MassMutual Ascend Life Insurance Company (MMALIC) Funds Withheld Reinsurance Supplement

Year Ended September 30, 2024 (Dollars in Millions)

MMALIC, Gross of Reinsurance Funds withheled Acjust men MANALIC, Net of Funds men MANAL		September 30, 2024		
Non-Affiliated		Funds Withheld		•
Corporate Bonds	ASSET MIX			
U.S. Gov*1, Agencies, Municipals, Foreign Gov*1	Non-Affiliated			
RMBS 2,967 1,262 1,705 CMBS 1,194 669 525 Other ABS (including CLOs) 10,705 1,675 9,030 Mortgage Loans and Real Estate 4,871 646 4,225 Schedule BA Assets 1,294 265 1,029 Unaffiliated Stocks 654 69 585 Total Non-Affiliated 8 7,1 7,7 US Govt, Agencies, Municipals, Foreign Govt 1 0 0 0 Corporate Bonds 1 148 7,1 7,7 US Govt, Agencies, Municipals, Foreign Govt 0 0 0 0 RMBS 0 0 0 0 0 CMBS 0 0 0 0 0 CMBS 672 123 549 0 0 0 Mortgage Loans and Real Estate 0 0 0 0 0 0 0 0 145 415 415 415 415 <t< td=""><td>Corporate Bonds</td><td>19,011</td><td>2,309</td><td>16,702</td></t<>	Corporate Bonds	19,011	2,309	16,702
CMBS Other ABS (including CLOs) 1,194 4669 5255 Other ABS (including CLOs) 10,705 1,675 9,030 Mortgage Loans and Real Estate 4,871 646 4,225 Schedule BA Assets 1,294 265 1,029 Unaffiliated Stocks 6,54 6,97 35,343 Affiliated Corporate Bonds 1,48 71 77 US Gov1, Agencies, Municipals, Foreign Gov1 0 0 0 RMBS 0 0 0 0 CMBS 0 0 0 0 CMBS 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Deriv	US Gov't, Agencies, Municipals, Foreign Gov't	1,620	77	1,543
Other ABS (including CLOs) 10,705 1,675 9,030 Mortgage Loans and Real Estate 4,871 646 4,225 Schedule BA Assets 1,294 265 1,029 Unaffiliated Stocks 654 69 585 Total Non-Affiliated 42,316 6,973 35,343 Affiliated 8 71 77 Corporate Bonds 148 71 77 US Govt, Agencies, Municipals, Foreign Govt 0 0 0 CMBS 0 0 0 0 CMBS 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728	RMBS	2,967	1,262	1,705
Mortgage Loans and Real Estate 4,871 646 4,225 Schedule BA Assets 1,294 265 1,029 Unoffiliated Stocks 654 69 585 Total Non-Affiliated 42,316 6,73 35,343 Affiliated Corporate Bonds 148 71 77 US Gov't, Agencies, Municipals, Foreign Gov't 0 0 0 CMBS 0 0 0 0 CMBS 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 473 0 473 Affiliated Stocks 473 0 473 124 444 1244 Other 1,618 374 1,244 1,244 1,244 1,244 1,244 1,244 1,244 1,244 1,244 1,244 1,244 1,244	CMBS	•	669	
Schedule BA Assets 1,294 265 1,029 Unaffiliated Stocks 654 69 585 Total Non-Affiliated 42,316 6,973 35,343 Affiliated Corporate Bonds 148 71 77 US Gov't, Agencies, Municipals, Foreign Gov't 0 0 0 RMBS 0 0 0 0 CMBS 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Cash and Invested Assets 48,2	Other ABS (including CLOs)	10,705	1,675	9,030
Unaffiliated Stocks 654 69 585 Total Non-Affiliated 42,316 6,973 35,343 Affiliated Corporate Bonds 148 71 77 US Gov't, Agencies, Municipals, Foreign Gov't 0 10 0 0	Mortgage Loans and Real Estate	4,871	646	4,225
Total Non-Affiliated 42,316 6,973 35,343 Affiliated Corporate Bonds 148 71 77 US Gov't, Agencies, Municipals, Foreign Gov't 0 0 0 0 RMBS 0 0 0 0 0 CMBS 0 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,80	Schedule BA Assets	1,294	265	1,029
Affiliated Corporate Bonds 148 71 77 US Gov*t, Agencies, Municipals, Foreign Gov*t 0 0 0 RMBS 0 0 0 0 CMBS 0 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Inv	Unaffiliated Stocks		69	585
Corporate Bonds 148 71 77 US Gov't, Agencies, Municipals, Foreign Gov't 0 0 0 RNBS 0 0 0 CMBS 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 0 Schedule BA Assets 325 180 145 473 0 473 Affiliated Stocks 473 0 473 144 144 144 144 144 144 144 144 144 144 144 144 144 145 147 145 147 145 147 144 145 147 144 145 147 144 14	Total Non-Affiliated	42,316	6,973	35,343
US Gov't, Agencies, Municipals, Foreign Gov't 0 0 0 RMBS 0 0 0 CMBS 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 <td< td=""><td>Affiliated</td><td></td><td></td><td></td></td<>	Affiliated			
RMBS 0 0 0 CMBS 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4		148	71	77
CMBS Other ABS (including CLOs) 0 0 0 Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435	US Gov't, Agencies, Municipals, Foreign Gov't	0	0	0
Other ABS (including CLOs) 672 123 549 Mortgage Loans and Real Estate 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 19 23 196 NAIC 6	RMBS	0	0	0
Mortgage Loans and Real Estate 0 0 0 Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052		0	0	0
Schedule BA Assets 325 180 145 Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 215 53 62 Below Investment Grade 2,052 581 1,471	Other ABS (including CLOs)	672	123	549
Affiliated Stocks 473 0 473 Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 All Other 1,70 0 170	Mortgage Loans and Real Estate	0	0	0
Total Affiliated 1,618 374 1,244 Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471		325	180	145
Other Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY VAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,479 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471				
Cash, Cash Equivalents, and Short-Term Investments 3,442 338 3,104 Derivatives 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 CREDIT Quality NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	Total Affiliated	1,618	374	1,244
Derivatives All Other 728 0 728 All Other 170 0 170 Total Other 4,340 338 4,002 CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	Other			
NAIC 3 NAIC 3 NAIC 4 NAIC 4 NAIC 5 NAIC 5 NAIC 5 NAIC 5 NAIC 6 N	Cash, Cash Equivalents, and Short-Term Investments	3,442	338	3,104
Total Other 4,340 338 4,002 Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY Valid 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	Derivatives	728		728
Total Cash and Invested Assets 48,274 7,685 40,589 CREDIT QUALITY 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471				
CREDIT QUALITY NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	Total Other	4,340	338	4,002
NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	Total Cash and Invested Assets	48,274	7,685	40,589
NAIC 1 20,963 3,803 17,160 NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	CREDIT QUALITY			
NAIC 2 13,302 1,803 11,499 Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471		20.963	3.803	17.160
Investment Grade 34,265 5,606 28,659 NAIC 3 1,200 422 778 NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471			·	· ·
NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471				
NAIC 4 518 83 435 NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471	NAIC 3	1.200	422	778
NAIC 5 219 23 196 NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471				· · · -
NAIC 6 115 53 62 Below Investment Grade 2,052 581 1,471				
Below Investment Grade 2,052 581 1,471				
10101 201103 00,017 0,107 30,130	Total Bonds	36,317	6,187	30,130