

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**ASSETS**

	Current Year			Prior Year
	1 General Account Basis	2 Fair Value Basis	3 Total (Cols. 1 + 2)	4 Total
1. Bonds (Schedule D).....	1,082,378,262	2,213,581,387	3,295,959,649	3,179,872,182
2. Stocks (Schedule D):				
2.1 Preferred stocks .....				
2.2 Common stocks .....		1,077,772,555	1,077,772,555	911,978,848
3. Mortgage loans on real estate (Schedule B).....	11,478,238		11,478,238	12,946,744
4. Real estate (Schedule A):				
4.1 Properties held for the production of income (less \$ ..... encumbrances) .....				
4.2 Properties held for sale (less \$ ..... encumbrances) .....				
5. Cash (\$ ..... Schedule E - Part 1), and cash equivalents (\$ .....153,437,263 , Schedule E - Part 2) .....	43,394,916	110,042,347	153,437,263	133,935,143
6. Short-term investments (Schedule DA) .....	4,440,525	52,978,648	57,419,173	39,577,197
7. Derivatives (Schedule DB) .....	60,693		60,693	56,305,649
8. Other invested assets (Schedule BA) .....				
9. Securities lending reinvested collateral assets (Schedule DL) .....				
10. Aggregate write-ins for invested assets .....				
11. Subtotals, cash and invested assets (Lines 1 to 10) .....	1,141,752,634	3,454,374,937	4,596,127,571	4,334,615,763
12. Investment income due and accrued .....	7,550,494	6,552,421	14,102,915	14,079,227
13. Receivables for securities .....	5,918,858	2,104,792	8,023,650	6,900,957
14. Net adjustment in assets and liabilities due to foreign exchange rates .....				
15. Aggregate write-ins for other than invested assets .....				
16. Total (Lines 11 to 15)	1,155,221,986	3,463,032,150	4,618,254,136	4,355,595,947
<b>DETAILS OF WRITE-INS</b>				
1001. ....				
1002. ....				
1003. ....				
1098. Summary of remaining write-ins for Line 10 from overflow page .....				
1099. Totals (Lines 1001 thru 1003 plus 1098)(Line 10 above)				
1501. ....				
1502. ....				
1503. ....				
1598. Summary of remaining write-ins for Line 15 from overflow page .....				
1599. Totals (Lines 1501 thru 1503 plus 1598)(Line 15 above)				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**LIABILITIES AND SURPLUS**

	Current Year			Prior Year
	1 General Account Basis	2 Fair Value Basis	3 Total (Cols. 1 + 2)	4 Total
1. Aggregate reserve for life, annuity and accident and health contracts (Exhibit 3, Line 9999999, Col. 2) .....	1,159,725,795	3,452,854,299	4,612,580,094	4,342,779,380
2. Liability for deposit-type contracts (Exhibit 4, Line 9, Col. 1) .....				
3. Interest Maintenance Reserve .....	1,080,191		1,080,191	1,272,221
4. Charges for investment management, administration and contract guarantees due or accrued .....	215,859	359,444	575,303	1,095,956
5. Investment expenses due or accrued (Exhibit 1, Line 24) .....				
6. Investment taxes, licenses and fees due or accrued, excluding federal income taxes (Exhibit 2, Line 8) .....				
7. Federal and foreign income taxes due or accrued (excluding deferred taxes) .....				
8. Reserve for future federal income taxes .....				
9. Unearned investment income .....				
10. Other transfers to general account due or accrued (net) (including \$ .....393,443 accrued expense allowances recognized in reserves).....	(8,045,386)	5,535,608	(2,509,778)	(9,585,376)
11. Remittances and items not allocated .....	18,003	(3,072)	14,931	1,814,347
12. Derivatives .....	20,177		20,177	435,643
13. Payable for securities .....	2,207,347	3,959,986	6,167,333	17,094,451
14. Payable for securities lending .....				
15. Net adjustment in assets and liabilities due to foreign exchange rates .....				
16. Aggregate write-ins for liabilities .....		325,885	325,885	689,325
17. Total liabilities (including \$ .....(1,934,475) due or accrued net transfers to or (from) the general account) .....	1,155,221,986	3,463,032,150	4,618,254,136	4,355,595,947
18. Contributed surplus .....				
19. Aggregate write-ins for special surplus funds .....				
20. Unassigned funds .....				
21. Surplus (Lines 18 through 20) .....				
22. Totals	1,155,221,986	3,463,032,150	4,618,254,136	4,355,595,947
<b>DETAILS OF WRITE-INS</b>				
1601. Claims in course of settlement .....		320,294	320,294	684,640
1602. Annuitant mortality fluctuation fund .....		5,591	5,591	4,685
1603. ....				
1698. Summary of remaining write-ins for Line 16 from overflow page .....				
1699. Totals (Lines 1601 thru 1603 plus 1698)(Line 16 above)		325,885	325,885	689,325
1901. ....				
1902. ....				
1903. ....				
1998. Summary of remaining write-ins for Line 19 from overflow page .....				
1999. Totals (Lines 1901 thru 1903 plus 1998)(Line 19 above)				

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**SUMMARY OF OPERATIONS**

	1 Current Year	2 Prior Year
1. Transfers to Separate Accounts:		
1.1 Net premiums and annuity considerations for life and accident and health contracts	29,014,095	30,815,940
1.2 Considerations for supplementary contracts with life contingencies		
1.3 Aggregate write-ins for other transfers to Separate Accounts		
1.4 Totals (Lines 1.1 to 1.3)	29,014,095	30,815,940
2. Transfers on account of deposit-type contracts (including \$ deposits less \$ withdrawals)		
3. Net investment income and capital gains and losses	392,177,003	16,985,631
4. Aggregate write-ins for other income		
5. Totals (Lines 1.4 to 4)	421,191,098	47,801,571
<b>DEDUCT:</b>		
6. Transfers from the Separate Account on account of contract benefits:		
6.1 Death benefits	36,115,052	38,992,925
6.2 Matured endowments		
6.3 Annuity benefits	1,020,205	1,388,783
6.4 Payments on supplementary contracts with life contingencies		
6.5 Accident and health benefits		
6.6 Surrender benefits and withdrawals for life contracts	41,400,351	40,151,712
6.7 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits		
7. Transfers on account of policy loans	6,796,504	7,975,879
8. Net transfer of reserves from or (to) Separate Accounts	1,077,802	1,304,601
9. Other transfers from the Separate Accounts:		
9.1 Federal and foreign income taxes incurred		
9.2 Change in expense allowances recognized in reserves	(28,886)	(89,485)
9.3 Aggregate write-ins for other transfers from Separate Accounts		
10. Subtotals (Lines 6.1 to 9.3)	86,381,028	89,724,415
11. Fees associated with charges for investment management, administration and contract guarantees	65,372,796	68,342,969
12. Increase in aggregate reserve for life and accident and health contracts	269,800,714	(110,438,594)
13. Increase in liability for deposit-type contracts		
14. Increase in reserve for future federal income taxes		
15. Aggregate write-ins for reserves and funds	(363,440)	172,781
16. Totals (Lines 10 to 15)	421,191,098	47,801,571
17. Net gain from operations (including \$ unrealized capital gains) (Line 5 minus Line 16)		
<b>SURPLUS ACCOUNT</b>		
18. Surplus, December 31, prior year		
19. Net gain from operations (Line 17)		
20. Surplus contributed or (withdrawn) during year		
21. Change in reserve on account of change in valuation basis, (increase) or decrease		
22. Transfer from Separate Accounts of the change in expense allowances recognized in Line 21		
23. Aggregate write-ins for gains and losses in surplus		
24. Surplus, December 31, current year (Page 3, Line 21)		
<b>DETAILS OF WRITE-INS</b>		
01.301.		
01.302.		
01.303.		
01.398. Summary of remaining write-ins for Line 1.3 from overflow page		
01.399. Totals (Lines 01.301 thru 01.303 plus 01.398)(Line 1.3 above)		
0401.		
0402.		
0403.		
0498. Summary of remaining write-ins for Line 4 from overflow page		
0499. Totals (Lines 0401 thru 0403 plus 0498)(Line 4 above)		
06.701.		
06.702.		
06.703.		
06.798. Summary of remaining write-ins for Line 6.7 from overflow page		
06.799. Totals (Lines 06.701 thru 06.703 plus 06.798)(Line 6.7 above)		
09.301.		
09.302.		
09.303.		
09.398. Summary of remaining write-ins for Line 9.3 from overflow page		
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398)(Line 9.3 above)		
1501. Claims in course of settlement	(364,346)	174,384
1502. Change in annuitant mortality fluctuation fund	906	(1,603)
1503.		
1598. Summary of remaining write-ins for Line 15 from overflow page		
1599. Totals (Lines 1501 thru 1503 plus 1598)(Line 15 above)	(363,440)	172,781
2301.		
2302.		
2303.		
2398. Summary of remaining write-ins for Line 23 from overflow page		
2399. Totals (Lines 2301 thru 2303 plus 2398)(Line 23 above)		

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - SUMMARY**

	1	2	3	4	5	6	7
	Total	Individual Life	Group Life	Individual Annuities	Group Annuities	Accident and Health	Other Lines of Business
1. Transfers to Separate Accounts:							
1.1 Net premiums and annuity considerations for life and accident and health contracts	29,014,095	29,004,295		9,800			
1.2 Considerations for supplementary contracts with life contingencies		XXX	XXX			XXX	
1.3 Aggregate write-ins for other transfers to Separate Accounts							
1.4 Totals (Lines 1.1 to 1.3)	29,014,095	29,004,295		9,800			
2. Transfers on account of deposit-type contracts (including \$ deposits less \$ withdrawals)							
3. Net investment income and capital gains and losses	392,177,003	343,062,563	40,210,282	8,904,158			
4. Aggregate write-ins for other income							
5. Totals (Lines 1.4 to 4)	421,191,098	372,066,858	40,210,282	8,913,958			
DEDUCT:							
6. Transfers from the Separate Account on account of contract benefits:							
6.1 Death benefits	36,115,052	31,129,818	4,985,234			XXX	
6.2 Matured endowments						XXX	
6.3 Annuity benefits	1,020,205	XXX	XXX	1,020,205		XXX	
6.4 Payments on supplementary contracts with life contingencies		XXX	XXX			XXX	
6.5 Accident and health benefits		XXX	XXX	XXX	XXX		
6.6 Surrender benefits and withdrawals for life contracts	41,400,351	38,585,471		2,814,880		XXX	
6.7 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits							
7. Transfers on account of policy loans	6,796,504	6,796,504				XXX	
8. Net transfer of reserves from or (to) Separate Accounts	1,077,802	1,344,674	(289,714)	22,842			
9. Other transfers from the Separate Accounts:							
9.1 Federal and foreign income taxes incurred						XXX	
9.2 Change in expense allowances recognized in reserves	(28,886)	(24,951)		(3,935)		XXX	
9.3 Aggregate write-ins for other transfers from Separate Accounts							
10. Subtotals (Lines 6.1 to 9.3)	86,381,028	77,831,516	4,695,520	3,853,992			
11. Fees associated with charges for investment management, administration and contract guarantees	65,372,796	59,688,910	5,129,930	553,956			
12. Increase in aggregate reserve for life and accident and health contracts	269,800,714	234,910,778	30,384,832	4,505,104			
13. Increase in liability for deposit-type contracts						XXX	
14. Increase in reserve for future federal income taxes							
15. Aggregate write-ins for reserves and funds	(363,440)	(364,346)		906			
16. Totals (Lines 10 to 15)	421,191,098	372,066,858	40,210,282	8,913,958			
17. Net gain from operations (including \$ unrealized capital gains) (Line 5 minus Line 16)							
18. Policies/certificates in force end of year	32,728	29,025	3,087	616			
<b>DETAILS OF WRITE-INS</b>							
01.301. ....							
01.302. ....							
01.303. ....							
01.398. Summary of remaining write-ins for Line 1.3 from overflow page							
01.399. Totals (Lines 01.301 thru 01.303 plus 01.398) (Line 1.3 above)							
0401. ....							
0402. ....							
0403. ....							
0498. Summary of remaining write-ins for Line 4 from overflow page							
0499. Totals (Lines 0401 thru 0403 plus 0498) (Line 4 above)							
06.701. ....							
06.702. ....							
06.703. ....							
06.798. Summary of remaining write-ins for Line 6.7 from overflow page							
06.799. Totals (Lines 06.701 thru 06.703 plus 06.798) (Line 6.7 above)							
09.301. ....							
09.302. ....							
09.303. ....							
09.398. Summary of remaining write-ins for Line 9.3 from overflow page							
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)							
1501. Claims in course of settlement	(364,346)	(364,346)					
1502. Change in annuitant mortality fluctuation fund	906			906			
1503. ....							
1598. Summary of remaining write-ins for Line 15 from overflow page							
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15 above)	(363,440)	(364,346)		906			

**ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company**  
**ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - INDIVIDUAL LIFE INSURANCE (b)**

	1	2	3	4	5	6	7	8	9	10	11
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life with Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life (N/A Fraternal)	Other Individual Life
<b>1. Transfers to Separate Accounts:</b>											
1.1 Net premiums for life contracts (a)	29,004,295	XXX						181,327	28,822,968	XXX	
1.2 Considerations for supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
1.3 Aggregate write-ins for other transfers to Separate Accounts		XXX								XXX	
1.4 Totals (Lines 1.1 to 1.3)	29,004,295	XXX						181,327	28,822,968	XXX	
<b>2. Transfers on account of deposit-type contracts (including \$ deposits less \$ withdrawals)</b>		XXX								XXX	
<b>3. Net investment income and capital gains and losses</b>	343,062,563	XXX						2,166,774	340,895,789	XXX	
<b>4. Aggregate write-ins for other income</b>		XXX								XXX	
<b>5. Totals (Lines 1.4 to 4)</b>	372,066,858	XXX						2,348,101	369,718,757	XXX	
<b>DEDUCT:</b>											
<b>6. Transfers from the Separate Account on account of contract benefits:</b>											
6.1 Death benefits	31,129,818	XXX							31,129,818	XXX	
6.2 Matured endowments		XXX								XXX	
6.3 Annuity benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.4 Payments on supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.5 Accident and health benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.6 Surrender benefits and withdrawals for life contracts	38,585,471	XXX						479,378	38,106,093	XXX	
6.7 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits		XXX								XXX	
<b>7. Transfers on account of policy loans</b>	6,796,504	XXX						(82,347)	6,878,851	XXX	
<b>8. Net transfer of reserves from or (to) Separate Accounts</b>	1,344,674	XXX						2,651	1,342,023	XXX	
<b>9. Other transfers from the Separate Accounts:</b>											
9.1 Federal and foreign income taxes incurred		XXX								XXX	
9.2 Change in expense allowances recognized in reserves	(24,951)	XXX							(24,951)	XXX	
9.3 Aggregate write-ins for other transfers from Separate Accounts		XXX								XXX	
<b>10. Subtotals (Lines 6.1 to 9.3)</b>	77,831,516	XXX						399,682	77,431,834	XXX	
<b>11. Fees associated with charges for investment management, administration and contract guarantees</b>	59,688,910	XXX						320,221	59,368,689	XXX	
<b>12. Increase in aggregate reserve for life and accident and health contracts</b>	234,910,778	XXX						1,628,198	233,282,580	XXX	
<b>13. Increase in liability for deposit-type contracts</b>		XXX								XXX	
<b>14. Increase in reserve for future federal income taxes</b>		XXX								XXX	
<b>15. Aggregate write-ins for reserves and funds</b>	(364,346)	XXX							(364,346)	XXX	
<b>16. Totals (Lines 10 to 15)</b>	372,066,858	XXX						2,348,101	369,718,757	XXX	
<b>17. Net gain from operations (including \$ unrealized capital gains) (Line 5 minus Line 16)</b>		XXX								XXX	
<b>18. Policies/certificates in force end of year</b>	29,025	XXX						284	28,741	XXX	
<b>DETAILS OF WRITE-INS</b>											
01.301. ....		XXX								XXX	
01.302. ....		XXX								XXX	
01.303. ....		XXX								XXX	
01.398. Summary of remaining write-ins for Line 1.3 from overflow page		XXX								XXX	
01.399. Totals (Lines 01.301 thru 01.303 plus 01.398) (Line 1.3 above)		XXX								XXX	
0401. ....		XXX								XXX	
0402. ....		XXX								XXX	
0403. ....		XXX								XXX	
0498. Summary of remaining write-ins for Line 4 from overflow page		XXX								XXX	
0499. Totals (Lines 0401 thru 0403 plus 0498) (Line 4 above)		XXX								XXX	
06.701. ....		XXX								XXX	
06.702. ....		XXX								XXX	
06.703. ....		XXX								XXX	
06.798. Summary of remaining write-ins for Line 6.7 from overflow page		XXX								XXX	
06.799. Totals (Lines 06.701 thru 06.703 plus 06.798) (Line 6.7 above)		XXX								XXX	
09.301. ....		XXX								XXX	
09.302. ....		XXX								XXX	
09.303. ....		XXX								XXX	
09.398. Summary of remaining write-ins for Line 9.3 from overflow page		XXX								XXX	
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)		XXX								XXX	
1501. Claims in course of settlement	(364,346)	XXX							(364,346)	XXX	
1502. ....		XXX								XXX	
1503. ....		XXX								XXX	
1598. Summary of remaining write-ins for Line 15 from overflow page		XXX								XXX	
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15 above)	(364,346)	XXX							(364,346)	XXX	

(a) Include premium amounts for preneed plans included in Line 1  
(b) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - GROUP LIFE INSURANCE (c)**  
**(N/A Fraternal)**

	1	2	3	4	5	6	7	8
	Total	Whole Life	Term Life	Variable Life	Universal Life	Variable Universal Life	Credit Life	Other Group Life (a)
1. Transfers to Separate Accounts:								
1.1 Net premiums for life contracts (b)	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
1.2 Considerations for supplementary contracts with life contingencies							XXX	
1.3 Aggregate write-ins for other transfers to Separate Accounts							XXX	
1.4 Totals (Lines 1.1 to 1.3)							XXX	
2. Transfers on account of deposit-type contracts (including \$ deposits less \$ withdrawals)							XXX	
3. Net investment income and capital gains and losses	40,210,282					40,210,282	XXX	
4. Aggregate write-ins for other income							XXX	
5. Totals (Lines 1.4 to 4)	40,210,282					40,210,282	XXX	
DEDUCT:								
6. Transfers from the Separate Account on account of contract benefits:								
6.1 Death benefits	4,985,234					4,985,234	XXX	
6.2 Matured endowments							XXX	
6.3 Annuity benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.4 Payments on supplementary contracts with life contingencies	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.5 Accident and health benefits	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
6.6 Surrender benefits and withdrawals for life contracts							XXX	
6.7 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits							XXX	
7. Transfers on account of policy loans							XXX	
8. Net transfer of reserves from or (to) Separate Accounts	(289,714)					(289,714)	XXX	
9. Other transfers from the Separate Accounts:								
9.1 Federal and foreign income taxes incurred							XXX	
9.2 Change in expense allowances recognized in reserves							XXX	
9.3 Aggregate write-ins for other transfers from Separate Accounts							XXX	
10. Subtotals (Lines 6.1 to 9.3)	4,695,520					4,695,520	XXX	
11. Fees associated with charges for investment management, administration and contract guarantees	5,129,930					5,129,930	XXX	
12. Increase in aggregate reserve for life and accident and health contracts	30,384,832					30,384,832	XXX	
13. Increase in liability for deposit-type contracts							XXX	
14. Increase in reserve for future federal income taxes							XXX	
15. Aggregate write-ins for reserves and funds							XXX	
16. Totals (Lines 10 to 15)	40,210,282					40,210,282	XXX	
17. Net gain from operations (including \$ unrealized capital gains) (Line 5 minus Line 16)							XXX	
18. Policies/certificates in force end of year	3,087					3,087	XXX	
<b>DETAILS OF WRITE-INS</b>								
01.301.							XXX	
01.302.							XXX	
01.303.							XXX	
01.398. Summary of remaining write-ins for Line 1.3 from overflow page							XXX	
01.399. Totals (Lines 01.301 thru 01.303 plus 01.398) (Line 1.3 above)							XXX	
0401.							XXX	
0402.							XXX	
0403.							XXX	
0498. Summary of remaining write-ins for Line 4 from overflow page							XXX	
0499. Totals (Lines 0401 thru 0403 plus 0498) (Line 4 above)							XXX	
06.701.							XXX	
06.702.							XXX	
06.703.							XXX	
06.798. Summary of remaining write-ins for Line 6.7 from overflow page							XXX	
06.799. Totals (Lines 06.701 thru 06.703 plus 06.798) (Line 6.7 above)							XXX	
09.301.							XXX	
09.302.							XXX	
09.303.							XXX	
09.398. Summary of remaining write-ins for Line 9.3 from overflow page							XXX	
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)							XXX	
1501.							XXX	
1502.							XXX	
1503.							XXX	
1598. Summary of remaining write-ins for Line 15 from overflow page							XXX	
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15 above)							XXX	

(a) Includes the following amounts for FEGLI/SGLI: Line 1 \_\_\_\_\_, Line 10 \_\_\_\_\_, Line 16 \_\_\_\_\_, Line 23 \_\_\_\_\_, Line 24 \_\_\_\_\_

(b) Include premium amounts for preneed plans included in Line 1 \_\_\_\_\_

(c) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected. \_\_\_\_\_

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF OPERATIONS BY LINES OF BUSINESS - INDIVIDUAL ANNUITIES (a)**

	1 Total	Deferred			6 Life Contingent Payout (Immediate and Annuityizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities With Guarantees		
1. Transfers to Separate Accounts:						
1.1 Net annuity considerations for annuity contracts	9,800	XXX	XXX	9,800	XXX	XXX
1.2 Considerations for supplementary contracts with life contingencies						
1.3 Aggregate write-ins for other transfers to Separate Accounts						
1.4 Totals (Lines 1.1 to 1.3)	9,800			9,800		
2. Transfers on account of deposit-type contracts (including \$ deposits less \$ withdrawals)						
3. Net investment income and capital gains and losses	8,904,158			8,904,158		
4. Aggregate write-ins for other income						
5. Totals (Lines 1.4 to 4)	8,913,958			8,913,958		
DEDUCT:						
6. Transfers from the Separate Account on account of contract benefits:						
6.1 Death benefits						
6.2 Matured endowments						
6.3 Annuity benefits	1,020,205			1,020,205		
6.4 Payments on supplementary contracts with life contingencies		XXX	XXX	XXX	XXX	XXX
6.5 Accident and health benefits	XXX	XXX	XXX	XXX	XXX	XXX
6.6 Surrender benefits and withdrawals for life contracts	2,814,880			2,814,880		
6.7 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits						
7. Transfers on account of policy loans						
8. Net transfer of reserves from or (to) Separate Accounts	22,842			22,842		
9. Other transfers from the Separate Accounts:						
9.1 Federal and foreign income taxes incurred						
9.2 Change in expense allowances recognized in reserves	(3,935)			(3,935)		
9.3 Aggregate write-ins for other transfers from Separate Accounts						
10. Subtotals (Lines 6.1 to 9.3)	3,853,992			3,853,992		
11. Fees associated with charges for investment management, administration and contract guarantees	553,956			553,956		
12. Increase in aggregate reserve for life and accident and health contracts	4,505,104			4,505,104		
13. Increase in liability for deposit-type contracts						
14. Increase in reserve for future federal income taxes						
15. Aggregate write-ins for reserves and funds	906			906		
16. Totals (Lines 10 to 15)	8,913,958			8,913,958		
17. Net gain from operations (including \$ unrealized capital gains) (Line 5 minus Line 16)						
18. Policies/certificates in force end of year	616			616		
<b>DETAILS OF WRITE-INS</b>						
01.301.						
01.302.						
01.303.						
01.398. Summary of remaining write-ins for Line 1.3 from overflow page						
01.399. Totals (Lines 01.301 thru 01.303 plus 01.398) (Line 1.3 above)						
0401.						
0402.						
0403.						
0498. Summary of remaining write-ins for Line 4 from overflow page						
0499. Totals (Lines 0401 thru 0403 plus 0498) (Line 4 above)						
06.701.						
06.702.						
06.703.						
06.798. Summary of remaining write-ins for Line 6.7 from overflow page						
06.799. Totals (Lines 06.701 thru 06.703 plus 06.798) (Line 6.7 above)						
09.301.						
09.302.						
09.303.						
09.398. Summary of remaining write-ins for Line 9.3 from overflow page						
09.399. Totals (Lines 09.301 thru 09.303 plus 09.398) (Line 9.3 above)						
1501. Change in annuitant mortality fluctuation fund	906			906		
1502.						
1503.						
1598. Summary of remaining write-ins for Line 15 from overflow page						
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15 above)	906			906		

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected.

Analysis of Operations by Lines of Business - Group Annuities

**NONE**

Analysis of Operations by Lines of Business - Accident and Health

**NONE**



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - INDIVIDUAL LIFE INSURANCE (a)**

	1	2	3	4	5	6	7	8	9	10	11
	Total	Industrial Life	Whole Life	Term Life	Indexed Life	Universal Life	Universal Life With Secondary Guarantees	Variable Life	Variable Universal Life	Credit Life (N/A Fraternal)	Other Individual Life
1. Reserve December 31 of prior year .....	660,795,802	XXX						9,544,769	651,251,033	XXX	
2. Tabular net premiums and considerations for annuities and supplementary contracts with life contingencies .....	29,004,292	XXX						181,327	28,822,965	XXX	
3. Increase or (decrease) from investment results after provision for federal income taxes .....	343,062,563	XXX						2,166,774	340,895,789	XXX	
4. Tabular less actual reserve released .....		XXX								XXX	
5. Increase in reserve on account of change in valuation basis .....		XXX								XXX	
5.1 Change in excess of VM-20 deterministic/stochastic reserve over net premium reserve .....		XXX								XXX	
6. Other increases (net) .....	2,519,708,919	XXX							2,519,708,919	XXX	
7. Totals (Lines 1 to 6) .....	3,552,571,576	XXX						11,892,870	3,540,678,706	XXX	
8. Net transfer of reserves from or (to) Separate Accounts .....	1,344,674	XXX						2,651	1,342,023	XXX	
9. Tabular cost .....	46,537,709	XXX						293,933	46,243,776	XXX	
10. Reserves released by death .....	31,129,818	XXX							31,129,818	XXX	
11. Reserves released by other terminations (net) .....	38,585,471	XXX						479,378	38,106,093	XXX	
12. Transfers on account of annuity and supplementary contract payments involving life contingencies .....	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13. Charges for investment management, administration and contract guarantees .....	13,151,201	XXX						26,288	13,124,913	XXX	
14. Aggregate write-ins for other decreases in reserves .....	6,407,207	XXX						(82,347)	6,489,554	XXX	
15. Total deductions (Lines 8 to 14) .....	137,156,080	XXX						719,903	136,436,177	XXX	
16. Reserve December 31 of current year .....	3,415,415,496	XXX						11,172,967	3,404,242,529	XXX	
<b>Cash Surrender Value and Policy Loans</b>											
17. CSV ending balance December 31, current year .....	3,375,646,863	XXX						7,196,511	3,368,450,352	XXX	
18. Amount available for policy loans based upon Line 17 CSV .....	620,368,044	XXX						5,757,209	614,610,835	XXX	
<b>DETAILS OF WRITE-INS</b>											
1401. Change in policy loans .....	6,796,504	XXX						(82,347)	6,878,851	XXX	
1402. Claims in course of settlement .....	(364,346)	XXX							(364,346)	XXX	
1403. Change in surrender charge offset .....	(24,951)	XXX							(24,951)	XXX	
1498. Summary of remaining write-ins for Line 14 from overflow page .....		XXX								XXX	
1499. TOTALS (Lines 1401 thru 1403 plus 1498) (Line 14 above) .....	6,407,207	XXX						(82,347)	6,489,554	XXX	

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected. ....

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - GROUP LIFE INSURANCE (a)**  
**(N/A Fraternal)**

	1	2	3	4	5	6	7	8
	Total	Whole Life	Term Life	Universal Life	Variable Life	Variable Universal Life	Credit Life	Other Group Life
1. Reserve December 31 of prior year .....	3,649,049,881					3,649,049,881	XXX	
2. Tabular net premiums and considerations .....							XXX	
3. Increase or (decrease) from investment results after provision for federal income taxes .....	40,210,283					40,210,283	XXX	
4. Tabular less actual reserve released .....							XXX	
5. Increase in reserve on account of change in valuation basis .....							XXX	
6. Other increases (net) .....	(2,519,708,919)					(2,519,708,919)	XXX	
7. Totals (Lines 1 to 6) .....	1,169,551,245					1,169,551,245	XXX	
8. Net transfer of reserves from or (to) Separate Accounts .....	(289,714)					(289,714)	XXX	
9. Tabular cost .....						XXX	XXX	
10. Reserves released by death .....	4,985,234					4,985,234	XXX	
11. Reserves released by other terminations (net) .....							XXX	
12. Transfers on account of annuity and supplementary contract payments involving life contingencies .....	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
13. Charges for investment management, administration and contract guarantees .....	5,129,930					5,129,930	XXX	
14. Aggregate write-ins for other decreases in reserves .....							XXX	
15. Total deductions (Lines 8 to 14) .....	9,825,450					9,825,450	XXX	
16. Reserve December 31 of current year .....	1,159,725,795					1,159,725,795	XXX	
<b>Cash Surrender Value and Policy Loans</b>								
17. CSV ending balance December 31, current year .....	1,145,168,219					1,145,168,219	XXX	
18. Amount available for policy loans based upon line 17 CSV .....	916,134,575					916,134,575	XXX	
<b>DETAILS OF WRITE-INS</b>								
1401. ....							XXX	
1402. ....							XXX	
1403. ....							XXX	
1498. Summary of remaining write-ins for Line 14 from overflow page .....							XXX	
1499. TOTALS (Lines 1401 thru 1403 plus 1498) (Line 14 above) .....							XXX	

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected. ....

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company  
**ANALYSIS OF INCREASE IN RESERVES DURING THE YEAR - INDIVIDUAL ANNUITIES (a)**

	1 Total	Deferred				6 Life Contingent Payout (Immediate and Annuitizations)	7 Other Annuities
		2 Fixed Annuities	3 Indexed Annuities	4 Variable Annuities With Guarantees	5 Variable Annuities Without Guarantees		
1. Reserve December 31 of prior year .....	32,933,697			32,933,697			
2. Tabular net premiums and considerations .....	9,800			9,800			
3. Increase or (decrease) from investment results after provision for federal income taxes .....	8,904,160			8,904,160			
4. Tabular less actual reserve released .....							
5. Increase in reserve on account of change in valuation basis .....							
6. Other increases (net) .....							
7. Totals (Lines 1 to 6) .....	41,847,657			41,847,657			
8. Net transfer of reserves from or (to) Separate Accounts .....	22,842			22,842			
9. Tabular cost .....							
10. Reserves released by death .....	.XXX	.XXX	.XXX	.XXX	.XXX	.XXX	
11. Reserves released by other terminations (net) .....	2,814,880			2,814,880			
12. Transfers on account of annuity and supplementary contract payments involving life contingencies .....	1,020,205			1,020,205			
13. Charges for investment management, administration and contract guarantees .....	553,956			553,956			
14. Aggregate write-ins for other decreases in reserves .....	(3,029)			(3,029)			
15. Total deductions (Lines 8 to 14) .....	4,408,854			4,408,854			
16. Reserve December 31 of current year .....	37,438,803			37,438,803			
<b>Cash Surrender Value and Policy Loans</b>							
17. CSV ending balance December 31, current year .....	37,249,830			37,249,830			
18. Amount available for policy loans based upon line 17 CSV .....							
<b>DETAILS OF WRITE-INS</b>							
1401. Change in surrender charge offset .....	(3,935)			(3,935)			
1402. Change in annuitant mortality fluctuation fund .....	906			906			
1403. ....							
1498. Summary of remaining write-ins for Line 14 from overflow page .....							
1499. TOTALS (Lines 1401 thru 1403 plus 1498) (Line 14 above) .....	(3,029)			(3,029)			

(a) Indicate if blocks of business in run-off that comprise less than 5% of premiums and less than 5% of reserve and loans liability are aggregated with material blocks of business and which columns are affected. ....

Analysis of Increase in Reserves During the Year - Group Annuities

**NONE**

Analysis of Reserves During the Year - Accident and Health

**NONE**

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**EXHIBIT OF NET INVESTMENT INCOME**

	1 Collected During Year	2 Earned During Year
1. U.S. Government bonds	(a) 16,017,472	15,999,498
1.1 Bonds exempt from U.S. tax	(a)	
1.2 Other bonds (unaffiliated)	(a) 91,344,206	91,356,738
1.3 Bonds of affiliates	(a)	
2.1 Preferred stocks (unaffiliated)	(b)	
2.11 Preferred stocks of affiliates	(b)	
2.2 Common stocks (unaffiliated)	100,256,825	100,256,657
2.21 Common stocks of affiliates		
3. Mortgage loans	(c) 579,386	574,336
4. Real estate	(d)	
5. Contract loans		
6. Cash, cash equivalents and short-term investments	(e) 606,810	641,197
7. Derivative instruments	(f) 7,470,772	7,470,772
8. Other invested assets		
9. Aggregate write-ins for investment income	(1,404,069)	(1,404,069)
10. Total gross investment income	214,871,402	214,895,129
11. Investment expenses		(g)
12. Investment taxes, licenses and fees, excluding federal income taxes		(g)
13. Interest expense		(h)
14. Depreciation on real estate and other invested assets		(i)
15. Aggregate write-ins for deductions from investment income		
16. Total deductions (Lines 11 through 15)		
17. Net investment income (Line 10 minus Line 16)		214,895,129
<b>DETAILS OF WRITE-INS</b>		
0901. Miscellaneous	(1,596,099)	(1,596,099)
0902. Amortization of IMR	192,030	192,030
0903.		
0998. Summary of remaining write-ins for Line 9 from overflow page		
0999. Totals (Lines 0901 thru 0903 plus 0998) (Line 9, above)	(1,404,069)	(1,404,069)
1501.		
1502.		
1503.		
1598. Summary of remaining write-ins for Line 15 from overflow page		
1599. Totals (Lines 1501 thru 1503 plus 1598) (Line 15, above)		

- (a) Includes \$ 1,318,231 accrual of discount less \$ 2,491,500 amortization of premium and less \$ 2,074,212 paid for accrued interest on purchases.
- (b) Includes \$ accrual of discount less \$ amortization of premium and less \$ paid for accrued dividends on purchases.
- (c) Includes \$ 1,511 accrual of discount less \$ 31,165 amortization of premium and less \$ paid for accrued interest on purchases.
- (d) Includes \$ for company's occupancy of its own buildings; and excludes \$ interest on encumbrances.
- (e) Includes \$ 11,623 accrual of discount less \$ 15,772 amortization of premium and less \$ 16,942 paid for accrued interest on purchases.
- (f) Includes \$ accrual of discount less \$ amortization of premium.
- (g) Includes \$ investment expenses and \$ investment taxes, licenses and fees, excluding federal income taxes, attributable to segregated and Separate Accounts.
- (h) Includes \$ interest on surplus notes and \$ interest on capital notes.
- (i) Includes \$ depreciation on real estate and \$ depreciation on other invested assets.

**EXHIBIT OF CAPITAL GAINS (LOSSES)**

	1	2	3	4	5
	Realized Gain (Loss) On Sales or Maturity	Other Realized Adjustments	Total Realized Capital Gain (Loss) (Columns 1 + 2)	Change in Unrealized Capital Gain (Loss)	Change in Unrealized Foreign Exchange Capital Gain (Loss)
1. U.S. Government bonds	2,788,241		2,788,241	7,970,470	
1.1 Bonds exempt from U.S. tax					
1.2 Other bonds (unaffiliated)	(5,696,375)		(5,696,375)	73,982,625	
1.3 Bonds of affiliates					
2.1 Preferred stocks (unaffiliated)					
2.11 Preferred stocks of affiliates					
2.2 Common stocks (unaffiliated)	35,345,478		35,345,478	116,120,435	
2.21 Common stocks of affiliates					
3. Mortgage loans					
4. Real estate					
5. Contract loans					
6. Cash, cash equivalents and short-term investments	2,530,658		2,530,658		
7. Derivative instruments	69,832		69,832	(55,829,490)	
8. Other invested assets					
9. Aggregate write-ins for capital gains (losses)					
10. Total capital gains (losses)	35,037,834		35,037,834	142,244,040	
<b>DETAILS OF WRITE-INS</b>					
0901.					
0902.					
0903.					
0998. Summary of remaining write-ins for Line 9 from overflow page					
0999. Totals (Lines 0901 thru 0903 plus 0998) (Line 9, above)					

Exhibit 1

**NONE**

Exhibit 2

**NONE**

### EXHIBIT 3 - AGGREGATE RESERVE FOR LIFE, ANNUITY AND ACCIDENT AND HEALTH CONTRACTS

1	2	3	4
Description of Valuation Basis	Total	Ordinary	Group
0100001. 58 CSO 4.00% Mod CRVM (issued 1983 to 1988)	11,172,967	11,172,967	
0100002. 80 CSO 5.50% CRVM (issued 1988 to 1992)	197,831,908	197,831,908	
0100003. 80 CSO 5.00% CRVM (issued 1993 to 1994)	571,363,228	571,363,228	
0100004. 80 CSO Account Value	3,794,773,188	2,635,047,393	1,159,725,795
0199999. Life Insurance: Totals	4,575,141,291	3,415,415,496	1,159,725,795
0200001. Deferred Annuity 4.75%-6.50% CARVM	37,252,374	37,252,374	
0200002. Annuity Reserve 4.00% VA Valuation 82	186,429	186,429	
0299999. Annuities: Totals	37,438,803	37,438,803	
9999999. Totals (to Page 3, Line 1)	4,612,580,094	3,452,854,299	1,159,725,795

### EXHIBIT 3 - INTERROGATORIES

- 1.1 Has the reporting entity ever issued both participating and non-participating variable life insurance contracts?..... Yes [ ] No [ X ]
- 2.1 Does the reporting entity at present issue both participating and non-participating variable life insurance contracts?..... Yes [ ] No [ X ]
- 2.2 If not, state which kind is issued  
Non-participating .....
- 3.1 Is any surrender value promised in excess of the reserve as legally computed? ..... Yes [ ] No [ X ] N/A [ ]
- 3.2 If so, the amount of such excess must be included in surrender values in excess of reserves otherwise required and carried in this schedule. Has this been done? ..... Yes [ ] No [ ] N/A [ X ]  
Attach a statement of methods employed in the valuation of variable life insurance contracts issued at, or subsequently subject to, an extra premium or in the valuation of contracts otherwise issued on lives classified as substandard for the plan of contract issued or on special class lives (including paid-up variable life insurance).

### EXHIBIT 3A - CHANGES IN BASIS OF VALUATION DURING THE YEAR

(Including supplementary contracts set up on a basis other than that used to determine benefits)

1 Description of Valuation Class	Valuation Basis		4 Increase in Actuarial Reserve Due to Change
	2 Changed From	3 Changed To	
<b>NONE</b>			
9999999 - Totals (Page 6, Line 5, Analysis of Increase in Reserves)			

Exhibit 4

**NONE**



ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**EXHIBIT 5 - RECONCILIATION OF CASH AND INVESTED ASSETS**

DEVELOPMENT OF INCREASE IN CASH		1 Amount
1. Transfers to Separate Accounts on account of:		
1.1 Net premiums and considerations for annuities and supplementary contracts with life contingencies .....		29,014,095
1.2 Aggregate write-ins for other transfers to Separate Accounts .....		
2. Deposits on deposit-type contract funds and other liabilities without life or disability contingencies .....		214,871,402
3. Investment income collected .....		(16,848,400)
4. Consideration on disposal of short-term bonds net of purchases .....		1,114,996,652
5. Consideration on disposal of investments (excluding short-term bonds) .....		
6. Aggregate write-ins for other increases in funds from operations .....		
7. Total (Lines 1 to 6) .....		1,342,033,749
8. Cost of investments acquired (excluding short-term bonds) .....		1,163,390,697
9. Transfers from Separate Accounts on account of contract benefits:		
9.1 Death benefits .....		35,451,534
9.2 Matured endowments .....		
9.3 Annuity benefits .....		1,020,205
9.4 Supplementary contract benefits with life contingencies .....		
9.5 Accident and health benefits .....		
9.6 Surrender benefits and withdrawals for life contracts .....		41,400,351
9.7 Policy loans (net) .....		6,796,504
9.8 Transfers of reserves (net) .....		(5,363,175)
9.9 Aggregate write-ins for other transfers from Separate Accounts on account of contract benefits .....		
10. Other transfers from Separate Accounts:		
10.1 Federal income taxes .....		
10.2 Aggregate write-ins for other transfers from Separate Accounts .....		1,892,278
11. Withdrawals on deposit-type contract funds and other liabilities without life or disability contingencies .....		
12. Investment expenses (Exhibit 1, Line 25) .....		
12.1 Fees associated with investment management, administration and contract guarantees .....		65,893,462
13. Investment taxes, licenses and fees, excluding federal income taxes (Exhibit 2, Line 9) .....		
14. Total (Lines 8 to 13) .....		1,310,481,856
15. Funds from operations (Line 7 minus Line 14) .....		31,551,893
16. Surplus contributed or (withdrawn) during year .....		
17. Aggregate write-ins for other changes in funds .....		
18. Total funds (includes \$ ..... net transfers from general account) (Lines 15 to 17) .....		31,551,893
19. Increase in payable for investments acquired, net of receivable for investments sold .....		(12,049,773)
20. Decrease in policy loans .....		
21. Aggregate write-ins for other reconciling items .....		
22. Increase in cash (Line 18 to 21) .....		19,502,120
<b>RECONCILIATION BETWEEN YEARS</b>		
23. Cash and invested assets, December 31st of prior year .....		4,334,615,763
24. Increase in cash (Line 22) .....		19,502,120
25. Cost of invested assets acquired .....		1,326,212,379
26. Adjusted cost of assets disposed of .....		1,225,239,659
27. Increase in policy loans .....		
28. Accrual of discount less amortization of premium .....		(1,207,073)
29. Depreciation on real estate and other invested assets .....		
30. Increase in net unrealized gains .....		142,244,041
31. Aggregate write-ins for other reconciling items .....		
32. Cash and invested assets, December 31st of current year .....		4,596,127,571
<b>DETAILS OF WRITE-INS</b>		
01.201. ....		
01.202. ....		
01.203. ....		
01.298. Summary of remaining write-ins for Line 1.2 from overflow page .....		
01.299. Totals (Lines 01.201 thru 01.203 plus 01.298) (Line 1.2 above) .....		
0601. ....		
0602. ....		
0603. ....		
0698. Summary of remaining write-ins for Line 6 from overflow page .....		
0699. Totals (Lines 0601 thru 0603 plus 0698) (Line 6 above) .....		
09.901. ....		
09.902. ....		
09.903. ....		
09.998. Summary of remaining write-ins for Line 9.9 from overflow page .....		
09.999. Totals (Lines 09.901 thru 09.903 plus 09.998) (Line 09.9 above) .....		
10.201. Change in remittances and items not allocated .....		1,799,416
10.202. Investment income recognized as a result of prepayment penalties and/or acceleration fees .....		92,862
10.203. ....		
10.298. Summary of remaining write-ins for Line 10.2 from overflow page .....		
10.299. Totals (Lines 10.201 thru 10.203 plus 10.298) (Line 10.2 above) .....		1,892,278
1701. ....		
1702. ....		
1703. ....		
1798. Summary of remaining write-ins for Line 17 from overflow page .....		
1799. Totals (Lines 1701 thru 1703 plus 1798) (Line 17 above) .....		
2101. ....		
2102. ....		
2103. ....		
2198. Summary of remaining write-ins for Line 21 from overflow page .....		
2199. Totals (Lines 2101 thru 2103 plus 2198) (Line 21 above) .....		
3101. ....		
3102. ....		
3103. ....		
3198. Summary of remaining write-ins for Line 31 from overflow page .....		
3199. Totals (Lines 3101 thru 3103 plus 3198) (Line 31 above) .....		

**EXHIBIT 6 - GUARANTEED INSURANCE AND ANNUITY PRODUCTS**

	1 Amount	2 Percent of Total
1. Aggregate reserve for life, annuity and accident and health contracts (Included in Exhibit 3):		
1.1 Life insurance .....	1,159,725,795	25.1
1.2 Annuities .....		
1.3 Supplementary contracts with life contingencies .....		
1.4 Accident and health .....		
1.5 Miscellaneous reserves .....		
1.6 Total .....	1,159,725,795	25.1
2. Liability for deposit-type contracts (included in Exhibit 4):		
2.1 Guaranteed interest contracts .....		
2.2 Annuities certain .....		
2.3 Supplemental contracts .....		
2.4 Dividend accumulations or refunds .....		
2.5 Premium and other deposit funds .....		
2.6 Total .....		
3. Other liabilities (included in Page 3, Lines 4, 10, 13 & 14) .....	(5,622,180)	(0.1)
4. Total liabilities associated with guarantees (Lines 1.6 + 2.6 + 3) .....	1,154,103,615	25.0
5. Total liabilities not associated with guarantees .....	3,464,150,521	75.0
6. Total Separate Accounts liabilities (Lines 4 + 5 = Page 3, Line 17)	4,618,254,136	100.0%

## GENERAL INTERROGATORIES

**Product Mix**

1.01 Identify the product types in the separate account, quantify the assets associated with those products, indicate if there are any guarantees associated with those products, quantify seed money and quantify other fees and expenses due to the general account:

Note: A distinct product identifier shall be used for each product and shall be used consistently throughout the interrogatory.

1 Product Identifier	Separate Account Assets		4 Guarantees Associated with the Product Yes/No	5 Seed Money	6 Fees and Expenses Due to the General Account	7 Additional Required Surplus Amounts
	2 Registered with SEC	3 Not Registered with SEC				
Stable Value Bank-owned Life Insurance .....		2,325,479,768	YES			
Bank-owned Life Insurance - Guaranteed .....		1,155,221,986	YES		10,699,344	
Individual Variable Universal Life .....	781,066,160		YES			
Corporate-owned Life Insurance .....		319,025,184	YES			
Individual Variable Annuity .....	37,461,037		YES			
<b>Totals</b>	<b>818,527,197</b>	<b>3,799,726,938</b>	<b>XXX</b>		<b>10,699,344</b>	

Note: Additional Required Surplus Amounts is defined as additional or permanent surplus that is required to be retained in the separate account in accordance with state law or regulation. These amounts should not include reinvested separate account investment proceeds that have not been allocated to separate account contract holders.

1.01A For the products (and related assets) that are not registered with the SEC, identify whether the products are considered private placement variable annuity products or private placement life insurance.

1 Product Identifier	Not Registered with SEC		
	2 Private Placement Variable Annuity	3 Private Placement Life Insurance	4 Other (Not PPVA or PPLI)
Stable Value Bank-owned Life Insurance .....			2,325,479,768
Bank-owned Life Insurance - Guaranteed .....			1,155,221,986
Corporate-owned Life Insurance .....			319,025,184
<b>Totals</b>			<b>3,799,726,938</b>

1.02 Did the reporting entity remit seed money, other fees and expenses or additional required surplus amounts to the general account during the current year? Yes [ X ] No [ ]

1.03 If yes, provide information on the total gross amount of seed money, other fees and expenses or additional required surplus amounts remitted to the general account during the current year (these amounts should not be reflected in the seed money totals in 1.01):

1.031 Seed Money.....	\$ .....
1.032 Other Fees and Expenses.....	\$ .....129,925
1.033 Additional Required Surplus Amounts .....	\$ .....

1.04 Did the reporting entity receive seed money from the general account in the current year? Yes [ ] No [ X ]

1.05 If yes, provide information on the total gross amount of seed money received in the current year: (If amounts were both received and remitted in the current year, include the gross amounts in both 1.031 and 1.051.)

1.051 Seed Money Received.....	\$ .....
--------------------------------	----------

1.06 Does the reporting entity consider any of the seed money reflected in separate accounts to be insulated from the general account? Yes [ ] No [ ] N/A [ X ]

1.07 If yes, provide information on the amount of seed money the reporting entity considers insulated from the general account:

1.071 Insulated Seed Money ..... \$ .....

1.08 Does the reporting entity have a policy for repatriating seed money or remitting fees and expenses due and additional required surplus amounts to the general account:

1.081 Seed Money.....	Yes [ ] No [ ]
1.082 Other Fees and Expenses.....	Yes [ X ] No [ ]
1.083 Additional Required Surplus Amounts .....	Yes [ ] No [ ]

1.09 Provide detail on the time duration for which seed money, other fees and expenses due to the general account and additional required surplus amounts have been held in the separate account:

	1 Seed Money	2 Fees and Expenses Due to the General Account	3 Additional Required Surplus Amounts
1.091 Under 1 Year .....			
1.092 1 Year - 3 Years .....			
1.093 Over 3 Years - 5 Years .....		10,699,344	
1.094 Over 5 Years .....			
1.095 Total		10,699,344	

1.10 For seed money, other fees and expenses, and additional required surplus amounts held in the separate account, does the reporting entity invest these funds in accordance with investment directives of the general account:

1.101 Seed Money.....	Yes [ ] No [ ] N/A [ X ]
1.102 Other Fees and Expenses.....	Yes [ ] No [ X ] N/A [ ]
1.103 Additional Required Surplus Amounts .....	Yes [ ] No [ ] N/A [ X ]

## GENERAL INTERROGATORIES

1.11 If no, does the reporting entity have stated policy and procedure for the investment of seed money, other fees and expenses, and additional required surplus amounts that are retained with the separate account?

1.111 Seed Money..... Yes [ ] No [ ] N/A [ X ]  
 1.112 Other Fees and Expenses..... Yes [ X ] No [ ] N/A [ ]  
 1.113 Additional Required Surplus Amounts .... Yes [ ] No [ ] N/A [ X ]

**Separate Account Products with General Account Guarantees**

- 2.1 Does the reporting entity have products with guarantees provided by the general account? ..... Yes [ X ] No [ ]
- 2.2 Has the separate account collected amounts from the general account within the past five years related to separate account guarantees? ..... Yes [ X ] No [ ]
- 2.3 If yes, provide detail on these guarantees paid by the general account:

	1 Year	2 Amount
2.301	As of December 31, 2019 .....	\$ .....97,757
2.302	As of December 31, 2018 .....	\$ .....322,625
2.303	As of December 31, 2017 .....	\$ .....278,674
2.304	As of December 31, 2016 .....	\$ .....517,611
2.305	As of December 31, 2015 .....	\$ .....386,032

- 2.4 To compensate the general account for the risk taken, for any separate account products with general account guarantees, does the separate account remit risk charges to the general account related to separate account guarantees? ..... Yes [ ] No [ X ]
- 2.5 If yes, identify the separate account products with risk charges that are remitted to the general account and whether the risk charge for that product is reviewed and opined upon:

1	2	3
Product Identifier with Risk Charges	Risk Charge Reviewed and Opined Upon	Name and Title of Individual who Provided Opinion on Risk Charges

2.6 Provide detail on the risk charges paid to the general account related to separate account guarantees for the past five years:

	1 Year	2 Amount
2.601	As of December 31, 2019 .....	\$ .....
2.602	As of December 31, 2018 .....	\$ .....
2.603	As of December 31, 2017 .....	\$ .....
2.604	As of December 31, 2016 .....	\$ .....
2.605	As of December 31, 2015 .....	\$ .....

**Investment Directive of Separate Account Activity**

- 3.1 Does the reporting entity have products classified within the separate account for which the investment directive is not determined by the contract holder? (Situations in which the investments directive mirrors the general account would not be considered determined by the contract holder; however, having the contract holder select an investment direction from multiple options would meet this criteria.) ..... Yes [ X ] No [ ]
- 3.2 If yes, if these investments would have been included in the general account, would the reporting entity have exceeded the investment limitations imposed on the general account? ..... Yes [ ] No [ X ] N/A [ ]
- 3.3 Provide detail on the separate account investment portfolio and state investment limitations. (This includes the combined separate account and general investments, excluding separate account assets with investment direction determined by the contract holder):

1	2	3
Investment Type	State Investment Limitation	Combined Investment (Separate and General Account)

**Allocation of Investment Proceeds of Separate Account Activity**

- 4.1 Does the reporting entity have separate account assets in which less than 100% of investment proceeds (net of contract fees and assessments) are attributed to a contract holder? (This should identify any situations where there is a ceiling on investment performance results.) ..... Yes [ ] No [ X ]

## GENERAL INTERROGATORIES

4.2 If yes, provide detail on the net investment proceeds that were attributed to the contract holder, transferred to the general account and reinvested within the separate account:

1 Product Identifier	2 Net Investment Proceeds	3 Attributed to Contract Holder	4 Transferred to General Account	5 Reinvested Within the Separate Account

4.3 For items reinvested within the Separate Account, does the reporting entity invest these assets in accordance with investment directives of the general account? ..... Yes [ ] No [ ] N/A [ X ]

4.4 If no, does the reporting entity have a stated policy and procedure for the reinvestment of investment proceeds within the separate account? ..... Yes [ ] No [ ] N/A [ X ]

4.5 Did the reinvestment of investment proceeds within the separate account result with the company having a combined investment portfolio that exceeded the state investment limitations imposed on the general account? ..... Yes [ ] No [ ] N/A [ X ]

**Measurement of Separate Account Assets**

5.1 Does the reporting entity report all separate account assets at fair value? ..... Yes [ ] No [ X ]

5.2 For items not reported at fair value, does the reporting entity report separate account assets at amortized cost, and/or under different measurement methods?  
 5.21 Amortized Cost ..... Yes [ X ] No [ ]  
 5.22 Other Measurement Methods ..... Yes [ ] No [ X ]

5.3 If other measurement methods are used, provide explanation on these measurement methods.  
 .....

5.4 Identify the assets measured at fair value, amortized cost or another measurement method and the percentage of separate account assets measured under each measurement method:

Description	1 Amount	2 Percentage
5.41 Fair Value .....	\$ 3,524,397,637	76.3 %
5.42 Amortized Cost .....	\$ 1,093,856,499	23.7 %
5.43 Other Measurement Methods .....	\$ .....	% .....

5.5 For the assets not measured at fair value, provide a comparison of the reported value to current fair value and identify the unrealized gain or loss that would have been recorded if the assets had been reported at fair value:

1 Assets Held at Amortized Cost	2 Fair Value	3 Unrecorded Unrealized Gain/Loss
5.51... \$ 1,093,856,499	\$ 1,133,452,169	\$ 39,595,670

1 Assets Held at Other Measurement Method	2 Fair Value	3 Unrecorded Unrealized Gain/Loss
5.52... \$ .....	\$ .....	\$ .....

**Securities Lending Transactions Within Separate Accounts**

6.1 Does the reporting entity engage in securities lending transactions with separate account assets? ..... Yes [ ] No [ X ]

6.2 If yes, does the reporting entity have written policies and procedures for such transactions? ..... Yes [ ] No [ ] N/A [ X ]

6.3 Does the reporting entity obtain approval, or otherwise provide notification to contract holders, regarding securities lending transactions that occur with separate account assets? ..... Yes [ ] No [ ] N/A [ X ]

6.4 Are all securities lending transactions reported on balance sheet? ..... Yes [ ] No [ ] N/A [ X ]

6.5 Provide a description of the reporting entity's securities lending transaction program, specifically identifying any variations from the securities lending transaction program administered by the general account.

6.6 Provide detail on the current status of separate account transactions by separate account product:

6.61 Amount of any loaned securities within the separate account and the percentage of separate account assets lent  
 6.611 Amount ..... \$ .....  
 6.612 Percentage ..... %  
 6.62 Identify whether securities lent are reported at book value or market value  
 6.621 Book Value ..... \$ .....  
 6.622 Market Value ..... \$ .....

## GENERAL INTERROGATORIES

6.63 Detail on collateral received:

6.631 Aggregate Amount Collateral Received

6.6311 Open .....	\$ .....
6.6312 30 Days or Less.....	\$ .....
6.6313 31 to 60 Days.....	\$ .....
6.6314 61 to 90 Days.....	\$ .....
6.6315 Greater than 90 Days.....	\$ .....
6.6316 Total Collateral Received.....	\$ .....

6.632 The aggregate fair value of all securities acquired from the sale, trade or use of the accepted collateral (reinvested collateral) .....\$ .....

6.633 Narrative discussion about sources and uses of collateral:  
.....

6.634 Collateral for transactions that extend beyond one year from the reporting date .....\$ .....

6.7 For the reporting entity's security lending program state the amount of the following as December 31 of the current year:

6.71 Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2 (Sum of Schedule DL, Parts 1 and 2, Column 5) .....	\$ .....
6.72 Total book adjusted/carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2 (Sum of Schedule DL, Parts 1 and 2, Column 6) .....	\$ .....
6.73 Total payable for securities lending reported on the liability page (Page 3, Line 14, Column 3) .....	\$ .....

**FHLB Funding Agreements**

7.1 Does the reporting entity report Federal Home Loan Bank (FHLB) funding agreements within the separate account? ..... Yes [ ] No [ X ]

7.2 Provide detail on the elements that support the classification of FHLB funding agreements within the separate account  
.....

7.3 Provide detail regarding the FHLB funding agreements classified within the separate account:

1 Amount of FHLB Stock Purchased or Owned	2 Amount of Collateral Pledged to the FHLB	3 Total Borrowing or Funding Capacity Currently Available	4 Total Reserves Related to FHLB Agreements
\$ .....	\$ .....	\$ .....	\$ .....

7.4 For funding agreements within the separate account, provide a general description on the nature of the agreement, type of funding (lines of credit, borrowed money, etc) and intended use of funding.  
.....

**Reporting Differences Between GAAP and SAP Financial Statements (This disclosure is applicable to all reporting entities regardless if they file GAAP financial statements)**

8.1 Does the reporting entity file GAAP financial statements? ..... Yes [ ] No [ X ]

8.2 In accordance with the different separate account reporting requirements between GAAP (SOP 03-1) and statutory accounting, does the reporting entity have products that are classified within the separate account that were, or would have been if GAAP financial statements had been completed, required to be reported within the general account under GAAP financials? Pursuant to SOP 03-1, all of the following conditions must be met to receive separate account reporting classification under GAAP: ..... Yes [ X ] No [ ] N/A [ ]

- a. Legal Recognition - The separate account is legally recognized. That is, the separate account is established, approved, and regulated under special rules such as state insurance laws, federal securities laws, or similar foreign laws.
- b. Legally Insulated - The separate account assets supporting the contract liabilities are legally insulated from the general account liabilities of the insurance enterprise (that is, the contract holder is not subject to insurer default risk to the extent of the assets held in the separate account).
- c. Investment Directive - The insurer must, as a result of contractual, statutory, or regulatory requirements, invest the contract holder's funds within the separate account as directed by the contract holder in designated investment alternatives or in accordance with specific investment objectives or policies.
- d. Investment Performance - All investment performance, net of contract fees and assessments, must as a result of contractual, statutory, or regulatory requirements be passed through to the individual contract holder. Contracts may specify conditions under which there may be a minimum guarantee, but not a ceiling, as a ceiling would prohibit all investment performance from being passed through to the contract holder

## GENERAL INTERROGATORIES

8.3 Identify all separate account products and identify whether each product was classified within a separate account for GAAP reporting purposes. (For non-GAAP filers, this disclosure should reflect whether the GAAP classification would have been the same if GAAP financials had been completed.) For products that were (or would have been) reported differently, identify which SOP 03-1 condition prevented separate account GAAP classification for that particular product.

1	2
Product Identifier	Same as GAAP / Condition that Requires GAAP General Account Reporting
Stable Value Bank-owned Life Insurance .....	GAAP GIA Classification due to Investment Performance .....
Bank-owned Life Insurance - Guaranteed .....	GAAP GIA Classification due to Investment Performance .....
Individual Variable Universal Life .....	Same as GAAP .....
Corporate-owned Life Insurance .....	Same as GAAP .....
Individual Variable Annuity .....	Same as GAAP .....

**FORM FOR CALCULATING THE INTEREST MAINTENANCE RESERVE**

**INTEREST MAINTENANCE RESERVE**

	1 Amount
1. Reserve as of December 31, Prior Year .....	1,272,221
2. Current year's realized pre-tax capital gains/(losses) of \$ ..... 5,743,272 transferred into the reserve net of taxes of \$ ..... (2,010,145) .....	3,733,127
3. Adjustment for current year's liability gains/(losses) released from the reserve .....	(3,733,127)
4. Balance before reduction for amount transferred to Summary of Operations (Line 1 + Line 2 + Line 3) .....	1,272,221
5. Current year's amortization released to Summary of Operations (Amortization, Line 1, Column 4) .....	192,030
6. Reserve as of December 31, current year (Line 4 minus Line 5)	1,080,191

**AMORTIZATION**

Year of Amortization	1 Reserve as of December 31, Prior Year	2 Current Year's Realized Capital Gains/(Losses) Transferred into the Reserve Net of Taxes	3 Adjustment for Current Year's Liability Gains/(Losses) Released From the Reserve	4 Balance Before Reduction for Current Year's Amortization (Cols. 1 + 2 + 3)
1. 2019 .....	192,024	321,882	(321,876)	192,030
2. 2020 .....	199,905	564,749	(564,755)	199,899
3. 2021 .....	201,531	451,044	(451,044)	201,531
4. 2022 .....	205,545	382,117	(382,117)	205,545
5. 2023 .....	218,817	312,287	(312,287)	218,817
6. 2024 .....	220,096	240,208	(240,208)	220,096
7. 2025 .....	192,984	186,125	(186,125)	192,984
8. 2026 .....	147,494	158,128	(158,128)	147,494
9. 2027 .....	92,398	126,920	(126,920)	92,398
10. 2028 .....	31,684	94,354	(94,354)	31,684
11. 2029 .....	(24,188)	60,868	(60,868)	(24,188)
12. 2030 .....	(47,764)	47,867	(47,867)	(47,764)
13. 2031 .....	(54,315)	49,812	(49,812)	(54,315)
14. 2032 .....	(53,310)	54,190	(54,190)	(53,310)
15. 2033 .....	(49,230)	57,220	(57,220)	(49,230)
16. 2034 .....	(47,355)	60,723	(60,723)	(47,355)
17. 2035 .....	(47,009)	59,922	(59,922)	(47,009)
18. 2036 .....	(40,456)	55,528	(55,528)	(40,456)
19. 2037 .....	(32,313)	51,590	(51,590)	(32,313)
20. 2038 .....	(24,203)	47,135	(47,135)	(24,203)
21. 2039 .....	(10,114)	42,329	(42,329)	(10,114)
22. 2040 .....		40,032	(40,032)	
23. 2041 .....		40,516	(40,516)	
24. 2042 .....		39,922	(39,922)	
25. 2043 .....		40,961	(40,961)	
26. 2044 .....		40,471	(40,471)	
27. 2045 .....		37,447	(37,447)	
28. 2046 .....		29,805	(29,805)	
29. 2047 .....		21,398	(21,398)	
30. 2048 .....		12,992	(12,992)	
31. 2049 and Later		4,585	(4,585)	
32. Total (Lines 1 to 31)	1,272,221	3,733,127	(3,733,127)	1,272,221



**ASSET VALUATION RESERVE**  
**BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS**  
**DEFAULT COMPONENT**

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols.4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
<b>LONG-TERM BONDS</b>												
1.		Exempt Obligations .....	343,941,878	XXX	XXX	343,941,878	0.0000		0.0000		0.0000	
2.	1	Highest Quality .....	553,003,378	XXX	XXX	553,003,378	0.0005	276,502	0.0016	884,805	0.0033	1,824,911
3.	2	High Quality .....	181,032,544	XXX	XXX	181,032,544	0.0021	380,168	0.0064	1,158,608	0.0106	1,918,945
4.	3	Medium Quality .....	2,500,881	XXX	XXX	2,500,881	0.0099	24,759	0.0263	65,773	0.0376	94,033
5.	4	Low Quality .....	1,812,202	XXX	XXX	1,812,202	0.0245	44,399	0.0572	103,658	0.0817	148,057
6.	5	Lower Quality .....	87,379	XXX	XXX	87,379	0.0630	5,505	0.1128	9,856	0.1880	16,427
7.	6	In or Near Default .....		XXX	XXX		0.0000		0.2370		0.2370	
8.		Total Unrated Multi-class Securities Acquired by Conversion ..		XXX	XXX		XXX		XXX		XXX	
9.		Total Long-Term Bonds (Sum of Lines 1 through 8)	1,082,378,262	XXX	XXX	1,082,378,262	XXX	731,333	XXX	2,222,701	XXX	4,002,373
<b>PREFERRED STOCK</b>												
10.	1	Highest Quality .....		XXX	XXX		0.0005		0.0016		0.0033	
11.	2	High Quality .....		XXX	XXX		0.0021		0.0064		0.0106	
12.	3	Medium Quality .....		XXX	XXX		0.0099		0.0263		0.0376	
13.	4	Low Quality .....		XXX	XXX		0.0245		0.0572		0.0817	
14.	5	Lower Quality .....		XXX	XXX		0.0630		0.1128		0.1880	
15.	6	In or Near Default .....		XXX	XXX		0.0000		0.2370		0.2370	
16.		Affiliated Life with AVR .....		XXX	XXX		0.0000		0.0000		0.0000	
17.		Total Preferred Stocks (Sum of Lines 10 through 16)		XXX	XXX		XXX		XXX		XXX	
<b>SHORT - TERM BONDS</b>												
18.		Exempt Obligations .....	188,912	XXX	XXX	188,912	0.0000		0.0000		0.0000	
19.	1	Highest Quality .....	4,251,613	XXX	XXX	4,251,613	0.0005	2,126	0.0016	6,803	0.0033	14,030
20.	2	High Quality .....		XXX	XXX		0.0021		0.0064		0.0106	
21.	3	Medium Quality .....		XXX	XXX		0.0099		0.0263		0.0376	
22.	4	Low Quality .....		XXX	XXX		0.0245		0.0572		0.0817	
23.	5	Lower Quality .....		XXX	XXX		0.0630		0.1128		0.1880	
24.	6	In or Near Default .....		XXX	XXX		0.0000		0.2370		0.2370	
25.		Total Short - Term Bonds (Sum of Lines 18 through 24)	4,440,525	XXX	XXX	4,440,525	XXX	2,126	XXX	6,803	XXX	14,030
<b>DERIVATIVE INSTRUMENTS</b>												
26.		Exchange Traded .....		XXX	XXX		0.0005		0.0016		0.0033	
27.	1	Highest Quality .....	40,516	XXX	XXX	40,516	0.0005	20	0.0016	65	0.0033	134
28.	2	High Quality .....		XXX	XXX		0.0021		0.0064		0.0106	
29.	3	Medium Quality .....		XXX	XXX		0.0099		0.0263		0.0376	
30.	4	Low Quality .....		XXX	XXX		0.0245		0.0572		0.0817	
31.	5	Lower Quality .....		XXX	XXX		0.0630		0.1128		0.1880	
32.	6	In or Near Default .....		XXX	XXX		0.0000		0.2370		0.2370	
33.		Total Derivative Instruments .....	40,516	XXX	XXX	40,516	XXX	20	XXX	65	XXX	134
34.		Total (Lines 9 + 17 + 25 + 33)	1,086,859,303	XXX	XXX	1,086,859,303	XXX	733,479	XXX	2,229,569	XXX	4,016,537

**ASSET VALUATION RESERVE (Continued)**  
**BASIC CONTRIBUTION, RESERVE OBJECTIVE AND MAXIMUM RESERVE CALCULATIONS**  
**DEFAULT COMPONENT**

Line Number	NAIC Designation	Description	1 Book/Adjusted Carrying Value	2 Reclassify Related Party Encumbrances	3 Add Third Party Encumbrances	4 Balance for AVR Reserve Calculations (Cols. 1 + 2 + 3)	Basic Contribution		Reserve Objective		Maximum Reserve	
							5 Factor	6 Amount (Cols. 4 x 5)	7 Factor	8 Amount (Cols. 4 x 7)	9 Factor	10 Amount (Cols. 4 x 9)
MORTGAGE LOANS												
In Good Standing:												
35.		Farm Mortgages - CM1 - Highest Quality .....			XXX		0.0011		0.0057		0.0074	
36.		Farm Mortgages - CM2 - High Quality .....			XXX		0.0040		0.0114		0.0149	
37.		Farm Mortgages - CM3 - Medium Quality .....			XXX		0.0069		0.0200		0.0257	
38.		Farm Mortgages - CM4 - Low Medium Quality .....			XXX		0.0120		0.0343		0.0428	
39.		Farm Mortgages - CM5 - Low Quality .....			XXX		0.0183		0.0486		0.0628	
40.		Residential Mortgages - Insured or Guaranteed .....	11,478,238		XXX	11,478,238	0.0003	3,443	0.0007	8,035	0.0011	12,626
41.		Residential Mortgages - All Other .....			XXX		0.0015		0.0034		0.0046	
42.		Commercial Mortgages - Insured or Guaranteed .....			XXX		0.0003		0.0007		0.0011	
43.		Commercial Mortgages - All Other - CM1 - Highest Quality .....			XXX		0.0011		0.0057		0.0074	
44.		Commercial Mortgages - All Other - CM2 - High Quality .....			XXX		0.0040		0.0114		0.0149	
45.		Commercial Mortgages - All Other - CM3 - Medium Quality .....			XXX		0.0069		0.0200		0.0257	
46.		Commercial Mortgages - All Other - CM4 - Low Medium Quality .....			XXX		0.0120		0.0343		0.0428	
47.		Commercial Mortgages - All Other - CM5 - Low Quality .....			XXX		0.0183		0.0486		0.0628	
Overdue, Not in Process:												
48.		Farm Mortgages .....			XXX		0.0480		0.0868		0.1371	
49.		Residential Mortgages - Insured or Guaranteed .....			XXX		0.0006		0.0014		0.0023	
50.		Residential Mortgages - All Other .....			XXX		0.0029		0.0066		0.0103	
51.		Commercial Mortgages - Insured or Guaranteed .....			XXX		0.0006		0.0014		0.0023	
52.		Commercial Mortgages - All Other .....			XXX		0.0480		0.0868		0.1371	
In Process of Foreclosure:												
53.		Farm Mortgages .....			XXX		0.0000		0.1942		0.1942	
54.		Residential Mortgages - Insured or Guaranteed .....			XXX		0.0000		0.0046		0.0046	
55.		Residential Mortgages - All Other .....			XXX		0.0000		0.0149		0.0149	
56.		Commercial Mortgages - Insured or Guaranteed .....			XXX		0.0000		0.0046		0.0046	
57.		Commercial Mortgages - All Other .....			XXX		0.0000		0.1942		0.1942	
58.		Total Schedule B Mortgages (Sum of Lines 35 through 57)	11,478,238		XXX	11,478,238	XXX	3,443	XXX	8,035	XXX	12,626
59.		Schedule DA Mortgages			XXX		0.0034		0.0114		0.0149	
60.		Total Mortgage Loans on Real Estate (Lines 58 + 59)	11,478,238		XXX	11,478,238	XXX	3,443	XXX	8,035	XXX	12,626

Asset Valuation Reserve - Equity Component

**NONE**

Asset Valuation Reserve - Replications (Synthetic) Assets

**NONE**

**OVERFLOW PAGE FOR WRITE-INS**

**NONE**

## SCHEDULE A - VERIFICATION BETWEEN YEARS

Real Estate

1.	Book/adjusted carrying value, December 31 of prior year .....	
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 6) .....	
2.2	Additional investment made after acquisition (Part 2, Column 9) .....	
3.	Current year change in encumbrances:	
3.1	Totals, Part 1, Column 13 .....	
3.2	Totals, Part 3, Column 11 .....	
4.	Total gain (loss) on disposals, Part 3, Column 18 .....	
5.	Deduct amounts received on disposals, Part 3, Column 15 .....	
6.	Total foreign exchange change in book/adjusted carrying value:	
6.1	Totals, Part 1, Column 15 .....	
6.2	Totals, Part 3, Column 13 .....	
7.	Deduct current year's other than temporary impairment recognized:	
7.1	Totals, Part 1, Column 12 .....	
7.2	Totals, Part 3, Column 10 .....	
8.	Deduct current year's depreciation:	
8.1	Totals, Part 1, Column 11 .....	
8.2	Totals, Part 3, Column 9 .....	
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) .....	

NONE

## SCHEDULE B - VERIFICATION BETWEEN YEARS

Mortgage Loans

1.	Book value/recorded investment excluding accrued interest, December 31 of prior year .....	12,946,744
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 7) .....	
2.2	Additional investment made after acquisition (Part 2, Column 8) .....	6,302
3.	Capitalized deferred interest and other:	
3.1	Totals, Part 1, Column 12 .....	
3.2	Totals, Part 3, Column 11 .....	
4.	Accrual of discount .....	1,511
5.	Unrealized valuation increase (decrease):	
5.1	Totals, Part 1, Column 9 .....	
5.2	Totals, Part 3, Column 8 .....	
6.	Total gain (loss) on disposals, Part 3, Column 18 .....	
7.	Deduct amounts received on disposals, Part 3, Column 15 .....	1,445,154
8.	Deduct amortization of premium and mortgage interest points and commitment fees .....	31,165
9.	Total foreign exchange change in book value/recorded investment excluding accrued interest:	
9.1	Totals, Part 1, Column 13 .....	
9.2	Totals, Part 3, Column 13 .....	
10.	Deduct current year's other than temporary impairment recognized:	
10.1	Totals, Part 1, Column 11 .....	
10.2	Totals, Part 3, Column 10 .....	
11.	Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10) .....	11,478,238
12.	Total valuation allowance .....	
13.	Subtotal (Line 11 plus 12) .....	11,478,238
14.	Deduct total nonadmitted amounts .....	
15.	Statement value of mortgages owned at end of current period (Line 13 minus Line 14) .....	11,478,238

## SCHEDULE BA - VERIFICATION BETWEEN YEARS

Other Long-Term Invested Assets

1.	Book/adjusted carrying value, December 31 of prior year .....	
2.	Cost of acquired:	
2.1	Actual cost at time of acquisition (Part 2, Column 8) .....	
2.2	Additional investment made after acquisition (Part 2, Column 9) .....	
3.	Capitalized deferred interest and other:	
3.1	Totals, Part 1, Column 16 .....	
3.2	Totals, Part 3, Column 12 .....	
4.	Accrual of discount .....	
5.	Unrealized valuation increase (decrease):	
5.1	Totals, Part 1, Column 13 .....	
5.2	Totals, Part 3, Column 9 .....	
6.	Total gain (loss) on disposals, Part 3, Column 19 .....	
7.	Deduct amounts received on disposals, Part 3, Column 18 .....	
8.	Deduct amortization of premium and depreciation .....	
9.	Total foreign exchange change in book/adjusted carrying value:	
9.1	Totals, Part 1, Column 17 .....	
9.2	Totals, Part 3, Column 14 .....	
10.	Deduct current year's other than temporary impairment recognized:	
10.1	Totals, Part 1, Column 15 .....	
10.2	Totals, Part 3, Column 11 .....	
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10) .....	
12.	Deduct total nonadmitted amounts .....	
13.	Statement value at end of current period (Line 11 minus Line 12) .....	

**NONE**

## SCHEDULE D - VERIFICATION BETWEEN YEARS

Bonds and Stocks

1.	Book/adjusted carrying value, December 31 of prior year .....	4,091,851,030
2.	Cost of bonds and stocks acquired, Part 3, Column 7 .....	1,165,932,368
3.	Accrual of discount .....	1,318,231
4.	Unrealized valuation increase (decrease):	
4.1.	Part 1, Column 12 .....	74,702,637
4.2.	Part 2, Section 1, Column 15 .....	
4.3.	Part 2, Section 2, Column 13 .....	140,181,642
4.4.	Part 4, Column 11 .....	(16,810,749)
5.	Total gain (loss) on disposals, Part 4, Column 19 .....	32,437,344
6.	Deduction consideration for bonds and stocks disposed of, Part 4, Column 7 .....	1,113,481,661
7.	Deduct amortization of premium .....	2,491,500
8.	Total foreign exchange change in book/adjusted carrying value:	
8.1.	Part 1, Column 15 .....	
8.2.	Part 2, Section 1, Column 19 .....	
8.3.	Part 2, Section 2, Column 16 .....	
8.4.	Part 4, Column 15 .....	
9.	Deduct current year's other than temporary impairment recognized:	
9.1.	Part 1, Column 14 .....	
9.2.	Part 2, Section 1, Column 17 .....	
9.3.	Part 2, Section 2, Column 14 .....	
9.4.	Part 4, Column 13 .....	
10.	Total investment income recognized as a result of prepayment penalties and/or acceleration fees, Note 5Q, Line 2 .....	92,862
11.	Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9+10) .....	4,373,732,204
12.	Deduct total nonadmitted amounts .....	
13.	Statement value at end of current period (Line 11 minus Line 12) .....	4,373,732,204

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**SCHEDULE D - SUMMARY BY COUNTRY**

Long-Term Bonds and Stocks OWNED December 31 of Current Year

Description		1 Book/Adjusted Carrying Value	2 Fair Value	3 Actual Cost	4 Par Value of Bonds
<b>BONDS</b>					
Governments (Including all obligations guaranteed by governments)	1. United States .....	579,603,919	590,712,740	576,312,031	568,561,869
	2. Canada .....	7,396,441	7,600,772	7,495,622	7,215,000
	3. Other Countries	4,354,484	4,619,716	4,335,164	4,267,100
	4. Totals	591,354,844	602,933,228	588,142,817	580,043,969
U.S. States, Territories and Possessions (Direct and guaranteed)	5. Totals	313,001	313,001	249,504	235,000
U.S. Political Subdivisions of States, Territories and Possessions (Direct and guaranteed)	6. Totals	308,443	315,250	302,869	270,000
U.S. Special Revenue and Special Assessment Obligations and all Non- Guaranteed Obligations of Agencies and Authorities of Governments and their Political Subdivisions	7. Totals	1,503,002,843	1,506,207,533	1,479,106,746	1,437,047,476
Industrial and Miscellaneous, SVO Identified Funds, Unaffiliated Bank Loans and Hybrid Securities (unaffiliated)	8. United States .....	1,097,671,269	1,119,911,426	1,088,426,449	1,068,096,414
	9. Canada .....	19,257,993	19,933,244	19,240,597	19,229,800
	10. Other Countries	84,051,256	85,939,551	84,096,096	83,573,500
	11. Totals	1,200,980,518	1,225,784,221	1,191,763,142	1,170,899,714
Parent, Subsidiaries and Affiliates	12. Totals				
	13. Total Bonds	3,295,959,649	3,335,553,233	3,259,565,078	3,188,496,159
<b>PREFERRED STOCKS</b>					
Industrial and Miscellaneous (unaffiliated)	14. United States .....				
	15. Canada .....				
	16. Other Countries				
	17. Totals				
Parent, Subsidiaries and Affiliates	18. Totals				
	19. Total Preferred Stocks				
<b>COMMON STOCKS</b>					
Industrial and Miscellaneous (unaffiliated)	20. United States .....	1,077,772,555	1,077,772,555	861,167,749	
	21. Canada .....				
	22. Other Countries				
	23. Totals	1,077,772,555	1,077,772,555	861,167,749	
Parent, Subsidiaries and Affiliates	24. Totals				
	25. Total Common Stocks	1,077,772,555	1,077,772,555	861,167,749	
	26. Total Stocks	1,077,772,555	1,077,772,555	861,167,749	
	27. Total Bonds and Stocks	4,373,732,204	4,413,325,788	4,120,732,827	

ANNUAL STATEMENT FOR THE YEAR 2019 OF THE SEPARATE ACCOUNTS OF THE MML Bay State Life Insurance Company

**SCHEDULE DA - VERIFICATION BETWEEN YEARS**

Short-Term Investments

	1	2	3	4	5
	Total	Bonds	Mortgage Loans	Other Short-term Investment Assets (a)	Investments in Parent, Subsidiaries and Affiliates
1. Book/adjusted carrying value, December 31 of prior year .....	39,577,197	39,577,197			
2. Cost of short-term investments acquired .....	162,821,682	162,821,682			
3. Accrual of discount .....	7,464	7,464			
4. Unrealized valuation increase (decrease) .....					
5. Total gain (loss) on disposals .....	993,577	993,577			
6. Deduct consideration received on disposals .....	145,973,301	145,973,301			
7. Deduct amortization of premium .....	7,446	7,446			
8. Total foreign exchange change in book/adjusted carrying value .....					
9. Deduct current year's other than temporary impairment recognized .....					
10. Book adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) .....	57,419,173	57,419,173			
11. Deduct total nonadmitted amounts .....					
12. Statement value at end of current period (Line 10 minus Line 11)	57,419,173	57,419,173			

(a) Indicate the category of such assets, for example, joint ventures, transportation equipment:



**SCHEDULE DB - PART A - VERIFICATION BETWEEN YEARS**

Options, Caps, Floors, Collars, Swaps and Forwards

1. Book/adjusted carrying value, December 31, prior year (Line 9, prior year)	55,870,006
2. Cost paid/(consideration received) on additions:	
2.1 Current year paid/(consideration received) at time of acquisition, still open, Section 1, Column 12	
2.2 Current year paid/(consideration received) at time of acquisition, terminated, Section 2, Column 14	
3. Unrealized valuation increase/(decrease):	
3.1 Section 1, Column 17	(55,706,619)
3.2 Section 2, Column 19	(122,871)
4. SSAP No. 108 Adjustments	
5. Total gain (loss) on termination recognized, Section 2, Column 22	69,832
6. Considerations received/(paid) on terminations, Section 2, Column 15	69,832
7. Amortization:	
7.1 Section 1, Column 19	
7.2 Section 2, Column 21	
8. Adjustment to the book/adjusted carrying value of hedged item:	
8.1 Section 1, Column 20	
8.2 Section 2, Column 23	
9. Total foreign exchange change in book/adjusted carrying value:	
9.1 Section 1, Column 18	
9.2 Section 2, Column 20	
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6+7+8+9)	40,516
11. Deduct nonadmitted assets	
12. Statement value at end of current period (Line 10 minus Line 11)	40,516

**SCHEDULE DB - PART B - VERIFICATION**

Futures Contracts

1. Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year)	
2. Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - 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 minus	
3.12 Section 1, Column 15, prior year	
Change in variation margin on open contracts - All other	
3.13 Section 1, Column 18, current year minus	
3.14 Section 1, Column 18, prior year	
3.2 Add:	
Change in adjustment to basis of hedged item	
3.21 Section 1, Column 17, current year to date minus	
3.22 Section 1, Column 17, prior year	
Change in amount recognized	
3.23 Section 1, Column 19, current year to date minus	
3.24 Section 1, Column 19, prior year plus	
3.25 SSAP No. 108 Adjustments	
3.3 Subtotal (Line 3.1 minus Line 3.2)	
4.1 Cumulative variation margin on terminated contracts during the year (Section 2, Column 15)	
4.2 Less:	
4.21 Amount used to adjust basis of hedged item (Section 2, Column 17)	
4.22 Amount recognized (Section 2, Column 16)	
4.23 SSAP No. 108 Adjustments	
4.3 Subtotal (Line 4.1 minus Line 4.2)	
5. Dispositions gains (losses) on contracts terminated in prior year:	
5.1 Total gain (loss) recognized for terminations in prior year	
5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year	
6. Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2)	
7. Deduct total nonadmitted amounts	
8. Statement value at end of current period (Line 6 minus Line 7)	

**NONE**

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

**N O N E**

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

**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.....	40,516
2.	Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance .....	.....
3.	Total (Line 1 plus Line 2) .....	40,516
4.	Part D, Section 1, Column 5 .....	60,693
5.	Part D, Section 1, Column 6 .....	(20,177)
6.	Total (Line 3 minus Line 4 minus Line 5) .....	.....
		Fair Value Check
7.	Part A, Section 1, Column 16 .....	40,516
8.	Part B, Section 1, Column 13 .....	.....
9.	Total (Line 7 plus Line 8) .....	40,516
10.	Part D, Section 1, Column 8 .....	60,693
11.	Part D, Section 1, Column 9 .....	(20,177)
12.	Total (Line 9 minus Line 10 minus Line 11) .....	.....
		Potential Exposure Check
13.	Part A, Section 1, Column 21 .....	5,323,565
14.	Part B, Section 1, Column 20 .....	.....
15.	Part D, Section 1, Column 11 .....	5,323,565
16.	Total (Line 13 plus Line 14 minus Line 15) .....	.....

**SCHEDULE E - PART 2 - VERIFICATION BETWEEN YEARS**

(Cash Equivalents)

	1 Total	2 Bonds	3 Money Market Mutual funds	4 Other (a)
1. Book/adjusted carrying value, December 31 of prior year .....	133,407,095	87,822,026	45,585,069	
2. Cost of cash equivalents acquired .....	1,742,421,189	914,285,768	828,135,421	
3. Accrual of discount .....	4,159	4,159		
4. Unrealized valuation increase (decrease) .....				
5. Total gain (loss) on disposals .....	1,537,081	1,537,081		
6. Deduct consideration received on disposals .....	1,723,923,935	930,419,972	793,503,963	
7. Deduct amortization of premium .....	8,326	8,326		
8. Total foreign exchange change in book/adjusted carrying value .....				
9. Deduct current year's other than temporary impairment recognized .....				
10. Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) .....	153,437,263	73,220,736	80,216,527	
11. Deduct total nonadmitted amounts .....				
12. Statement value at end of current period (Line 10 minus Line 11)	153,437,263	73,220,736	80,216,527	

(a) Indicate the category of such investments, for example, joint ventures, transportation equipment: