



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

Report of Independent Registered Public Accounting Firm

The Board of Directors of Massachusetts Mutual Life Insurance Company and Contract Owners of Massachusetts Mutual Variable Annuity Fund 1:

Opinion on the Financial Statements and Financial Highlights

We have audited the accompanying statement of assets and liabilities of Massachusetts Mutual Variable Annuity Fund 1 (comprised of the MML Equity Division) (“the Separate Account”) as of December 31, 2020, 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 (collectively, the “financial statements”) and the financial highlights for each of the years in the five- year period then ended. In our opinion, the financial statements and financial highlights present fairly, in all material respects, the financial position of the Separate Account as of December 31, 2020, the results of its operations and changes in its 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 and financial highlights are the responsibility of the Separate Account’s management. Our responsibility is to express an opinion on these financial statements and financial highlights 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 and financial highlights 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 and financial highlights, 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 and financial highlights. Such procedures also included confirmation of securities owned as of December 31, 2020, by correspondence with the underlying mutual fund and its 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 and financial highlights. 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 10, 2021

Massachusetts Mutual Variable Annuity Fund 1

STATEMENT OF ASSETS AND LIABILITIES

December 31, 2020

	<u>MML Equity Division</u>
ASSETS	
Investments	
Number of shares	75,305
Identified cost	\$ 1,924,275
Value	\$ 1,885,458
Receivable from Massachusetts Mutual Life Insurance Company	37
Total assets	1,885,495
LIABILITIES	
Payable to Massachusetts Mutual Life Insurance Company	-
Total liabilities	-
NET ASSETS	\$ 1,885,495
Net Assets:	
Accumulation units - value	\$ 1,739,144
Contracts in payout (annuitization) period	146,351
Net assets	\$ 1,885,495
Outstanding units	
Contract owners	32,090
UNIT VALUE	
Fund 1	\$ 58.76

See Notes to Financial Statements.

Massachusetts Mutual Variable Annuity Fund 1

STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS For The Years Ended December 31, 2020 and 2019

	MML Equity Division	
	2020	2019
Investment Income		
Dividends.....	\$ 38,463	\$ 41,613
Expenses		
Mortality and expense risk fees	12,059	14,888
Net investment income (loss)	26,404	26,725
Net realized and unrealized gain (loss) on investments		
Realized gain (loss) on sale of fund shares	26,904	151,461
Realized gain distribution.....	186,772	107,799
Realized gain (loss).....	213,676	259,260
Change in net unrealized appreciation/depreciation of investments.....	(202,638)	164,078
Net gain (loss) on investments	11,038	423,338
Net increase (decrease) in net assets resulting from operations	37,442	450,063
Capital transactions:		
Transfers due to death benefits	-	(428,686)
Transfers due to withdrawal of funds.....	(66,977)	(66,460)
Transfers due to net charge (credit) to annuitant mortality fluctuation	12,361	16,376
Transfers due to annuity benefit payments.....	(22,105)	(25,517)
Transfers due to expense guarantee adjustment	2,194	2,697
Net increase (decrease) in net assets resulting from capital transactions	(74,527)	(501,590)
Total increase (decrease)	(37,085)	(51,527)
NET ASSETS, at beginning of the year	1,922,580	1,974,107
NET ASSETS, at end of the year	\$ 1,885,495	\$ 1,922,580

See Notes to Financial Statements.

Massachusetts Mutual Variable Annuity Fund 1

Notes To Financial Statements

1. ORGANIZATION

Massachusetts Mutual Variable Annuity Fund 1 (the “Separate Account”) is a separate investment account of Massachusetts Mutual Life Insurance Company (“MassMutual”) established on April 24, 1968. The Separate Account is registered as a unit investment trust under the Investment Company Act of 1940 (“the 1940 Act”).

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

2. INVESTMENT OF THE SEPARATE ACCOUNT’S ASSETS

As of December 31, 2020, the Separate Account invests in the following mutual fund:

Division	The division listed in the first column invests in the fund in this column
MML Equity Division	MML Equity Fund ¹

¹ MML Investment Advisers, LLC is the investment adviser to this Fund.

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. Separate Account Massachusetts Mutual Variable Annuity Fund 1 follows the accounting and reporting guidance in FASB Accounting Standards Codification 946.

A. Investment Valuation

Investments in MML Equity Division are valued at the closing net asset value of the underlying fund, which values its 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 division.

C. Federal Income Taxes

MassMutual 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. MassMutual may, however, make such a charge in the future if an unanticipated change of the current law results in a company tax liability attributable to the Separate Account.

D. Contract Charges

See Note 8B for charges associated with the contracts.

Notes To Financial Statements (Continued)

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 maintains a reserve as required by regulatory authorities to provide for mortality losses incurred. The reserve is adjusted quarterly for mortality losses and gains and its proportionate share of changes in value. Transfers to or from MassMutual are then made quarterly to adjust the Separate Account. Net transfers from MassMutual to the Separate Account totaled \$12,361 and \$16,376 for the years ended December 31, 2020 and 2019, respectively. The 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 MassMutual. The 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 either the 71 IAM or 83 IAM table.

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, 2020. There have been no transfers between levels for the year ended December 31, 2020.

5. RELATED PARTY TRANSACTIONS

Receivable from/Payable to MassMutual

Certain fees such as mortality and expense risk fees are charges paid between the general investment account (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 investments for the year ended December 31, 2020 were as follows:

	MML Equity Division
Cost of purchase	\$ 232,501
Proceeds from sales	(93,860)

7. NET INCREASE (DECREASE) IN OUTSTANDING UNITS

The changes in outstanding units for the two years ended December 31, 2020 were as follows:

	MML Equity Division	
	2020	2019
Units purchased	243	317
Units withdrawn	(1,663)	(9,877)
Net increase (decrease).....	<u>(1,420)</u>	<u>(9,560)</u>

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 five years in the period ended December 31, 2020 follows:

	<u>At December 31,</u>			<u>For the Years Ended December 31,</u>		
	<u>Units</u>	<u>Net Assets</u>		<u>Investment</u>	<u>Expense</u>	<u>Total</u>
		<u>Unit Value</u>	<u>Amount</u>	<u>Income Ratio¹</u>	<u>Ratio²</u>	<u>Return³</u>
MML Equity Division						
2020	32,090	\$ 58.76	\$ 1,885,495	2.33 %	0.73 %	2.41 %
2019	33,510	57.37	1,922,580	2.04	0.73	25.17
2018	43,070	45.83	1,974,107	1.78	0.73	(10.53)
2017	44,519	51.23	2,280,679	1.82	0.73	15.10
2016	48,884	44.51	2,175,742	1.73	0.73	11.91

¹The investment income ratios represent the dividends, excluding distributions of capital gains, received by the division from the underlying mutual fund, net of management fees assessed by the fund manager, divided by the average net assets. These ratios exclude those expenses, such as mortality and expense charges, that are assessed against contract owner 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 expenses 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 owner 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. Investment options with a date notation indicate the effective date of that investment option in the variable account. The total return is calculated for each period indicated or from the effective date through the end of the reporting period.

Notes To Financial Statements (Continued)

- B.** The Separate Account is assessed a mortality and expense risk charge. MassMutual will make deductions, for all contract years, equal on an annual basis, to 0.73% of the average daily net assets for mortality and expense risks undertaken by MassMutual. This charge is assessed through a reduction in unit values for all contracts contained within the Separate Account. A one time front-end charge is made for sales and administrative charges. The charge ranges from 8.75% for single purchase payment and 9% for periodic purchase payments. This charge is assessed through a reduction in the number of units purchased.

9. *EXPENSE GUARANTEE ADJUSTMENT*

MassMutual will reimburse the Separate Account for any per share expenses of MML Equity Fund attributable to shares of MML Equity Fund held by the Separate Account other than (1) the annual investment management fee payable to MassMutual by MML Equity Fund, (2) brokerage commissions and other capital items payable in connection with the purchase or sale of MML Equity Fund's investments and (3) interest on account of any borrowings by MML Equity Fund. The Separate Account was reimbursed \$2,194 and \$2,697 in each of the years ended December 31, 2020 and 2019, respectively.

10. *SUBSEQUENT EVENTS*

The Separate Account's management has reviewed events occurring through March 10, 2021, the date the financial statements were issued, and no subsequent events occurred requiring accrual or disclosure.

