



KPMG LLP
Two Financial Center
60 South Street
Boston, MA 02111

Report of Independent Registered Public Accounting Firm

The Board of Directors of MML Bay State Life Insurance Company and Contract Owners of MML Bay State Variable Annuity Separate Account 1:

Opinion on the Financial Statements

We have audited the accompanying statements of assets and liabilities of the divisions listed in Appendix A that comprise MML Bay State Variable Annuity Separate Account 1 (Separate Account), as of December 31, 2023, the related statements of operations and changes in net assets for each of the years in the two-year period then ended, and the related notes, including the financial highlights in Note 8, for each of the years in the five-year period then ended (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of each division as of December 31, 2023, and the results of their operations and changes in their net assets for each of the years in the two-year period then ended, and the financial highlights for each of the years in the five-year period then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Separate Account's management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Separate Account in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Such procedures also included confirmation of securities owned as of December 31, 2023, by correspondence with the underlying mutual funds or their transfer agent. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

KPMG LLP

We have served as the Separate Account's auditor since 2004.

Boston, Massachusetts
March 7, 2024

Appendix A

MML Bay State Variable Annuity Separate Account 1 was comprised of the following divisions as of December 31, 2023.

Divisions

Invesco V.I. Capital Appreciation Division
Invesco V.I. Conservative Balanced Division
Invesco V.I. Core Plus Bond Division*
Invesco V.I. Discovery Mid Cap Growth Division
Invesco V.I. Global Division
Invesco V.I. Global Strategic Income Division
Invesco V.I. Main Street Division
Invesco V.I. Main Street Small Cap Division
Invesco V.I. U.S. Government Money Division
MML Blend Division
MML Equity Division
MML Managed Bond Division
MML U.S. Government Money Market Division

* See Note 2 to the financial statements for the previous name of this division.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF ASSETS AND LIABILITIES

December 31, 2023

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division
ASSETS							
Investments							
Number of shares	157,324	74,835	24,628	47,264	138,408	395,602	430,395
Identified cost.....	\$ 7,497,278	\$ 1,041,817	\$ 163,119	\$ 3,531,295	\$ 5,129,027	\$ 1,938,802	\$ 9,328,421
Value	\$ 7,405,223	\$ 1,149,461	\$ 141,365	\$ 2,968,650	\$ 5,060,195	\$ 1,697,132	\$ 7,841,792
Receivable from MML Bay State Life Insurance Company.....	-	1	-	-	-	-	-
Total assets	7,405,223	1,149,462	141,365	2,968,650	5,060,195	1,697,132	7,841,792
LIABILITIES							
Payable to Annuitant mortality fluctuation fund reserve	1,285	-	-	713	566	257	1,927
Payable to MML Bay State Life Insurance Company	355	-	7	26	24	9	94
Total liabilities	1,640	-	7	739	590	266	2,021
NET ASSETS	\$ 7,403,583	\$ 1,149,462	\$ 141,358	\$ 2,967,911	\$ 5,059,605	\$ 1,696,866	\$ 7,839,771
Net Assets:							
Accumulation units - value	\$ 7,360,751	\$ 1,149,462	\$ 141,358	\$ 2,944,157	\$ 5,040,740	\$ 1,688,294	\$ 7,775,530
Contracts in payout (annuitization) period.....	42,832	-	-	23,754	18,865	8,572	64,241
Net assets	\$ 7,403,583	\$ 1,149,462	\$ 141,358	\$ 2,967,911	\$ 5,059,605	\$ 1,696,866	\$ 7,839,771
Outstanding units							
Contract owners.....	680,676	335,572	86,298	423,525	556,975	623,636	966,146
UNIT VALUE							
LifeTrust.....	10.88 \$	3.43 \$	1.64 \$	7.01 \$	9.08 \$	2.72 \$	8.11

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF ASSETS AND LIABILITIES (Continued)

December 31, 2023

	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
ASSETS						
Investments						
Number of shares	23,501	110,950	65,013	66,816	49,544	347,966
Identified cost.....	\$ 575,343	\$ 110,950	\$ 1,373,705	\$ 1,762,025	\$ 617,443	\$ 347,966
Value	\$ 632,415	\$ 110,950	\$ 1,264,742	\$ 1,755,425	\$ 537,791	\$ 347,966
Receivable from MML Bay State Life Insurance Company.....	-	2	-	-	-	9
Total assets	632,415	110,952	1,264,742	1,755,425	537,791	347,975
LIABILITIES						
Payable to Annuitant mortality fluctuation fund reserve	-	-	415	422	-	-
Payable to MML Bay State Life Insurance Company	1	-	12	40	-	-
Total liabilities	1	-	427	462	-	-
NET ASSETS	\$ 632,414	\$ 110,952	\$ 1,264,315	\$ 1,754,963	\$ 537,791	\$ 347,975
Net Assets:						
Accumulation units - value	\$ 632,414	\$ 110,952	\$ 1,250,472	\$ 1,740,882	\$ 537,791	\$ 347,975
Contracts in payout (annuitization) period.....	-	-	13,843	14,081	-	-
Net assets	\$ 632,414	\$ 110,952	\$ 1,264,315	\$ 1,754,963	\$ 537,791	\$ 347,975
Outstanding units						
Contract owners.....	108,270	87,812	242,180	303,818	206,378	283,560
UNIT VALUE						
LifeTrust.....	\$ 5.84	\$ 1.26	\$ 5.22	\$ 5.78	\$ 2.61	\$ 1.23

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS For The Year Ended December 31, 2023

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division
Investment Income							
Dividends	\$ -	\$ 20,810	\$ 3,598	\$ -	\$ 10,515	\$ -	\$ 61,875
Expenses							
Mortality and expense risk fees and administrative expense charges	92,999	15,369	2,044	40,431	64,726	23,194	104,411
Net investment income (loss)	(92,999)	5,441	1,554	(40,431)	(54,211)	(23,194)	(42,536)
Net realized and unrealized gain (loss) on investments							
Realized gain (loss) on sale of fund shares	(277,793)	12,572	(3,897)	(114,408)	(48,735)	(70,147)	(521,590)
Realized gain distribution	-	-	-	-	531,738	-	503,119
Realized gain (loss)	(277,793)	12,572	(3,897)	(114,408)	483,003	(70,147)	(18,471)
Change in net unrealized appreciation/ depreciation of investments	2,295,085	98,602	8,644	474,525	878,248	215,390	1,525,498
Net gain (loss) on investments	2,017,292	111,174	4,747	360,117	1,361,251	145,243	1,507,027
Net increase (decrease) in net assets resulting from operations	1,924,293	116,615	6,301	319,686	1,307,040	122,049	1,464,491
Capital transactions:							
Transfers of net premiums	1,768	1	-	812	451	-	870
Transfers due to death benefits	(35,470)	(4,393)	(74)	(73,226)	(61,527)	(36,288)	(75,670)
Transfers due to annuity benefit payments	(11,353)	-	-	(3,397)	(2,978)	(1,595)	(14,711)
Transfers due to withdrawal of funds	(527,100)	(45,279)	(16,754)	(203,115)	(284,555)	(160,836)	(697,840)
Transfers due to net charge (credit) to annuitant mortality fluctuation	131	(104)	-	(68)	359	170	1,082
Transfers between Divisions and to/from General Account	(7,293)	-	-	15,951	(28,019)	11,306	(46,214)
Net increase (decrease) in net assets resulting from capital transactions	(579,317)	(49,775)	(16,828)	(263,043)	(376,269)	(187,243)	(832,483)
Total increase (decrease)	1,344,976	66,840	(10,527)	56,643	930,771	(65,194)	632,008
NET ASSETS, at beginning of the year	6,058,607	1,082,622	151,885	2,911,268	4,128,834	1,762,060	7,207,763
NET ASSETS, at end of the year	7,403,583	1,149,462	141,358	2,967,911	5,059,605	1,696,866	7,839,771

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS (Continued)

For The Year Ended December 31, 2023

	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
Investment Income						
Dividends	\$ 6,742	\$ 4,861	\$ 20,252	\$ 35,319	\$ 20,756	\$ 17,904
Expenses						
Mortality and expense risk fees and administrative expense charges	8,187	1,536	17,970	23,862	7,530	5,566
Net investment income (loss)	(1,445)	3,325	2,282	11,457	13,226	12,338
Net realized and unrealized gain (loss) on investments						
Realized gain (loss) on sale of fund shares	(3,016)	-	(42,410)	(377)	(10,305)	-
Realized gain distribution	-	-	-	134,587	-	-
Realized gain (loss)	(3,016)	-	(42,410)	134,210	(10,305)	-
Change in net unrealized appreciation/ depreciation of investments	94,534	-	233,842	(16,222)	24,242	-
Net gain (loss) on investments	91,518	-	191,432	117,988	13,937	-
Net increase (decrease) in net assets resulting from operations	90,073	3,325	193,714	129,445	27,163	12,338
Capital transactions:						
Transfers of net premiums	-	-	-	900	-	-
Transfers due to death benefits	(13,190)	(725)	(45,493)	(7,179)	-	(16,291)
Transfers due to annuity benefit payments	-	-	-	(4,785)	-	-
Transfers due to withdrawal of funds	(23,939)	(2,199)	(251,429)	(126,403)	(44,068)	(128,980)
Transfers due to net charge (credit) to annuitant mortality fluctuation	-	-	(1,465)	(182)	-	-
Transfers between Divisions and to/from General Account	(3)	320	1,212	3,198	1,187	48,354
Net increase (decrease) in net assets resulting from capital transactions	(37,132)	(2,604)	(297,175)	(134,451)	(42,881)	(96,917)
Total increase (decrease)	52,941	721	(103,461)	(5,006)	(15,718)	(84,579)
NET ASSETS, at beginning of the year	579,473	110,231	1,367,776	1,759,969	553,509	432,554
NET ASSETS, at end of the year	632,414	110,952	1,264,315	1,754,963	537,791	347,975

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS For The Year Ended December 31, 2022

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division
Investment Income							
Dividends	\$ -	\$ 16,813	\$ 6,593	\$ -	\$ -	\$ -	\$ 117,290
Expenses							
Mortality and expense risk fees and administrative expense charges	102,089	17,456	2,320	49,530	68,062	26,902	114,661
Net investment income (loss)	(102,089)	(643)	4,273	(49,530)	(68,062)	(26,902)	2,629
Net realized and unrealized gain (loss) on investments							
Realized gain (loss) on sale of fund shares	12,571	22,759	(2,032)	28,507	82,817	(119,692)	(109,689)
Realized gain distribution	2,457,644	91,614	99	918,190	812,034	-	3,023,185
Realized gain (loss)	2,470,215	114,373	(1,933)	946,697	894,851	(119,692)	2,913,496
Change in net unrealized appreciation/depreciation of investments	(5,424,262)	(381,344)	(30,997)	(2,525,055)	(3,044,590)	(135,534)	(5,056,640)
Net gain (loss) on investments	(2,954,047)	(266,971)	(32,930)	(1,578,358)	(2,149,739)	(255,226)	(2,143,144)
Net increase (decrease) in net assets resulting from operations	(3,056,136)	(267,614)	(28,657)	(1,627,888)	(2,217,801)	(282,128)	(2,140,515)
Capital transactions:							
Transfers of net premiums	1,770	-	-	810	450	-	871
Transfers due to death benefits	(64,536)	(99)	(1,887)	(90,032)	(51,319)	(41,320)	(141,577)
Transfers due to annuity benefit payments	(12,656)	(222)	-	(4,160)	(2,964)	(1,856)	(16,108)
Transfers due to withdrawal of funds	(688,901)	(195,193)	(8,498)	(464,651)	(393,693)	(249,731)	(675,624)
Transfers due to net charge (credit) to annuitant mortality fluctuation	1,507	42	-	751	725	346	2,305
Transfers between Divisions and to/from General Account	(3,424)	-	-	(74,779)	(113,354)	(29,242)	(120,501)
Net increase (decrease) in net assets resulting from capital transactions	(766,240)	(195,472)	(10,385)	(632,061)	(560,155)	(321,803)	(950,634)
Total increase (decrease)	(3,822,376)	(463,086)	(39,042)	(2,259,949)	(2,777,956)	(603,931)	(3,091,149)
NET ASSETS, at beginning of the year	9,880,983	1,545,708	190,927	5,171,217	6,906,790	2,365,991	10,298,912
NET ASSETS, at end of the year	\$ 6,058,607	\$ 1,082,622	\$ 151,885	\$ 2,911,268	\$ 4,128,834	\$ 1,762,060	\$ 7,207,763

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS (Continued)

For The Year Ended December 31, 2022

	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
Investment Income						
Dividends	\$ 3,292	\$ 1,515	\$ 20,542	\$ 28,914	\$ 18,510	\$ 4,633
Expenses						
Mortality and expense risk fees and administrative expense charges	8,953	1,689	21,220	25,053	8,266	4,546
Net investment income (loss)	(5,661)	(174)	(678)	3,861	10,244	87
Net realized and unrealized gain (loss) on investments						
Realized gain (loss) on sale of fund shares	3,385	-	(31,934)	48,302	(2,428)	-
Realized gain distribution	71,436	-	27,508	193,274	6,194	-
Realized gain (loss)	74,821	-	(4,426)	241,576	3,766	-
Change in net unrealized appreciation/depreciation of investments	(198,127)	-	(309,143)	(363,927)	(121,883)	-
Net gain (loss) on investments	(123,306)	-	(313,569)	(122,351)	(118,117)	-
Net increase (decrease) in net assets resulting from operations	(128,967)	(174)	(314,247)	(118,490)	(107,873)	87
Capital transactions:						
Transfer of net premiums	-	-	-	900	-	-
Transfers due to death benefits	-	(9,902)	(21,761)	(25,355)	-	(24,089)
Transfers due to annuity benefit payments	-	-	-	(5,154)	-	-
Transfers due to withdrawal of funds	(62,999)	(2,339)	(124,848)	(121,856)	(10,230)	(113,188)
Transfers due to net charge (credit) to annuitant mortality fluctuation	-	-	(1,421)	134	-	-
Transfers between Divisions and to/from General Account	1,928	(1,115)	8,210	84,780	14,272	233,227
Net increase (decrease) in net assets resulting from capital transactions	(61,071)	(13,356)	(139,820)	(66,551)	4,042	95,950
Total increase (decrease)	(190,038)	(13,530)	(454,067)	(185,041)	(103,831)	96,037
NET ASSETS, at beginning of the year	769,511	123,761	1,821,843	1,945,010	657,340	336,517
NET ASSETS, at end of the year	\$ 579,473	\$ 110,231	\$ 1,367,776	\$ 1,759,969	\$ 553,509	\$ 432,554

See Notes to Financial Statements.

MML Bay State Variable Annuity Separate Account 1

Notes To Financial Statements

1. ORGANIZATION

MML Bay State Variable Annuity Separate Account 1 (“the Separate Account”) is a separate investment account of MML Bay State Life Insurance Company (“MML Bay State”) established on January 14, 1994. The Separate Account is registered as a unit investment trust under the Investment Company Act of 1940 (“the 1940 Act”).

On June 30, 1997, MML Bay State redomesticated from the State of Missouri to the State of Connecticut. MML Bay State is an indirect subsidiary of Massachusetts Mutual Life Insurance Company (“MassMutual”). MML Bay State maintains the following segment within the separate account: LifeTrust.

The assets and liabilities of the Separate Account are clearly identified and distinguished from MML Bay State’s other assets and liabilities. The Separate Account assets are not chargeable with liabilities arising from any other MML Bay State business.

2. INVESTMENT OF THE SEPARATE ACCOUNT’S ASSETS

As of December 31, 2023, the Separate Account consists of thirteen divisions which invest in the following mutual funds. All of the divisions may not be available to every contract owner:

Divisions	The division listed in the first column invests in the fund in this column
Invesco V.I. Capital Appreciation Division	Invesco V.I. Capital Appreciation Fund ¹
Invesco V.I. Conservative Balanced Division	Invesco V.I. Conservative Balanced Fund ¹
Invesco V.I. Core Plus Bond Division	Invesco V.I. Core Plus Bond Fund ^{1,3}
Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Discovery Mid Cap Growth Fund ¹
Invesco V.I. Global Division	Invesco V.I. Global Fund ¹
Invesco V.I. Global Strategic Income Division	Invesco V.I. Global Strategic Income Fund ¹
Invesco V.I. Main Street Division	Invesco V.I. Main Street Fund® ¹
Invesco V.I. Main Street Small Cap Division	Invesco V.I. Main Street Small Cap Fund® ¹
Invesco V.I. U.S. Government Money Division	Invesco V.I. U.S. Government Money Portfolio ¹
MML Blend Division	MML Blend Fund ²
MML Equity Division	MML Equity Fund ²
MML Managed Bond Division	MML Managed Bond Fund ²
MML U.S. Government Money Market Division	MML U.S. Government Money Market Fund ²

In addition to the thirteen divisions, some contract owners may also allocate funds to the Fixed Interest Account (“FIA”), which is part of MML Bay State’s general investment account (“General Account”). Because of exemptive and exclusionary provisions in the securities law, interests in the FIA are not registered under the Securities Act of 1933, and the General Account and the FIA are not registered as an investment company under the 1940 Act.

¹ Invesco Advisers, Inc. is the investment adviser to this Fund.

² MML Investment Advisers, LLC is the investment adviser to this Fund.

³ After the close of business on April 29, 2022, Invesco V.I. Core Plus Bond Fund acquired all the net assets of Invesco V.I. Core Bond Fund pursuant to a plan of reorganization approved by the Board of Trustees of the Invesco V.I. Core Plus Bond Fund on December 1, 2021 and by the shareholders of the Invesco V.I. Core Bond Fund on March 31, 2022. The acquisition was accomplished by a tax-free exchange as of the close of business on April 29, 2022. Shares of Invesco V.I. Core Bond Fund were exchanged for the like class of shares of Invesco V.I. Core Plus Bond Fund, based on the relative net asset value of the two funds which resulted in Invesco V.I. Core Bond Fund receiving 1.15816327 shares of Invesco V.I. Core Plus Bond Fund in exchange of 1 share of Invesco V.I. Core Bond Fund. As a result of the underlying fund merger, the division name changed from Invesco V.I. Core Bond to Invesco V.I. Core Plus Bond.

Notes To Financial Statements (Continued)

3. SIGNIFICANT ACCOUNTING POLICIES

The following is a summary of significant accounting policies followed by the Separate Account in preparation of the financial statements in conformity with generally accepted accounting principles. MML Bay State Variable Annuity Separate Account 1 follows the accounting and reporting guidance in FASB Accounting Standards Codification 946.

A. Investment Valuation

Investments in the underlying funds held by each division are carried at fair value which is based on the closing net asset value of each of the respective underlying funds, which value their investment securities at fair value.

B. Accounting for Investments

Investment transactions are accounted for on a trade-date basis and identified cost is the basis followed in determining the cost of investments sold for financial statement purposes. Dividend income and gains from realized gain distributions are recorded on the ex-distribution date and they are generally reinvested in the underlying investment funds.

C. Federal Income Taxes

MML Bay State is taxed under federal law as a life insurance company under the provisions of the 1986 Internal Revenue Code, as amended. Under existing federal law, no taxes are payable on net investment income and net realized capital gains attributable to contracts, which depend on the Separate Account's investment performance. Accordingly, no provision for federal income tax has been made. MML Bay State may, however, make such a charge in the future if an unanticipated change of current law results in a tax liability attributable to the Separate Account.

D. Contract Charges

See Note 8B for charges associated with the contracts.

E. Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

F. Annuitant Mortality Fluctuation

The Separate Account contributes to an Annuitant Mortality Fluctuation Fund (AMFF) reserve maintained by MML Bay State as required by regulatory authorities to provide for mortality losses incurred. The AMFF reserve is adjusted quarterly for mortality losses and gains and its proportionate share of changes in value. Transfers to or from MML Bay State are then made quarterly to adjust the AMFF reserve which is held in the Separate Account. Net transfers from the Separate Account to MML Bay State totaled \$77 for the year ended December 31, 2023. Net transfers from MML Bay State to the Separate Account totaled \$4,388 for the year ended December 31, 2022. The AMFF reserve is subject to a maximum of 3% of the Separate Account's annuity reserves. Any mortality losses in excess of this reserve will be borne by MML Bay State. The AMFF reserve is not available to owners of the contracts except to the extent necessary to cover mortality losses under the contracts.

G. Annuity Reserves

Annuity reserves are developed by using accepted actuarial methods and are computed using the 1994 MGDB Table.

Notes To Financial Statements (Continued)

4. FAIR VALUE OF FINANCIAL INSTRUMENTS

The Separate Account defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Separate Account generally uses the market approach as the valuation technique due to the nature of the mutual fund investments offered in the Separate Account. This technique maximizes the use of observable inputs and minimizes the use of unobservable inputs. Investments in mutual funds are valued at the mutual fund's closing net asset value per share on the day of valuation.

Valuation Inputs: Various inputs are used to determine the value of the Separate Account's investments. These inputs are summarized in the three broad levels listed below:

- **Level 1** – quoted prices in active markets for identical securities
- **Level 2** – observable inputs other than Level 1 quoted prices (including, but not limited to, quoted prices for similar securities, interest rates, prepayment speeds and credit risk)
- **Level 3** – unobservable inputs

The investments of the Separate Account are measured at fair value. All the investments are categorized as Level 1 as of December 31, 2023. There have been no transfers between levels for the year ended December 31, 2023.

5. RELATED PARTY TRANSACTIONS

A. Sales Agreements

Pursuant to separate underwriting agreements with MML Bay State, on its own behalf and on behalf of the Separate Account, MML Investors Services, LLC ("MMLIS") serves as principal underwriter of the contracts sold by its registered representatives, and MML Strategic Distributors, LLC ("MSD") serves as principal underwriter of the contracts sold by registered representatives of other broker-dealers who have entered into distribution agreements with MSD.

Both MMLIS and MSD are registered with the Securities and Exchange Commission (the "SEC") as broker-dealers under the Securities Exchange Act of 1934 and are members of the Financial Industry Regulatory Authority ("FINRA"). Commissions for sales of contracts by MMLIS registered representatives are paid on behalf of MMLIS to its registered representatives. Commissions for sales of contracts by registered representatives of other broker-dealers are paid on behalf of MSD to those broker-dealers. MMLIS and MSD also receive compensation for their actions as principal underwriters of the contracts.

The contracts are no longer offered for sale to the public. Contract owners may continue, however, to make purchase payments under existing contracts.

B. Receivable from/Payable to MML Bay State

Certain fees such as mortality and expense risk fees are charges paid between the General Account and the Separate Account. The General Account is not registered as an investment company under the 1940 Act.

Notes To Financial Statements (Continued)

6. PURCHASE AND SALES OF INVESTMENTS

The cost of purchases and proceeds from sales of investments for each of the years in the two-year period ended December 31, 2023 were as follows:

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
2023					
Cost of purchases	\$ 6,265	\$ 23,126	\$ 3,598	\$ 14,527	\$ 549,145
Proceeds from sales	(678,461)	(67,505)	(18,871)	(318,050)	(447,804)

	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division
2023 (continued)					
Cost of purchases	\$ 11,545	\$ 567,769	\$ 6,742	\$ 5,336	\$ 22,435
Proceeds from sales	(222,047)	(939,757)	(45,318)	(4,583)	(317,310)

	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
2023 (continued)			
Cost of purchases	\$ 173,111	\$ 21,905	\$ 66,228
Proceeds from sales	(161,637)	(51,561)	(150,810)

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
2022					
Cost of purchases	\$ 2,479,593	\$ 108,427	\$ 6,692	\$ 953,713	\$ 851,302
Proceeds from sales	(891,338)	(212,945)	(12,699)	(717,632)	(667,834)

	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division
2022 (continued)					
Cost of purchases	\$ 322	\$ 3,211,475	\$ 76,426	\$ 1,493	\$ 67,988
Proceeds from sales	(349,130)	(1,137,378)	(71,723)	(15,062)	(181,115)

	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
2022 (continued)			
Cost of purchases	\$ 307,507	\$ 39,136	\$ 237,832
Proceeds from sales	(177,117)	(18,654)	(141,804)

Notes To Financial Statements (Continued)

7. NET INCREASE (DECREASE) IN OUTSTANDING UNITS

The changes in outstanding units for each of the years in the two-year period ended December 31, 2023 were as follows:

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
2023					
Units purchased	251	-	-	126	121
Units withdrawn	(62,497)	(15,381)	(10,754)	(42,629)	(43,502)
Units transferred between Divisions and to/from General Account	(707)	-	-	2,465	(3,548)
Net increase (decrease)	<u>(62,953)</u>	<u>(15,381)</u>	<u>(10,754)</u>	<u>(40,038)</u>	<u>(46,929)</u>

	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division
2023 (continued)					
Units purchased	73	334	-	-	-
Units withdrawn	(76,079)	(106,871)	(7,297)	(2,365)	(61,944)
Units transferred between Divisions and to/from General Account	4,295	(6,642)	(1)	256	245
Net increase (decrease)	<u>(71,711)</u>	<u>(113,179)</u>	<u>(7,298)</u>	<u>(2,109)</u>	<u>(61,699)</u>

	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
2023 (continued)			
Units purchased	167	-	-
Units withdrawn	(25,416)	(17,595)	(120,395)
Units transferred between Divisions and to/from General Account	591	474	40,299
Net increase (decrease)	<u>(24,658)</u>	<u>(17,121)</u>	<u>(80,096)</u>

	Invesco V.I. Capital Appreciation Division	Invesco V.I. Conservative Balanced Division	Invesco V.I. Core Plus Bond Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
2022					
Units purchased	530	10	-	168	422
Units withdrawn	(84,431)	(59,890)	(6,376)	(85,956)	(61,054)
Units transferred between Divisions and to/from General Account	(266)	-	-	(11,058)	(15,210)
Net increase (decrease)	<u>(84,167)</u>	<u>(59,880)</u>	<u>(6,376)</u>	<u>(96,846)</u>	<u>(75,842)</u>

	Invesco V.I. Global Strategic Income Division	Invesco V.I. Main Street Division	Invesco V.I. Main Street Small Cap Division	Invesco V.I. U.S. Government Money Division	MML Blend Division
2022 (continued)					
Units purchased	922	447	-	-	769
Units withdrawn	(109,721)	(119,009)	(12,157)	(10,003)	(31,428)
Units transferred between Divisions and to/from General Account	(11,050)	(16,728)	350	(912)	1,617
Net increase (decrease)	<u>(119,849)</u>	<u>(135,290)</u>	<u>(11,807)</u>	<u>(10,915)</u>	<u>(29,042)</u>

Notes To Financial Statements (Continued)

7. NET INCREASE (DECREASE) IN OUTSTANDING UNITS (Continued)

	MML Equity Division	MML Managed Bond Division	MML U.S. Government Money Market Division
2022 (continued)			
Units purchased.....	190	1,462	-
Units withdrawn	(28,446)	(5,480)	(115,414)
Units transferred between Divisions			
and to/from General Account	15,388	5,062	196,642
Net increase (decrease)	<u>(12,868)</u>	<u>1,043</u>	<u>81,228</u>

Notes To Financial Statements (Continued)

8. Financial Highlights

A. A summary of units outstanding, unit values, net assets, investment income ratios, expense ratios (excluding expenses of the underlying funds) and total return ratios for each of the years in the five-year period ended December 31, 2023 follows:

	At December 31,			For the Years Ended December 31,		
	Units	Net Assets		Investment Income Ratio ¹	Expense Ratio ²	Total Return ³
		Unit Value ³	Amount			
Invesco V.I. Capital Appreciation Division						
2023	680,676	\$ 10.88	\$ 7,403,583	- %	1.40 %	33.50 %
2022	743,629	8.15	6,058,607	-	1.40	(31.74)
2021	827,796	11.94	9,880,983	-	1.40	20.86
2020	929,323	9.88	9,177,898	-	1.40	34.69
2019	1,013,318	7.33	7,429,979	0.06	1.40	34.30
Invesco V.I. Conservative Balanced Division						
2023	335,572	3.43	1,149,462	1.89	1.40	11.04
2022	350,953	3.08	1,082,622	1.35	1.40	(18.01)
2021	410,833	3.76	1,545,708	1.46	1.40	9.10
2020	472,186	3.45	1,628,433	2.09	1.40	13.26
2019	526,653	3.04	1,603,630	2.26	1.40	15.88
Invesco V.I. Core Plus Bond Division⁴						
2023	86,298	1.64	141,358	2.46	1.40	4.67
2022	97,051	1.56	151,885	1.94	1.40	(15.22)
2021	103,428	1.85	190,927	2.06	1.40	(3.02)
2020	117,077	1.90	222,843	2.35	1.40	8.18
2019	197,278	1.76	347,091	3.41	1.40	8.00
Invesco V.I. Discovery Mid Cap Growth Division						
2023	423,525	7.01	2,967,911	-	1.40	11.58
2022	463,564	6.28	2,911,268	-	1.40	(31.94)
2021	560,411	9.23	5,171,217	-	1.40	17.44
2020	638,999	7.86	5,020,642	0.04	1.40	38.73
2019	727,975	5.66	4,122,817	-	1.40	37.43
Invesco V.I. Global Division						
2023	556,975	9.08	5,059,605	0.23	1.40	32.87
2022	603,904	6.84	4,128,834	-	1.40	(32.71)
2021	679,746	10.16	6,906,790	-	1.40	13.88
2020	762,081	8.92	6,799,347	0.70	1.40	25.86
2019	899,501	7.09	6,376,283	0.91	1.40	29.96
Invesco V.I. Global Strategic Income Division						
2023	623,636	2.72	1,696,866	-	1.40	7.37
2022	695,347	2.53	1,762,060	-	1.40	(12.69)
2021	815,195	2.90	2,365,991	4.65	1.40	(4.76)
2020	838,421	3.05	2,554,914	5.80	1.40	1.96
2019	904,609	2.99	2,703,535	3.76	1.40	9.26
Invesco V.I. Main Street Division						
2023	966,146	8.11	7,839,771	0.83	1.40	21.51
2022	1,079,325	6.68	7,207,763	1.43	1.40	(21.24)
2021	1,214,613	8.48	10,298,912	0.69	1.40	25.80
2020	1,323,513	6.74	8,920,947	1.48	1.40	12.36
2019	1,542,983	6.00	9,256,306	1.06	1.40	30.24
Invesco V.I. Main Street Small Cap Division						
2023	108,270	5.84	632,414	1.15	1.40	16.49
2022	115,567	5.01	579,473	0.51	1.40	(17.00)
2021	127,374	6.04	769,511	0.36	1.40	20.85
2020	160,662	5.00	803,158	0.63	1.40	18.26
2019	174,841	4.23	739,076	0.20	1.40	24.71

Notes To Financial Statements (Continued)

8. Financial Highlights (Continued)

	At December 31,			For the Years Ended December 31,		
	Units	Net Assets		Investment Income Ratio ¹	Expense Ratio ²	Total Return ³
		Unit Value ³	Amount			
Invesco V.I. U.S. Government Money Division						
2023	87,812	\$ 1.26	\$ 110,952	4.42 %	1.40 %	3.07 %
2022	89,922	1.23	110,231	1.25	1.40	(0.12)
2021	100,837	1.23	123,761	0.01	1.40	(1.38)
2020	98,768	1.24	122,921	0.23	1.40	(1.17)
2019	111,540	1.26	140,462	1.73	1.40	0.29
MML Blend Division						
2023	242,180	5.22	1,264,315	1.58	1.40	15.99
2022	303,879	4.50	1,367,776	1.35	1.40	(17.75)
2021	332,920	5.47	1,821,843	2.12	1.40	13.43
2020	378,594	4.82	1,826,558	-	1.40	11.30
2019	404,720	4.33	1,754,400	2.43	1.40	19.69
MML Equity Division						
2023	303,818	5.78	1,754,963	2.07	1.40	7.81
2022	328,477	5.36	1,759,969	1.61	1.40	(5.97)
2021	341,345	5.70	1,945,010	1.66	1.40	28.45
2020	363,219	4.44	1,611,241	2.29	1.40	1.59
2019	391,146	4.37	1,707,926	2.08	1.40	24.17
MML Managed Bond Division						
2023	206,378	2.61	537,791	3.85	1.40	5.22
2022	223,499	2.48	553,509	3.13	1.40	(16.19)
2021	222,455	2.95	657,340	3.02	1.40	(0.59)
2020	213,758	2.97	635,379	0.10	1.40	6.21
2019	243,308	2.80	680,897	3.61	1.40	8.28
MML U.S. Government Money Market Division						
2023	283,360	1.23	347,975	4.50	1.40	3.19
2022	363,456	1.19	432,554	1.42	1.40	(0.19)
2021	282,228	1.19	336,517	-	1.40	(1.39)
2020	289,765	1.21	350,373	0.25	1.40	(1.16)
2019	484,409	1.22	592,620	1.69	1.40	0.29

¹The investment income ratios represent the dividends, excluding distributions of capital gains, received by the division from the underlying mutual fund, divided by the average net assets. These ratios exclude those expenses, such as mortality and expense charges, that are assessed against contract owners accounts either through reductions in the unit values or the redemption of units. The recognition of investment income by the division is affected by the timing of the declaration of dividends by the underlying fund in which the division invests.

²The expense ratios represent the annualized contract expense of the divisions of the Separate Account, consisting primarily of mortality and expense charges, for each period indicated. The ratios include only those expenses that result in a direct reduction of unit values. Charges made directly to contract owners accounts through the redemption of units and expenses of the underlying fund have been excluded.

³The total returns are for the periods indicated, including changes in the value of the underlying fund, and the expenses assessed through the reduction of unit values. These ratios do not include any expenses assessed through the redemption of units.

⁴After the close of business on April 29, 2022, Invesco V.I. Core Plus Bond Fund acquired all the net assets of Invesco V.I. Core Bond Fund pursuant to a plan of reorganization approved by the Board of Trustees of the Invesco V.I. Core Plus Bond Fund on December 1, 2021 and by the shareholders of the Invesco V.I. Core Bond Fund on March 31, 2022. The acquisition was accomplished by a tax-free exchange as of the close of business on April 29, 2022. Shares of Invesco V.I. Core Bond Fund were exchanged for the like class of shares of Invesco V.I. Core Plus Bond Fund, based on the relative net asset value of the two funds which resulted in Invesco V.I. Core Bond Fund receiving 1.156327 shares of Invesco V.I. Core Plus Bond Fund in exchange of 1 share of Invesco V.I. Core Bond Fund. As a result of the underlying fund merger, the division name changed from Invesco V.I. Core Bond Fund to Invesco V.I. Core Plus Bond. Financial highlights for the years 2018-2021 correspond to the Invesco V.I. Core Bond.

Notes To Financial Statements (Continued)

8. Financial Highlights (Continued)

- B. The Separate Account assesses charges associated with the contract. These charges are either assessed as a direct reduction in unit values or through a redemption of units for all contracts contained within the Separate Account.

<p>Mortality and Expense Risk Charge* This charge is assessed through reduction of unit values.</p>	<p>This charge is equal, on an annual basis, to 1.15% of the daily value of the assets invested in each fund.</p>
<p>Administrative Expense Charge This charge is assessed through reduction of unit values.</p>	<p>This charge is equal, on an annual basis, to 0.15% of the daily value of the assets invested in each fund.</p>
<p>Death Benefit Charge This charge is assessed through reduction of unit values.</p>	<p>This charge is equal, on an annual basis, to 0.10% of the daily value of the assets invested in each fund.</p>
<p>Administrative Charge** This charge is assessed through the redemption of units.</p>	<p>\$30 per contract, annually. These charges are not applicable to contracts with values of \$50,000 or more.</p>
<p>Contingent Deferred Sales Charge This charge is assessed through the redemption of units.</p>	<p>0 - 7%</p>

* Right reserved to increase to 1.25%.

** Right reserved to increase to \$50.

9. SUBSEQUENT EVENTS

The Separate Account's management has reviewed events occurring through March 7, 2024, the date the financial statements were issued, and no subsequent events occurred requiring accrual or disclosure.

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