518)	.....	.....	.....	.....	2,545,849	.....	.....	.....	0003	.....
158040 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	46,549,514	3966.94448800	(3,644,100)	.....	2,715,603	(69,887)	.....	.....	.....	.....	2,715,603	.....	.....	.....	0003	.....
158046 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	49,354,098	3983.42037600	(3,750,247)	.....	2,794,705	(71,923)	.....	.....	.....	.....	2,794,705	.....	.....	.....	0003	.....
158065 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	70,204,861	4109.98515200	(4,178,934)	.....	3,114,164	(80,144)	.....	.....	.....	.....	3,114,164	.....	.....	.....	0003	.....
158081 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/06/2027	.....	3,163,776	4040.33708000	0	.....	0	0	.....	.....	.....	.....	0	.....	.....	.....	0003	.....
158084 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	10/05/2029	.....	2,372,230	4058.68522800	0	.....	0	0	.....	.....	.....	.....	0	.....	.....	.....	0003	.....
158090 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	36,718,660	169.33550400	(2,287,659)	.....	1,704,776	(43,873)	.....	.....	.....	.....	1,704,776	.....	.....	.....	0003	.....
158098 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	10/06/2022	10/06/2023	.....	49,137,343	3933.61826000	(2,630,240)	.....	1,960,069	(50,443)	.....	.....	.....	.....	1,960,069	.....	.....	.....	0003	.....
158115 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	10/06/2022	10/06/2023	.....	39,645,046	3864.71909200	(1,950,077)	.....	1,453,208	(37,399)	.....	.....	.....	.....	1,453,208	.....	.....	.....	0003	.....
158133 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/06/2022	10/06/2023	.....	24,467,545	85.30288800	(1,810,701)	.....	1,349,344	(34,726)	.....	.....	.....	.....	1,349,344	.....	.....	.....	0003	.....
158142 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	10/06/2022	04/05/2024	.....	6,268,896	3878.94826800	(726,742)	.....	361,378	(251,105)	.....	.....	.....	.....	361,378	.....	.....	.....	0003	.....
158146 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	10/06/2022	10/06/2023	.....	1,525,591	60.79342500	(106,373)	.....	79,269	(2,040)	.....	.....	.....	.....	79,269	.....	.....	.....	0003	.....
158147 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	10/06/2022	10/06/2023	.....	64,704,067	3819.41040000	(9,580,007)	.....	7,139,074	(183,726)	.....	.....	.....	.....	7,139,074	.....	.....	.....	0003	.....
158157 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	10/06/2022	10/06/2023	.....	50,443,774	3821.65711200	(5,097,484)	.....	3,798,673	(97,760)	.....	.....	.....	.....	3,798,673	.....	.....	.....	0003	.....
158680 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023	.....	30,460,657	160.96106000	(1,946,067)	.....	1,450,220	(111,965)	.....	.....	.....	.....	1,450,220	.....	.....	.....	0003	.....
158696 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	10/20/2022	10/20/2023	.....	19,770,467	83.12379600	(1,522,095)	.....	1,134,273	(87,573)	.....	.....	.....	.....	1,134,273	.....	.....	.....	0003	.....
158710 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	10/20/2022	10/20/2023		826,862	59.69977600	(60,825)		45,327	(3,500)					45,327				0003	

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	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
158721 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	63,468,586	..3983.23654800	(4,339,882)	.....	3,234,104	.....	(249,692)	.....	.....	.....	3,234,104	.....	.....	0003	.....
158722 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPU8MPRO8K5P83	10/20/2022	10/20/2023	.....	30,182,779	..3776.85313400	(1,612,697)	.....	1,201,791	.....	(92,785)	.....	.....	.....	1,201,791	.....	.....	0003	.....
158728 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	10/20/2022	10/20/2023	.....	43,575,339	..4073.78131400	(2,505,984)	.....	1,867,473	.....	(144,180)	.....	.....	.....	1,867,473	.....	.....	0003	.....
158730 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF32TWEFA76	10/20/2022	10/20/2027	.....	7,088,546	..3978.83761200	0	.....	0	.....	0	.....	.....	.....	0	.....	.....	0003	.....
158734 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJSFPU8MPRO8K5P83	10/20/2022	10/19/2029	.....	3,982,571	..3979.93734600	0	.....	0	.....	0	.....	.....	.....	0	.....	.....	0003	.....
158746 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	04/19/2024	.....	5,699,921	..3799.94754800	(672,270)	.....	334,291	.....	(249,490)	.....	.....	.....	334,291	.....	.....	0003	.....
158754 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	60,187,635	..3738.36244400	(6,234,725)	.....	4,646,151	.....	(358,710)	.....	.....	.....	4,646,151	.....	.....	0003	.....
158762 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	74,808,545	..3760.35712400	(7,471,391)	.....	5,567,721	.....	(429,861)	.....	.....	.....	5,567,721	.....	.....	0003	.....
158779 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	44,588,854	..3797.38150200	(4,182,970)	.....	3,117,172	.....	(240,664)	.....	.....	.....	3,117,172	.....	.....	0003	.....
158795 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	83,245,748	..3819.37618200	(7,520,804)	.....	5,604,544	.....	(432,704)	.....	.....	.....	5,604,544	.....	.....	0003	.....
158815 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	33,126,972	..3824.14169600	(2,967,803)	.....	2,211,623	.....	(170,750)	.....	.....	.....	2,211,623	.....	.....	0003	.....
158825 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	50,631,234	..3850.90189000	(4,328,548)	.....	3,225,658	.....	(249,040)	.....	.....	.....	3,225,658	.....	.....	0003	.....
158829 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	10/20/2022	10/20/2023	.....	61,835,513	..3889.02600200	(4,936,791)	.....	3,678,924	.....	(284,035)	.....	.....	.....	3,678,924	.....	.....	0003	.....
159732 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	40,206,225	..3902.89630500	(3,731,185)	.....	2,765,347	.....	(386,335)	.....	.....	.....	2,765,347	.....	.....	0003	.....
159746 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	45,078,853	..3916.09323000	(4,090,674)	.....	3,031,780	.....	(423,558)	.....	.....	.....	3,031,780	.....	.....	0003	.....
159752 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	56,039,710	..3927.40488000	(4,987,835)	.....	3,696,706	.....	(516,452)	.....	.....	.....	3,696,706	.....	.....	0003	.....
159764 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	59,245,929	..3938.71653000	(5,171,384)	.....	3,832,742	.....	(535,457)	.....	.....	.....	3,832,742	.....	.....	0003	.....
159803 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	44,657,906	..3957.56928000	(3,772,585)	.....	2,796,031	.....	(390,622)	.....	.....	.....	2,796,031	.....	.....	0003	.....
159813 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023	.....	56,552,118	..3981.70080000	(4,578,686)	.....	3,393,468	.....	(474,087)	.....	.....	.....	3,393,468	.....	.....	0003	.....
159818 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	11/04/2022	11/06/2023		53,364,806	..4003.94704500	(4,152,740)		3,077,780		(429,984)				3,077,780			0003	

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159826 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023		55,755,735	4054.09536000	(3,959,586)		2,934,625	(409,984)					2,934,625				0003
159833 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	84,508,193	4181.53995000	(4,695,506)		3,480,048	(486,183)					3,480,048				0003
159835 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/05/2027	.....	12,677,866	4092.55497000	0		0	0					0				0003
159839 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/06/2029	.....	8,325,314	4095.57141000	0		0	0					0				0003
159844 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	05/06/2024	.....	8,588,031	3903.65041500	(995,434)		493,184	(388,899)					493,184				0003
159851 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	11/06/2023	.....	83,833,730	3845.58394500	(8,352,234)		6,190,212	(864,809)					6,190,212				0003
159856 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/04/2022	11/06/2023	.....	48,827,816	3850.48566000	(4,823,960)		3,575,251	(499,484)					3,575,251				0003
159873 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023	.....	32,797,956	165.99902300	(2,120,784)		1,571,807	(219,591)					1,571,807				0003
159887 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	11/04/2022	11/06/2023	.....	25,791,103	87.60073500	(1,876,116)		1,390,473	(194,257)					1,390,473				0003
159899 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	11/04/2022	11/06/2023	.....	1,207,807	63.69637500	(83,285)		61,726	(8,624)					61,726				0003
159904 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	11/04/2022	11/06/2023	.....	41,881,396	3888.56821500	0		0	0					0				0003
159910 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	11/04/2022	11/06/2023	.....	59,052,975	3882.91239000	(5,667,405)		4,200,366	(586,816)					4,200,366				0003
160845 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	11/18/2022	11/19/2027	.....	13,083,553	4298.82509400	0		0	0					0				0003
160848 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	11/18/2022	11/20/2029	.....	8,257,298	4314.28992000	0		0	0					0				0003
160861 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	31,067,700	172.08530900	(1,946,185)		1,442,404	(275,754)					1,442,404				0003
160867 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	11/18/2022	11/20/2023	.....	19,457,914	91.69881000	(1,252,240)		928,091	(177,429)					928,091				0003
160891 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	11/18/2022	05/20/2024	.....	6,833,287	4115.22985200	(597,009)		295,786	(254,463)					295,786				0003
160892 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023	.....	1,084,663	68.79840000	(63,536)		47,090	(9,002)					47,090				0003
160900 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	11/18/2022	11/20/2023		48,796,656	4094.61008400	(4,287,603)		3,177,733	(607,508)					3,177,733				0003

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
160903 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	70,276,392	4044.25026600	(6,822,355)	.....	5,056,350	(966,655)	.....	.....	.....	.....	5,056,350	.....	.....	.....	0003
160914 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	49,047,265	4139.41842600	(3,976,349)	.....	2,947,049	(563,406)	.....	.....	.....	.....	2,947,049	.....	.....	.....	0003
160915 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	62,347,792	4061.30122800	(5,879,927)	.....	4,357,875	(833,123)	.....	.....	.....	.....	4,357,875	.....	.....	.....	0003
160927 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	34,446,329	4158.84859200	(2,694,846)	.....	1,997,270	(381,831)	.....	.....	.....	.....	1,997,270	.....	.....	.....	0003
160937 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	69,072,620	4158.05552400	(5,411,945)	.....	4,011,033	(766,815)	.....	.....	.....	.....	4,011,033	.....	.....	.....	0003
160940 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	11/18/2022	11/20/2023	.....	47,437,050	4128.31547400	(3,978,259)	.....	2,948,464	(563,677)	.....	.....	.....	.....	2,948,464	.....	.....	.....	0003
160957 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	11/18/2022	11/20/2023	.....	55,904,712	4390.02791400	(2,887,987)	.....	2,140,416	(409,197)	.....	.....	.....	.....	2,140,416	.....	.....	.....	0003
160978 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	35,895,178	4085.09326800	(1,558,822)	.....	1,155,312	(220,868)	.....	.....	.....	.....	1,155,312	.....	.....	.....	0003
160991 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	11/18/2022	11/20/2023	.....	48,721,022	4200.08812800	(3,528,024)	.....	2,614,775	(499,884)	.....	.....	.....	.....	2,614,775	.....	.....	.....	0003
160996 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	11/18/2022	11/20/2023	.....	54,462,159	4228.63857600	(3,733,855)	.....	2,767,326	(529,048)	.....	.....	.....	.....	2,767,326	.....	.....	.....	0003
161837 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... 02RNE81BXP4ROT8PU41 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/06/2022	12/06/2023	.....	19,655,311	91.39673400	(1,188,754)	.....	885,866	(221,467)	.....	.....	.....	.....	885,866	.....	.....	.....	0003
161851 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/06/2022	12/06/2023	.....	30,337,309	174.28533200	(1,805,074)	.....	1,345,151	(336,288)	.....	.....	.....	.....	1,345,151	.....	.....	.....	0003
161863 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/06/2022	12/06/2023	.....	837,139	70.84779700	(42,183)	.....	31,435	(7,859)	.....	.....	.....	.....	31,435	.....	.....	.....	0003
161873 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/06/2022	06/06/2024	.....	6,553,212	4095.75739200	(690,832)	.....	342,895	(316,421)	.....	.....	.....	.....	342,895	.....	.....	.....	0003
161879 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	.....	43,870,014	4026.78534200	(4,035,777)	.....	3,007,483	(751,871)	.....	.....	.....	.....	3,007,483	.....	.....	.....	0003
161887 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76 X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED	12/06/2022	12/06/2023	.....	64,234,679	4018.50869600	(6,143,810)	.....	4,578,401	(1,144,600)	.....	.....	.....	.....	4,578,401	.....	.....	.....	0003
161890 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	.....	43,509,051	4060.28605200	(3,765,625)	.....	2,806,165	(701,541)	.....	.....	.....	.....	2,806,165	.....	.....	.....	0003
161905 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		51,348,725	4087.87487200	(4,332,906)		3,228,905	(807,226)					3,228,905				0003

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SCHEDULE DB - PART A - SECTION 1

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161932 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023		40,207,813	4107.58117200	 (3,272,372)		2,438,589	 (609,647)					2,438,589				0003
161939 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/06/2022	12/06/2023	.....	30,425,542	4056.73891800	 (1,182,375)	.....	881,112	 (220,278)	.....	.....	.....	.....	881,112	.....	.....	.....	0003
161941 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	52,280,101	4114.67544000	 (4,197,480)	.....	3,127,985	 (781,996)	.....	.....	.....	.....	3,127,985	.....	.....	.....	0003
161947 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	44,760,010	4128.86397600	 (3,500,175)	.....	2,608,350	 (652,087)	.....	.....	.....	.....	2,608,350	.....	.....	.....	0003
161958 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	62,912,892	4156.45279600	 (4,678,257)	.....	3,486,263	 (871,566)	.....	.....	.....	.....	3,486,263	.....	.....	.....	0003
161963 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	70,590,992	4186.40637200	 (4,952,466)	.....	3,690,605	 (922,651)	.....	.....	.....	.....	3,690,605	.....	.....	.....	0003
161967 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2027	.....	8,949,414	4275.08472200	 0	.....	0	 0	.....	.....	.....	.....	0	.....	.....	.....	0003
161971 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/06/2022	12/06/2029	.....	11,421,597	4288.87913200	 0	.....	0	 0	.....	.....	.....	.....	0	.....	.....	.....	0003
161972 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	12/06/2022	12/06/2023	.....	57,358,597	4331.83886600	 (2,975,747)	.....	2,217,543	 (554,386)	.....	.....	.....	.....	2,217,543	.....	.....	.....	0003
162528 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA E571P3UJRHIGC71XBU11	12/20/2022	12/20/2023	.....	30,723,667	3932.82914200	 (1,439,006)	.....	1,072,355	 (323,283)	.....	.....	.....	.....	1,072,355	.....	.....	.....	0003
162534 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUBMPROBK5P83	12/20/2022	12/20/2027	.....	7,255,213	4141.10743200	 0	.....	0	 0	.....	.....	.....	.....	0	.....	.....	.....	0003
162538 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSPFUBMPROBK5P83	12/20/2022	12/20/2029	.....	11,042,350	4157.15823600	 0	.....	0	 0	.....	.....	.....	.....	0	.....	.....	.....	0003
162544 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	29,319,901	178.76828400	 (1,751,634)	.....	1,305,327	 (393,518)	.....	.....	.....	.....	1,305,327	.....	.....	.....	0003
162569 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	538,093	68.90083200	 (32,723)	.....	24,385	 (7,351)	.....	.....	.....	.....	24,385	.....	.....	.....	0003
162577 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	06/20/2024	.....	6,342,055	3963.78426400	 (686,736)	.....	340,862	 (332,089)	.....	.....	.....	.....	340,862	.....	.....	.....	0003
162581 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	53,382,375	3896.52375200	 (5,062,835)	.....	3,772,852	 (1,137,404)	.....	.....	.....	.....	3,772,852	.....	.....	.....	0003
162591 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	48,738,535	3904.54915400	 (4,556,113)	.....	3,395,240	 (1,023,565)	.....	.....	.....	.....	3,395,240	.....	.....	.....	0003
162606 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	45,704,594	3936.65076200	 (4,031,347)	.....	3,004,182	 (905,673)	.....	.....	.....	.....	3,004,182	.....	.....	.....	0003
162617 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023		47,442,642	3961.87345400	 (3,994,195)		2,976,496	 (897,326)					2,976,496				0003

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SCHEDULE DB - PART A - SECTION 1

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162631 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023		51,887,182	.. 3977.15993400	 (4,244,871)		3,163,301	 (953,642)					3,163,301				0003
162639 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	54,624,358	.. 3989.77128000	 (4,363,080)	.....	3,251,391	 (980,199)					3,251,391				0003
162649 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	66,887,312	.. 4016.52262000	 (5,074,681)	.....	3,781,680	 (1,140,065)					3,781,680				0003
162658 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	52,602,306	.. 4046.33125600	 (3,763,240)	.....	2,804,387	 (845,440)					2,804,387				0003
162665 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	12/20/2022	12/20/2023	.....	50,272,715	.. 4079.96151200	 (3,359,802)	.....	2,503,743	 (754,805)					2,503,743				0003
162689 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	12/20/2022	12/20/2023	.....	20,180,184	.. 88.21243900	 (1,385,231)	.....	1,032,282	 (311,203)					1,032,282				0003
162695 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	12/20/2022	12/20/2023	.....	36,116,180	.. 4235.50144600	 (1,789,770)	.....	1,333,746	 (402,085)					1,333,746				0003
163196 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	45,372,359	.. 4010.37436800	 (3,856,213)	.....	2,828,596	 (1,027,617)					2,828,596				0003
163294 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	64,732,760	.. 4072.69564800	 (4,878,859)	.....	3,578,723	 (1,300,135)					3,578,723				0003
163305 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHNSJPF6FNF3B8653	01/06/2023	01/05/2024	.....	35,770,655	.. 4082.82285600	 (2,616,491)	.....	1,919,239	 (697,252)					1,919,239				0003
163315 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	55,682,351	.. 4115.93103600	 (3,819,423)	.....	2,801,610	 (1,017,813)					2,801,610				0003
163328 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	52,540,549	.. 4146.70216800	 (3,382,389)	.....	2,481,038	 (901,351)					2,481,038				0003
163334 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	01/06/2023	01/05/2024	.....	46,299,205	.. 4299.38930400	 (2,128,687)	.....	1,561,427	 (567,260)					1,561,427				0003
163339 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	67,065,858	.. 4040.36648400	 (5,386,092)	.....	3,950,787	 (1,435,305)					3,950,787				0003
163343 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RHG71XBU11	01/06/2023	01/05/2024	.....	30,593,196	.. 4006.86879600	 (1,302,597)	.....	955,477	 (347,121)					955,477				0003
163354 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/06/2028	.....	12,190,909	.. 4212.52902000	.....	0	0	0					0				0003
163355 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LR0WP21HZNB6K528	01/06/2023	01/05/2024	.....	18,092,135	.. 90.96017100	 (1,136,908)	.....	833,941	 (302,967)					833,941				0003
163357 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/04/2030	.....	14,877,934	.. 4223.82475200	.....	0	0	0					0				0003
163363 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	01/06/2023	01/05/2024	.....	1,144,030	.. 71.46155700	 (68,278)	.....	50,083	 (18,195)					50,083				0003
163371 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024	.....	54,924,863	.. 3972.98160000	 (4,997,412)	.....	3,665,684	 (1,331,728)					3,665,684				0003
163377 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32WIEFA76	01/06/2023	01/05/2024		51,089,512	.. 3973.37110800	 (4,647,992)		3,409,379	 (1,238,613)					3,409,379				0003

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163383 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2023	01/05/2024		34,960,372	183.21193700		(2,177,248)	1,597,047	(580,201)					1,597,047				0003
163387 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2023	07/05/2024		4,464,112	4058.28385200		(439,252)	214,799	(224,453)					214,799				0003
163392 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/06/2023	01/05/2024		35,531,401	4056.72582000		(2,677,429)	1,963,938	(713,491)					1,963,938				0003
163829 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/19/2024		49,541,615	4057.62385400		(4,123,779)	2,866,253	(1,257,526)					2,866,253				0003
163850 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/19/2024		49,193,689	4095.36364900		(3,793,197)	2,636,480	(1,156,717)					2,636,480				0003
163868 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/19/2024		55,499,209	4132.70618300		(3,955,312)	2,749,159	(1,206,153)					2,749,159				0003
163876 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/19/2024		69,378,671	4157.73362600		(4,682,033)	3,254,270	(1,427,763)					3,254,270				0003
163884 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	01/20/2023	01/19/2024		67,017,392	4182.76106900		(4,189,462)	2,911,906	(1,277,556)					2,911,906				0003
163906 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	01/20/2023	01/19/2024		63,067,009	4218.51455900		(3,624,022)	2,518,894	(1,105,127)					2,518,894				0003
163911 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	01/20/2023	01/19/2024		50,564,523	4359.93947500		(2,100,904)	1,460,244	(640,660)					1,460,244				0003
163918 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	ROYAL BANK OF CANADA	01/20/2023	01/19/2024		24,538,316	4092.58282200		(897,976)	624,142	(273,833)					624,142				0003
163923 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	CITIBANK N.A.	01/20/2023	01/20/2028		6,175,508	4299.55580300		0	0	0					0				0003
163926 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/18/2030		19,648,191	4314.65172100		0	0	0					0				0003
163950 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	GOLDMAN SACHS INTERNATIONAL	01/20/2023	01/19/2024		18,725,600	94.73083600		(1,112,346)	773,141	(339,204)					773,141				0003
163955 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	07/19/2024		4,217,308	4143.03496900		(399,368)	185,055	(214,313)					185,055				0003
163965 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BNP PARIBAS LONDON	01/20/2023	01/19/2024		51,653,498	4050.87041700		(4,357,393)	3,028,628	(1,328,766)					3,028,628				0003
163969 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2023	01/19/2024		28,912,368	189.95775500		(1,774,701)	1,233,515	(541,186)					1,233,515				0003
163976 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	01/20/2023	01/19/2024		995,397	74.65991400		(49,063)	34,102	(14,962)					34,102				0003
164468 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	WELLS FARGO BANK, N.A.	02/06/2023	02/06/2024		65,277,722	4194.12381600		(5,253,187)	3,396,581	(1,856,606)					3,396,581				0003
164503 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		51,473,298	4232.35686000		(3,806,614)	2,461,263	(1,345,351)					2,461,263				0003
164531 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		34,326,717	4261.54552800		(2,382,100)	1,540,207	(841,893)					1,540,207				0003
164540 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5	Equity/Index	BANK OF AMERICA, N.A.	02/06/2023	02/06/2024		52,927,009	4290.73419600		(3,439,966)	2,224,197	(1,215,769)					2,224,197				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
164566 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	.02/06/2023	.02/06/2024	.....	77,139,214	..4300.60078800	.....	....(4,906,263)	3,172,268	(1,733,994)	.....	.....	.....	.....3,172,268	.....	.....	.....	.....0003
164573 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	.02/06/2023	.02/06/2024	.....	39,813,179	..4309.23405600	.....	....(2,481,574)	1,604,524	(877,049)	.....	.....	.....	.....1,604,524	.....	.....	.....	.....0003
164577 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	.02/06/2023	.02/06/2024	.....	53,306,957	..4340.47826400	.....	....(3,086,673)	1,995,767	(1,090,906)	.....	.....	.....	.....1,995,767	.....	.....	.....	.....0003
164583 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G71XB11	.02/06/2023	.02/06/2024	.....	47,776,817	..4362.67809600	.....	....(2,639,160)	1,706,416	(932,744)	.....	.....	.....	.....1,706,416	.....	.....	.....	.....0003
164588 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G71XB11	.02/06/2023	.02/06/2024	.....	52,895,101	..4381.58906400	.....	....(2,784,214)	1,800,204	(984,010)	.....	.....	.....	.....1,800,204	.....	.....	.....	.....0003
164596 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G71XB11	.02/06/2023	.02/06/2024	.....	52,669,295	..4530.82126800	.....	....(1,863,808)	1,205,092	(658,716)	.....	.....	.....	.....1,205,092	.....	.....	.....	.....0003
164601 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	ES70DZ1WZ7FF32WIEFA76	.02/06/2023	.02/04/2028	.....	6,031,541	..4443.25526400	.....	.....0	0	0	.....	.....	.....	.....0	.....	.....	.....	.....0003
164604 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	ES70DZ1WZ7FF32WIEFA76	.02/06/2023	.02/06/2030	.....	22,611,987	..4460.52180000	.....	.....0	0	0	.....	.....	.....	.....0	.....	.....	.....	.....0003
164608 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/06/2023	.02/06/2024	.....	2,588,924	..75.46157500	.....	....(99,493)	64,330	(35,163)	.....	.....	.....	.....64,330	.....	.....	.....	.....0003
164618 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROWP21HZNB6K528	.02/06/2023	.02/06/2024	.....	47,795,368	..184.07538000	.....	....(2,604,165)	1,683,789	(920,376)	.....	.....	.....	.....1,683,789	.....	.....	.....	.....0003
164625 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	.02/06/2023	.02/06/2024	.....	29,709,564	..98.34149600	.....	....(1,605,392)	1,038,007	(567,385)	.....	.....	.....	.....1,038,007	.....	.....	.....	.....0003
164629 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	B4TYDEB6KMZ0031MB27	.02/06/2023	.08/06/2024	.....	7,077,128	..4275.93430800	.....	....(653,884)	282,115	(371,770)	.....	.....	.....	.....282,115	.....	.....	.....	.....0003
164634 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCUFXT09	.02/06/2023	.02/06/2024	.....	67,641,836	..4193.30160000	.....	....(5,451,136)	3,524,570	(1,926,566)	.....	.....	.....	.....3,524,570	.....	.....	.....	.....0003
164640 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	ES71P3U3RH1G71XB11	.02/06/2023	.02/06/2024	.....	30,526,625	..4227.01245600	.....	....(1,098,507)	710,268	(388,240)	.....	.....	.....	.....710,268	.....	.....	.....	.....0003
165123 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LROWP21HZNB6K528	.02/17/2023	.02/20/2024	.....	27,549,694	..96.02707200	.....	....(1,609,829)	984,270	(625,558)	.....	.....	.....	.....984,270	.....	.....	.....	.....0003
165134 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPURMPRO8K5P83	.02/17/2023	.02/20/2024	.....	1,061,285	..75.50136200	.....	....(49,715)	30,396	(19,319)	.....	.....	.....	.....30,396	.....	.....	.....	.....0003
165166 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.02/17/2023	.02/20/2024	.....	53,408,551	..4234.09542000	.....	....(3,881,715)	2,373,331	(1,508,384)	.....	.....	.....	.....2,373,331	.....	.....	.....	.....0003
165181 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	BFBMT61CT2L1QCEMIK50	.02/17/2023	.02/20/2024	.....	51,236,591	..4266.72814000	.....	....(3,458,226)	2,114,404	(1,343,821)	.....	.....	.....	.....2,114,404	.....	.....	.....	.....0003
165197 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.02/17/2023	.02/20/2024	.....	40,512,532	..4487.81481800	.....	....(1,616,259)	988,202	(628,057)	.....	.....	.....	.....988,202	.....	.....	.....	.....0003
165231 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	G5GSEF7VJP5170UK5573	.02/17/2023	.02/20/2024	.....	24,973,199	..4191.67288400	.....	....(898,579)	549,403	(349,176)	.....	.....	.....	.....549,403	.....	.....	.....	.....0003
165238 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/17/2023	.08/20/2024	.....	7,200,043	..4235.31914700	.....	....(677,076)	276,986	(400,090)	.....	.....	.....	.....276,986	.....	.....	.....	.....0003
165241 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.02/17/2023	.02/20/2024		57,810,658	..4159.04016400		(4,773,399)	2,918,518	(1,854,881)				2,918,518				0003

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	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amorti- zation)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)	
165253 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		56,015,695	4165.97461700		(4,561,556)	2,788,995	(1,772,561)					2,788,995				0003	
165263 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		45,754,286	4200.65000000		(3,470,364)	2,121,826	(1,348,538)					2,121,826				0003	
165271 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		65,149,879	4258.16205100		(4,367,385)	2,670,276	(1,697,109)					2,670,276				0003	
165273 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		54,394,665	4283.04450000		(3,448,050)	2,108,183	(1,339,867)					2,108,183				0003	
165278 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		51,783,232	4315.26931100		(3,048,000)	1,863,587	(1,184,413)					1,863,587				0003	
165282 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	02/17/2023		51,300,312	4347.08621300		(2,798,154)	1,710,828	(1,087,326)					1,710,828				0003	
165304 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	02/17/2023		41,746,058	181.21020600		(2,321,869)	1,419,621	(902,248)					1,419,621				0003	
165309 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPFUBM8PRO8K5P83	02/17/2023		9,260,923	4396.44320200		0	0	0					0				0003	
165311 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUWSPFUBM8PRO8K5P83	02/17/2023		18,378,131	4420.50983300		0	0	0					0				0003	
165810 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	W22LR0WP21HZNBB6K528	03/06/2023		49,276,499	181.67693200		(2,536,711)	1,441,628	(1,095,083)					1,441,628				0003	
165819 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	03/06/2023		30,403,640	93.00188400		(1,883,693)	1,070,514	(813,179)					1,070,514				0003	
165828 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	03/06/2023		1,479,373	73.76131000		(82,670)	46,982	(35,688)					46,982				0003	
165835 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/06/2023		4,591,313	4173.92102000		(415,217)	157,028	(258,189)					157,028				0003	
165838 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/06/2023		66,915,767	4130.60292600		(4,973,400)	2,826,413	(2,146,987)					2,826,413				0003	
165847 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	03/06/2023		54,113,343	4167.84839000		(3,696,798)	2,100,912	(1,595,885)					2,100,912				0003	
165864 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRUGOFU57RNE97	03/06/2023		9,926,288	4378.77107200		0	0	0					0				0003	
165867 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZVZ7FF32TWEFA76	03/06/2023		14,922,988	4373.91296800		0	0	0					0				0003	

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165882 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024		67,446,867	..4129.38840000		(5,580,898)	3,171,658	(2,409,240)					3,171,658				0003
165902 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	49,969,042	..4199.42606600	.....	....(3,574,379)	2,031,341	(1,543,038)	.....	.....	.....	.....	.....2,031,341	.....	.....	.....	0003
165906 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	54,213,738	..4301.85109200	.....	....(3,081,602)	1,751,293	(1,330,309)	.....	.....	.....	.....	.....1,751,293	.....	.....	.....	0003
165912 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	83,321,774	..4250.84100000	.....	....(5,324,658)	3,026,035	(2,298,623)	.....	.....	.....	.....	.....3,026,035	.....	.....	.....	0003
165921 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	47,272,559	..4434.63926800	.....	....(1,916,105)	1,088,934	(827,171)	.....	.....	.....	.....	.....1,088,934	.....	.....	.....	0003
165926 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	67,416,861	..4224.12142800	.....	....(4,574,577)	2,599,760	(1,974,817)	.....	.....	.....	.....	.....2,599,760	.....	.....	.....	0003
165930 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	03/06/2023	03/06/2024	.....	31,676,238	..4162.99028600	.....	....(1,207,535)	686,250	(521,286)	.....	.....	.....	.....	.....686,250	.....	.....	.....	0003
165937 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	39,552,414	..4243.55384400	.....	....(2,569,662)	1,460,354	(1,109,308)	.....	.....	.....	.....	.....1,460,354	.....	.....	.....	0003
165943 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	32,827,213	..4269.46373200	.....	....(2,010,846)	1,142,776	(868,070)	.....	.....	.....	.....	.....1,142,776	.....	.....	.....	0003
165945 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	03/06/2023	03/06/2024	.....	47,749,734	..4286.46709600	.....	....(2,814,114)	1,599,278	(1,214,836)	.....	.....	.....	.....	.....1,599,278	.....	.....	.....	0003
166354 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	03/20/2023	03/20/2024	.....	47,729,989	194.37403200	.....	....(2,934,313)	1,555,346	(1,378,967)	.....	.....	.....	.....	.....1,555,346	.....	.....	.....	0003
166362 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	03/20/2023	03/20/2024	.....	32,438,707	87.55445000	.....	....(1,906,351)	1,010,470	(895,881)	.....	.....	.....	.....	.....1,010,470	.....	.....	.....	0003
166371 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	03/20/2023	03/20/2024	.....	955,728	72.00994200	.....	....(53,428)	28,320	(25,108)	.....	.....	.....	.....	.....28,320	.....	.....	.....	0003
166379 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	03/20/2023	03/20/2024	.....	66,103,902	..4319.46116700	.....	....(2,918,085)	1,546,744	(1,371,340)	.....	.....	.....	.....	.....1,546,744	.....	.....	.....	0003
166388 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	03/20/2023	03/20/2028	.....	11,891,860	..4306.02582900	.....	.....0	0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
166391 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	03/20/2023	03/20/2030	.....	14,285,384	..4297.33237500	.....	.....0	0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
166396 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/20/2023	03/20/2024	.....	45,628,419	..4117.14078300	.....	....(2,877,695)	1,525,336	(1,352,359)	.....	.....	.....	.....	.....1,525,336	.....	.....	.....	0003
166402 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/20/2023	03/20/2024	.....	52,323,955	..4127.81002200	.....	....(3,215,257)	1,704,262	(1,510,995)	.....	.....	.....	.....	.....1,704,262	.....	.....	.....	0003
166407 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/20/2023	03/20/2024	.....	50,142,539	..4144.01145900	.....	....(2,960,144)	1,569,038	(1,391,106)	.....	.....	.....	.....	.....1,569,038	.....	.....	.....	0003
166412 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/20/2023	03/20/2024	.....	52,478,430	..4164.95478000	.....	....(2,937,186)	1,556,869	(1,380,317)	.....	.....	.....	.....	.....1,556,869	.....	.....	.....	0003
166419 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	03/20/2023	03/20/2024		77,041,031	..4188.26904300		(4,056,719)	2,150,283	(1,906,436)					2,150,283				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
166442 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U8RHIGC71XBU11	.03/20/2023	.03/20/2024	.....	28,311,222	..4061.42364600	.....	.....(1,198,227)	635,126	(563,101)	.....	.....	.....	.....	.....635,126	.....	.....	.....	0003
166444 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.09/20/2024	.....	4,876,079	..4063.39943100	.....	.....(322,068)	113,602	(208,466)	.....	.....	.....	.....	.....113,602	.....	.....	.....	0003
166447 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	76,148,493	..4029.02077200	.....	.....(5,877,711)	3,115,508	(2,762,203)	.....	.....	.....	.....	.....3,115,508	.....	.....	.....	0003
166453 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	67,625,203	..4032.97234200	.....	.....(5,174,965)	2,743,014	(2,431,951)	.....	.....	.....	.....	.....2,743,014	.....	.....	.....	0003
166459 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	49,258,730	..4068.93162900	.....	.....(3,479,282)	1,844,209	(1,635,072)	.....	.....	.....	.....	.....1,844,209	.....	.....	.....	0003
166469 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.03/20/2023	.03/20/2024	.....	51,151,363	..4098.56840400	.....	.....(3,372,801)	1,787,769	(1,585,032)	.....	.....	.....	.....	.....1,787,769	.....	.....	.....	0003
167363 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.04/06/2023	.04/05/2024	.....	40,013,788	..89.02054000	.....	.....(2,559,046)	1,240,962	(1,318,084)	.....	.....	.....	.....	.....1,240,962	.....	.....	.....	0003
167372 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFXTO9	.04/06/2023	.04/05/2024	.....	1,895,084	77.35708200	.....	.....(70,495)	34,185	(36,310)	.....	.....	.....	.....	.....34,185	.....	.....	.....	0003
167377 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.04/06/2023	.10/04/2024	.....	3,777,261	..4217.90805000	.....	.....(372,359)	120,489	(251,870)	.....	.....	.....	.....	.....120,489	.....	.....	.....	0003
167380 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.04/06/2023	.04/05/2024	.....	84,576,435	..4185.47839200	.....	.....(6,797,802)	3,296,468	(3,501,334)	.....	.....	.....	.....	.....3,296,468	.....	.....	.....	0003
167386 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.04/06/2023	.04/05/2024	.....	82,540,040	..4189.58341200	.....	.....(6,578,294)	3,190,022	(3,388,272)	.....	.....	.....	.....	.....3,190,022	.....	.....	.....	0003
167392 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.04/06/2023	.04/05/2024	.....	31,531,165	..4283.99887200	.....	.....(736,022)	356,920	(379,102)	.....	.....	.....	.....	.....356,920	.....	.....	.....	0003
167399 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.04/06/2023	.04/05/2024	.....	40,323,413	..4346.39517600	.....	.....(927,744)	449,892	(477,852)	.....	.....	.....	.....	.....449,892	.....	.....	.....	0003
167405 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFGFNF3BB653	.04/06/2023	.04/05/2024	.....	81,284,742	..4394.83441200	.....	.....(1,849,552)	896,906	(952,646)	.....	.....	.....	.....	.....896,906	.....	.....	.....	0003
167411 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZIWZ7FF32TWEFA76	.04/06/2023	.04/06/2028	.....	19,187,787	..4472.00878800	.....	.....0	0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
167415 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZIWZ7FF32TWEFA76	.04/06/2023	.04/05/2030	.....	21,222,133	..4465.44075600	.....	.....0	0	0	.....	.....	.....	.....	.....0	.....	.....	.....	0003
167424 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZQ078	.04/06/2023	.04/05/2024	.....	72,528,189	..4276.19933400	.....	.....(4,621,676)	2,241,196	(2,380,480)	.....	.....	.....	.....	.....2,241,196	.....	.....	.....	0003
167433 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJISFPUBMPRO8K5P83	.04/06/2023	.04/05/2024		36,922,405	..4210.92951600		(1,428,953)	692,944	(736,008)					692,944				0003

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SCHEDULE DB - PART A - SECTION 1

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
167435 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	46,822,088	..4296.31393200	.....	..... (2,845,738)	1,379,988	 (1,465,750)					1,379,988				0003
167442 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	49,695,577	..4321.35455400	.....	..... (2,843,375)	1,378,842	 (1,464,533)					1,378,842				0003
167446 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	57,085,229	..4324.63857000	.....	..... (3,240,336)	1,571,341	 (1,668,995)					1,571,341				0003
167448 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	44,404,987	..4531.12107600	.....	..... (1,422,862)	689,991	 (732,871)					689,991				0003
167458 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	53,543,948	..197.62345300	.....	..... (3,367,775)	1,633,140	 (1,734,635)					1,633,140				0003
167462 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	48,294,992	..4259.77925400	.....	..... (3,195,911)	1,549,798	 (1,646,113)					1,549,798				0003
167474 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/06/2023	.04/05/2024	.....	59,890,855	..4226.12000000	.....	..... (4,274,721)	2,072,947	 (2,201,774)					2,072,947				0003
167993 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.04/20/2023	.04/20/2028	.....	16,962,996	..4486.60385600	.....	..... 0	0	0					0				0003
167997 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZWZ7FF32TWEFA76	.04/20/2023	.04/18/2030	.....	15,969,531	..4486.19087700	.....	..... 0	0	0					0				0003
168003 Call Options – Ishares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.04/19/2024	.....	1,458,979	..77.34790800	.....	..... (51,683)	23,081	 (28,603)					23,081				0003
168018 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.10/18/2024	.....	3,803,041	..4225.60112800	.....	..... (368,739)	109,880	 (258,859)					109,880				0003
168021 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.04/19/2024	.....	66,523,070	..4210.32090500	.....	..... (5,126,626)	2,289,425	 (2,837,201)					2,289,425				0003
168031 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.04/19/2024	.....	49,999,935	..4265.66009100	.....	..... (3,406,854)	1,521,417	 (1,885,437)					1,521,417				0003
168049 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.04/19/2024	.....	67,484,441	..4299.11139000	.....	..... (4,250,672)	1,898,245	 (2,352,427)					1,898,245				0003
168061 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.04/20/2023	.04/19/2024		56,971,775	..4316.04352900		 (3,445,200)	1,538,541	 (1,906,659)					1,538,541				0003

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168071 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2023	04/19/2024		52,241,081	.. 4348.66887000		 (2,912,100)	 1,300,472	 (1,611,628)					 1,300,472				0003
168087 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2023	04/19/2024	.....	54,521,728	.. 4370.96973600	.....	..... (2,870,300)	 1,281,805	 (1,588,495)	.....	.....	.....	.....	..... 1,281,805	.....	.....	.....	0003
168099 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2023	04/19/2024	.....	62,929,856	.. 4384.59804300	.....	..... (3,195,293)	 1,426,939	 (1,768,354)	.....	.....	.....	.....	..... 1,426,939	.....	.....	.....	0003
168111 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2023	04/19/2024	.....	42,790,560	.. 197.79506100	.....	..... (2,556,404)	 1,141,627	 (1,414,777)	.....	.....	.....	.....	..... 1,141,627	.....	.....	.....	0003
168112 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	04/20/2023	04/19/2024	.....	71,024,919	.. 4471.32363300	.....	..... (2,828,560)	 1,263,165	 (1,565,395)	.....	.....	.....	.....	..... 1,263,165	.....	.....	.....	0003
168120 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ... BANK OF AMERICA, N.A.	04/20/2023	04/19/2024	.....	29,621,620	.. 89.47350000	.....	..... (1,801,842)	 804,658	 (997,184)	.....	.....	.....	.....	..... 804,658	.....	.....	.....	0003
168126 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPRO8K5P83	04/20/2023	04/19/2024	.....	62,678,185	.. 4214.86367400	.....	..... (4,923,486)	 2,198,708	 (2,724,779)	.....	.....	.....	.....	..... 2,198,708	.....	.....	.....	0003
168130 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPRO8K5P83	04/20/2023	04/19/2024	.....	27,081,227	.. 4240.46837200	.....	..... (977,699)	 436,616	 (541,083)	.....	.....	.....	.....	..... 436,616	.....	.....	.....	0003
170969 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPRO8K5P83	05/05/2023	05/06/2024	.....	36,474,172	.. 4251.65137500	.....	..... (1,331,721)	 537,043	 (794,678)	.....	.....	.....	.....	..... 537,043	.....	.....	.....	0003
170977 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZVZ7FF32TWEFA76	05/05/2023	05/05/2028	.....	17,010,736	.. 4496.93100000	.....	..... 0	 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
170981 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUWSFPU8MPRO8K5P83	05/05/2023	05/06/2030	.....	17,276,431	.. 4485.76312500	.....	..... 0	 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
171009 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/05/2023	05/06/2024	.....	55,213,121	.. 199.28872600	.....	..... (3,296,906)	 1,329,542	 (1,967,363)	.....	.....	.....	.....	..... 1,329,542	.....	.....	.....	0003
171017 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/05/2023	11/06/2024	.....	3,821,275	.. 4245.86062500	.....	..... (358,227)	 96,221	 (262,006)	.....	.....	.....	.....	..... 96,221	.....	.....	.....	0003
171019 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/05/2023	05/06/2024	.....	70,805,651	.. 4317.41775000	.....	..... (4,363,876)	 1,759,819	 (2,604,057)	.....	.....	.....	.....	..... 1,759,819	.....	.....	.....	0003
171029 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/05/2023	05/06/2024	.....	50,048,438	.. 4354.23037500	.....	..... (2,818,840)	 1,136,753	 (1,682,087)	.....	.....	.....	.....	..... 1,136,753	.....	.....	.....	0003
171040 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	05/05/2023	05/06/2024	.....	51,540,796	.. 4413.79237500	.....	..... (2,485,025)	 1,002,135	 (1,482,890)	.....	.....	.....	.....	..... 1,002,135	.....	.....	.....	0003
171069 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	05/05/2023	05/06/2024		47,507,791	.. 4522.16212500		 (1,811,506)	 730,525	 (1,080,980)					 730,525				0003

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SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
171094 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	60,383,755	..4391.04300000	.....	(3,269,932)	1,318,665	(1,951,267)	.....	.....	.....	.....1,318,665	.....	.....	.....	0003
171108 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	SOCIETE GENERAL ...	02RNE81BXP4R0TD8PU41	.05/05/2023	.05/06/2024	.....	37,877,141	..90.25691400	.....	(2,451,061)	988,439	(1,462,622)	.....	.....	.....	.....988,439	.....	.....	.....	0003
171115 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUMPR08K5P83	.05/05/2023	.05/06/2024	.....	1,973,738	..78.71914000	.....	(78,931)	31,830	(47,101)	.....	.....	.....	.....31,830	.....	.....	.....	0003
171119 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	77,217,739	..4217.32050000	.....	(6,201,677)	2,500,949	(3,700,728)	.....	.....	.....	.....2,500,949	.....	.....	.....	0003
171125 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	62,987,198	..4221.45675000	.....	(5,016,777)	2,023,114	(2,993,663)	.....	.....	.....	.....2,023,114	.....	.....	.....	0003
171134 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	37,302,771	..4258.68300000	.....	(2,745,837)	1,107,313	(1,638,524)	.....	.....	.....	.....1,107,313	.....	.....	.....	0003
171142 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	45,407,700	..4300.04550000	.....	(3,052,585)	1,231,015	(1,821,570)	.....	.....	.....	.....1,231,015	.....	.....	.....	0003
171148 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	57,361,798	..4334.37637500	.....	(3,562,918)	1,436,817	(2,126,101)	.....	.....	.....	.....1,436,817	.....	.....	.....	0003
171152 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	MORGAN STANLEY & CO. INTERNATIONAL PLC	4PQUHN3JPF6GNF3BB653	.05/05/2023	.05/06/2024	.....	53,975,231	..4377.39337500	.....	(3,023,812)	1,219,412	(1,804,400)	.....	.....	.....	.....1,219,412	.....	.....	.....	0003
171610 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	E570DZIWZ7FF321WEFA76	.05/19/2023	.05/20/2030	.....	22,121,980	..4538.65674600	.....	0	0	0	.....	.....	.....	.....0	.....	.....	.....	0003
171618 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/19/2023	.05/20/2024	.....	71,815,365	..4493.38336200	.....	(3,096,124)	1,130,465	(1,965,659)	.....	.....	.....	.....1,130,465	.....	.....	.....	0003
171632 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	9R7GPTS07KV3UQJZ0078	.05/19/2023	.05/20/2024	.....	44,612,664	..4569.67739800	.....	(1,526,993)	557,540	(969,454)	.....	.....	.....	.....557,540	.....	.....	.....	0003
171637 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	ROMUJISFPUMPR08K5P83	.05/19/2023	.11/20/2024	.....	2,148,818	..4313.54742000	.....	(206,236)	50,156	(156,081)	.....	.....	.....	.....50,156	.....	.....	.....	0003
171643 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	71,017,178	..4274.56200600	.....	(5,485,947)	2,003,043	(3,482,903)	.....	.....	.....	.....2,003,043	.....	.....	.....	0003
171645 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	66,055,853	..4278.33478800	.....	(5,061,785)	1,848,172	(3,213,613)	.....	.....	.....	.....1,848,172	.....	.....	.....	0003
171652 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	45,305,558	..4327.38095400	.....	(3,120,808)	1,139,477	(1,981,330)	.....	.....	.....	.....1,139,477	.....	.....	.....	0003
171663 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	86,079,685	..4372.65433800	.....	(5,337,765)	1,948,939	(3,388,826)	.....	.....	.....	.....1,948,939	.....	.....	.....	0003
171677 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	48,554,600	..4388.58386200	.....	(2,898,074)	1,058,152	(1,839,922)	.....	.....	.....	.....1,058,152	.....	.....	.....	0003
171691 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	G5GSEF7VJP5170UK5573	.05/19/2023	.05/20/2024	.....	49,059,023	..4426.73088000	.....	(2,666,632)	973,648	(1,692,984)	.....	.....	.....	.....973,648	.....	.....	.....	0003
171699 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	KB1H1DSPRFMYMCJFXT09	.05/19/2023	.05/20/2024	.....	65,994,380	..4466.97388800	.....	(3,201,867)	1,169,074	(2,032,793)	.....	.....	.....	.....1,169,074	.....	.....	.....	0003
171719 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A.	7H6GLXDRJUGUF57RNE97	.05/19/2023	.05/20/2024	.....	30,291,711	..87.68697600	.....	(1,927,993)	703,954	(1,224,039)	.....	.....	.....	.....703,954	.....	.....	.....	0003

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
172393 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U9RHIGC71XBU11	.06/06/2023	.06/06/2024	.....	29,851,389	..4402.08426000	.....	..... (912,158)	289,099	 (623,059)	.....	.....	.....	.....	.....289,099	.....	.....	.....	0003
172399 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2023	.06/06/2024	.....	46,977,556	..4474.05294000	.....	..... (2,601,690)	824,579	 (1,777,111)	.....	.....	.....	.....	.....824,579	.....	.....	.....	0003
172402 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2023	.06/06/2024	.....	45,383,910	..4483.47741000	.....	..... (2,452,576)	777,319	 (1,675,257)	.....	.....	.....	.....	.....777,319	.....	.....	.....	0003
172407 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/06/2023	.06/06/2024	.....	53,163,392	..4543.87969500	.....	..... (2,438,397)	772,825	 (1,665,572)	.....	.....	.....	.....	.....772,825	.....	.....	.....	0003
172809 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57PNE97	.06/20/2023	.06/20/2024	.....	25,145,347	89.91969000	.....	..... (1,286,947)	358,657	 (928,290)	.....	.....	.....	.....	.....358,657	.....	.....	.....	0003
172819 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL W22LROWP21HZNB86K528	.06/20/2023	.06/20/2024	.....	1,704,881	76.36689000	.....	..... (75,914)	21,156	 (54,758)	.....	.....	.....	.....	.....21,156	.....	.....	.....	0003
172833 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/20/2023	.06/20/2024	.....	45,809,924	..4539.24275300	.....	..... (2,970,733)	827,909	 (2,142,824)	.....	.....	.....	.....	.....827,909	.....	.....	.....	0003
172844 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/20/2023	.06/20/2024	.....	47,339,516	..4603.75679000	.....	..... (2,635,753)	734,554	 (1,901,199)	.....	.....	.....	.....	.....734,554	.....	.....	.....	0003
172859 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC G5GSEF7VJP5170UK5573	.06/20/2023	.06/20/2024	.....	52,076,434	..4622.18937200	.....	..... (2,771,375)	772,351	 (1,999,025)	.....	.....	.....	.....	.....772,351	.....	.....	.....	0003
172865 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A. KB1H1DSPPRFMYMCJFXTO9	.06/20/2023	.06/20/2024	.....	30,582,010	..4510.71613800	.....	..... (943,228)	262,867	 (680,361)	.....	.....	.....	.....	.....262,867	.....	.....	.....	0003
172869 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON ROMUJSFPU8MPR08K5P83	.06/20/2023	.06/20/2028	.....	19,299,716	..4745.51212300	.....	..... 0	 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
172871 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E57QDZVZ7FF32TWEFA76	.06/20/2023	.06/20/2030	.....	10,638,767	..4740.24567100	.....	..... 0	 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
172882 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/20/2023	.06/20/2024	.....	46,914,240	..190.53500000	.....	..... (2,445,002)	681,394	 (1,763,608)	.....	.....	.....	.....	.....681,394	.....	.....	.....	0003
172883 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/20/2023	.06/20/2024	.....	46,806,119	..4588.83517600	.....	..... (2,558,364)	712,987	 (1,845,377)	.....	.....	.....	.....	.....712,987	.....	.....	.....	0003
172886 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/20/2023	.06/20/2024	.....	55,406,191	..4655.98243900	.....	..... (2,536,604)	706,922	 (1,829,682)	.....	.....	.....	.....	.....706,922	.....	.....	.....	0003
172893 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/20/2023	.12/20/2024	.....	3,617,350	..4521.68791300	.....	..... (323,112)	60,032	 (263,080)	.....	.....	.....	.....	.....60,032	.....	.....	.....	0003
172897 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.06/20/2023	.06/20/2024		57,260,770	..4679.68147300		 (2,454,060)	683,918	 (1,770,142)					683,918				0003

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172898 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024		74,287,782	..4475.16758700		(5,318,972)	1,482,336	(3,836,636)					1,482,336				0003
172907 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	70,842,784	..4735.85696100	.....	.....(2,576,057)	717,917	(1,858,139)					717,917				0003
172912 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	63,419,017	..4479.11742600	.....	.....(4,500,806)	1,254,323	(3,246,483)					1,254,323				0003
172919 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	06/20/2023	06/20/2024	.....	63,361,235	..4573.91356200	.....	.....(3,596,033)	1,002,173	(2,593,860)					1,002,173				0003
173441 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	36,493,163	..4558.05000000	.....	.....(2,390,142)	563,157	(1,826,985)					563,157				0003
173454 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	41,828,061	..4585.85000000	.....	.....(2,568,028)	605,070	(1,962,959)					605,070				0003
173465 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	33,471,370	..4599.96000000	.....	.....(1,945,303)	458,345	(1,486,957)					458,345				0003
173479 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	66,806,951	..4601.29000000	.....	.....(3,952,690)	931,319	(3,021,371)					931,319				0003
173487 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	48,623,204	..4621.14000000	.....	.....(2,682,980)	632,154	(2,050,826)					632,154				0003
173499 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	61,473,203	..4660.40000000	.....	.....(3,072,499)	723,931	(2,348,568)					723,931				0003
173505 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	07/06/2023	07/05/2024	.....	55,215,881	..189.40000000	.....	.....(2,586,511)	609,425	(1,977,087)					609,425				0003
173512 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024	.....	55,416,456	..4695.26000000	.....	.....(2,520,111)	593,780	(1,926,331)					593,780				0003
173519 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	07/06/2023	07/05/2024	.....	27,187,068	..92.33000000	.....	.....(1,292,268)	304,480	(987,788)					304,480				0003
173523 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/06/2023	07/05/2024	.....	96,092,490	..4749.96000000	.....	.....(3,807,286)	897,059	(2,910,227)					897,059				0003
173533 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/06/2023	07/05/2024	.....	64,395,998	..4801.13000000	.....	.....(2,198,803)	518,074	(1,680,729)					518,074				0003
173540 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2023	07/06/2028	.....	17,845,282	..4768.49000000	.....	.....0	0	0					0				0003
173542 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	07/06/2023	07/05/2030	.....	15,739,988	..4765.40000000	.....	.....0	0	0					0				0003
173547 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2023	01/06/2025	.....	4,066,515	..4518.35000000	.....	.....(385,812)	60,327	(325,485)					60,327				0003
173554 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	93,915,579	..4499.82000000	.....	.....(6,999,476)	1,649,192	(5,350,284)					1,649,192				0003
173557 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/06/2023	07/05/2024	.....	74,752,790	..4500.26000000	.....	.....(5,566,342)	1,311,522	(4,254,820)					1,311,522				0003
173561 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/06/2023	07/05/2024		2,927,156	..75.25000000		(85,967)	20,255	(65,712)					20,255				0003

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173569 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	07/06/2023	07/05/2024		28,762,055	4531.59000000		(870,813)	205,178	(665,635)					205,178				0003
174112 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2023	07/19/2024	.....	76,848,499	4636.45000000	.....	(5,360,004)	1,057,316	(4,302,688)	.....	.....	.....	.....	1,057,316	.....	.....	.....	0003
174123 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROMUJSFPU8MPRO8K5P83	07/20/2023	07/19/2024	.....	61,334,731	4723.07000000	.....	(3,476,421)	685,760	(2,790,661)	.....	.....	.....	.....	685,760	.....	.....	.....	0003
174140 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	07/20/2023	07/19/2024	.....	56,886,944	4744.83000000	.....	(3,056,721)	602,970	(2,453,751)	.....	.....	.....	.....	602,970	.....	.....	.....	0003
174151 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	07/20/2023	07/19/2024	.....	52,063,689	4787.01000000	.....	(2,514,033)	495,919	(2,018,114)	.....	.....	.....	.....	495,919	.....	.....	.....	0003
174154 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	07/20/2023	07/19/2024	.....	55,139,280	4840.52000000	.....	(2,306,063)	454,895	(1,851,168)	.....	.....	.....	.....	454,895	.....	.....	.....	0003
174158 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	07/20/2023	07/19/2024	.....	54,983,619	4902.19000000	.....	(1,925,070)	379,740	(1,545,330)	.....	.....	.....	.....	379,740	.....	.....	.....	0003
174166 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BANK OF AMERICA, N.A.	07/20/2023	07/19/2024	.....	34,180,959	4978.38000000	.....	(852,189)	168,103	(684,086)	.....	.....	.....	.....	168,103	.....	.....	.....	0003
174167 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	UBS AG	07/20/2023	07/19/2024	.....	21,782,054	94.20000000	.....	(1,144,853)	225,834	(919,019)	.....	.....	.....	.....	225,834	.....	.....	.....	0003
174173 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	07/20/2023	07/19/2024	.....	87,622,627	4624.21000000	.....	(6,278,028)	1,238,405	(5,039,622)	.....	.....	.....	.....	1,238,405	.....	.....	.....	0003
174180 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	WELLS FARGO BANK, N.A.	07/20/2023	07/19/2024	.....	24,961,962	4660.03000000	.....	(728,746)	143,753	(584,993)	.....	.....	.....	.....	143,753	.....	.....	.....	0003
174186 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	01/17/2025	.....	3,642,196	4652.78000000	.....	(323,289)	42,554	(280,735)	.....	.....	.....	.....	42,554	.....	.....	.....	0003
174187 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024	.....	41,392,131	194.97000000	.....	(1,951,037)	384,862	(1,566,175)	.....	.....	.....	.....	384,862	.....	.....	.....	0003
174191 Call Options - iShares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024	.....	2,657,018	78.61000000	.....	(75,374)	14,868	(60,506)	.....	.....	.....	.....	14,868	.....	.....	.....	0003
174197 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	07/20/2023	07/19/2024	.....	48,409,382	4699.94000000	.....	(2,731,148)	538,747	(2,192,401)	.....	.....	.....	.....	538,747	.....	.....	.....	0003
174680 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	46,555,554	191.94000000	.....	(2,185,399)	338,499	(1,846,900)	.....	.....	.....	.....	338,499	.....	.....	.....	0003
174692 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	22,333,910	90.87000000	.....	(999,582)	154,827	(844,755)	.....	.....	.....	.....	154,827	.....	.....	.....	0003
174701 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	02/06/2025	.....	5,059,813	4599.83000000	.....	(463,023)	47,812	(415,211)	.....	.....	.....	.....	47,812	.....	.....	.....	0003
174710 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		52,072,488	4619.98000000		(3,263,561)	505,497	(2,758,064)					505,497				0003

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174718 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024		48,857,825	..4646.40000000		 (2,874,225)	445,192	 (2,429,032)					445,192				0003
174729 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	50,735,365	..4662.08000000	.....	..... (2,872,343)	444,901	 (2,427,442)					444,901				0003
174736 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	48,162,388	..4675.96000000	.....	..... (2,632,783)	407,795	 (2,224,988)					407,795				0003
174745 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	49,182,766	..4694.32000000	.....	..... (2,565,942)	397,442	 (2,168,500)					397,442				0003
174758 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	48,998,556	..4739.99000000	.....	..... (2,263,655)	350,621	 (1,913,035)					350,621				0003
174768 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	56,388,151	..4786.12000000	.....	..... (2,286,573)	354,170	 (1,932,403)					354,170				0003
174772 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	53,777,058	..4844.78000000	.....	..... (1,825,728)	282,789	 (1,542,939)					282,789				0003
174775 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO	08/04/2023	08/06/2024	.....	33,450,016	..4919.12000000	.....	..... (887,332)	137,440	 (749,892)					137,440				0003
174778 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/04/2023	08/04/2028	.....	19,686,217	..4850.15000000	.....	.....0	0	0					0				0003
174780 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2030	.....	13,467,930	..4858.21000000	.....	.....0	0	0					0				0003
174792 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	GOLDMAN SACHS INTERNATIONAL	08/04/2023	08/06/2024	.....	2,596,930	..76.99000000	.....	..... (103,754)	16,071	 (87,684)					16,071				0003
174802 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2024	.....	91,665,355	..4566.25000000	.....	..... (6,886,808)	1,066,707	 (5,820,102)					1,066,707				0003
174820 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BNP PARIBAS LONDON	08/04/2023	08/06/2024	.....	72,264,589	..4570.28000000	.....	..... (5,382,668)	833,728	 (4,548,940)					833,728				0003
174824 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC	08/04/2023	08/06/2024	.....	33,184,814	..4602.97000000	.....	..... (924,787)	143,241	 (781,545)					143,241				0003
175356 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA	08/18/2023	08/20/2024	.....	2,161,933	..75.39000000	.....	..... (85,519)	9,993	 (75,526)					9,993				0003
175363 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/18/2023	08/18/2028	.....	23,953,924	..4736.77000000	.....	.....0	0	0					0				0003
175365 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A.	08/18/2023	08/20/2030		15,294,440	..4740.70000000		0	0	0					0				0003

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175375 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024		64,030,807	..4552.80000000		 (3,982,236)	465,316	 (3,516,920)					465,316				 0003
175386 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	50,841,663	..4580.33000000	.....	..... (2,968,362)	346,847	 (2,621,515)					346,847				 0003
175388 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	BARCLAYS BANK PLC X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO G5GSEF7VJP5170UK5573	.08/18/2023	.08/20/2024	.....	26,977,271	..4489.88000000	.....	..... (872,510)	101,951	 (770,559)					101,951				 0003
175395 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	55,630,723	..4630.58000000	.....	..... (2,876,817)	336,150	 (2,540,668)					336,150				 0003
175403 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	53,566,656	..4703.12000000	.....	..... (2,299,332)	268,672	 (2,030,660)					268,672				 0003
175409 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	55,661,208	..4798.38000000	.....	..... (1,829,784)	213,806	 (1,615,978)					213,806				 0003
175416 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	33,817,213	..187.08000000	.....	..... (1,541,912)	180,169	 (1,361,743)					180,169				 0003
175423 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	18,199,316	..88.24000000	.....	..... (860,054)	100,495	 (759,558)					100,495				 0003
175427 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.02/20/2025	.....	4,035,384	..4483.76000000	.....	..... (394,659)	30,743	 (363,916)					30,743				 0003
175433 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	70,401,482	..4455.79000000	.....	..... (5,392,066)	630,051	 (4,762,015)					630,051				 0003
175435 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	63,805,313	..4461.91000000	.....	..... (4,830,254)	564,405	 (4,265,849)					564,405				 0003
175441 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.08/18/2023	.08/20/2024	.....	63,785,139	..4522.21000000	.....	..... (4,246,550)	496,200	 (3,750,350)					496,200				 0003
175964 Call Options - SPDR Gold shares - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	39,243,910	..189.71000000	.....	..... (1,793,499)	117,606	 (1,675,893)					117,606				 0003
175970 Call Options - iShares U.S. Real Estate - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024		21,065,107	..89.13000000		 (954,819)	62,611	 (892,208)					62,611				 0003

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175978 Call Options - Ishares MSCI EAFE - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024		1,650,784	75.37000000		(51,033)	3,346	(47,686)					3,346				0003
175982 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.03/06/2025	.....	4,138,290	..4598.10000000	.....	.....(375,039)	16,455	(358,584)					16,455				0003
175988 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	72,392,700	..4553.00000000	.....	.....(5,380,401)	352,813	(5,027,588)					352,813				0003
175991 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	69,273,544	..4557.47000000	.....	.....(5,100,816)	334,480	(4,766,336)					334,480				0003
175994 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	37,302,525	..4605.25000000	.....	.....(2,478,357)	162,515	(2,315,842)					162,515				0003
176000 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	51,986,868	..4636.51000000	.....	.....(3,220,342)	211,170	(3,009,172)					211,170				0003
176010 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	51,931,537	..4653.03000000	.....	.....(3,096,899)	203,075	(2,893,823)					203,075				0003
176018 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	49,824,780	..4668.66000000	.....	.....(2,864,093)	187,809	(2,676,284)					187,809				0003
176029 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	49,296,573	..4699.02000000	.....	.....(2,634,560)	172,758	(2,461,802)					172,758				0003
176041 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	52,950,334	..4745.47000000	.....	.....(2,519,160)	165,191	(2,353,969)					165,191				0003
176050 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	55,450,957	..4803.96000000	.....	.....(2,257,071)	148,005	(2,109,067)					148,005				0003
176055 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	45,812,028	..4873.62000000	.....	.....(1,527,030)	100,133	(1,426,897)					100,133				0003
176057 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/06/2023	.09/06/2024	.....	41,636,112	..4956.68000000	.....	.....(1,072,764)	70,345	(1,002,419)					70,345				0003
176066 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GCT1XBU11	.09/06/2023	.09/06/2024	.....	30,086,412	..4595.43000000	.....	.....(906,304)	59,430	(846,875)					59,430				0003
176073 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. ES70DZ1Z7FF32TWEFA76	.09/06/2023	.09/06/2028		18,666,886	..4860.67000000		0	0	0					0				0003

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

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Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
176076 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZFF32TWIFA76	.09/06/2023	.09/06/2030	.....	19,919,460	..4866.48000000	.....	0	 0	 0	.....	.....	.....	.....	0	.....	.....	.....	0003
176718 Call Options – SPDR Gold shares – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	33,340,776	..191.29000000	.....	(1,450,129)	39,621	(1,410,508)	.....	.....	.....	.....	39,621	.....	.....	.....	0003
176724 Call Options – iShares U.S. Real Estate – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	19,313,853	..88.68000000	.....	(821,078)	22,434	(798,645)	.....	.....	.....	.....	22,434	.....	.....	.....	0003
176732 Call Options – iShares MSCI EAFE – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	1,221,453	75.69000000	.....	(37,439)	1,023	(36,416)	.....	.....	.....	.....	1,023	.....	.....	.....	0003
176737 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.03/20/2025	.....	6,312,838	..4509.17000000	.....	(594,622)	10,871	(583,751)	.....	.....	.....	.....	10,871	.....	.....	.....	0003
176740 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	65,082,960	..4488.48000000	.....	(4,647,685)	126,986	(4,520,699)	.....	.....	.....	.....	126,986	.....	.....	.....	0003
176747 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	63,349,749	..4482.89000000	.....	(4,481,544)	122,447	(4,359,097)	.....	.....	.....	.....	122,447	.....	.....	.....	0003
176750 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	55,500,606	..4549.23000000	.....	(3,465,776)	94,693	(3,371,083)	.....	.....	.....	.....	94,693	.....	.....	.....	0003
176759 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	56,519,413	..4579.17000000	.....	(3,293,778)	89,994	(3,203,784)	.....	.....	.....	.....	89,994	.....	.....	.....	0003
176771 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	47,853,089	..4587.66000000	.....	(2,668,959)	72,922	(2,596,037)	.....	.....	.....	.....	72,922	.....	.....	.....	0003
176777 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	51,416,485	..4646.52000000	.....	(2,544,311)	69,517	(2,474,794)	.....	.....	.....	.....	69,517	.....	.....	.....	0003
176783 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	49,631,086	..4704.19000000	.....	(2,115,566)	57,802	(2,057,764)	.....	.....	.....	.....	57,802	.....	.....	.....	0003
176788 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	53,301,312	..4801.92000000	.....	(1,728,381)	47,224	(1,681,157)	.....	.....	.....	.....	47,224	.....	.....	.....	0003
176791 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	X-CHANGE FINANCIAL ACCESS / MORGAN STANLEY/CLEARED THROUGH CBO 9R7GPTS07KV3UQJZ0078	.09/20/2023	.09/20/2024	.....	37,717,141	..4898.33000000	.....	(914,529)	24,987	(889,542)	.....	.....	.....	.....	24,987	.....	.....	.....	0003
176795 Call Options – S&P 500 – USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZFF32TWIFA76	.09/20/2023	.09/20/2028		21,880,844	..4839.34000000		0	 0	 0					0				0003

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
176800 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.09/20/2023	.09/20/2030	.....	17,703,441	..4847.70000000	.....	..... 0	 0	 0	.....	.....	.....	.....	..... 0	.....	.....	.....	0003
176835 Call Options - S&P 500 - USD	LIABILITY HEDGE	Exhibit 5 ...	Equity/Index	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.09/20/2023	.09/20/2024	.....	28,919,784	..4521.06000000	.....	..... (887,023)	 24,236	 (862,788)	.....	.....	.....	.....	..... 24,236	.....	.....	.....	0003
0649999999. Subtotal - Written Options - Hedging Other - Call Options and Warrants										(321,573,976)	(718,529,160)	521,516,675	(472,162,459)	XXX	0	0	0	521,516,675	0	0	XXX	XXX
0709999999. Subtotal - Written Options - Hedging Other										(321,573,976)	(718,529,160)	521,516,675	(472,162,459)	XXX	0	0	0	521,516,675	0	0	XXX	XXX
0779999999. Subtotal - Written Options - Replications										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0849999999. Subtotal - Written Options - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0919999999. Subtotal - Written Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0929999999. Total Written Options - Call Options and Warrants										(321,573,976)	(718,529,160)	521,516,675	(472,162,459)	XXX	0	0	0	521,516,675	0	0	XXX	XXX
0939999999. Total Written Options - Put Options										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0949999999. Total Written Options - Caps										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0959999999. Total Written Options - Floors										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0969999999. Total Written Options - Collars										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0979999999. Total Written Options - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
0989999999. Total Written Options										(321,573,976)	(718,529,160)	521,516,675	(472,162,459)	XXX	0	0	0	521,516,675	0	0	XXX	XXX
1049999999. Subtotal - Swaps - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1109999999. Subtotal - Swaps - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
Interest Rate Swap /169502 /Pay USD[Quarterly] SOFR [0.89076%]/ Receive USDQuarterly FIXED 2.434%	Portfolio Hedge	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZQ078	.06/04/2015	.06/23/2030	.....	76,000,000	.. 2.434% [SOFR]	.....	..... 19,376	 (39,790)	 (7,702,703)	.....	..... (7,702,703)	 (7,722,080)	.....	.....	.....	..... 986,537	.....	0001
Interest Rate Swap /169504 /Pay USD[Quarterly] SOFR [0.89076%]/ Receive USDQuarterly FIXED 1.618%	Portfolio Hedge	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZQ078	.10/06/2016	.06/23/2030	.....	173,000,000	.. 1.618% [SOFR]	.....	..... 47,172	 (114,102)	... (22,690,841)	.....	... (22,690,841)	... (22,738,013)	.....	.....	.....	..... 2,245,671	.....	0001
Interest Rate Swap /169506 /Pay USD[Monthly] SOFR [2.06484%]/ Receive USDMonthly FIXED 1.385%	Portfolio Hedge	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZQ078	.11/10/2016	.12/25/2023	.....	12,000,000	.. 1.385% [SOFR]	.....	..... 665	 (95,915)	 (109,399)	.....	..... (109,399)	 (110,064)	.....	.....	.....	..... 30,000	.....	0001
Interest Rate Swap /169507 /Pay USD[Quarterly] SOFR [4.98309%]/ Receive USDQuarterly FIXED 2.005%	Portfolio Hedge	Exhibit 5 ...	Interest	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZQ078	.07/14/2017	.04/15/2024	.....	194,000,000	.. 2.005% [SOFR]	.....	..... 22,117	 (1,477,215)	 (3,387,366)	.....	..... (3,387,366)	 (3,409,483)	.....	.....	.....	..... 719,371	.....	0001
Interest Rate Swap /169501 /Pay USD[Quarterly] SOFR [4.48737%]/ Receive USDQuarterly FIXED 2.233%	Portfolio Hedge	Exhibit 5 ...	Interest	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZQ078	.10/25/2017	.10/25/2025		88,000,000	.. 2.233% [SOFR]		 8,967	 (567,663)	 (3,142,369)		 (3,142,369)	 (3,151,336)				 634,577		0001

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Interest Rate Swap /169503 /Pay USD[Quarterly] SOFR [0.89076%]/ Receive USDQuarterly FIXED 2.4175%	Portfolio Hedge	Exhibit 5 ...	Interest ...	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 10/25/2017	. 06/23/2030		 69,000,000	2.4175% [SOFR]		 17,735	(36,315)	 (6,822,934)		 (6,822,934)	(6,840,669)				895,672		0001
Interest Rate Swap /169543 /Pay USD[Quarterly] SOFR [4.98309%]/ Receive USDQuarterly FIXED 2.9741%	Portfolio Hedge	Exhibit 5 ...	Interest ...	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 07/23/2018	. 04/15/2024		210,000,000	2.9741% [SOFR]		 23,526	 (1,180,718)	(2,708,257)		 (2,708,257)	(2,731,783)				 778,701		0001
Interest Rate Swap /169500 /Pay USD[Quarterly] SOFR [4.98309%]/ Receive USDQuarterly FIXED 2.998%	Portfolio Hedge	Exhibit 5 ...	Interest ...	MORGAN STANLEY CAPITAL SERVICES / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 09/11/2018	. 04/15/2024		107,000,000	.. 2.998% [SOFR]		 12,892	 (596,348)	(1,478,218)		 (1,478,218)	(1,491,110)				396,767		0001
Interest Rate Swap /169505 /Pay USD[Quarterly] SOFR [3.27151%]/ Receive USDQuarterly FIXED 3.1675%	Portfolio Hedge	Exhibit 5 ...	Interest ...	BANK OF AMERICA, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 10/05/2018	. 05/15/2024		 54,000,000	3.1675% [SOFR]		 3,378	 (174,991)	 (739,999)		 (739,999)	 (743,376)				214,306		0001
Interest Rate Swap /169508 /Pay USD[Quarterly] FIXED [3.27151%]/ Receive USDQuarterly SOFR 3.27151%	Portfolio Hedge	Exhibit 5 ...	Interest ...	BNP PARIBAS LONDON / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 12/15/2021	. 05/15/2024		5,510,204	SOFR [3.1675%]		 (402,345)	 17,856	75,510		 75,510	477,855				21,868		0001
Interest Rate Swap /145478 /Pay USD[Annual] SOFR [3.60081%]/ Receive USDAnnual FIXED 1.481%	Portfolio Hedge	Exhibit 5 ...	Interest ...	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 01/13/2022	. 01/18/2030		286,000,000	.. 1.481% [SOFR]		 0	 (7,636,556)	(44,151,994)		 (44,151,994)	(7,058,700)				 3,594,964		0001
Interest Rate Swap /162729 /Pay USD[Annual] FIXED [3.28%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest ...	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 12/21/2022	. 12/23/2042		 240,000,000	.. SOFR [3.28%]		 0	 3,116,944	29,963,459		29,963,459	24,803,571				 5,263,611		0001
Interest Rate Swap /162730 /Pay USD[Annual] FIXED [3.36%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest ...	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	. 12/21/2022	. 12/23/2032		280,000,000	.. SOFR [3.36%]		 0	 3,466,568	19,292,048		19,292,048	 15,558,349				 4,257,934		0001

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
Interest Rate Swap /162731 /Pay USD[Annual] SOFR [3.88702%]/ Receive USDAnnual FIXED 4.2535%	Portfolio Hedge	Exhibit 5 ...	Interest	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2024	.....	855,000,000	4.2535% [SOFR]	 0	.....	(4,792,181)	(11,175,209)	.....	(11,175,209)	(7,864,093)	.....	.....	.....	4,760,439	.....	0001
Interest Rate Swap /162732 /Pay USD[Annual] FIXED [3.354%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest	CITIBANK N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2032	.....	195,000,000	SOFR [3.354%]	 0	.....	2,423,089	13,523,713	.....	13,523,713	10,826,069	.....	.....	.....	2,965,347	.....	0001
Interest Rate Swap /162733 /Pay USD[Annual] FIXED [3.276%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2042	.....	240,000,000	SOFR [3.276%]	 0	.....	3,124,224	30,088,506	.....	30,088,506	24,791,302	.....	.....	.....	5,263,611	.....	0001
Interest Rate Swap /162734 /Pay USD[Annual] SOFR [3.88702%]/ Receive USDAnnual FIXED 4.7705%	Portfolio Hedge	Exhibit 5 ...	Interest	JPMORGAN CHASE BANK, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2023	.....	1,625,000,000	4.7705% [SOFR]	 0	.....	(2,736,999)	(3,133,512)	.....	(3,133,512)	(1,037,074)	.....	.....	.....	4,062,500	.....	0001
Interest Rate Swap /162735 /Pay USD[Annual] FIXED [3.3545%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest	THE TORONTO-DOMINION BANK / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2032	.....	400,000,000	SOFR [3.3545%]	 0	.....	4,968,923	27,725,876	.....	27,725,876	22,208,895	.....	.....	.....	6,082,763	.....	0001
Interest Rate Swap /162736 /Pay USD[Annual] FIXED [3.354%]/ Receive USDAnnual SOFR 3.88702%	Portfolio Hedge	Exhibit 5 ...	Interest	JPMORGAN CHASE BANK, N.A. / MORGAN STANLEY/CLEARED THROUGH CME 9R7GPTS07KV3UQJZ0078	12/21/2022	12/23/2032	.....	190,000,000	SOFR [3.354%]	 0	.....	2,360,959	13,176,951	.....	13,176,951	10,548,477	.....	.....	.....	2,889,312	.....	0001
1119999999. Subtotal - Swaps - Hedging Other - Interest Rate										0	(246,517)	29,771	26,603,259	XXX	26,603,259	44,316,737	0	0	0	46,063,951	XXX	XXX
Currency Swap /154919 /Pay EUR[Semi-Annual] FIXED [3.33%]/ Receive USDSemi-Annual FIXED 5.214%	ASSET HEDGE	Schedule D ...	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	08/04/2022	08/20/2027	.....	22,972,500	5.214% [3.33%]	 0	.....	289,428	(563,174)	.....	(563,174)	(238,447)	(1,282)	.....	.....	226,544	.....	0002
Currency Swap /156715 /Pay GBP[Semi-Annual] FIXED [6.66%]/ Receive USDSemi-Annual FIXED 6.78%	ASSET HEDGE	Schedule D ...	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCUFXT09	09/09/2022	09/20/2032	.....	19,669,000	6.78% [6.66%]	 0	.....	(56,156)	(1,437,964)	.....	(1,437,964)	(546,733)	(79)	.....	.....	294,707	.....	0002
Currency Swap /158392 /Pay EUR[Semi-Annual] FIXED [6.04%]/ Receive USDSemi-Annual FIXED 7.672%	ASSET HEDGE	Schedule D ...	Currency.....	ROYAL BANK OF CANADA ES71P3U3RFH1GC71XBU11	10/13/2022	10/30/2027		21,802,500	7.672% [6.04%]	 0		150,380	(2,226,879)		(2,226,879)	9,760	(16,793)			220,464		0002

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Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
Currency Swap /158652 /Pay EUR[Quarterly] FIXED [6.408%]/ Receive USDQuarterly FIXED 7.7987%	ASSET HEDGE	Schedule D ..	Currency.....	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.10/20/2022	.10/19/2027	.....	.....4,895,000	7.7987% [6.408%]	0	.....	.....	.....(248,868)	.....	.....(248,868)	(226,337)	.....	.....	.....	.....49,316	.....	0002
Currency Swap /158899 /Pay GBP[Semi-Annual] FIXED [6.22%]/ Receive USDSemi-Annual FIXED 6.2485%	ASSET HEDGE	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBUI1	.10/25/2022	.01/31/2030	.....	.....27,528,000	6.2485% [6.22%]	0	.....	.....(94,787)	(2,113,507)	.....	.....(2,113,507)	(1,999,201)	(8,874)	.....	.....	.....346,569	.....	0002
Currency Swap /158983 /Pay GBP[Semi-Annual] FIXED [9.2279%]/ Receive USDSemi-Annual FIXED 9.495%	ASSET HEDGE	Schedule D ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMVMCUFXT09	.10/26/2022	.05/02/2025	.....	.....5,785,000	9.495% [9.2279%]	0	.....	.....(21,928)	(335,126)	.....	.....(335,126)	(70,852)	.....	.....	.....	.....36,473	.....	0002
Currency Swap /159089 /Pay GBP[Semi-Annual] FIXED [6.07%]/ Receive USDSemi-Annual FIXED 6.282%	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.10/27/2022	.11/09/2037	.....	.....18,528,000	6.282% [6.07%]	0	.....	.....(33,412)	(1,305,559)	.....	.....(1,305,559)	(347,376)	(15,992)	.....	.....	.....347,986	.....	0002
Currency Swap /159812 /Pay EUR[Quarterly] FIXED [5.01%]/ Receive USDQuarterly FIXED 6.691%	ASSET HEDGE	Schedule D ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMVMCUFXT09	.11/07/2022	.01/31/2030	.....	.....20,000,000	6.691% [5.01%]	0	.....	.....218,393	(1,325,089)	.....	.....(1,325,089)	(1,860,523)	(7,991)	.....	.....	.....251,794	.....	0002
Currency Swap /161475 /Pay EUR[Semi-Annual] FIXED [5.08%]/ Receive USDSemi-Annual FIXED 6.418%	ASSET HEDGE	Schedule D ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. 17331LVCZKQKX5T7XV54	.12/02/2022	.06/27/2030	.....	.....18,445,000	6.418% [5.08%]	0	.....	.....56,374	(308,445)	.....	.....(308,445)	(690,248)	(7,185)	.....	.....	.....239,430	.....	0002
Currency Swap /162602 /Pay EUR[Semi-Annual] FIXED [5.478%]/ Receive USDSemi-Annual FIXED 6.6425%	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.12/21/2022	.01/04/2032	.....	.....21,180,000	6.6425% [5.478%]	0	.....	.....153,042	(672,352)	.....	.....(672,352)	(639,414)	(8,326)	.....	.....	.....304,543	.....	0002
Currency Swap /166905 /Pay GBP[Semi-Annual] FIXED [6.2%]/ Receive USDSemi-Annual FIXED 6.13%	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/28/2023	.08/23/2029	.....	.....17,262,000	..6.13% [6.2%]	0	.....	.....(2,370)	50,974	.....	.....50,974	53,204	(2,231)	.....	.....	.....209,646	.....	0002
Currency Swap /166906 /Pay GBP[Semi-Annual] FIXED [6.26%]/ Receive USDSemi-Annual FIXED 6.2675%	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/28/2023	.08/23/2031	.....	.....11,097,000	6.2675% [6.26%]	0	.....	.....(623)	12,980	.....	.....12,980	14,428	(1,448)	.....	.....	.....156,050	.....	0002
Currency Swap /166959 /Pay GBP[Semi-Annual] FIXED [6.11%]/ Receive USDSemi-Annual FIXED 6.055%	ASSET HEDGE	Schedule D ..	Currency.....	CITIBANK N.A. E570DZIWZ7FF32TWEFA76	.03/30/2023	.06/29/2030	.....	.....24,760,000	6.055% [6.11%]	0	.....	.....(12,392)	130,453	.....	.....130,453	144,799	(14,346)	.....	.....	.....321,880	.....	0002
Currency Swap /167021 /Pay EUR[Semi-Annual] FIXED [6.01%]/ Receive USDSemi-Annual FIXED 6.839%	ASSET HEDGE	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.03/31/2023	.06/30/2028		27,175,000	6.839% [5.62%]	0		75,591	32,773		32,773	44,498	(11,725)			296,133		0002

SCHEDULE DB - PART A - SECTION 1

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STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
REC 2119268.36 USD PAY [1907000.00] EUR /170685	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.04/27/2023	.10/26/2023	.....	.....2,119,268	1.11131010	.....	.....0	.....	.....100,702	.....	.....100,702	100,702	.....	.....	.....	.....2,997	.....	0002
REC 5902413.13 USD PAY [4646000.00] GBP /173219	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.06/30/2023	.10/02/2023	.....	.....5,902,413	1.27042900	.....	.....0	.....	.....232,796	.....	.....232,796	232,796	.....	.....	.....	.....2,951	.....	0002
REC 2591646.23 USD PAY [2365000.00] EUR /173244	Asset Hedge	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.07/03/2023	.10/03/2023	.....	.....2,591,646	1.09583350	.....	.....0	.....	.....90,014	.....	.....90,014	90,014	.....	.....	.....	.....1,296	.....	0002
REC 1192943.19 USD PAY [940000.00] GBP /173257	Asset Hedge	Schedule D ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.07/03/2023	.10/03/2023	.....	.....1,192,943	1.26908850	.....	.....0	.....	.....45,834	.....	.....45,834	45,834	.....	.....	.....	.....596	.....	0002
REC 4911972.15 USD PAY [44483000.00] EUR /173616	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.07/11/2023	.10/11/2023	.....	.....49,111,972	1.10406160	.....	.....0	.....	.....2,021,801	.....	.....2,021,801	2,021,801	.....	.....	.....	.....42,532	.....	0002
REC 4914249.74 USD PAY [4402000.00] EUR /174044	Asset Hedge	Schedule BA ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.07/21/2023	.10/03/2023	.....	.....4,914,250	1.11636750	.....	.....0	.....	.....259,861	.....	.....259,861	259,861	.....	.....	.....	.....2,457	.....	0002
REC 423833.51 USD PAY [381000.00] EUR /174308	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.07/26/2023	.10/26/2023	.....	.....423,834	1.11242391	.....	.....0	.....	.....20,558	.....	.....20,558	20,558	.....	.....	.....	.....599	.....	0002
REC 1112652.30 USD PAY [1000000.00] EUR /174334	Asset Hedge	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.07/26/2023	.10/26/2023	.....	.....1,112,652	1.11265230	.....	.....0	.....	.....53,696	.....	.....53,696	53,696	.....	.....	.....	.....1,574	.....	0002
REC 347273.95 USD PAY [270000.00] GBP /174397	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.07/28/2023	.10/03/2023	.....	.....347,274	1.28619981	.....	.....0	.....	.....17,836	.....	.....17,836	17,836	.....	.....	.....	.....174	.....	0002
REC 1994708.49 USD PAY [1819000.00] EUR /174502	Asset Hedge	Schedule D ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.08/03/2023	.11/03/2023	.....	.....1,994,708	1.09659620	.....	.....0	.....	.....67,858	.....	.....67,858	67,858	.....	.....	.....	.....2,992	.....	0002
REC 4284554.59 USD PAY [3869000.00] EUR /174589	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6GKMZ0031MB27	.08/04/2023	.11/06/2023	.....	.....4,284,555	1.10740620	.....	.....0	.....	.....183,648	.....	.....183,648	183,648	.....	.....	.....	.....6,774	.....	0002
REC 2285146.40 USD PAY [3072000.00] CAD /175078	Asset Hedge	Schedule BA ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RH1GC71XBU11	.08/15/2023	.11/15/2023	.....	.....2,285,146	74386276	.....	.....0	.....	.....20,675	.....	.....20,675	20,675	.....	.....	.....	.....4,120	.....	0002
REC 189219.15 USD PAY [148000.00] GBP /175222	Asset Hedge	Schedule BA ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. 17331LVCZKQKXST7XV54	.08/17/2023	.11/20/2023	.....	.....189,219	1.27850777	.....	.....0	.....	.....8,456	.....	.....8,456	8,456	.....	.....	.....	.....354	.....	0002
REC 15106560.52 USD PAY [11864000.00] GBP /175323	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.08/21/2023	.11/21/2023	.....	.....15,106,561	1.27331090	.....	.....0	.....	.....622,391	.....	.....622,391	622,391	.....	.....	.....	.....28,262	.....	0002
REC 826625.09 USD PAY [1274000.00] AUD /175730	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.08/31/2023	.12/01/2023	.....	.....826,625	64884230	.....	.....0	.....	.....5,826	.....	.....5,826	5,826	.....	.....	.....	.....1,704	.....	0002
REC 9834930.35 USD PAY [9032000.00] EUR /175774	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.08/31/2023	.12/01/2023	.....	.....9,834,930	1.08889840	.....	.....0	.....	.....259,711	.....	.....259,711	259,711	.....	.....	.....	.....20,275	.....	0002
REC 482118.24 USD PAY [449000.00] EUR /175911	Asset Hedge	Schedule BA ..	Currency.....	THE TORONTO-DOMINION BANK PT3QB789TSUIDF371261	.09/07/2023	.12/01/2023	.....	.....482,118	1.07376000	.....	.....0	.....	.....(5,834)	.....	.....(5,834)	(5,834)	.....	.....	.....	......994	.....	0002
REC 15366.79 USD PAY [21000.00] CAD /175922	Asset Hedge	Schedule BA ..	Currency.....	THE TORONTO-DOMINION BANK PT3QB789TSUIDF371261	.09/07/2023	.10/26/2023		15,367	73175190		0		132		132	132				22		0002

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REC 239000.00 EUR PAY [256743.77] USD /176257	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.09/12/2023	.11/06/2023		256,744	1.07424172		0		(3,463)		(3,463)	(3,463)				406		0002
REC 3013000.00 CAD PAY [2230235.51] USD /176381	Asset Hedge	Schedule BA ..	Currency.....	BNP PARIBAS LONDON ROMUWSPUBM8MPR08K5P83	.09/14/2023	.11/15/2023	.....	.....2,230,236	74020428	.....	.....0	.....	.....(9,667)	.....	.....(9,667)	(9,667)	.....	.....	.....	.....4,021	.....	0002
REC 96540.90 USD PAY [78000.00] GBP /176455	Asset Hedge	Schedule D ..	Currency.....	BARCLAYS BANK PLC G5GSEF7VJP5I70UK5573	.09/18/2023	.12/19/2023	.....	.....96,541	1.23770385	.....	.....0	.....	.....1,280	.....	.....1,280	1,280	.....	.....	.....	.....226	.....	0002
REC 825901.37 USD PAY [771000.00] EUR /176480	Asset Hedge	Schedule BA ..	Currency.....	THE TORONTO-DOMINION BANK PT30B789TSUIDF371261	.09/18/2023	.12/19/2023	.....	.....825,901	1.07120800	.....	.....0	.....	.....(7,408)	.....	.....(7,408)	(7,408)	.....	.....	.....	.....1,937	.....	0002
REC 1311888.68 USD PAY [9104000.00] DKK /176573	Asset Hedge	Schedule BA ..	Currency.....	JPMORGAN CHASE BANK, N.A. 7H6GLXDRUGOFU57RNE97	.09/19/2023	.12/15/2023	.....	.....1,311,889	14410025	.....	.....0	.....	.....15,404	.....	.....15,404	15,404	.....	.....	.....	.....3,006	.....	0002
REC 1284.79 USD PAY [2000.00] AUD /176697	Asset Hedge	Schedule BA ..	Currency.....	WELLS FARGO BANK, N.A. KB1H1DSPRFMYMCJFX09	.09/21/2023	.12/22/2023	.....	.....1,285	64239500	.....	.....0	.....	.....(6)	.....	.....(6)	(6)	.....	.....	.....	.....3	.....	0002
REC 521703.52 USD PAY [425000.00] GBP /176712	Asset Hedge	Schedule BA ..	Currency.....	ROYAL BANK OF CANADA ES71P3U3RHIGC71XBU11	.09/21/2023	.12/22/2023	.....	.....521,704	1.22753769	.....	.....0	.....	.....2,826	.....	.....2,826	2,826	.....	.....	.....	.....1,251	.....	0002
REC 186000.00 EUR PAY [198347.00] USD /176857	Asset Hedge	Schedule D ..	Currency.....	MORGAN STANLEY CAPITAL SERVICES .. I7331LVCZKQKX57XV54	.09/22/2023	.10/11/2023	.....	.....198,347	1.06638172	.....	.....0	.....	.....(1,490)	.....	.....(1,490)	(1,490)	.....	.....	.....	.....172	.....	0002
REC 81810.16 USD PAY [67000.00] GBP /176896	Asset Hedge	Schedule D ..	Currency.....	BNP PARIBAS LONDON ROMUWSPUBM8MPR08K5P83	.09/25/2023	.11/21/2023	.....	.....81,810	1.22104716	.....	.....0	.....	.....54	.....	.....54	54	.....	.....	.....	.....153	.....	0002
REC 1922045.10 USD PAY [1821000.00] EUR /177013	Asset Hedge	Schedule BA ..	Currency.....	THE TORONTO-DOMINION BANK PT30B789TSUIDF371261	.09/27/2023	.12/21/2023	.....	.....1,922,045	1.05548880	.....	.....0	.....	.....10,952	.....	.....10,952	10,952	.....	.....	.....	.....4,609	.....	0002
REC 128362.84 USD PAY [200000.00] AUD /177061	Asset Hedge	Schedule D ..	Currency.....	CITIBANK N.A. E570DZVZ7FF32WFEA76	.09/28/2023	.12/01/2023	.....	.....128,363	64181420	.....	.....0	.....	.....(963)	.....	.....(963)	(963)	.....	.....	.....	.....265	.....	0002
REC 4646000.00 GBP PAY [5663009.40] USD /177062	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.09/28/2023	.10/02/2023	.....	.....5,663,009	1.21890000	.....	.....0	.....	.....9,614	.....	.....9,614	9,614	.....	.....	.....	.....2,832	.....	0002
REC 5542061.65 USD PAY [4545000.00] GBP /177074	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.09/28/2023	.12/22/2023	.....	.....5,542,062	1.21937550	.....	.....0	.....	.....(9,512)	.....	.....(9,512)	(9,512)	.....	.....	.....	.....13,289	.....	0002
REC 1569654.78 USD PAY [1281000.00] GBP /177120	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.09/29/2023	.01/05/2024	.....	.....1,569,655	1.22533550	.....	.....0	.....	.....4,376	.....	.....4,376	4,376	.....	.....	.....	.....4,078	.....	0002
REC 1210000.00 GBP PAY [1481572.40] USD /177122	Asset Hedge	Schedule D ..	Currency.....	BANK OF AMERICA, N.A. B4TYDEB6KMZ0031MB27	.09/29/2023	.10/03/2023	.....	.....1,481,572	1.22444000	.....	.....0	.....	.....(4,187)	.....	.....(4,187)	(4,187)	.....	.....	.....	.....741	.....	0002
REC 2519696.12 USD PAY [2369000.00] EUR /177145	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.09/29/2023	.01/05/2024	.....	.....2,519,696	1.06361170	.....	.....0	.....	.....3,315	.....	.....3,315	3,315	.....	.....	.....	.....6,546	.....	0002
REC 4402000.00 EUR PAY [4654366.66] USD /177147	Asset Hedge	Schedule BA ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.09/29/2023	.10/03/2023	.....	.....4,654,367	1.05733000	.....	.....0	.....	.....(352)	.....	.....(352)	(352)	.....	.....	.....	.....2,327	.....	0002
REC 259409.87 USD PAY [245000.00] EUR /177148	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.09/29/2023	.11/06/2023	.....	.....259,410	1.05881580	.....	.....0	.....	.....20	.....	.....20	20	.....	.....	.....	.....410	.....	0002
REC 4676101.54 USD PAY [4402000.00] EUR /177149	Asset Hedge	Schedule BA ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.09/29/2023	.01/05/2024	.....	.....4,676,102	1.06226750	.....	.....0	.....	.....328	.....	.....328	328	.....	.....	.....	.....12,149	.....	0002

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE DB - PART A - SECTION 1

Showing all Options, Caps, Floors, Collars, Swaps and Forwards Open as of Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Exchange, Counterparty or Central Clearinghouse	Trade Date	Date of Maturity or Expiration	Number of Contracts	Notional Amount	Strike Price, Rate or Index Received (Paid)	Cumulative Prior Year(s) Initial Cost of Un-discounted Premium (Received) Paid	Current Year Initial Cost of Un-discounted Premium (Received) Paid	Current Year Income	Book/ Adjusted Carrying Value	Code	Fair Value	Unrealized Valuation Increase/ (Decrease)	Total Foreign Exchange Change in B./A.C.V.	Current Year's (Amortization)/ Accretion	Adjustment to Carrying Value of Hedged Item	Potential Exposure	Credit Quality of Reference Entity	Hedge Effectiveness at Inception and at Quarter-end (b)
REC 2365000.00 EUR PAY [2503754.55] USD /177156	Asset Hedge	Schedule D ..	Currency.....	CANADIAN IMPERIAL BANK OF COMMERCE .. 21G119DL770XOHC3ZE78	.09/29/2023	.10/03/2023	.....	.....2,503,755	1.05867000	.....	.....0	.....	.....(3,356)	.....	.....(3,356)	(3,356)	.....	.....	.....	.....1,252	.....	.....0002
1439999999. Subtotal - Forwards - Hedging Other										0	0	0	4,278,860	XXX	4,278,860	4,278,860	0	0	0	382,564	XXX	XXX
1479999999. Subtotal - Forwards										0	0	0	4,278,860	XXX	4,278,860	4,278,860	0	0	0	382,564	XXX	XXX
1509999999. Subtotal - SSAP No. 108 Adjustments										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1689999999. Subtotal - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1699999999. Subtotal - Hedging Effective Variable Annuity Guarantees Under SSAP No.108										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1709999999. Subtotal - Hedging Other										130,149,118	427,149,244	(242,230,853)	315,623,574	XXX	615,622,996	40,892,222	(172,022)	(243,185,068)	0	51,855,558	XXX	XXX
1719999999. Subtotal - Replication										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1729999999. Subtotal - Income Generation										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1739999999. Subtotal - Other										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1749999999. Subtotal - Adjustments for SSAP No. 108 Derivatives										0	0	0	0	XXX	0	0	0	0	0	0	XXX	XXX
1759999999 - Totals										130,149,118	427,149,244	(242,230,853)	315,623,574	XXX	615,622,996	40,892,222	(172,022)	(243,185,068)	0	51,855,558	XXX	XXX

(a)	Code	Description of Hedged Risk(s)
(b)	Code	Financial or Economic Impact of the Hedge at the End of the Reporting Period
	0001	Interest rate hedges reduced the portfolio's interest rate risk (duration, convexity, volatility, yield curve)
	0002	Currency derivatives hedging foreign investments or liabilities back to USD
	0003	Equity derivatives hedging portfolio's exposure to equity markets

SCHEDULE DB - PART B - SECTION 1

Futures Contracts Open as of the Current Statement Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	Highly Effective Hedges			18	19	20	21	22
														15	16	17					
Ticker Symbol	Number of Contracts	Notional Amount	Description	Description of Item(s) Hedged, Used for Income Generation or Replicated	Schedule/ Exhibit Identifier	Type(s) of Risk(s) (a)	Date of Maturity or Expiration	Exchange	Trade Date	Transaction Price	Reporting Date Price	Fair Value	Book/ Adjusted Carrying Value	Cumulative Variation Margin	Deferred Variation Margin	Change in Variation Margin Gain (Loss) Used to Adjust Basis of Hedged Item	Cumulative Variation Margin for All Other Hedges	Change in Variation Margin Gain (Loss) Recognized in Current Year	Potential Exposure	Hedge Effectiveness at Inception and at Quarter-end (b)	Value of One (1) Point
TYZ3	 2,026	202,600,000	Long /US 10Y NOTE FUTURE II /176199 ...	Portfolio Hedge	Schedule BA, D	Interest	12/29/2023	CBOT 9R7GPTS07KV3UQJZQ078	.09/08/2023	 109.9219	 108.0600	 (3,772,655)	 (3,772,655)	.....	.....	.....	.....(3,772,655)	(3,772,655)	 4,052,000	0001	 1,000
TUZ3	 1,904	380,800,000	Long /US 2YR NOTE FUTURE II /176200 ...	Portfolio Hedge	Schedule BA, D	Interest	12/29/2023	CBOT 9R7GPTS07KV3UQJZQ078	.09/08/2023	 101.6172	 101.3600	 (1,001,566)	 (1,001,566)	.....	.....	.....	..... (1,001,566)	 (1,001,566)	 2,284,800	0001	 1,000
FVZ3	 3,340	334,000,000	Long /US 5YR NOTE FUTURE II /176198 ...	Portfolio Hedge	Schedule BA, D	Interest	12/29/2023	CBOT 9R7GPTS07KV3UQJZQ078	.09/08/2023	 106.2181	 105.3600	 (2,876,725)	 (2,876,725)	.....	.....	.....	..... (2,876,725)	 (2,876,725)	 4,425,500	0001	 1,000
1539999999. Subtotal - Long Futures - Hedging Other												(7,650,946)	(7,650,946)	0	0	0	(7,650,946)	(7,650,946)	10,762,300	XXX	XXX
1579999999. Subtotal - Long Futures												(7,650,946)	(7,650,946)	0	0	0	(7,650,946)	(7,650,946)	10,762,300	XXX	XXX
1649999999. Subtotal - Short Futures												0	0	0	0	0	0	0	0	XXX	XXX
1679999999. Subtotal - SSAP No. 108 Adjustments												0	0	0	0	0	0	0	0	XXX	XXX
1689999999. Subtotal - Hedging Effective Excluding Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	0	0	0	XXX	XXX
1699999999. Subtotal - Hedging Effective Variable Annuity Guarantees Under SSAP No.108												0	0	0	0	0	0	0	0	XXX	XXX
1709999999. Subtotal - Hedging Other												(7,650,946)	(7,650,946)	0	0	0	(7,650,946)	(7,650,946)	10,762,300	XXX	XXX
1719999999. Subtotal - Replication												0	0	0	0	0	0	0	0	XXX	XXX
1729999999. Subtotal - Income Generation												0	0	0	0	0	0	0	0	XXX	XXX
1739999999. Subtotal - Other												0	0	0	0	0	0	0	0	XXX	XXX
1749999999. Subtotal - Adjustments for SSAP No. 108 Derivatives												0	0	0	0	0	0	0	0	XXX	XXX
1759999999 - Totals												(7,650,946)	(7,650,946)	0	0	0	(7,650,946)	(7,650,946)	10,762,300	XXX	XXX

.....	Beginning Cash Balance	Cumulative Cash Change	Ending Cash Balance
.....			
Total Net Cash Deposits			

(a)	Code	Description of Hedged Risk(s)
		
		

(b)	Code	Financial or Economic Impact of the Hedge at the End of the Reporting Period
	0001	Interest rate hedges reduced the portfolio's interest rate risk (duration, convexity, volatility, yield curve)

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE DB - PART D - SECTION 1

Counterparty Exposure for Derivative Instruments Open as of Current Statement Date

1	2	3	Counterparty Offset		Book/Adjusted Carrying Value			Fair Value			12	13
			4	5	6	7	8	9	10	11		
Description of Exchange, Counterparty or Central Clearinghouse	Master Agreement (Y or N)	Credit Support Annex (Y or N)	Fair Value of Acceptable Collateral	Present Value of Financing Premium	Contracts With Book/Adjusted Carrying Value >0	Contracts With Book/Adjusted Carrying Value <0	Exposure Net of Collateral	Contracts With Fair Value >0	Contracts With Fair Value <0	Exposure Net of Collateral	Potential Exposure	Off-Balance Sheet Exposure
0199999999 - Aggregate Sum of Exchange Traded Derivatives	XXX	XXX	XXX			(7,650,945)	0		(7,650,945)	0	10,762,300	10,762,300
Bank Of America NA	Y	Y	46,050,000		28,679,934	(15,677,440)	0	24,259,393		0	70,652	
BNP Paribas London	Y	Y	80,920,000		79,654,449	(53,050,114)	0	46,644,036		0	237,888	
BNP Paribas London	Y	Y					0			0		
Canadian Imperial Bank of Commerce	Y	Y	900,000		929,983	(3,708)	26,275	926,275		26,275	73,698	73,698
Citibank N.A.	Y	Y					0			0		
Citibank N.A.	Y	Y	55,239,394		45,394,390	(19,114,867)	0	55,570,670		331,276	632,421	
Credit Suisse International	Y	Y					0			0		
Goldman Sachs International	Y	Y	23,750,000		14,201,010	(9,114,540)	0	5,321,309		0		
JPMorgan Chase Bank, N.A.	Y	Y					0			0		
JPMorgan Chase Bank, N.A.	Y	Y	33,860,000		23,666,950	(6,048,240)	0	34,786,453		926,453	2,110,728	
Morgan Stanley & Co International PLC	Y	Y	46,865,000		41,462,874	(27,345,518)	0	44,075,748		0		
Morgan Stanley Capital Services	Y	Y			98,891	(696,937)	0		(598,046)	0	777,488	179,442
Royal Bank of Canada	Y	Y	43,180,000		36,734,504	(26,391,718)	0	21,070,198		0	581,405	
Societe Generale	Y	Y	95,310,000		12,464,613	(7,911,352)	0	5,056,465		0		
The Toronto-Dominion Bank	Y	Y		11,084		(13,242)	0		(2,159)	0	7,562	5,403
UBS AG	Y	Y	10,540,000		12,786,587	(2,262,840)	0	9,925,995		0		
Wells Fargo Bank, N.A.	Y	Y	61,655,948		53,262,861	(28,332,070)	0	59,486,343		0	1,299,539	
0299999999. Total NAIC 1 Designation			498,270,342	0	349,348,130	(195,962,588)	26,275	307,122,885	(600,205)	1,284,004	5,791,381	258,543
Barclays Bank PLC	Y	Y	107,970,000		68,982,956	(46,266,217)	0	78,772,137		0	226	
0399999999. Total NAIC 2 Designation			107,970,000	0	68,982,956	(46,266,217)	0	78,772,137	0	0	226	0
0899999999. Aggregate Sum of Central Clearinghouses (Excluding Exchange Traded)			30,335,995		488,798,068	(349,276,775)	112,918,034	230,328,179		203,724,920	46,063,951	42,331,215
0999999999 - Gross Totals			636,576,337	0	907,129,155	(599,156,525)	112,944,309	616,223,201	(8,251,150)	205,008,925	62,617,858	53,352,058
1. Offset per SSAP No. 64												
2. Net after right of offset per SSAP No. 64					907,129,155	(599,156,525)						

Collateral for Derivative Instruments Open as of Current Statement Date

[illegible]

1	2	3	4	5	6	7	8	9
Exchange, Counterparty or Central Clearinghouse	Type of Asset Pledged	CUSIP Identification	Description	Fair Value	Par Value	Book/Adjusted Carrying Value	Maturity Date	Type of Margin (I, V or IV)
Bank Of America NA	B4TYDEB6GKMZ0031MB27 .	Cash.....	Cash Collateral	46,050,000	46,050,000	XXX		V.....
Barclays Bank Plc	G5GSEF7VJPS170UK5573	Cash.....	Cash Collateral	107,970,000	107,970,000	XXX		V.....
BNP Paribas	ROMUISFPUBMIPRO8K5P83	Cash.....	Cash Collateral	80,920,000	80,920,000	XXX		V.....
Canadian Imperial Bank of Commerce	2IG119DL77OXOHC3ZE78	Cash.....	Cash Collateral	900,000	900,000	XXX		V.....
Citibank NA	E570DZINZ7FF32TWEFA76	Cash.....	Cash Collateral	55,239,394	55,239,394	XXX		V.....
Goldman Sachs International	W22LR0WP21HZNBB6K528	Cash.....	Cash Collateral	23,750,000	23,750,000	XXX		V.....
JPMorgan Chase Bank, N.A.	7H6GLXDRUGGFU57PNE97	Cash.....	Cash Collateral	33,860,000	33,860,000	XXX		V.....
Morgan Stanley & Co International PLC	4PQUHN3JPF6GFNF3BB653	Cash.....	Cash Collateral	46,865,000	46,865,000	XXX		V.....
Morgan Stanley & Co. LLC CME	17331LVCZKQKX5T7XV54	Cash.....	Cash Collateral	30,335,995	30,335,995	XXX		V.....
Royal Bank of Canada	ES71P3U3RAH1GC71XBU11	Cash.....	Cash Collateral	43,180,000	43,180,000	XXX		V.....
Societe Generale	O2RNE81BXP4ROTDBPU41	Cash.....	Cash Collateral	95,310,000	95,310,000	XXX		V.....
UBS AG	BFM8T61CT2L10CEMIK50	Cash.....	Cash Collateral	10,540,000	10,540,000	XXX		V.....
Wells Fargo Bank NA	KB1H1DSPRFNVMCUFXT09	Mortgage	Government National Mortgage A	317,556	324,876	XXX	08/01/2052	V.....
Wells Fargo Bank NA	KB1H1DSPRFNVMCUFXT09	Treasury	US TREASURY N/B	62,616,119	72,886,000	XXX	09/30/2028	V.....
0299999999 - Total				637,854,064	648,131,264	XXX	XXX	XXX

Schedule DB - Part E - Derivatives Hedging Variable Annuity Guarantees

N O N E

Schedule DL - Part 1 - Reinvested Collateral Assets Owned

N O N E

Schedule DL - Part 2 - Reinvested Collateral Assets Owned

N O N E

SCHEDULE E - PART 1 - CASH

Month End Depository Balances

1	2	3	4	5	Book Balance at End of Each Month During Current Quarter			9
					6	7	8	
					First Month	Second Month	Third Month	
Depository	Code	Rate of Interest	Amount of Interest Received During Current Quarter	Amount of Interest Accrued at Current Statement Date				*
Bank of New York Mellon New York, NY .....	.....	.....	.....	.....	.....82,925,821	23,678,413	59,798,615	..XXX.
PNC Bank Pittsburgh, PA .....	.....	.....	.....	.....	.....(206,793,160)	(137,394,009)	(82,981,491)	..XXX.
Wells Fargo Bank / Norwest Bank Phoenix, AZ .....	.....	.....	.....	.....	.....71,661	269,729	324,293	..XXX.
Huntington Bank Columbus, OH .....	.....	.....	.....	.....	.....50,270	49,117	47,910	..XXX.
FHLB Cincinnati, OH .....	.....	4.800	104,744	.....	.....8,027,394	6,038,198	17,902,520	..XXX.
State Street Global Services Kansas City, MO .....	.....	.....	.....	.....	.....14,204,945	9,296,723	14,102,451	..XXX.
0199998. Deposits in ... depositories that do not exceed the allowable limit in any one depository (See instructions) - Open Depositories	XXX	XXX	.....	.....	.....	.....	.....	XXX
0199999. Totals - Open Depositories	XXX	XXX	104,744	0	(101,513,069)	(98,061,829)	9,194,298	XXX
0299998. Deposits in ... depositories that do not 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	104,744	0	(101,513,069)	(98,061,829)	9,194,298	XXX
0499999. Cash in Company's Office	XXX	XXX	XXX	XXX	.....	.....	.....	XXX
.....								
.....								
.....								
.....								
.....								
.....								
.....								
0599999. Total - Cash	XXX	XXX	104,744	0	(101,513,069)	(98,061,829)	9,194,298	XXX

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned End of Current Quarter

1	2	3	4	5	6	7	8	9
CUSIP	Description	Code	Date Acquired	Rate of Interest	Maturity Date	Book/Adjusted Carrying Value	Amount of Interest Due and Accrued	Amount Received During Year
0109999999	Total - U.S. Government Bonds					0	0	0
0309999999	Total - All Other Government Bonds					0	0	0
0509999999	Total - U.S. States, Territories and Possessions Bonds					0	0	0
0709999999	Total - U.S. Political Subdivisions Bonds					0	0	0
0909999999	Total - U.S. Special Revenues Bonds					0	0	0
.....	AMCOR FLEXIBLES NORTH AMERICA INC COMMER .....	.....	09/27/2023	0.000	10/25/2023	8,966,559	0	5,549
.....	AMCOR FLEXIBLES NORTH AMERICA INC COMMER .....	.....	09/28/2023	0.000	10/26/2023	9,961,301	0	4,624
.....	AMCOR FINANCE USA INC COMMERCIAL PAPER .....	.....	09/05/2023	0.000	10/04/2023	34,983,747	0	140,227
.....	AMEREN CORP COMMERCIAL PAPER .....	.....	09/21/2023	0.000	10/31/2023	14,930,654	0	20,679
.....	AMERICAN ELECTRIC POWER CO INC COMMERCIA .....	.....	08/29/2023	0.000	10/17/2023	9,975,121	0	49,388
.....	AMERICAN ELECTRIC POWER CO INC COMMERCIA .....	.....	07/28/2023	0.000	10/25/2023	14,942,918	0	152,439
.....	AON CORP COMMERCIAL PAPER .....	.....	09/22/2023	0.000	10/20/2023	9,970,879	0	13,735
.....	AUTOZONE INC COMMERCIAL PAPER .....	.....	09/26/2023	0.000	10/03/2023	14,995,497	0	11,247
.....	AVANGRID INC COMMERCIAL PAPER .....	.....	09/06/2023	0.000	10/06/2023	12,990,106	0	47,284
.....	CRH AMERICA FINANCE INC COMMERCIAL PAPER .....	.....	08/22/2023	0.000	11/06/2023	9,943,649	0	61,872
.....	CHEVRON PHILLIPS CHEMICAL CO LLC COMMERC .....	.....	09/26/2023	0.000	10/03/2023	8,497,443	0	6,385
.....	CHEVRON PHILLIPS CHEMICAL CO LLC COMMERC .....	.....	09/27/2023	0.000	10/04/2023	9,995,489	0	6,008
.....	CLOROX CO/THE COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/11/2023	9,984,959	0	9,003
.....	CLOROX CO/THE COMMERCIAL PAPER .....	.....	09/26/2023	0.000	12/18/2023	9,878,572	0	7,683
.....	DTE ENERGY CO COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/17/2023	9,975,756	0	9,061
.....	DTE ELECTRIC CO COMMERCIAL PAPER .....	.....	09/26/2023	0.000	10/16/2023	7,233,554	0	5,465
.....	DENTSPLY SIRONA INC COMMERCIAL PAPER .....	.....	09/19/2023	0.000	10/10/2023	14,979,149	0	27,711
.....	DOMINION ENERGY INC COMMERCIAL PAPER .....	.....	09/20/2023	0.000	12/06/2023	9,896,789	0	16,995
.....	DOVER CORP COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/02/2023	14,997,748	0	11,248
.....	DUPONT DE NEMOURS INC COMMERCIAL PAPER .....	.....	09/22/2023	0.000	10/12/2023	14,975,171	0	20,254
.....	EIDP INC COMMERCIAL PAPER .....	.....	09/05/2023	0.000	10/11/2023	9,984,717	0	39,517
.....	EIDP INC COMMERCIAL PAPER .....	.....	09/27/2023	0.000	11/03/2023	14,924,329	0	9,120
.....	ENBRIDGE US INC COMMERCIAL PAPER .....	.....	09/19/2023	0.000	10/20/2023	9,970,606	0	16,939
.....	EQUIFAX INC FIXED COUPON 0 MATURITY 201 .....	.....	09/20/2023	0.000	10/19/2023	9,972,207	0	15,374
.....	EVERGY KANSAS CENTRAL INC COMMERCIAL PAP .....	.....	09/19/2023	0.000	10/11/2023	9,984,613	0	16,871
.....	EVERSOURCE ENERGY COMMERCIAL PAPER .....	.....	09/18/2023	0.000	10/05/2023	9,993,877	0	19,849
.....	EVERSOURCE ENERGY COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/13/2023	12,976,101	0	11,916
.....	FIDELITY NATIONAL INFORMATION SERVICES I .....	.....	09/20/2023	0.000	10/18/2023	19,947,305	0	33,949
.....	FORTIVE CORP COMMERCIAL PAPER .....	.....	09/11/2023	0.000	10/03/2023	16,195,053	0	49,305
.....	HEWLETT PACKARD ENTERPRISE CO COMMERCIAL .....	.....	09/28/2023	0.000	10/27/2023	39,042,258	0	12,081
.....	HEWLETT PACKARD ENTERPRISE CO COMMERCIAL .....	.....	09/28/2023	0.000	10/31/2023	14,930,353	0	4,620
.....	HP INC COMMERCIAL PAPER .....	.....	09/26/2023	0.000	10/05/2023	19,987,882	0	12,104
.....	HUMANA INC COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/24/2023	14,946,571	0	13,875
.....	INGREDION INC COMMERCIAL PAPER .....	.....	09/26/2023	0.000	10/03/2023	10,896,697	0	8,248
.....	INTERCONTINENTAL EXCHANGE INC COMMERCIAL .....	.....	08/29/2023	0.000	10/17/2023	20,947,464	0	107,530
.....	KEURIG DR PEPPER INC COMMERCIAL PAPER .....	.....	09/12/2023	0.000	10/02/2023	24,996,204	0	71,899
.....	L3HARRIS TECHNOLOGIES INC COMMERCIAL PAP .....	.....	07/31/2023	0.000	10/25/2023	14,942,741	0	145,916
.....	LEGGETT & PLATT INC COMMERCIAL PAPER .....	.....	09/27/2023	0.000	10/05/2023	14,990,846	0	6,858
.....	MARRIOTT INTERNATIONAL INC/MD COMMERCIAL .....	.....	08/29/2023	0.000	10/20/2023	19,941,126	0	98,376
.....	MICROCHIP TECHNOLOGY INC COMMERCIAL PAPE .....	.....	09/27/2023	0.000	10/23/2023	4,982,939	0	3,089
.....	MONDELEZ INTERNATIONAL INC COMMERCIAL PA .....	.....	09/25/2023	0.000	10/11/2023	14,977,316	0	11,316
.....	MOSAIC CO/THE COMMERCIAL PAPER .....	.....	09/27/2023	0.000	10/13/2023	14,972,642	0	4,550
.....	NEXTERA ENERGY CAPITAL HOLDINGS INC COM .....	.....	09/18/2023	0.000	10/03/2023	4,298,684	0	8,538
.....	NISOURCE INC COMMERCIAL PAPER .....	.....	09/25/2023	0.000	10/06/2023	8,875,221	0	8,121
.....	NISOURCE INC COMMERCIAL PAPER .....	.....	09/15/2023	0.000	10/13/2023	14,722,645	0	36,316
.....	NISOURCE INC COMMERCIAL PAPER .....	.....	09/28/2023	0.000	10/19/2023	39,889,366	0	12,255
.....	OGE ENERGY CORP COMMERCIAL PAPER .....	.....	09/18/2023	0.000	10/04/2023	16,092,512	0	32,368
.....	O'REILLY AUTOMOTIVE INC COMMERCIAL PAPER .....	.....	09/11/2023	0.000	10/10/2023	8,548,151	0	26,214
.....	O'REILLY AUTOMOTIVE INC COMMERCIAL PAPER .....	.....	09/21/2023	0.000	10/11/2023	9,984,671	0	15,282
.....	ORACLE CORP COMMERCIAL PAPER .....	.....	09/05/2023	0.000	10/05/2023	29,182,215	0	115,075
.....	ORACLE CORP COMMERCIAL PAPER .....	.....	09/28/2023	0.000	10/27/2023	44,820,843	0	20,580

STATEMENT AS OF SEPTEMBER 30, 2023 OF THE MassMutual Ascend Life Insurance Company

SCHEDULE E - PART 2 - CASH EQUIVALENTS

Show Investments Owned End of Current Quarter

1	2	3	4	5	6	7	8	9
CUSIP	Description	Code	Date Acquired	Rate of Interest	Maturity Date	Book/Adjusted Carrying Value	Amount of Interest Due and Accrued	Amount Received During Year
	PARKER-HANNIFIN CORP COMMERCIAL PAPER		08/16/2023	0.000	11/02/2023	11,343,376	0	76,946
	PENSKE TRUCK LEASING CO LP COMMERCIAL PA		09/27/2023	0.000	10/23/2023	10,962,871	0	6,724
	PUBLIC SERVICE ENTERPRISE GROUP INC COMM		09/27/2023	0.000	10/05/2023	9,993,975	0	4,514
	RELX INC COMMERCIAL PAPER		09/22/2023	0.000	10/05/2023	9,994,003	0	13,467
	RTX CORP COMMERCIAL PAPER		09/05/2023	0.000	10/05/2023	69,957,058	0	267,197
	RYDER SYSTEM INC COMMERCIAL PAPER		08/31/2023	0.000	10/03/2023	19,993,826	0	95,209
	RYDER SYSTEM INC COMMERCIAL PAPER		09/12/2023	0.000	10/10/2023	4,993,030	0	14,652
	RYDER SYSTEM INC FIXED COUPON 0 MATURIT		09/13/2023	0.000	10/13/2023	13,974,028	0	38,778
	RYDER SYSTEM INC COMMERCIAL PAPER		09/28/2023	0.000	10/26/2023	34,865,042	0	16,125
	SEMPRA COMMERCIAL PAPER		09/11/2023	0.000	10/03/2023	12,995,979	0	40,071
	SHERWIN-WILLIAMS CO/THE COMMERCIAL PAPER		09/26/2023	0.000	10/18/2023	14,961,443	0	9,043
	SOUTHERN POWER CO COMMERCIAL PAPER		09/27/2023	0.000	10/04/2023	9,995,456	0	6,053
	SPIRE INC COMMERCIAL PAPER		09/06/2023	0.000	10/04/2023	14,993,124	0	57,057
	SPIRE INC COMMERCIAL PAPER		09/14/2023	0.000	10/12/2023	14,466,228	0	38,119
	TAMPA ELECTRIC CO COMMERCIAL PAPER		09/11/2023	0.000	10/11/2023	10,164,115	0	31,622
	TAMPA ELECTRIC CO COMMERCIAL PAPER		09/25/2023	0.000	10/26/2023	10,957,182	0	10,227
	TYSON FOODS INC COMMERCIAL PAPER		09/20/2023	0.000	10/18/2023	14,961,118	0	25,052
	VW CREDIT INC COMMERCIAL PAPER		09/05/2023	0.000	10/10/2023	8,987,485	0	35,960
	VW CREDIT INC COMMERCIAL PAPER		09/11/2023	0.000	10/11/2023	21,966,163	0	67,363
	VW CREDIT INC COMMERCIAL PAPER		09/18/2023	0.000	10/18/2023	24,534,582	0	49,792
	VW CREDIT INC COMMERCIAL PAPER		09/26/2023	0.000	10/30/2023	14,932,886	0	11,511
	VIRGINIA ELECTRIC AND POWER CO COMMERCIA		08/29/2023	0.000	11/01/2023	9,952,232	0	48,832
	VULCAN MATERIALS CO COMMERCIAL PAPER		09/26/2023	0.000	10/10/2023	18,974,045	0	14,389
	WPP CP LLC COMMERCIAL PAPER		09/11/2023	0.000	10/05/2023	13,991,262	0	43,528
	WPP CP LLC COMMERCIAL PAPER		09/14/2023	0.000	10/11/2023	9,984,403	0	26,403
	WRKCO INC COMMERCIAL PAPER		09/20/2023	0.000	10/24/2023	9,964,033	0	17,110
	WASTE MANAGEMENT INC COMMERCIAL PAPER		09/19/2023	0.000	10/17/2023	19,951,289	0	36,378
	ALIMENTATION COUCHE-TARD INC COMMERCIAL		09/27/2023	0.000	10/10/2023	14,260,235	0	16,432
	CANADIAN PACIFIC RAILWAY CO COMMERCIAL P		09/20/2023	0.000	10/04/2023	999,542	0	1,677
	THOMSON REUTERS CORP COMMERCIAL PAPER		09/26/2023	0.000	10/25/2023	24,908,277	0	15,222
	TRANSCANADA PIPELINES LTD COMMERCIAL PAP		09/26/2023	0.000	12/01/2023	9,905,377	0	7,677
	DIAGEO CAPITAL PLC COMMERCIAL PAPER		09/15/2023	0.000	10/18/2023	29,922,747	0	72,347
	EXPERIAN FINANCE PLC COMMERCIAL PAPER		09/26/2023	0.000	10/04/2023	11,994,586	0	9,013
	EXPERIAN FINANCE PLC COMMERCIAL PAPER		09/25/2023	0.000	10/10/2023	9,986,363	0	9,071
	RECKITT BENCKISER TREASURY SERVICES PLC		09/19/2023	0.000	10/11/2023	14,977,170	0	25,033
	TYCO ELECTRONICS GROUP SA COMMERCIAL PAP		09/26/2023	0.000	10/02/2023	11,998,182	0	9,082
1019999999. Subtotal - Bonds - Industrial and Miscellaneous (Unaffiliated) - Issuer Obligations						1,344,755,929	0	2,882,584
1109999999. Total - Industrial and Miscellaneous (Unaffiliated) Bonds						1,344,755,929	0	2,882,584
1309999999. Total - Hybrid Securities						0	0	0
1509999999. Total - Parent, Subsidiaries and Affiliates Bonds						0	0	0
1909999999. Subtotal - Unaffiliated Bank Loans						0	0	0
2419999999. Total - Issuer Obligations						1,344,755,929	0	2,882,584
2429999999. Total - Residential Mortgage-Backed Securities						0	0	0
2439999999. Total - Commercial Mortgage-Backed Securities						0	0	0
2449999999. Total - Other Loan-Backed and Structured Securities						0	0	0
2459999999. Total - SVO Identified Funds						0	0	0
2469999999. Total - Affiliated Bank Loans						0	0	0
2479999999. Total - Unaffiliated Bank Loans						0	0	0
2509999999. Total Bonds						1,344,755,929	0	2,882,584
09248U-71-8	BLACKROCK LIQUIDITY FUND-EXEMPT MONEY MA		09/29/2023	0.000		405,000,000	0	0
825252-40-6	INVESCO ADVISERS TREASURY PORT INSTL CL		09/27/2023	0.000		32,065,404	(87,788)	767,956
8209999999. Subtotal - Exempt Money Market Mutual Funds - as Identified by the SVO						437,065,404	(87,788)	767,956
8609999999 - Total Cash Equivalents						1,781,821,333	(87,788)	3,650,540